APPENDIX F - Schedule of Rates For Term Contract

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SECTION 00

GENERAL TERMS AND CONDITIONS

Associated documents **GT.01**

This Schedule of Rates (hereinafter referred to as “this Schedule” or "the Schedule") shall be read and used in conjunction with : -

(a) The General Conditions of Contract and Special Conditions of Contract adopted for the Term Contract.

(b) The Conditions of Tender, Form of Tender and Articles of Agreement of the Term Contract.

(c) Drawings, Specification and Employer’s Requirements of the Term Contract.

(d) The term “Specification” shall mean the General Specification, Codes of Practice and other documents referred herein below, Particular Specifications and all other specification requirements issued therein and referred to in the Term Contract.

(e) Particular Specification(s) and all other specification requirements issued and referred to in the Term Contract.

(f) Any Amendments and Corrigenda to the Schedule of Rates issued and referred to in the Term Contract.

Definitions generally **GT.02**

Where any of the definitions given in these General Terms and Conditions are at variance with those given in the Special Conditions preceding the Sections throughout this Schedule, the definitions given in the Sections in this Schedule shall take priority.

“Maintenance Surveyor”	shall mean CUHK Medical Centre (CUHKMC) representative(s)
“approved”	shall mean approved in writing by the Maintenance Surveyor but this approval shall not relieve the Contractor from responsibilities imposed by the Term Contract.
“described”	shall mean described in the Specification and all current amendments (if any) issued thereto.
“ditto”	shall mean the whole of the work described in detail in the preceding item, except as qualified in the description in which it occurs.
“origin”	shall mean the place or country where the material (which shall be natural material only) is originally produced.
“proprietary”	shall mean a proprietary material or product, protected by a patent or registered trade mark ® or a trade mark symbol ™ or similar recognizable trade mark or copyright, that is manufactured and marketed by the owner who has exclusive rights of use, or other material or product that the Contractor could provide authentication documents on its make and origin as required by the Maintenance Surveyor and to his satisfaction.

		"Schedule"	shall mean this Schedule of Rates.
		"specified"	shall mean specified in the Specification and all current amendments (if any) issued thereto.
		"submission"	shall mean the submission of all documents like design, calculation, working drawings, shop drawings, records, etc. as required in the Special Conditions to each Section of the Schedule including obtaining the approval of the Maintenance Surveyor on the submission.

"Term Contract" shall mean the Contract referring this Schedule as forming part of the Contract.

Abbreviations

"exc."	shall mean exceeding.
"n.e."	shall mean not exceeding.
"c/w"	shall mean complete with.
"xx - yy"	shall mean a range of dimensions exceeding the first dimension as stated but not exceeding the second, for example: "1.50 - 3.00" shall mean exceeding 1.50 and not exceeding 3.00.
"bore"	shall mean nominal internal diameter.
"dia"	shall mean nominal diameter.
"mm"	shall mean millimetre.

Abbreviations (Cont'd) **GT.02 (Cont'd)**

"m"	shall mean linear metre.
"m^2"	shall mean square metre.
"m^3"	shall mean cubic metre.
"kg"	shall mean kilogram.
"AL"	shall mean Accredited Laboratory which is an independent body accredited by the Hong Kong Laboratory Accreditation Scheme (HOKLAS).
"B.S."	shall mean British Standard.
"DIN"	shall mean German Institute for Standardization.
"DBH"	shall mean diameter of trunk of tree or plant measured at a height of 1.3 m above ground level.
"EN"	shall mean European Standard.
"FRR"	shall mean fire resistance rating.
"MDF"	shall mean medium density fibreboard.

	"PWL"	shall mean Public Works Laboratories.
	"RSE"	shall mean Registered Structural Engineer.
	"TCP"	shall mean Technically Competent Person.

Methods of measurement **GT.03**

All works including "Supply only of materials" measured and paid for under this Schedule shall be measured in accordance with the conditions and rules detailed herein irrespective of any local or trade customs.

All works shall be measured net as completed or fixed in its place. Due consideration has been made in the Schedule rates for works executed in small quantities, narrow widths, short lengths, isolated patches, repairs, any height or locations above or below ground, difficult positions or confined spaces or any other exceptional circumstances; and no additional payment for such circumstances shall be made except where specifically provided for in this Schedule.

All works of "Supply only of materials" shall be the net quantities specified in a Works Order. No allowance or payment shall be made to the Contractor for small quantities, short lengths, breakage or damage, delivery to store or any designated location as directed by the Maintenance Surveyor or any other circumstance except where specifically provided for in this Schedule.

Any disadvantage which may be entailed by items being performed under exceptional circumstances must be regarded as being offset by other items which may be proven exceptionally advantageous, and due allowance is deemed to have been made in the Contract Percentages.

Overtime **GT.04** Not Available (N/A)

Deductions for voids **GT.05** Not Available (N/A)

Curved or circular works **GT.06** Not Available (N/A)

Works executed by Specialist Sub-contractors, sub-contractors, etc. **GT.07** Not Available (N/A)

Latest standards, specification and drawings **GT.08**

Where materials, workmanship and works are specified in this Schedule to be in conformity with certain British Standards or other International Standards, or to be in accordance with certain Code of Practice, drawings and the like, they shall deem to be referred to

referred to in this Schedule		the latest relevant and equivalent standards and amendments as specified in the Specification; or where no specific dates are stated, they shall deem to be referred to the latest relevant and equivalent standards, specification and drawings current and published before the date of first notice of tender invitation for the Term Contract unless otherwise specified. If conflict occurs between various standards, then the more onerous is to apply. Due allowance is deemed to have been made in the Contract Percentages for complying with these requirements.
Imperial equivalents where required or necessary	**GT.09**	Whenever practicable, the Contractor shall supply materials in metric sizes and execute the works strictly in accordance with the metric dimensions specified. Imperial equivalents may be accepted only when circumstances prohibit compliance with this sub-clause (for example, statutory obligations) or where the Maintenance Surveyor considers it impracticable, undesirable or impossible to use metric sizes or dimensions or when suitable materials are not available in metric sizes. The provision of this sub-clause shall not apply to materials which are specified in this Schedule by their actual manufactured sizes or their metric equivalents (for example, roof tiles, plywood, building boards, p.v.c. pipes, mosaic tiles) or classified in accordance with the relevant British Standards (for example, copper pipes) or other International Standards.

Schedule rates **GR.10** The rates throughout this Schedule shall include for: -

(a) All materials supplied, and all works and services executed complying strictly with the Specification as detailed in General Terms and Conditions Clause GT.01 and the provision or execution of all samples of materials or finished works in patterns where required.

(b) Provision of all materials and cutting and wastage on the same, except where otherwise stated, including collection, loading, conveyance, delivery, unloading, stacking, storage of the same, multi-handling between positions as directed on Site and provision of storage accommodation, handling, hoisting, lowering, distributing, etc. to specified location.

(c) Provision of all labour including contributions to Mandatory Provident Fund, paid leave, travelling expenses, lodging allowance or living accommodation and any other allowances as required.

(d) Provision of all tools, plant, temporary water, power and lighting, watching and work sheds.

(e) All expenses for delivery, distribution or transportation of articles, materials, labour, personnel, tools, plant, work sheds etc. by all means including land, sea or air except otherwise specifically provided for in the Special Conditions of each Section in this Schedule or when specifically required and ordered by the Maintenance Surveyor.

(f) Executing work in any position, location and height unless otherwise stated.

(g) Providing record of photograph, location plan and schedule of existing trees, if any, within and in close vicinity (within 2.00 m) of the site boundary and works areas including protective and preservative works/measures such as tree surgery works, temporary fencing, etc. and the like, allowance for method of operation and vehicular access for tree preservation throughout the period of the Works and removing all temporary protective and preservative works/measures on completion and making good all works disturbed.

(h) Setting up monitor points for controlling noise, vibration, settlement and lateral movement imposed on adjoining properties including provision of equipment, technical and supervisory personnel carrying out daily monitoring and submission of records as directed by the Maintenance Surveyor.

(i) Providing and maintaining temporary access and road and making good to match existing.

(j) Providing and maintaining temporary drainage system and making good to match existing.

(k) Provision of drawings including shop drawings and/or as built drawings, and operation and maintenance manuals, and carrying out tests on samples or finished works including the submission of test reports and test certificates to the satisfaction of the Maintenance Surveyor; unless specifically provided otherwise in the Schedule.

(l) Allowance for the works to be executed by Specialist Sub-contractors, Maintenance Surveyor's approved sub-contractors and applicators where required in the Specification, or as stated in the Special Conditions of each Section of the Schedule.

(m) Carrying out tests by the Public Works Laboratories (PWL) or by an independent body accredited by the Hong Kong Laboratory Accreditation Scheme (HOKLAS) (hereinafter referred to as the "Accredited Laboratory") (AL) including provision and submission of sampling and analysis methodology to the Maintenance Surveyor for approval prior to conducting any tests. The testing laboratories to be engaged by the Contractor shall be approved by the Maintenance Surveyor. The testing laboratories shall submit test results directly from the laboratory to the Maintenance Surveyor in sealed envelopes.

(n) Conducting compliance tests on structural works by the PWL/AL. The testing laboratories to be engaged by the Contractor shall be approved by the Maintenance Surveyor. The testing laboratories shall submit test results directly from the laboratory to the Maintenance Surveyor in sealed envelopes.

(o) Certification including the employment of independent certification bodies wherever required or necessary.

(p) Provision, erection, maintenance, alteration, dismantling and clearing away of the following temporary works and protective measures that are required for the execution and completion of the Works unless specifically provided otherwise in the Schedule : -

(i) All bamboo, metal or proprietary scaffolding, staging, ladders, trestles, cradles, gondolas, platforms and similar items complete with all netting, coverings, screens, dust sheets, barricades, catch-fans, protective canopies, etc.;

(ii) All types of hoardings and walkways complete with gateways, adequate lighting, associated power supply and electrical work as required by the Maintenance Surveyor including the types of hoardings and walkways (including internal metal/aluminium hoardings) referred to in Section 10 - Steel and Metal Work of this Schedule and other proprietary hoardings and walkways systems, and the submission of detailed drawings together with supporting calculations certified by TCP or RSE for approval and provision of operation manuals of other proprietary hoardings and walkways systems; and

(iii) Similar temporary measures including but not limited to protective shield coverings, fences, barriers and the like and/or other protective measures specifically covered by the Special Conditions of each Section in this Schedule, and the erection, alteration and dismantling of such temporary measures on a daily basis where required by the Maintenance Surveyor for all necessary protection to new works and the public from harm, dust or nuisance.

(q) Clearing away debris, surplus materials or other materials arising from the works and leaving the works and areas affected by the works clean and tidy on completion to the satisfaction of the Maintenance Surveyor.

(r) Provision of mechanical dump truck covers in accordance with Particular Specification for Mechanical Dump Truck Covers.

(s) All superintendence, establishment charges, overhead, expenses and profit.

(t) Any cost and/or expenses incurred for carrying out the works at all times including working outside normal working hours as provided in General Terms and Conditions Clause GT.04.

(u) Any costs and/or expenses in supplying materials or products to match existing works, finishes or systems when instructed by the Maintenance Surveyor, except when such materials or products are not specifically mentioned in this Schedule.

(v) Any other expenses incurred in conforming with the Term Contract.

(w) Reinstatement and making good surfaces disturbed.

(x) Imperial equivalents wherever required or necessary.

(y) All work, services and obligations for or related to ensuring that all workers involved in site works wear site uniform when they are on the site as prescribed in the Term Contract. There shall be no measurement or separate payment for any of such work, services and obligations.

(z) The provision of implementation of and compliance with the Sub-contractor Management Plan (SMP) including submission and quarterly updating of SMP in the form and contents as prescribed in the Term Contract. There shall be no separate items in this Schedule for measurement of "complete Sub-contractor Management Plan" and "quarterly updating of Sub-contractor Management Plan".

(aa) The provision of implementation of and compliance with the Mandatory Construction Tradesman Collaborative Training Scheme (CTS) including submission and quarterly updating of training plan in the form and contents as prescribed in the Term Contract. There shall be no measurement or separate payment for any of such work, services and obligations.

Where the Contractor considers any of the rate contained in the Schedule is insufficient or inadequate, the Contractor is deemed to have made all necessary allowances in the Contract Percentages adjustment and/or in any other priced items in the Term Contract for executing the works as contained in the Schedule and in compliance with all requirements as stipulated in the Term Contract.

Schedule rates and application of Contract Percentages **GT.11**

The Schedule rates in this Schedule are derived from the basic rates of provisions of labour, materials, plant and all other provisions as stated in this Schedule including adjustments made to the basic rates giving due consideration of factors including market trends, trade practices and the management efficiency and bidding strategies of contractors as reflected in the past term contracts procurement.

The Schedule rates also take into account conditions under which term contracts works are executed, which may include but not be limited to works executed in small quantities or large quantities, narrow widths, short lengths, isolated patches, repairs, any height or locations above or below ground, difficult positions or confined spaces or any other exceptional circumstances of the works.

Schedule rates and application of Contract Percentages (Cont'd)

GT.11 (Cont'd)

The Schedule rates shall apply to the valuation of works instructed by the Maintenance Surveyor, and in all cases, the Schedule rates to be paid for the works shall be determined and applied before applying any relevant Contract Percentages.

The Contract Percentages including any percentage addition/adjustment as priced and included in the Contract shall include the Contractor's profits and overheads, attendance, all costs and expenses incurred in connection with the Works and are necessary in fulfilling the requirements of the Term Contract where they are not separately itemized or stated in this Schedule, including the works or services assessed under proportional rate items, star rate items and re-applicable rate items.

Rates for items not specifically mentioned in this Schedule

GT.12

Rates for items not specifically mentioned in this Schedule shall be valued as follows : -

(a) Proportional rate

When an article, a material, workmanship or service is of similar form, character or quality to that detailed in the Schedule or executed under similar conditions and circumstances as described therein, then at a rate equal to a Schedule rate but with a fair adjustment for the difference in form, character and quality or in conditions and circumstances, and such rate to be agreed upon between the Maintenance Surveyor and the Contractor.

Such proportional rate shall be subject to relevant Contract Percentages adjustment.

(b) Star rate

When an article, a material, workmanship or service is not of similar form, character or quality to that detailed in the Schedule or not executed under similar conditions and circumstances as described therein, or when work or material of any kind which is not detailed in the Schedule, then at a reasonable rate to be agreed upon between the Maintenance Surveyor and the Contractor.

Such star rate shall not be subject to relevant Contract Percentages adjustment unless otherwise specifically stated.

(c) Re-applicable rate

A rate fixed in accordance with the Term Contract requirements and to be re-applicable in any other Works Orders as approved by the Maintenance Surveyor for the whole duration of the Term Contract and not subject to adjustment of fluctuation and Contract Percentages adjustment.

Materials supplied by Government or other designated suppliers

GT.13

When materials are supplied to the Contractor by Government or other designated suppliers, no allowance shall be made to the Contractor other than the payment for “Fix only” (“Lay only” or “Set only”, etc.) as detailed under the appropriate items of this Schedule.

"Supply only" **GT.14**

The term "Supply only" used throughout this Schedule shall mean the provision complete by the Contractor of an article, a fitting or a material. The rates for such items shall include for, where applicable, obtaining and taking delivery of the articles, fittings or materials, transporting by land, sea, or air to sites or Government stores or other designated locations as directed by the Maintenance Surveyor, and all necessary off-loading and moving into sites, Government stores or other designated locations.

The rates listed in the "SUPPLY ONLY OF MATERIALS" in each Section of this Schedule shall include all the foregoing charges and allowance for replacement of materials damaged during delivery to sites, off-loading and moving into sites, Government stores or other designated locations as directed by the Maintenance Surveyor.

"Take down ("Take up" or "Take out", etc.) and clear away" **GT.15**

The term "Take down ("Take up" or "Take out", etc.) and clear away" used throughout this Schedule shall mean execution complete by the Contractor of the work of taking down, taking up or taking out of an existing article, fitting or material either in whole or in part and removing from Site and disposing of the same. The rates for such items shall include for all or any of the following : -

(a) Works executed by skilled labourers of the required trades, unless specifically provided otherwise in the Schedule.

(b) Payment of all fees and charges.

(c) Taking down, taking up or taking out of the articles, fittings or materials either in whole or in part together with any associated plugs, holdfasts, lugs, brackets and other fixings and all necessary cutting out and disposal.

(d) Making good any works disturbed and any damage to surrounding surfaces and filling up all mortices, holes, etc. or alternatively leaving the same open and clean to receive readily new articles, fittings or materials.

(e) Reinstatement and making good surfaces disturbed.

(f) Preparing edges, ends or surfaces of remaining materials to receive junctions with new.

(g) Taking up or removing covers, access doors, etc. and the like for the execution of the works and re-fixing the same on completion.

The articles, fittings, or materials taken down shall become property of the Contractor. Unless otherwise specified, due allowance for credits has been considered in the Schedule rates where applicable.

"Take down ("Take up" or "Take out", etc.) and set aside for re-use" **GT.16**

The term "Take down ("Take up" or "Take out", etc.) and set aside for re-use" used throughout this Schedule shall mean execution complete by the Contractor of the work of taking down, taking up or taking out of an existing article, fitting or material either in whole or in part and setting the same aside on site or transporting to Government stores or other Government sites for subsequent re-use. The rates for such items shall include for all or any of the following : -

(a) Works executed by skilled labourers of the required trades, unless specifically provided otherwise in the Schedule.

(b) Payment of all fees and charges.

(c) Carefully taking down, taking up or taking out of the articles, fittings or materials together with associated plugs, holdfasts, lugs, brackets and other fixings and all necessary cutting out and disposal.

(d) Thoroughly cleaning, oiling and adjusting the articles, fittings or materials ready for re-use, dismantling, re-assembling again as necessary, moving and stacking or putting into stores on sites or alternatively loading, transporting, unloading and moving to Government stores or other Government sites.

(e) Making good any works disturbed and any damage to surrounding surfaces and filling up all mortices, holes, etc. or alternatively leaving the same open and clean to receive readily re-used or new articles, fittings or materials.

(f) Reinstatement and making good surfaces disturbed.

(g) Preparing edges, ends or surfaces of remaining materials to receive junctions with re-used or new.

(h) Repairing or replacing at Contractor's own cost any damage caused to the articles, fittings or materials during taking down, taking up, taking out, etc. and transit.

(i) Taking up or removing covers, access doors, etc. and the like for the execution of the works and re-fixing the same on completion.

"Fix only" ("Lay only" or "Set only", etc.) **GT.17** The term "Fix only" ("Lay only" or "Set only", etc.) used throughout this Schedule shall mean execution complete by the Contractor of the work of fixing, laying, setting, jointing, re-fixing, re-laying, re-setting and re-jointing an article, a fitting or a material made available free of charge to the Contractor by Government or it has been previously taken down. The prior taking down of the existing articles, fittings or materials shall be measured separately and paid for at the appropriate rates under applicable Sections of this Schedule. The rates for such items shall include for any or all of the following : -

(a) Works executed by skilled labourers of the required trades, unless specifically provided otherwise in the Schedule.

(b) Payment of all fees and charges.

(c) Taking delivery of the articles, fittings or materials at Government stores or other designated suppliers, loading, transporting to sites, unloading, checking and examining the same and storing on sites and returning any crates and other packings to Government stores, if required.

(d) Taking the articles, fittings or materials from stores on sites, sorting, cutting and fitting, fabricating, assembling, moving, hoisting, distributing at locations, fixing, laying, setting, jointing, re-fixing, re-laying, re-setting and re-jointing in new or existing work, opening or position.

(e) Providing all fixing and jointing materials such as nails, bolts, nuts, washers, screws, gaskets, mastic, adhesive, mortar and the like or other fixing and jointing materials made available from taking down.

(f) Executing all plugging and screwing, jointing, cutting all mortices and grouting the same, and executing all cutting, fitting, easing or adapting necessary to the articles, fittings or materials to the positions in which the same are to be fixed, and oiling and leaving in good working order.

(g) Making good any damage caused to the articles, fittings or materials and surrounding surfaces and making good new or existing finishes up to the same.

(h) Reinstatement and making good surfaces disturbed.

When the articles, fittings or materials despite having been taken down from another positions and set aside for re-use or having been delivered by Government or other designated suppliers or their agents are made available on site, no deduction shall be made from the rates of "Fix only"("Lay only" or "Set only", etc.) for transporting the said articles, fittings or materials to Site.

Built up fittings or composite units **GT.18**

The rates for "Take down and clear away", "Take down and set aside for re-use" and "Fix only" are not intended to cover built up fittings or composite units, i.e. fittings or units that are fabricated and can be moved in their entirety or broken down into fabricated components. These items are to be measured as the appropriate items in the respective Sections unless otherwise provided in this Schedule.

Nominated Sub-contractors' accounts **GT.19**

When works are carried out by Nominated Sub-contractors and facilities for the execution of such works are afforded to the Nominated Sub-contractors by the Contractor and accounts for such works are paid by the Contractor in accordance with the Conditions of Contract, the percentage addition allowed to the Contractor on the net cost of such works shall be as that contained in the Form of Tender for "Profit and Attendance on Nominated Sub-contractors' Works".

"Making good" **GT.20**

The term "Making good" shall be understood as including all labour and materials necessary to bring the disturbed area to the same appearance, colour, texture, etc., in the same materials as the surrounding work and shall include for painting, colouring and/or varnishing any new work to match the surrounding existing work to the entire satisfaction of the Maintenance Surveyor.

Daywork **GT.21**

When daywork is ordered by the Maintenance Surveyor, measurement of daywork shall be made according to the Special Conditions set out in Section 17 - Labour and Section 18 Temporary Plant and Facilities of this Schedule.

"Utility Connection And Pavement Works" **GT.22**

The term "Utility Connection And Pavement Works" shall mean the works of drainage connection, water supply connection, construction of run-in and reinstatement of footways

GT.22

(Cont'd)

which shall be executed complete by contractors selected and employed by the Contractor from the "List of Approved Contractor for Public Works in Group A, B or C for Road & Drainage Works" for the drainage connection and construction of run-in and reinstatement of footways and from the "List of Approved Contractors for Public Works in Group A, B or C for Waterworks" for the water supply connection work.

When Utility Connection and Pavement Works are required to be executed under the Term Contract and are ordered specifically by the Maintenance Surveyor for such purpose, the Contractor shall be reimbursed a lump sum fee payment as included in Item 03062 in Section 03 – Excavation of this Schedule for compliance with the requirements stated herein and as provided in the Term Contract for the Utility Connection and Pavement Works. This lump sum fee payment is an allowance made for all costs and expenses other than the valued works executed in connection with the Utility Connection and Pavement Works under the relevant Sections in this Schedule, and shall include for the following : -

(a) Complying with the requirements and procedures in connection with the Utility Connection And Pavement Works specified in the Particular Specification referred to in the Term Contract and submitting assessments and reports as required.

(b) Liaising with the relevant authorities and utility companies, preparing and submitting relevant drawings, programmes and documents and completing all the forms in connection with the Utility Connection And Pavement Works.

(c) Submitting all the detailed particulars in connection with the granting of an Excavation Permit [Note : Excavation Permit means any excavation permit issued by the Government in respect of the Utility Connection And Pavement Works under Section 8 of the Land (Miscellaneous Provision) Ordinance] as required by the Maintenance Surveyor.

(d) Obtaining approvals and permits from relevant utility companies or Government departments.

(e) Complying with the conditions of any Excavation Permit applicable to the Utility Connection And Pavement Works.

(f) Providing and maintaining temporary road or access where required for pedestrian and vehicular traffic diversions and subsequent clearing away after completion of the Works.

(g) Providing and maintaining traffic control.

(h) Locating and protecting existing services.

(i) Carrying out all necessary site inspections (including handing over inspections) jointly with the relevant authorities and utility companies.

(j) Provision of identification tapes along the water connection mains.

(k) Cleaning and sterilization of fresh water mains for making connections.

(l) Provision of as built drawings and test reports as specified.

(m) Protection of curbs, masking and unmasking of drainage channels, manhole covers, gully gratings, expansion joints, road studs and road marking.

(n) Provision, maintenance and removal of all measures to maintain traffic flow including labour and temporary traffic diversion lighting and signs and paying all charges incurred.

(o) Provision, maintenance and removal of temporary road, walkway, covers to trenches and the like.

(p) Making good all surfaces, features, etc. and the like disturbed by all temporary road, access, traffic control, pedestrian footway, etc. and the like to match existing and including all requirements as stipulated in the Term Contract for carrying out the Utility Connection and Pavement Works.

This lump sum fee payment shall only be paid once for each location specified in the Works Order. Works executed in connection with the Utility Connection and Pavement Works shall be measured separately in accordance with the General Terms and Conditions and the Special Conditions of the relevant Sections in this Schedule.

Submission of measurement and accounts **GT.23** All quantities shall be measured and rounded to the nearest two decimals of a unit.

Materials/ Products **GT.24** All materials/products shall generally be based on the corresponding properties and/or performance standards as stipulated in the Specification (as defined in General Terms and Conditions Clause GT.01(d) herein) and/or as set out in this Schedule.

Where materials, products or works in this Schedule are stipulated as "proprietary", "approved", of "specific quality" or by their origins of which properties and/or performance standards are specified without their brand names, authentication documents on such materials, products or works including certificates of origins, technical literature and catalogues, test certificates and/or compliance test reports, manufacturers' guarantees or warranties, samples and mock-ups of these materials, products or works together with other documents required by the Maintenance Surveyor should be submitted or provided for the Maintenance Surveyor's written approval before purchase, delivery and execution. If any of these materials, products or works delivered or executed without the Maintenance Surveyor's prior written approval, or are not carried out to the Maintenance Surveyor's satisfaction, they should be removed or reinstated by the Contractor at his own expenses. The Maintenance Surveyor may also adjust this payment to the Contractor in accordance with General Terms and Conditions Clause GT.26.

For all materials, products and works within the definition of "proprietary" in General Terms and Conditions Clause GT.02, the Contractor, if required by the Maintenance Surveyor, shall provide a certificate of patent or registered trade mark or copy right; or provide authentication documents like the make or origin of the materials or products, test reports, test certificates, operation and maintenance manuals, warranties and manufacturer's guarantees and any other document that could provide the authentication to the same effect; and provide local project reference to demonstrate that the materials, products and works have proven track record of similar application, all to the satisfaction of the Maintenance Surveyor. The Contractor shall further be required to have specific proprietary materials/products/works executed by approved sub-contractors/applicators and submit technical literature, method statements, etc. where required by the Maintenance Surveyor or as stated in the Term Contract.

Due allowance is deemed to have been made in the Contract Percentages for complying with all of the above requirements.

Materials/Products specified as **GT.25** Certain materials/products in this Schedule are stipulated as of “specific quality”. These shall generally be materials/products of significance, such as those that are safety critical, prestigious

“specific quality”

in nature, or such are required to create a specific visual impact to the completed works, or are critical to the completed works from their functionality, operation and maintenance perspectives that the quality of such materials/products exceeds the requirement generally stated in the General Specification and in the Term Contract.

The Contractor shall provide authentication of documentary evidence and proof including those specified in this Clause and General Terms and Conditions Clause GT.24 herein to identify and justify the properties and/or performance standards of "specific quality" of the subject materials/products are generally of higher quality than that specified in the General Specification and the requirements as stated in the Specification of the Term Contract, for the

		Maintenance Surveyor's approval. Such proof may include carrying out appropriate quality tests to verify the quality of the subject materials/products is of quality higher than that specified in the General Specification, or obtaining certification from an independent testing authority/expert (to be approved by the Maintenance Surveyor) confirming of such specific quality. Due allowance is deemed to have been made in the Contract Percentages for complying with all of the above requirements.
Payment for materials/products	**GT.26**	Throughout this Schedule and including items valued under General Terms and Conditions Clause GT.12, the payment of materials/products shall generally be assessed according to the corresponding properties or performance standards as set out in this Schedule (with reference to the Specification) regardless of whether the materials/products are specified with brand names or referred as "proprietary", "approved", of "specific quality" or by their origins, or not. The onus of proof is vested with the Contractor to identify the origins, properties and/or performance standards of materials/products used in the works corresponding to those set out in this Schedule (with reference to the Specification) and/or approved or accepted by the Maintenance Surveyor, and to provide the necessary documentary evidence and authentications including but not limited to certificates of origins, certificates of patent, registered trade marks or copy rights, local job references to demonstrate that the materials, products and works have proven track records of similar applications, technical literature and catalogues, test certificates and/or compliance test reports, manufacturers' guarantees or warranties, sub-contractors' or applicators' warranties and the like of the materials/products specified or approved all to the satisfaction of the Maintenance Surveyor, and for use by the Maintenance Surveyor for payment of the corresponding materials/products as set out in this Schedule. In the absence of any documentary evidence and authentications that are required to demonstrate the conformity or compliance of the materials/products/works with the respective "proprietary", "approved", of "specific quality", origins or brand names, the assessment of such materials/products/works may be based on the basic costs of the materials/products/works that are available in the Schedule as ascertained by the Maintenance Surveyor, or otherwise the Maintenance Surveyor shall withhold or deduct the value of such materials/products/works that are not being carried out to his satisfaction from the final value of the works.
Adjustment to unit rates exceeding $99,999.99	**GT.27**	(N/A)
Application of Schedule rates	**GT.28**	(N/A)

Section 27

ELECTRICAL INSTALLATION -

LIGHTING SYSTEM AND FIXTURES

SECTION 27

ELECTRICAL INSTALLATION

SPECIAL CONDITIONS

(Note: The following special conditions shall apply equally where appropriate to rates under Sections 27 to 30)

Measurement of conduits and flexible conduits	**SC27.01**	Conduits and flexible conduits shall be measured the net length as fixed in linear metres over all conduit fittings, boxes and short running lengths.
Measurement of trunkings, trays and ladders	**SC27.02**	Trunkings, trays and ladders shall be measured the net length as fixed in linear metres over all fittings, short running lengths and branches.
Measurement of cables	**SC27.03**	Cables shall be measured the net length as fixed in linear metres between equipment, control gear, fittings, accessories and the like.
Measurement of excavations, cable ducts, chases, holes and other subsidiary work	**SC27.04**	All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All cable ducts shall be measured separately and paid for at the appropriate rates under Section 12 - Roadwork and Cable Duct of this Schedule. All chases in, and holes through existing walls, ceilings and similar for cables, conduits etc. shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork or other applicable Work Sections of this Schedule. Special concrete marker blocks specifically ordered in writing by the Maintenance Surveyor shall be measured separately and paid for at the appropriate rates under the applicable Works Sections of this Schedule.
Measurement of power supply for bedhead trunking system and staff/ emergency/ nurse call system	**SC27.05**	All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the bedhead trunking system and staff/ emergency/ nurse call systems shall be measured separately and paid for at the appropriate rates under these Sections 27 to 30 or other applicable Work Sections of this Schedule.
Measurement of control panel for bedhead trunking system and staff/ emergency/ nurse call system	**SC27.06**	The interconnecting cables and the cable containment for the control panel connecting to external equipment or existing panel shall be measured separately.

SPECIAL CONDITIONS

Measurement of simplified items

SC27.07

(1) Simplified items included in Section 27 shall apply to : -

(a) Lighting points commencing from the loadside of the over-current protection device (e.g. MCB) or existing lighting switch/ lighting fitting.

(b) Lighting switch points commencing from the loadside of the over-current protection device (e.g. MCB) or existing lighting fitting and lighting switch.

(c) Daylight sensor points/ occupancy sensor points/ motion detector points commencing from the loadside of the over-current protection device (e.g. MCB) or existing lighting switch/ fitting.

(2) Simplified items included in Section 28 shall apply to : -

(a) Power points commencing from the loadside of over-current protection device (e.g. RCBO) or adjacent power outlet.

(b) Telephone points commencing from the telephone distribution room on the same floor.

(c) LAN nodes commencing from the server, hub, cabinet, switches, equipment rack or router on the same floor.

(d) Service outlet points (e.g. broadcast and satellite reception, audio-visual, public address) commencing from the cabinet, equipment rack or distribution splitter on the same floor.

(e) Door bell points commencing from the loadside of over-current protection device (e.g. RCBO) or existing door bell/ push button.

(3) Any point containing a socket outlet (single or twin), a power connection unit, a power switch controlling socket outlet/ power connection unit and the like shall be measured as a power point. Any power point for power switch controlling socket outlet/ power connection unit shall be measured in accordance with the rating of its controlled socket outlet and rating of protection fuse of power connection unit no matter its rating is larger than the socket outlet/ power connection unit except the connection unit with cables of conductor size 2.5 mm^2 with ring final circuit arrangement shall be measured as a 13A power point.

(4) Cabling and wiring facilities for fan regulators shall not be measured as a power point.

(5) Any power points, telephone points, LAN points and service outlet points being fixed to floor outlet box/ trunking service box shall be measured as simplified items. Floor outlet box or trunking service box shall be measured separately.

(6) Simplified items shall be adopted unless otherwise specifically ordered in writing by the Maintenance Surveyor.

(7) Additional payment for Items 27990 to 27997 and Items 28549 to 28576 inclusive for provision of circuit protective conductors to grid switch shall be measured according to the number of final circuits.

SPECIAL CONDITIONS

Measurement of periodic inspection, testing and certification of electrical installation

SC27.08

Testing and inspection of electrical installation for the whole premises to comply with the statutory requirements shall be paid for at the appropriate single rate in accordance with the installed rating of outgoing switch of the switchboard or cut-out switch comprising rising mains and feeder circuits in single-phase or three-phase, except for small premises without switchboard or cut-out switch in which case the appropriate single rate for the installed rating shall apply. The testing of the sub-main circuit, final circuit, external mounted IDMT relay and testing of the main L.V. switchboard shall be measured separately and paid for at the appropriate rates under Section 30.

Measurement of temporary supply

SC27.09

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

Rates generally

SC27.10

The rates for all items shall generally include for : -

(a) Colour band and colour identification work.

(b) Lettering and engraving for identification, signs, labels in both English and Chinese.

(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.

(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.

(e) All protective coating or finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.

(f) Any kind of fixing method including drilling of the background and provision of fixings, hangers, brackets, supports, saddles, nails, screws, nuts, bolts, shims, washers, plugs, shotfired pins, spring compensated and seismic restraints and isolated components and the like.

SPECIAL CONDITIONS

Rates generally (Cont'd) **SC27.10 (Cont'd)**

(g) Provision of fire stopping as required.

(h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.

(i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.

(j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.

(k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.

(l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.

(m) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.

(n) Provision of framed schematic diagrams c/w clear plastic front sheet and wooden back plate including fixing to wall.

(o) Provision of manufacturer's guarantee.

(p) Submission of sample board for all compact sized materials and accessories, and supply of samples of materials for testing (including testing to destruction).

Where an equipment or item requires identification by lettering , engraving, sign, label, etc., 25 per cent of the value of the appropriate item will be deducted for non-provision of the required lettering, engraving, sign, label, etc.

Rates for "Take down and clear away" or "Take down and set aside for re-use" **SC27.11**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with electrical installation shall further include for : -

(a) All in-line fittings including brackets, supports, hangers and the like.

(b) Cutting into existing conduits, trunkings, trays, ladders, cables and the like in position.

(c) Plugging off remaining ends with plugs or caps as required.

(d) Preparing remaining ends of building services works to receive connections with new work if required.

(e) In the case of equipment, lighting fittings, appliances and the like, taking down all associated connecting cables and the like.

(f) In the case of bedhead trunking and staff/ emergency/ nurse call system, taking down all associated building services works.

SPECIAL CONDITIONS

Rates for "Take down and clear away" or "Take down and set aside for re-use" (Cont'd)

SC27.11 (Cont'd)

In the case of fluorescent lighting fittings, the rates for "Fix only" or "Take down and clear away" or "Take down and set aside for re-use" for fittings/ components of the fittings complete with T5 electronic ballasts shall also apply to the similar items complete with LED tube/ T8/ T12 electronic/ magnetic ballasts and starter units.

PART I - ELECTRICAL INSTALLATION

Rates for electrical installation generally

SC27.12

The rates for electrical installation shall further include for : -

(a) Making all necessary arrangements with public electricity supply companies and other public utility companies as may be required.

(b) Connecting supply to and energizing all new or "re-used" fittings including provision of associated materials.

(c) Disconnecting existing supply when existing fittings are taken down and properly sealing off the supply.

(d) Submission of Completion Certificate (Form WR1).

(e) Warning notice for installation having both new and old cable colours.

Rates for conduits and flexible conduits

SC27.13

The rates for conduits and flexible conduits shall further include for : -

(a) Draw wires, draw cable and the like.

(b) Bends, bushes, couplers, adaptors, expansion joints and the like.

(c) All bending, setting, cutting, screwing, threading, jointing and providing all conduit fixings.

(d) All conduit boxes, adaptable junction boxes, covers, and fittings

(e) Provision of all sleeves for casting in or building in where conduits pass through slabs, walls or beams and caulking between conduit and sleeve where required.

(f) Components and the forming of holes for making connections into trunking.

(g) Bonding as specified between adjacent component parts.

(h) Cleaning out and testing of the conduit system for continuity.

(i) Provision of expansion joints in services runs wherever they coincide with structural expansion joints.

SPECIAL CONDITIONS

Rates for trunkings **SC27.14** The rates for trunkings shall further include for : -

(a) All joints in the running lengths and components for bonding.

(b) All cutting and jointing to fittings.

(c) All cutting, drilling, bushing and jointing to equipment or control gear including all necessary connection accessories.

(d) Pin-racks for supporting cables.

(e) Internal fire barriers as required.

(f) Bonding as specified between adjacent component parts.

(g) Covers, cross units, tee units and elbow units

Rates for trays and ladders **SC27.15** The rates for trays and ladders shall further include for : -

(a) Cutting openings as required.

(b) All joints in the running lengths.

(c) All cutting and jointing to fittings.

(d) Pin-racks for supporting cables.

(e) Bonding as specified between adjacent component parts.

(f) Cable ties for securing cables.

SPECIAL CONDITIONS

Rates for cables **SC27.16** The rates for cables shall further include for : -

(a) Laying or fixing in different locations, such as laying in trenches or open ducts, laying on arms or hangers, fixing to cable trays, ladders or other surfaces, drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment, unless specifically provided in this Schedule.

(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.

(c) Making cable-joints.

(d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like.

(e) Components for supporting cables including combination system cable supports, two piece cleats, trefoil cleats, multiway cleats, hangers, channels and the like.

(f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.

(g) Bonding as specified between adjacent component parts.

(h) Provision of lettered or numbered ferrules for 1 core PVC cable at terminations where required for identification.

Rates for cable termination glands **SC27.17** The rates for cable termination glands shall further include for : -

(a) Assembling and mounting.

(b) Insulating material, jointing material, locknuts, bushes, couplers and the like.

SPECIAL CONDITIONS

Rates for fittings and accessories **SC27.18** The rates for fittings and accessories shall further include for : -

(a) All boxes, cover plates, connector blocks, cable terminations, bonding and connecting of cable tails.

(b) All necessary bushes, nipples, locknuts, couplers and the like.

(c) Assembling and fixing in position.

(d) Bonding as specified between adjacent component parts.

Rates for equipment and control gear **SC27.19** The rates for equipment (e.g. motors, fans, starter panels, circuit breakers, batteries, rectifiers and the like) and control gear (e.g. fuse-and-link disconnecting boxes, isolating switches, changeover switches, switch fuses, fused switches, distribution boards, connectors, starters, busbar chambers and the like) shall further include for : -

(a) Connecting cable ends or cable tails to which they are connected.

(b) Coupling to and forming holes for conduit entry.

(c) Links, fuses, gland plates, terminal boxes and the like which form part of the item.

(d) Bonding as specified between adjacent component parts.

(e) Emergency stop buttons.

Rates for lighting fittings **SC27.20** The rates for lighting fittings shall further include for : -

(a) Reflectors, shades, lamps, control gear, ballasts, transformers, light troughs, diffusers and the like.

(b) All connection/ terminal boxes, connector blocks, plugs and connecting of cable tails including all necessary grommets, bushes, nipples, locknuts and the like.

(c) Assembling and fixing in position including all forms of suspensions, supports, safety chains with attachments and the like.

(d) Adjustment, alignment and the like.

(e) Bonding as specified between adjacent component parts.

The rates for "Fix only" or "Take down and clear away" or "Take down and set aside for re-use" for a normal lighting fitting shall also apply to the similar items equipped with the emergency power pack but the emergency power pack shall not be measured separately.

Rates for dimmer switches **SC27.21** The rates for dimmer switchees shall further include for on/ off function.

SPECIAL CONDITIONS

Rates for ventilation fans, air curtains and appliances

SC27.22 The rates for ventilation fans, air curtains and appliances shall further include for : -

(a) All connection/ terminal boxes, connector blocks, plugs and connecting of cable tails including all necessary grommets, bushes, nipples, locknuts and the like.

(b) Assembling and fixing in position including all supporting devices, hangers and the like.

(c) Bonding as specified between adjacent component parts.

(d) Taking down existing power connection units for cable connection and subsequent refixing as required.

Rates for earthing, lightning protection and bonding items

SC27.23 The rates for earthing, lightning protection and bonding items shall further include for : -

(a) Bends, twists and through joints.

(b) Cables and tape connections and junctions including tinning, sweating and provision of any jointing materials, heat, holes, rivets, bolts, nuts, washers and clamps.

(c) Saddles, cleats, clips, holdfasts and the like which form part of the tape and rod conductor items.

(d) Driving electrodes into the ground and connecting electrodes to connectors.

Unless otherwise stated as being included in the items, bonding shall be measured and paid for at the appropriate rates under Sections 27 to 30.

Rates for simplified items

SC27.24 (1) The rates for lighting points/ daylight sensor point/ occupancy sensor points/ motion detector points/ door bell points and lighting switch points shall include the cabling and wiring facilities starting from the over-current protection device or adjacent points as the case may be, complete with cable termination, conduits/ trunking, draw wires, flexible conduits, adaptors, boxes and all necessary accessories. However, MCBs/ RCDs/ RCBOs in the MCB board, lighting fittings, motion sensors, lighting switches door bells and the like shall be measured separately and paid for at the appropriate rates under Sections 27 and 28.

(2) The number of lighting points/ daylight sensor points/ occupancy sensor points/ motion detector points/ door bell points shall be measured as the number of new lighting fittings/ sensors/ door bells installed. Lighting circuits with ELV provision for lighting dimming control, motion sensor control, etc. shall be measured separately.

(3) The number of lighting switch points shall be measured as the number of new lighting switch gang installed. Therefore, the number of lighting switch points for lighting switches and grid switch panel shall be measured as number of gangs installed on the lighting switches and grid switch panel.

SPECIAL CONDITIONS

Rates for simplified items (Cont'd)

SC27.24 (Cont'd)

(4) The rates for power points shall include the cabling and wiring facilities starting from the over-current protection device or adjacent points as the case may be, complete with cable termination, conduits/ trunking, draw wires, flexible conduits, adaptors, boxes and all necessary accessories. The rates for power points shall further include the cabling and wiring facilities from the MCB unit to the contactor/ time switch but exclude the by-pass switch. RCD, contactor and time switch shall not be measured separately as a power point/ lighting point. However, MCBs/ RCDs/ RCBOs in the MCB board, socket outlets, power connection units and the like shall be measured separately and paid for at the appropriate rates under Sections 27 and 28.

(5) The rates for telephone points, LAN points and service outlet points shall include for cabling and wiring facilities starting from the telephone distribution room/ server room/ control point on the same floor complete with conduit/ trunking, draw wires, boxes, blanking plates and all necessary accessories. Each point shall have a starting point and an end point. In case if there is a ring of multiple end points, one point shall be taken as a common start point. In case different rings are interconnected with each other, the interconnection shall be taken as a new point.

Rates for periodic inspection, testing and certification of electrical installation

SC27.25

The rates provided for the relevant work under periodic inspection, testing and certification of electrical installation shall generally include for : -

(a) Testing, inspection and measuring of electrical installation comprising rising mains, feeder circuits, sub-main circuits, final circuits, protective conductors, earthing facilities, power supplies to all communal services of the premises and all necessary testing and inspection to satisfy the requirements as stipulated in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department.

(b) Provision of electrical schematic, test report, test readings and test certificate which should be certified by a Registered Electrical Worker of the appropriate grade of the EMSD.

(c) Submission of duly completed and signed Form WR2.

(d) The testing and inspection, if necessary, to be scheduled in phases and/ or arranged in non-office hours/ night time/ on Sundays and holidays, to suit the allowable working schedule for such work of the premises as advised by the premises management office or the occupants of the premises or per the instruction given by the project officer.

SPECIAL CONDITIONS

Rates for periodic inspection, testing and certification of electrical installation (Cont'd)

SC27.25 (Cont'd)

For the purpose of assessment of the payment for periodic inspection, testing and certification of electrical installation under Section 30, the Contractor shall submit to the Maintenance Surveyor a detailed report which shall include, but not limited to, the value of works claimed in the Works Order, photographic records, electrical schematic diagrams, test report and test certificate which should be certified by the Registered Electrical Worker of the appropriate grade of the EMSD and the submission of Form WR2.

For government premises, Form WR2 shall be submitted to the Maintenance Surveyor for record. The Submission of Form WR2 to the EMSD including the endorsement fee shall only be paid for non-government premises with the L.V. switchboard not maintained by the EMSTF, for which WR2 shall be submitted to the EMSD for endorsement.

The Contractor shall submit the format of the report to the Maintenance Surveyor for approval upon commencement of the Contract; once endorsed, the details of the report shall be submitted by the Contractor together with any application for such payment.

In order to justify any payment, the Contractor shall demonstrate that the conditions as laid down in the Special Conditions under Section 27 of this Schedule have been satisfied.

No payment shall be made in respect of any work if the Contractor failed to submit the report, or if the Maintenance Surveyor considers that the work as stated in the report fails to satisfy the Special Conditions under Section 27 of this Schedule.

Rates for Buildings Energy Efficiency Ordinance Submission

SC27.26

(a) In order to fulfill the energy efficiency requirements by the Buildings Energy Efficiency Ordinance, the Contractor is required to appoint a Registered Energy Assessor (REA) at his own cost for the completion and submission of the Form of Compliance - Form EE4 to the EMSD for approval including but not limited to compilation and certification of the required forms and worksheets for the electrical installations, lighting installations and air-conditioning installations, where applicable, including any necessary endorsement fees.

(b) The rates as separately scheduled for the Buildings Energy Efficiency Ordinance submission shall generally include for the preparation of the installation summaries, worksheets, relevant drawings, drawing lists and other supportive documents by the Contractor. The Contractor shall further coordinate with the REA and provide the required information at no extra cost for his submission of the Form of Compliance to the EMSD as required to fulfill the latest requirements of the Buildings Energy Efficiency Ordinance.

SPECIAL CONDITIONS

PART II - BEDHEAD TRUNKING SYSTEM AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM

Rates for bedhead trunking system and staff/ emergency/ nurse call system generally

SC27.27

The rates for bedhead trunking system and staff/ emergency/ nurse call system shall further include for : -

(a) All components and parts building up the system.

(b) Interconnecting wirings and signal cables including conduits and/ or flexible conduits, trunkings, trays, junction boxes and the like necessary to complete the system.

(c) All electricity supply and control circuits from the supply points including cables, wirings, conduits and/ or flexible conduits, trunkings, cable trays, fuses, control boxes and necessary accessories required to energize the system.

(d) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.

Rates for call units

SC27.28

The rates for call units shall further include for push button package, flashlights, flexible cables, flexible conduits and all associated components.

Rates for power supply units

SC27.29

The rates for power supply units for call system shall further include for : -

(a) Uninterruptible power supply system and associated accessories.

(b) Well-ventilated and earthed metal enclosures.

(c) Transformers, fused spur units, termination blocks and the like.

(d) Rectifying, filtering and control circuits and associated accessories.

(e) Circuit protection devices.

(f) All cable and wiring facilities including necessary conduits, trunking and the like.

Rates for control panels

SC27.30

The rates for control panels shall further include for visual indications, audible alarm, indication lamps, switches and the internal wiring of the control panel. The cable and cable containment to external equipment or existing panel shall be measured separately and paid for at the appropriate rates under Sections 27 to 30.

SPECIAL CONDITIONS

PARTICULAR SPECIFICATION

Particular Specification for electrical installation	**SC27.31**	The Particular Specification for electrical installation can be found in the Contract.
Particular Specification for bedhead trunking system and staff/ emergency/ nurse call system	**SC27.32**	The Particular Specification for bedhead trunking system and staff/ emergency/ nurse call system can be found in the Contract.

LAMPHOLDERS

The rates include for the provision of fixing screws and rawplugs of approved sizes and types.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27001	Lampholder, bakelite, batten type, with shade carrier skirt or home office type, shield for all lamp with Edison Screw/ Bayonet cap	42.52	6.66	8.22	21.23	27001
27002	Lampholder, bakelite, cordgrip type, with shade carrier etc. for all lamps with Edison Screw/ Bayonet cap	30.09	4.71	5.86	15.33	27002
27003	Lampholder, porcelain, backplate type, for all lamps with Edison Screw/ Bayonet cap	38.08	6.66	8.22	21.23	27003
27004	Lampholder, porcelain, backplate type, skirted for all lamps with Edison Screw/ Bayonet cap	37.28	6.66	8.22	21.23	27004
27005	Lampholder, bakelite, angle batten type, with home office type, shield for all lamps with Edison Screw/ Bayonet cap	38.23	6.66	8.22	21.23	27005
27006	Lampholder, brass, threaded for all lamps with Edison Screw/ Bayonet cap	53.00	6.66	8.22	21.23	27006
27007	Lock ring for lampholder	10.65	2.05	2.44	6.25	27007
27008	Wedge lampholder for B.C. lamps	10.72	2.29	2.80	7.06	27008
27009	Lampholder for high pressure sodium type lamps (all types)	191.28	16.19	20.06	55.20	27009
27010	Ditto but for low pressure sodium type lamps (all types)	89.92	11.40	14.07	39.31	27010
27011	Ditto but for tungsten halogen type lamps (all types)	-	11.40	14.07	39.31	27011
27012	Ditto but for metal halide MBIL type lamps (all types)	201.40	16.19	20.06	55.20	27012
27013	Lampholder for tubular fluorescent lamp (all types)	41.83	4.71	5.86	15.33	27013
27014	Lampholder for compact fluorescent lamp (all types)	47.63	4.71	5.86	15.33	27014
27015	Lampholder for circular fluorescent lamp (all types)	40.53	4.71	5.86	15.33	27015

LAMPS

T5 tubular fluorescent tube, 2700K to 6500K : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27016	549 mm long, 14W	52.24	3.36	4.05	10.19	27016
27017	549 mm long, 24W	61.79	3.36	4.05	10.19	27017
27018	849 mm long, 21W	54.99	3.36	4.05	10.19	27018
27019	849 mm long, 39W	62.74	3.36	4.05	10.19	27019
27020	1149 mm long, 28W	55.31	3.36	4.05	10.19	27020
27021	1449 mm long, 35W	58.30	4.01	4.67	11.14	27021
27022	1449 mm long, 49W	78.18	4.01	4.67	11.14	27022
27023	1149 mm long, 54W	64.06	4.01	4.67	11.14	27023
27024	1449 mm long, 80W	78.18	4.01	4.67	11.14	27024

LAMPS (CONT'D)

LED lighting tube, suitable for T5/ T8 lighting panel with length : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27025	Up to 600 mm long, min. lumen output 800 lm each tube	117.06	3.36	4.05	10.19	27025
27026	600 - 900 mm long, min. lumen output 1200 lm each tube	119.35	3.36	4.05	10.19	27026
27027	900 - 1200 mm long, min. lumen output 1600 lm each tube	121.64	3.36	4.05	10.19	27027
27028	1200 - 1500 mm long, min. lumen output 2000 lm each tube	195.89	4.01	4.67	11.14	27028
27029	High output T5 LED tube for electronic high frequency control gear, 26W, min. lumen output 4000lm each tube	369.14	4.01	4.67	11.14	27029

Circular fluorescent lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27030	22W	35.52	4.69	5.86	15.20	27030
27031	32W	38.85	4.69	5.86	15.20	27031
27032	40W	55.26	4.69	5.86	15.20	27032
27033	60W	60.83	4.69	5.86	15.20	27033

LAMPS (CONT'D)

Compact fluorescent lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27034	2 pin single turn, 5/ 7W	24.45	2.29	2.80	7.02	27034
27035	Ditto but 9/ 11W	27.29	2.29	2.80	7.02	27035
27036	2 pin double turn, 10/ 13W	41.32	2.29	2.80	7.02	27036
27037	Ditto but 18/ 26W	51.47	2.29	2.80	7.02	27037
27038	4 pin biaxial long turn, 18/ 24/ 34W	74.04	2.29	2.80	7.02	27038
27039	Ditto but 36/ 40/ 55W	74.04	2.29	2.80	7.02	27039
27040	4 pin double turn, 10/ 13W	53.55	2.29	2.80	7.02	27040
27041	Ditto but 18/ 26W	60.92	2.29	2.80	7.02	27041
27042	2 or 4 pin triple turn, 13/ 18/ 26W	105.99	2.29	2.80	7.02	27042
27043	4 pin triple turn, 32/ 42W	121.78	2.29	2.80	7.02	27043
27044	2 pin 2D compact fluorescent lamp	58.14	2.29	2.80	7.02	27044
27045	Ditto but 4 pin 28/ 38/ 55 W	93.23	2.29	2.80	7.02	27045

Incandescent lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27046	15/ 25/ 40/ 60W, B15/ B22/ E14/ E27 cap, 35 mm diameter candle type or 45 mm diameter golf ball type lamps	-	1.36	2.70	5.13	27046
27047	25/ 40/ 60/ 100W, G.L.S. lamp B15/ B22/ E14/ E27 cap, with clear, pearl or colour finish	-	1.36	2.70	5.13	27047
27048	150W/ 200W, G.L.S. lamp G.E.S. cap, clear or pearl finishes	-	2.29	2.86	7.11	27048

Halogen lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27049	Dichroic lamp; in any power rating	-	2.29	2.86	7.11	27049
27050	Aluminium reflector lamp; in any power rating	-	2.29	2.86	7.11	27050
27051	Reflector lamp (spot/ flood/ wide flood); in any power rating	-	2.29	2.86	7.11	27051
27052	Single-end/ double-end; in any power rating	-	2.29	2.86	7.11	27052

LAMPS (CONT'D)

Induction lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27053	Up to 60W	737.25	2.29	2.86	7.11	27053
27054	60 - 80W	908.38	2.29	2.86	7.11	27054
27055	80 - 120W	1,079.51	2.29	2.86	7.11	27055
27056	120 - 200W	1,422.06	2.29	2.86	7.11	27056

Low pressure sodium lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27057	26/ 35W	268.68	9.02	10.94	27.13	27057
27058	35/ 55W	282.10	9.02	10.94	27.13	27058
27059	66/ 90W	385.27	9.02	10.94	27.13	27059
27060	90/ 135W	399.74	9.02	10.94	27.13	27060

LAMPS (CONT'D)

Metal halide lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27061	35W reflector - ceramic	527.55	9.02	10.94	27.13	27061
27062	70/ 150W double-end compact	167.86	9.02	10.94	27.13	27062
27063	250W double-end compact	830.32	9.02	10.94	27.13	27063
27064	400W double-end compact	864.48	9.02	10.94	27.13	27064
27065	70/ 150W double-end compact - ceramic	399.65	9.02	10.94	27.13	27065
27066	70/ 150W single-end compact	214.71	9.02	10.94	27.13	27066
27067	200W single-end compact	420.25	9.02	10.94	27.13	27067
27068	35/ 70W single-end compact - ceramic	448.32	9.02	10.94	27.13	27068
27069	150W single-end compact - ceramic	462.69	9.02	10.94	27.13	27069
27070	70W MBIF, elliptical coated	348.86	9.02	10.94	27.13	27070
27071	100/ 250W MBIF, elliptical coated	358.91	9.02	10.94	27.13	27071
27072	400W MBIF, elliptical coated	396.81	9.02	10.94	27.13	27072
27073	250W tubular clear	333.43	9.02	10.94	27.13	27073
27074	400W tubular clear	351.90	9.02	10.94	27.13	27074
27075	1000W tubular clear	1,011.40	10.98	13.64	37.40	27075
27076	750W MBIL double-end	539.80	10.98	13.64	37.40	27076
27077	1500W MBIL double-end	1,150.44	10.98	13.64	37.40	27077
27078	2000W MBIL double-end	2,285.91	10.98	13.64	37.40	27078
27079	70/ 150W compact metal halide	465.99	9.02	10.94	27.13	27079
27080	1000W compact metal halide	1,907.09	10.98	13.64	37.40	27080

High pressure sodium lamp (Standard) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27081	50/ 70W SON-E	167.52	9.02	10.94	27.13	27081
27082	70W SON-I/ SON-T	181.67	9.02	10.94	27.13	27082
27083	100W SON-E/ SON-T	210.34	9.02	10.94	27.13	27083
27084	110/ 150W SON-E/ SON-T	222.36	9.02	10.94	27.13	27084
27085	250W SON/ SON-T	232.58	9.02	10.94	27.13	27085
27086	400W SON/ SON-T	236.16	9.02	10.94	27.13	27086
27087	1000W SON-T	904.38	9.02	10.94	27.13	27087

LAMPS (CONT'D)

High pressure sodium lamp (Special) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27088	50/ 70W high lumen output	200.97	9.02	10.94	27.13	27088
27089	100/ 150W high lumen output	236.88	9.02	10.94	27.13	27089
27090	250/ 400W high lumen output	252.35	9.02	10.94	27.13	27090
27091	150W colour temperature not less than 2150K	290.16	8.99	10.93	27.12	27091
27092	250W colour temperature not less than 2150K	351.63	8.99	10.93	27.12	27092
27093	400W colour temperature not less than 2150K	437.59	8.99	10.93	27.12	27093
27094	35/ 50W WHITE SON	405.91	8.99	10.93	27.12	27094
27095	100W WHITE SON	434.63	8.99	10.93	27.12	27095
27096	150W WHITE SON	468.54	8.99	10.93	27.12	27096
27097	250W WHITE SON	513.69	8.99	10.93	27.12	27097
27098	70/ 150W double-end	417.89	8.99	10.93	27.12	27098
27099	250W double-end	521.78	8.99	10.93	27.12	27099
27100	400W double-end	579.09	8.99	10.93	27.12	27100
27101	70W reflector	357.27	8.99	10.93	27.12	27101

High pressure mercury discharge lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27102	50/ 80/ 125/ 250/ 400/ 450/ 700 W MBF	-	8.99	10.93	27.12	27102

LAMPS (CONT'D)

Other lamps : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27103	Energy saving lamp 9/ 11/ 13/ 15/ 18W, E14/ E27 lamp base	48.86	1.36	1.79	5.10	27103
27104	Energy saving lamp 20/ 25W, E14/ E27 lamp base	78.52	1.36	1.79	5.10	27104
27105	Energy saving lamp, globe type 9/ 11/ 13/ 15/ 18W	57.71	1.36	1.79	5.10	27105
27106	Energy saving lamp, globe type 20/ 25W	66.75	1.36	1.79	5.10	27106
27107	24V, 75/ 55W, sealed beam lamp bulb for underwater floodlight	86.42	8.99	11.51	27.12	27107
27108	Dimmable energy saving lamp 9/ 11/ 13/ 15/ 18W	226.96	1.36	1.79	5.10	27108
	Each					
27109	LED lamp, 12V 3 - 5W, GU 5.3	99.54	12.06	16.13	41.75	27109
27110	LED lamp, 12V 5 - 7W, GU 5.3	105.68	12.06	16.13	41.75	27110
27111	LED lamp, 10 - 20W	93.41	12.06	16.13	41.75	27111
27112	LED lamp, 20 - 30W	179.26	12.06	16.13	41.75	27112

FLUORESCENT LIGHTING FITTINGS

Surface mounted modular vandal resistant fluorescent lighting fitting c/w T5 electronic ballast, fluorescent tube, (one electronic ballast for each set of fluorescent tube), aluminium louvres/ reflectors, anti-vibration devices and polycarbonate diffusers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27113	200 x 600 mm, 1 x 14W, single tube	1,131.45	35.14	41.62	111.64	27113
27114	200 x 600 mm, 1 x 14W, single tube, impact resistance IK10, c/w 2-hour NiMH emergency power pack	2,522.73	35.14	41.62	111.64	27114
27115	Ditto but with 3-hour NiMH emergency power pack	3,620.86	35.14	41.62	111.64	27115
27116	200 x 600 mm, 1 x 14W, single tube, impact resistance IK10 c/w night light	2,459.66	35.14	41.62	111.64	27116
27117	200 x 600 mm, 1 x 14W, single tube, IP54, impact resistance IK10	1,561.49	35.14	41.62	111.64	27117
27118	200 x 600 mm, 2 x 14W, twin tube, impact resistance IK10	2,141.44	35.14	41.62	111.64	27118
27119	200 x 600 mm, 2 x 14W, twin tube, impact resistance IK10, c/w 2-hour NiMH emergency power pack	2,472.95	35.14	41.62	111.64	27119
27120	Ditto but with 3-hour NiMH emergency power pack	3,549.41	35.14	41.62	111.64	27120
27121	300 x 600 mm, 1 x 14W, single tube, matt-satin polycarbonate cross blades, dimmable electronic ballast	1,154.34	39.38	46.61	119.00	27121
27122	300 x 600 mm, 2 x 14W, twin tube	1,233.30	39.38	46.61	119.00	27122
27123	300 x 600 mm, 2 x 14W, twin tube, IP54 c/w 2-hour NiMH emergency power pack	2,532.21	39.38	46.61	119.00	27123
27124	Ditto but with 3-hour NiMH emergency power pack	3,569.91	39.38	46.61	119.00	27124
27125	300 x 600 mm, 2 x 14W, twin tube, IP54 c/w 1 x 10W PLC night light	2,218.87	39.38	46.61	119.00	27125
27126	300 x 600 mm, 2 x 14W, twin tube, IP54, impact resistance IK10	2,336.84	39.38	46.61	119.00	27126
27127	300 x 600 mm, 2 x 14W, twin tube, IP54, impact resistance IK10, c/w night light	2,761.72	39.38	46.61	119.00	27127
27128	300 x 600 mm, 2 x 14W, twin tube, IP54, impact resistance IK10, c/w night light and 2-hour NiMH emergency power pack	3,093.23	39.38	46.61	119.00	27128
27129	Ditto but with 3-hour NiMH emergency power pack	4,439.69	39.38	46.61	119.00	27129
27130	600 x 600 mm, 3 x 14W, triple tube, IP54, impact resistance IK10	2,730.85	39.38	46.61	119.00	27130

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface mounted modular vandal resistant fluorescent lighting fitting c/w T5 electronic ballast, fluorescent tube, (one electronic ballast for each set of fluorescent tube), aluminium louvres/ reflectors, anti-vibration devices and polycarbonate diffusers : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27131	600 x 600 mm, 3 x 14W, triple tube, IP54, impact resistance IK10 c/w 2-hour NiMH emergency power pack	3,062.36	39.38	46.61	119.00	27131
27132	Ditto but with 3-hour NiMH emergency power pack	4,162.13	39.38	46.61	119.00	27132
27133	200 x 1200 mm, 1 x 28W, single tube	1,177.90	35.14	41.62	111.64	27133
27134	200 x 1200 mm, 1 x 28W, single tube, IP54, impact resistance IK10	1,823.85	35.14	41.62	111.64	27134
27135	300 x 1200 mm, 2 x 28W, twin tube	1,445.67	39.38	46.61	119.00	27135
27136	300 x 1200 mm, 2 x 28W, twin tube, IP54, impact resistance IK10 c/w 2-hour NiMH emergency power pack	2,541.84	39.38	46.61	119.00	27136
27137	Ditto but with 3-hour NiMH emergency power pack	3,752.29	39.38	46.61	119.00	27137
27138	300 x 1200 mm, 2 x 28W, twin tube, impact resistance IK10 c/w parabolic side reflector	1,703.05	39.38	46.61	119.00	27138
27139	300 x 1200 mm, 2 x 28W, twin tube, IP54, impact resistance IK10 c/w night light	2,859.59	39.38	46.61	119.00	27139
27140	300 x 1200 mm, 2 x 28W, twin tube, c/w nano reflectors	3,462.54	39.38	46.61	119.00	27140
27141	250 x 1200 mm, 2 x 28W, twin tube, impact resistance IK10	1,681.12	39.38	46.61	119.00	27141
27142	200 x 1500 mm, 1 x 35W, single tube	1,644.08	37.32	45.18	118.46	27142
27143	200 x 1500 mm, 1 x 35W, single tube, IP54, impact resistance IK10	2,310.71	37.32	45.18	118.46	27143
27144	300 x 1500 mm, 2 x 35W, twin tube	1,754.85	43.79	51.29	126.63	27144
27145	300 x 1500 mm, 2 x 35W, twin tube, IP54, impact resistance IK10 c/w 2-hour NiMH emergency power pack	3,534.86	43.79	51.29	126.63	27145
27146	Ditto but with 3-hour NiMH emergency power pack	5,539.94	43.79	51.29	126.63	27146
27147	300 x 1500 mm, 2 x 35W, twin tube, IP54, Impact resistance IK10, c/w night light	4,493.03	103.73	149.39	255.61	27147
27148	300 x 1500 mm, 2 x 35W, twin tube c/w parabolic side reflector	2,368.35	43.79	51.29	126.63	27148
27149	600 x 1200 mm, 3 x 28W, triple tube c/w parabolic side reflector	3,315.11	43.79	51.29	126.63	27149
27150	600 x 1200 mm, 3 x 28W, triple tube, IP54 c/w 2-hour NiMH emergency power pack, impact resistance IK10	4,946.01	43.79	51.29	126.63	27150
27151	Ditto but with 3-hour NiMH emergency power pack	6,336.12	103.73	149.39	255.61	27151
27152	600 x 1200 mm, 3 x 28W, triple tube, IP54 c/w night light, impact resistance IK10	4,448.74	43.79	51.29	126.63	27152

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface mounted fluorescent light fitting c/w T5 fluorescent tube, T5 electronic control gear/ electronic ballast (one electronic ballast for each set of fluorescent tube) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
27153	600 mm, 1 x 14W, batten type similar to SFA 50	290.12	24.43	30.50	81.87	27153
27154	600 mm, 2 x 14W, batten type similar to SFA 69	421.91	26.74	33.90	94.47	27154
27155	600 mm, 1 x 14W, batten type with plastic diffuser similar to SFA 51	402.71	25.72	31.65	86.40	27155
27156	600 mm, 2 x 14W, batten type with plastic diffuser similar to SFA 74	595.87	28.68	35.27	99.16	27156
27157	1200 mm, 1 x 28W, batten type similar to SFA 50	325.39	27.13	33.05	91.64	27157
27158	1200 mm, 2 x 28W, batten type similar to SFA 69	499.83	29.18	35.72	106.11	27158
27159	1200 mm, 1 x 28W, batten type with metal trough reflector similar to SFA 58	424.67	28.42	35.20	97.18	27159
27160	1200 mm, 2 x 28W, batten type with metal trough reflector similar to SFA 72	645.55	31.14	38.47	112.06	27160
27161	1200 mm, 1 x 28W, batten type with metal angle reflector similar to SFA 56	432.12	28.68	35.27	97.18	27161
27162	1200 mm, 1 x 28W, batten type with plastic diffuser similar to SFA 51	478.82	28.68	35.27	97.18	27162
27163	1200 mm, 2 x 28W, batten type with plastic diffuser similar to SFA 74	738.41	31.14	38.47	112.06	27163
27164	1500 mm, 1 x 35W, batten type similar to SFA 50	381.51	28.24	34.86	96.73	27164
27165	1500 mm, 2 x 35W, batten type similar to SFA 69	594.23	32.87	40.16	113.92	27165
27166	1500 mm, 1 x 35W, batten type with metal trough reflector similar to SFA 58	460.62	31.99	38.89	102.75	27166
27167	1500 mm, 1 x 49W, batten type similar to SFA 50	388.11	28.24	34.86	96.73	27167
27168	1500 mm, 2 x 49W, batten type similar to SFA 69	606.07	32.87	40.16	113.92	27168
27169	1500 mm, 1 x 80W, batten type similar to SFA 50	552.18	28.24	34.86	96.73	27169
27170	1500 mm, 2 x 80W, batten type similar to SFA 69	865.59	32.87	40.16	113.92	27170
27171	1500 mm, 1 x 80W, batten type with metal trough reflector similar to SFA 58	664.11	31.99	38.89	102.75	27171
27172	1500 mm, 1 x 35W, batten type with metal angle reflector similar to SFA 56	440.16	31.87	38.65	102.15	27172
27173	1500 mm, 1 x 35W, batten type with plastic diffuser similar to SFA 51	438.53	31.87	38.65	102.15	27173
27174	1500 mm, 2 x 35W, batten type with metal trough reflector similar to SFA 72	704.20	34.02	42.61	120.45	27174
27175	1500 mm, 2 x 35W, batten type with plastic diffuser similar to SFA 74	711.54	33.90	42.35	119.71	27175
27176	1500 mm, 1 x 49W, batten type with metal angle reflector similar to SFA 56	444.53	31.87	38.65	102.15	27176
27177	1500 mm, 1 x 49W, batten type with metal trough reflector similar to SFA 58	478.07	31.99	38.89	102.75	27177
27178	1500 mm, 1 x 49W, batten type with plastic diffuser similar to SFA 51	451.69	31.87	38.65	102.15	27178
27179	1500 mm, 2 x 49W, batten type with metal trough reflector similar to SFA 72	718.48	34.02	42.61	120.45	27179
27180	1500 mm, 2 x 49W, batten type with plastic diffuser similar to SFA 74	735.64	33.90	42.35	119.71	27180

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/ electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/ reflector/ plastic diffuser (all types) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27181	150 x 1500 mm, 1 x 35W similar to SFA 110	602.67	29.07	35.57	105.68	27181
27182	300 x 600 mm, 1 x 14W similar to SFA 110	632.95	29.07	35.57	105.68	27182
27183	300 x 600 mm, 2 x 14W similar to SFA 110	873.21	35.10	41.55	111.43	27183
27184	300 x 1200 mm, 1 x 28W similar to SFA 110	828.59	35.10	41.55	111.43	27184
27185	300 x 1500 mm, 1 x 35W similar to SFA 110	899.70	37.27	44.99	117.96	27185
27186	300 x 1500 mm, 1 x 49W similar to SFA 110	909.53	37.27	44.99	117.96	27186
27187	300 x 1200 mm, 2 x 28W similar to SFA 110	910.24	39.31	46.42	118.54	27187
27188	300 x 1200 mm, 2 x 28W c/w nano reflectors	1,314.73	39.31	46.42	118.54	27188
27189	300 x 1500 mm, 2 x 35W similar to SFA 110	1,068.96	43.79	51.19	126.39	27189
27190	300 x 1500 mm, 2 x 35W c/w 2-hour NiMH emergency power pack	1,267.10	43.79	51.19	126.39	27190
27191	Ditto but with 3-hour NiMH emergency power pack	2,068.04	43.79	51.19	126.39	27191
27192	300 x 1500 mm, 2 x 49W similar to SFA 110	1,085.24	43.79	51.19	126.39	27192
27193	400 x 1500 mm, 3 x 35W	1,238.23	43.79	51.19	126.39	27193
27194	600 x 600 mm, 2 x 14W similar to SFA 111	954.71	37.32	45.08	118.20	27194
27195	600 x 1200 mm, 2 x 28W similar to SFA 110	1,050.14	47.45	55.91	138.59	27195
27196	600 x 600 mm, 3 x 14W similar to SFA 111	1,041.66	43.79	51.19	126.39	27196
27197	600 x 1200 mm, 3 x 28W similar to SFA 110	1,234.98	51.40	60.73	144.11	27197

Surface mounted modular fluorescent lighting fitting c/w T5 fluorescent tube, T5 electronic control gear/ electronic ballast (one T5 electronic ballast for each set of T5 fluorescent tube) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27198	1200 mm, 1 x 28W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,378.33	35.79	41.76	95.81	27198
27199	1200 mm, 2 x 28W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,650.70	35.79	41.76	95.81	27199
27200	1500 mm, 1 x 35W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,648.97	37.05	42.40	98.11	27200
27201	1500 mm, 2 x 35W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,840.43	37.05	42.40	98.11	27201

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface mounted modular LED T5 lighting fitting c/w T5 LED tube/ LED driver

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27202	600 x 600 mm, 3 x 14W similar to SFA 111	1,252.17	43.79	51.19	126.39	27202
27203	600 x 1200 mm, 3 x 28W similar to SFA 110	1,450.40	51.40	60.73	144.11	27203
27204	1200 mm, 1 x 28W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,450.14	35.79	41.76	95.81	27204
27205	1200 mm, 2 x 28W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,794.31	35.79	41.76	95.81	27205
27206	1500 mm, 1 x 35W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	1,797.93	37.05	42.40	98.11	27206
27207	1500 mm, 2 x 35W track light module luminaire for continuous lighting with housing c/w louver similar to SFA 201	2,138.34	37.05	42.40	98.11	27207

Surface mounted modular fluorescent lighting fitting c/w ball-proof hinged wire guard, with/ without transparent polycarbonate/ plastic cover, T5 fluorescent tube, T5 electronic control gear/ electronic ballast (one T5 electronic ballast for each set of T5 fluorescent tube) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27208	300 x 1200 mm, 2 x 28W similar to SFA 112	624.12	35.79	41.76	95.81	27208
27209	300 x 1500 mm, 1 x 35W similar to SFA 112	1,072.02	31.24	37.48	80.63	27209
27210	300 x 1500 mm, 2 x 35W similar to SFA 112	1,239.19	37.05	42.40	98.11	27210
27211	300 x 1500 mm, 2 x 35W c/w 2-hour NiMH emergency power pack	1,946.74	37.05	42.40	98.11	27211
27212	Ditto but with 3-hour NiMH emergency power pack	2,888.86	37.05	42.40	98.11	27212
27213	450 x 1200 mm, 3 x 28W similar to SFA 112	1,006.26	51.40	60.73	144.11	27213
27214	450 x 1500 mm, 3 x 35W similar to SFA 112	1,997.92	53.63	62.14	152.47	27214
27215	450 x 1500 mm, 3 x 35W with ball-proof hinged wire guard and with/ without transparent polycarbonate/ plastic cover c/w 2-hour NiMH emergency power pack	2,705.48	53.63	62.14	152.47	27215
27216	Ditto but with 3-hour NiMH emergency power pack	3,784.13	53.63	62.14	152.47	27216
27217	600 x 1500 mm, 3 x 35W with ball-proof hinged wire guard and with/ without transparent polycarbonate/ plastic cover similar to SFA 112	1,624.21	53.63	62.14	152.47	27217
27218	600 x 1200 mm, 3 x 54W with ball-proof hinged wire guard and with/ without transparent polycarbonate/ plastic cover similar to SFA 112	1,482.94	51.40	60.73	144.11	27218
27219	600 x 1500 mm, 4 x 49W with ball-proof hinged wire guard and with/ without transparent polycarbonate/ plastic cover similar to SFA 112	2,135.59	57.82	67.02	158.78	27219

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface/ pendant mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/ electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/ reflector/ plastic diffuser (all types), die cast aluminium body : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27220	1 x 28W similar to SFA 113	1,043.66	30.63	36.60	79.81	27220
27221	2 x 28W similar to SFA 113	1,353.14	35.79	41.76	95.81	27221
27222	3 x 28W similar to SFA 113	1,877.57	41.61	48.64	110.84	27222
27223	1 x 35W similar to SFA 113	1,127.25	31.24	37.48	80.63	27223
27224	2 x 35W similar to SFA 113	1,673.34	37.05	42.40	98.11	27224
27225	3 x 35W similar to SFA 113	1,972.44	45.08	53.19	115.57	27225

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Recess mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/ electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/ reflector/ plastic diffuser (all types), with/ without air slot : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27226	200 x 600 mm, 1 x 14W, vandal resistant	1,836.23	28.91	35.41	105.25	27226
27227	300 x 600 mm, 1 x 14W similar to SFA 114	797.66	28.91	35.41	105.25	27227
27228	300 x 600 mm, 1 x 14W c/w nano reflectors	823.06	28.91	35.41	105.25	27228
27229	300 x 600 mm, 1 x 14W c/w air slots	994.92	28.91	35.41	105.25	27229
27230	300 x 600 mm, 1 x 14W c/w air slots with perforated white panel	1,483.91	28.91	35.41	105.25	27230
27231	300 x 600 mm, 1 x 14W c/w air slots with perforated white panel and 2-hour NiMH emergency power pack	1,906.31	28.91	35.41	105.25	27231
27232	Ditto but with 3-hour NiMH emergency power pack	2,836.98	28.91	35.41	105.25	27232
27233	300 x 600 mm, 2 x 14W similar to SFA 114	986.45	34.86	41.37	110.97	27233
27234	300 x 600 mm, 2 x 14W, vandal resistant	2,129.10	34.86	41.37	110.97	27234
27235	300 x 1200 mm, 1 x 28W similar to SFA 114	860.04	34.86	41.37	110.97	27235
27236	300 x 1200 mm, 1 x 28W c/w air slots with perforated white panel	1,505.68	34.86	41.37	110.97	27236
27237	300 x 1200 mm, 1 x 28W c/w air slots with perforated white panel and 2-hour NiMH emergency power pack	2,120.11	34.86	41.37	110.97	27237
27238	Ditto but with 3-hour NiMH emergency power pack	3,018.39	34.86	41.37	110.97	27238
27239	300 x 1200 mm, 2 x 28W similar to SFA 114	1,024.64	39.06	46.33	118.28	27239
27240	300 x 1200 mm, 2 x 28W c/w dimmable electronic ballast, 3-level dimmer switch and 2-hour NiMH emergency power pack	1,285.33	39.06	46.33	118.28	27240
27241	Ditto but with 3-hour NiMH emergency power pack	1,839.99	39.06	46.33	118.28	27241
27242	300 x 1500 mm, 1 x 35W similar to SFA 114	922.26	43.43	50.97	125.89	27242
27243	300 x 1500 mm, 1 x 35W c/w white powder coated sheet steel with perforated white panel	1,519.06	43.43	50.97	125.89	27243
27244	300 x 1500 mm, 1 x 35W c/w white powder coated sheet steel with perforated white panel and 2-hour NiMH emergency power pack	2,333.89	43.43	50.97	125.89	27244
27245	Ditto but with 3-hour NiMH emergency power pack	3,341.04	43.43	50.97	125.89	27245

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Recess mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/ electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/ reflector/ plastic diffuser (all types), with/ without air slot : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27246	300 x 1500 mm, 1 x 49W similar to SFA 114	928.94	43.43	50.97	125.89	27246
27247	300 x 1500 mm, 2 x 35W similar to SFA 114	1,109.39	43.43	50.97	125.89	27247
27248	300 x 1500 mm, 2 x 49W similar to SFA 114	1,122.94	43.43	50.97	125.89	27248
27249	600 x 600 mm, 2 x 14W similar to SFA 115	996.00	43.43	50.97	125.89	27249
27250	600 x 600 mm, 2 x 14W c/w nano reflectors	1,048.99	43.43	50.97	125.89	27250
27251	600 x 600 mm, 2 x 14W c/w air slots with perforated white panel and 2-hour NiMH emergency power pack	2,246.69	43.43	50.97	125.89	27251
27252	Ditto but with 3-hour NiMH emergency power pack	3,205.35	43.43	50.97	125.89	27252
27253	600 x 600 mm, 3 x 14W similar to SFA 115	1,077.57	43.43	50.97	125.89	27253
27254	600 x 600 mm, 4 x 14W similar to SFA 115	1,351.52	43.43	50.97	125.89	27254
27255	600 x 1200 mm, 2 x 28W c/w air slots with perforated white panel and 2-hour NiMH emergency power pack	2,445.08	43.43	50.97	125.89	27255
27256	Ditto but with 3-hour NiMH emergency power pack	3,490.75	43.43	50.97	125.89	27256
27257	600 x 1500 mm, 2 x 35W c/w white powder coated sheet steel with perforated white panel	1,828.64	43.43	50.97	125.89	27257
27258	600 x 1500 mm, 2 x 35W c/w white powder coated sheet steel with perforated white panel and 2-hour NiMH emergency power pack	2,643.46	43.43	50.97	125.89	27258
27259	Ditto but with 3-hour NiMH emergency power pack	3,773.97	43.43	50.97	125.89	27259
27260	300 x 600 mm, 1 x 14W c/w dimmable electronic ballast	1,122.90	47.06	55.70	138.02	27260
27261	300 x 600 mm, 2 x 14W c/w dimmable electronic ballast	1,311.68	47.06	55.70	138.02	27261
27262	300 x 1200 mm, 1 x 28W c/w dimmable electronic ballast	1,197.49	47.06	55.70	138.02	27262
27263	300 x 1200 mm, 2 x 28W c/w dimmable electronic ballast	1,362.10	47.06	55.70	138.02	27263
27264	600 x 1200 mm, 2 x 28W c/w dimmable electronic ballast	1,435.23	47.06	55.70	138.02	27264
27265	600 x 1200 mm, 2 x 28W similar to SFA 114	1,097.78	47.06	55.70	138.02	27265
27266	600 x 1200 mm, 2 x 28W c/w nano reflectors	1,510.57	47.06	55.70	138.02	27266
27267	600 x 1200 mm, 2 x 28W c/w mirror aluminium back reflector, dimmable electronic ballast, 3-level dimmer switch and 2-hour NiMH emergency power pack	1,500.51	47.06	55.70	138.02	27267
27268	Ditto but with 3-hour NiMH emergency power pack	2,142.22	47.06	55.70	138.02	27268
27269	600 x 1200 mm, 3 x 28W similar to SFA 114	1,367.59	50.99	60.51	143.51	27269
27270	600 x 1200 mm, 4 x 28W similar to SFA 114	1,557.49	50.99	60.51	143.51	27270

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Compact fluorescent down light fitting, recess mounted to false ceiling, integral electronic control gear/ ballast, white stove enameled steel/ die cast aluminium body and anodized aluminium reflector with/ without metal trim:-

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27271	Down light with 7/ 9/ 11W PL lamp similar to SFA 224	312.80	20.18	24.70	70.08	27271
27272	Down light with 7/ 9/ 11W PL lamp c/w glass diffuser similar to SFA 224	417.76	20.18	24.70	70.08	27272
27273	Down light with 13/ 18/ 26W PL lamp similar to SFA 224	337.84	20.18	24.70	70.08	27273
27274	Down light with 13/ 18/ 26W PL lamp c/w glass diffuser similar to SFA 224	438.66	20.18	24.70	70.08	27274
27275	Down light with 2 x 13W/ 2 x 18W/ 2 x 26W PL lamp similar to SFA 224	446.82	20.18	24.70	70.08	27275
27276	Down light with 2 x 13W/ 2 x 18W/ 2 x 26W PL lamp c/w glass diffuser similar to SFA 224	558.56	20.18	24.70	70.08	27276
27277	Down light with 13/ 18/ 26W PL lamp, IP 65 c/w safety glass diffuser similar to SFA 224	2,834.25	20.18	24.70	70.08	27277
27278	Down light with dimmable electronic ballast, 13/ 18/ 26W PL lamp similar to SFA 224	1,802.18	20.18	24.70	70.08	27278
27279	Down light with dimmable electronic ballast, 2 x 13W/ 2 x 18W/ 2 x 26W PL lamp similar to SFA 224	2,016.38	20.18	24.70	70.08	27279

Recessed downlight : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27280	Ceiling recessed downlight similar to SFA 224, die cast aluminium body and front ring, anodised aluminium reflector, 150 mm diameter, IP65 c/w safety glass, control gear and 1 x 18W/ 26W compact fluorescent lamp c/w 2-hour NiMH emergency power pack	1,723.90	23.17	27.82	84.07	27280
27281	Ditto but with 3-hour NiMH emergency power pack	1,896.29	23.17	27.82	84.07	27281

Surface mounted fluorescent light fitting c/w T5 circular fluorescent tube, electronic control gear/ electronic ballast and diffuser : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27282	1 x 22W	1,201.74	27.57	35.03	105.29	27282
27283	1 x 40W	1,533.40	27.57	35.03	105.29	27283

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface mounted compact fluorescent light fitting, integral electronic control gear/ ballast : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
27284	Twin compact fluorescent 9W c/w prismatic controller	672.45	25.55	31.53	86.23	27284
27285	Twin compact fluorescent 11W c/w prismatic controller	724.98	25.55	31.53	86.23	27285
27286	Circular/ diamond shape compact fluorescent lighting fitting opal/ clear prismatic polycarbonate diffuser, die cast aluminium/ polycarbonate body c/w 16/ 21W 2D lamp	602.47	25.72	31.65	86.40	27286
27287	Circular/ diamond shape compact fluorescent lighting fitting opal/ clear prismatic polycarbonate diffuser, die cast aluminium/ polycarbonate body c/w 28/ 38W 2D lamp	727.94	25.72	31.65	86.40	27287
27288	Circular/ diamond shape compact fluorescent lighting fitting vandal resistant prismatic diffuser, die-cast aluminium base with IP65 protection body c/w 16/ 21W 2D electronic ballast and lamp tube	1,205.75	25.72	31.65	86.40	27288
27289	Circular/ diamond shape compact fluorescent lighting fitting vandal resistant prismatic diffuser, die-cast aluminium base with IP65 protection body c/w 28/ 38W 2D electronic ballast and lamp tube	1,316.69	25.72	31.65	86.40	27289
27290	Circular/ diamond shape compact fluorescent lighting fitting vandal resistant prismatic diffuser, die-cast aluminium base with IP65 protection body c/w 28/ 38W 2D electronic ballast, lamp tube and 2-hour NiMH emergency power pack	2,257.61	25.72	31.65	86.40	27290
27291	Ditto but with 3-hour NiMH emergency power pack	2,483.37	25.72	31.65	86.40	27291

Self-contained and maintained type for 2-hour duration emergency fluorescent lighting fitting c/w 2-hour NiMH emergency power pack, battery charger, inverter and : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A	B	C	D	
	Each	$	$	$	$	
27292	600/ 900 mm, 1 x 14W/ 21W single fluorescent tube (electronic ballast)	571.97	25.30	31.14	86.85	27292
27293	Ditto but with 3-hour NiMH emergency power pack	1,064.36	25.30	31.14	86.85	27293
27294	600/ 900 mm, 2 x 14W/ 21W twin fluorescent tubes (electronic ballasts)	726.10	27.83	33.90	94.47	27294
27295	Ditto but with 3-hour NiMH emergency power pack	1,230.72	27.83	33.90	94.47	27295
27296	1200/ 1500 mm, 1 x 28W/ 35W single fluorescent tube (electronic ballast)	841.35	28.84	34.61	100.88	27296
27297	Ditto but with 3-hour NiMH emergency power pack	1,635.66	28.84	34.61	100.88	27297
27298	1200/ 1500 mm, 2 x 28W/ 35W twin fluorescent tubes (electronic ballasts)	978.41	30.34	35.93	109.02	27298
27299	Ditto but with 3-hour NiMH emergency power pack	1,831.57	30.34	35.93	109.02	27299
27300	Bulk head fitting, 1 x 13/ 18/ 26W compact fluorescent tube	748.51	27.13	33.05	91.64	27300
27301	Ditto but with 3-hour NiMH emergency power pack	1,392.88	27.13	33.05	91.64	27301
27302	Bulk head fitting, 2 x 13/ 18/ 26W compact fluorescent tubes	859.54	27.13	33.05	91.64	27302
27303	Ditto but with 3-hour NiMH emergency power pack	1,599.49	27.13	33.05	91.64	27303
27304	Bulk head fitting, 1 x 7/ 9/ 11W compact fluorescent tube	668.56	27.13	33.05	91.64	27304
27305	Ditto but with 3-hour NiMH emergency power pack	1,244.10	27.13	33.05	91.64	27305
27306	Bulk head fitting, 2 x 7/ 9/ 11W compact fluorescent tubes	750.64	27.13	33.05	91.64	27306
27307	Ditto but with 3-hour NiMH emergency power pack	1,396.84	27.13	33.05	91.64	27307

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Weather proof, IP65 self-contained and maintained type for 2-hour duration emergency fluorescent lighting fitting with polycarbonate/ slab cover, 2-hour NiMH emergency power packbattery charger, inverter and : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27308	600/ 900 mm, 1 x 14W/ 21W single fluorescent tube (electronic ballast)	763.55	25.19	30.91	86.15	27308
27309	Ditto but with 3-hour NiMH emergency power pack	1,305.46	25.19	30.91	86.15	27309
27310	600/ 900 mm, 2 x 14W/ 21W twin fluorescent lamp tubes (electronic ballasts)	1,006.65	26.57	33.63	93.74	27310
27311	Ditto but with 3-hour NiMH emergency power pack	1,772.36	26.57	33.63	93.74	27311
27312	1200/ 1500 mm, 1 x 28W/ 35W single fluorescent tube (electronic ballast)	974.62	29.48	35.54	107.79	27312
27313	Ditto but with 3-hour NiMH emergency power pack	1,801.67	29.48	35.54	107.79	27313
27314	1200/ 1500 mm, 2 x 28W/ 35W twin fluorescent lamp tubes (electronic ballasts)	1,231.83	30.17	35.66	108.14	27314
27315	Ditto but with 3-hour NiMH emergency power pack	2,075.69	30.17	35.66	108.14	27315
27316	Bulk head fitting, 1 x 13/ 18/ 26W compact fluorescent tube	984.05	26.96	32.78	90.92	27316
27317	Ditto but with 3-hour NiMH emergency power pack	1,682.45	26.96	32.78	90.92	27317
27318	Bulk head fitting, 2 x 13/ 18/ 26W compact fluorescent tubes	1,157.60	26.96	32.78	90.92	27318
27319	Ditto but with 3-hour NiMH emergency power pack	2,038.13	26.96	32.78	90.92	27319
27320	Bulk head fitting, 1 x 7/ 9/ 11W compact fluorescent tube	930.56	26.96	32.78	90.92	27320
27321	Ditto but with 3-hour NiMH emergency power pack	1,720.22	26.96	32.78	90.92	27321
27322	Bulk head fitting, 2 x 7/ 9/ 11W compact fluorescent tubes	1,015.15	26.96	32.78	90.92	27322
27323	Ditto but with 3-hour NiMH emergency power pack	1,710.57	26.96	32.78	90.92	27323

Corrosion resistant fluorescent light fitting c/w polycarbonate diffuser, IP65, T5 fluorescent tube and electronic ballast (one electronic ballast for each set of fluorescent tube) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27324	600 mm, 1 x 14W similar to SFA 116	758.93	33.84	40.82	123.03	27324
27325	600 mm, 2 x 14W similar to SFA 117	955.12	35.57	42.76	140.13	27325
27326	1200 mm, 1 x 28W similar to SFA 116	873.92	39.44	46.13	132.99	27326
27327	1200 mm, 2 x 28W similar to SFA 117	1,127.14	41.34	48.65	155.67	27327
27328	1500 mm, 1 x 35W similar to SFA 116	1,333.94	42.24	50.45	139.07	27328
27329	1500 mm, 2 x 35W similar to SFA 117	1,565.43	45.30	53.97	162.63	27329
27330	1500 mm, 1 x 49W similar to SFA 116	1,409.96	43.54	51.49	139.07	27330
27331	1500 mm, 2 x 49W similar to SFA 117	1,623.16	46.59	55.01	162.63	27331

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Corrosion resistant IP65 fluorescent lighting fitting c/w T8 electronic ballast and self-contained battery (NiCd)/ (NiMH) for 2 hours discharge (emergency of the normal length) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27332	600 mm, 1 x 18/ 20W, single tube	-	25.20	31.11	84.76	27332
27333	600 mm, 2 x 18/ 20W, twin tube	-	28.36	35.12	98.95	27333
27334	1200 mm, 1 x 36/ 40W, single tube	-	27.06	33.00	91.47	27334
27335	1200 mm, 2 x 36/ 40W, twin tube	-	29.36	35.96	105.89	27335
27336	1500 mm, 1 x 58/ 60W, single tube	-	28.36	35.12	98.95	27336
27337	1500 mm, 2 x 58/ 60W, twin tube	-	32.82	40.08	113.70	27337

Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic ballast and self-contained battery (NiCd) for 2 hours discharge (emergency of the normal length) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27338	600 mm, 1 x 14W, single tube	-	25.20	31.11	84.76	27338
27339	600 mm, 2 x 14W, twin tube	-	28.36	35.12	98.95	27339
27340	1200 mm, 1 x 28W, single tube	-	27.06	33.00	91.47	27340
27341	1200 mm, 2 x 28W, twin tube	-	29.36	35.96	105.89	27341
27342	1500 mm, 1 x 35W, single tube	-	28.17	34.82	96.58	27342
27343	1500 mm, 2 x 35W, twin tube	-	32.80	40.08	113.70	27343
27344	1500 mm, 1 x 49W, single tube	-	28.36	35.12	98.95	27344
27345	1500 mm, 2 x 49W, twin tube	-	33.01	40.42	116.50	27345

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic ballast and self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27346	600 mm, 1 x 14W, single tube	1,105.40	25.20	31.11	84.76	27346
27347	600 mm, 2 x 14W, twin tube	1,330.18	28.36	35.12	98.95	27347
27348	1200 mm, 1 x 28W, single tube	1,186.88	27.06	33.00	91.47	27348
27349	1200 mm, 2 x 28W, twin tube	1,436.87	29.36	35.96	105.89	27349
27350	1500 mm, 1 x 35W, single tube	1,937.88	28.17	34.82	96.58	27350
27351	1500 mm, 2 x 35W, twin tube	2,297.44	32.80	40.08	113.70	27351
27352	1500 mm, 1 x 49W, single tube	1,944.63	28.36	35.12	98.95	27352
27353	1500 mm, 2 x 49W, twin tube	2,315.21	33.01	40.42	116.50	27353

Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic dimmable ballast and self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27354	1200 mm, 1 x 28W, single tube	1,361.61	27.06	33.00	91.47	27354
27355	1200 mm, 2 x 28W, twin tube	1,784.28	29.36	35.96	105.89	27355
27356	1500 mm, 1 x 35W, single tube	2,114.35	28.17	34.82	96.58	27356
27357	1500 mm, 2 x 35W, twin tube	2,648.03	32.80	40.08	113.70	27357
27358	1200 mm, 1 x 28W, single tube c/w light sensor	1,386.77	27.06	33.00	91.47	27358
27359	1500 mm, 1 x 35W, single tube c/w light sensor	2,139.51	28.17	34.82	96.58	27359

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Corrosion resistant IP65 fluorescent lighting fitting c/w T8 electronic ballast : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27360	600 mm, 1 x 18/ 20W, single tube	-	25.20	31.11	84.76	27360
27361	600 mm, 2 x 18/ 20W, twin tube	-	28.36	35.12	98.95	27361
27362	1200 mm, 1 x 36/ 40W, single tube	-	27.06	33.00	91.47	27362
27363	1200 mm, 2 x 36/ 40W, twin tube	-	29.36	35.96	105.89	27363
27364	1500 mm, 1 x 58/ 60W, single tube	-	28.36	35.12	98.95	27364
27365	1500 mm, 2 x 58/ 60W, twin tube	-	32.80	40.08	110.08	27365

Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic dimmable ballast : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27366	1200 mm, 1 x 28W, single tube	1,024.17	27.03	32.94	91.30	27366
27367	1200 mm, 2 x 28W, twin tube	1,446.82	29.28	35.88	105.68	27367
27368	1500 mm, 1 x 35W, single tube	1,770.70	28.14	34.74	96.36	27368
27369	1500 mm, 2 x 35W, twin tube	2,304.40	32.74	40.01	113.47	27369
27370	1200 mm, 1 x 28W, single tube c/w light sensor	1,049.32	27.03	32.94	91.30	27370
27371	1500 mm, 1 x 35W, single tube c/w light sensor	1,795.86	28.14	34.74	96.36	27371

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Surface mounted modular fluorescent light fitting c/w T5 fluorescent tube, dimmable electronic control gear/ electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/ reflector/ plastic diffuser (all types) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27372	300 x 600 mm, 1 x 14W similar to SFA 110	794.14	29.07	35.57	105.68	27372
27373	300 x 600 mm, 2 x 14W similar to SFA 110	1,195.59	35.10	41.55	111.43	27373
27374	300 x 1200 mm, 1 x 28W similar to SFA 110	909.46	35.10	41.55	111.43	27374
27375	300 x 1200 mm, 2 x 28W similar to SFA 110	1,291.64	39.31	46.51	118.76	27375
27376	300 x 1500 mm, 1 x 35W similar to SFA 110	1,062.25	37.27	45.08	118.20	27376
27377	300 x 1500 mm, 2 x 35W similar to SFA 110	1,484.39	43.70	51.19	126.39	27377
27378	300 x 1500 mm, 1 x 49W similar to SFA 110	1,083.31	37.27	45.08	118.20	27378
27379	300 x 1500 mm, 2 x 49W similar to SFA 110	1,526.40	43.70	51.19	126.39	27379

Flameproof IP66 fluorescent fitting c/w T5 electronic ballast for use in Zone 1 hazardous area and for gas groups IIA & IIB conform to FSD requirements : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27380	600 mm, 1 x 14W, single tube batten	7,041.12	65.39	81.98	245.10	27380
27381	600 mm, 2 x 14W, twin tube batten	7,538.81	71.53	88.43	260.16	27381
27382	1200 mm, 1 x 28W, single tube batten	7,473.47	65.39	81.98	245.10	27382
27383	1200 mm, 2 x 28W, twin tube batten	7,916.99	71.53	88.43	260.16	27383
27384	1500 mm, 1 x 35W, single tube batten	8,708.31	65.39	81.98	245.10	27384
27385	1500 mm, 2 x 35W, twin tube batten	9,226.56	71.53	88.43	260.16	27385
27386	1500 mm, 1 x 49W, single tube batten	9,953.80	65.39	81.98	245.10	27386
27387	1500 mm, 2 x 49W, twin tube batten	10,483.21	71.53	88.43	260.16	27387

X-ray view boxes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27388	X-ray view box, twin type, 1 mm thick aluminium x-ray viewing boxes; fluorescent tubes with color temperature 6500K to suit viewing box; 3 mm thick transparent perspex; including all necessary electrical connection to adjacent power source	4,204.81	26.92	32.84	91.09	27388
27389	Ditto but stainless steel x-ray viewing box	4,824.61	26.92	32.84	91.09	27389

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Emergency power pack (with inverter, battery charger, indication lights, test button and 2-hour NiMH emergency power pack) for fluorescent light/ compact fluorescent light/ LED light fitting : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
27390	Not exceeding 18W	464.84	9.07	10.98	28.16	27390
27391	18W - 28W power pack	614.43	9.07	10.98	28.16	27391
27392	28W - 35W power pack	707.55	9.07	10.98	28.16	27392
27393	35W - 58W power pack	1,013.52	9.07	10.98	28.16	27393

Emergency power pack (with inverter, battery charger, indication lights, test button and 3-hour NiMH emergency power pack) for fluorescent light/ compact fluorescent light/ LED light fitting : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
27394	Not exceeding 18W	971.80	9.07	10.98	28.16	27394
27395	18W - 28W power pack	1,385.93	9.07	10.98	28.16	27395
27396	28W - 35W power pack	1,585.65	9.07	10.98	28.16	27396
27397	35W - 58W power pack	1,910.97	9.07	10.98	28.16	27397

Reflector for surface mounted fluorescent light fittings/ LED light fitting (batten type) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
27398	Metal angle reflector, 1200 mm for SFA 56	109.19	10.41	11.76	30.26	27398
27399	Metal angle reflector, 1500 mm for SFA 56	120.36	10.41	11.76	30.26	27399
27400	Metal trough reflector, 600 mm for single tube batten similar to SFA 58	116.01	10.48	11.84	30.45	27400
27401	Metal trough reflector, 1200 mm for single tube batten similar to SFA 58	123.69	10.48	11.84	30.45	27401
27402	Metal trough reflector, 1200 mm for twin tube batten similar to SFA 72	150.86	10.48	11.84	30.45	27402
27403	Metal trough reflector, 1500 mm for single tube batten similar to SFA 58	135.84	10.48	11.84	30.45	27403
27404	Metal trough reflector, 1500 mm for twin tube batten similar to SFA 72	168.88	10.48	11.84	30.45	27404

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Plastic diffuser for surface mounted fluorescent light fittings/ LED light fittings (batten type) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27405	600 mm for single tube batten similar to SFA 51	83.39	6.78	7.33	18.22	27405
27406	1200 mm for single tube batten similar to SFA 51	94.41	6.78	7.33	18.22	27406
27407	1200 mm for twin tube batten similar to SFA 74	153.19	6.78	7.33	18.22	27407
27408	1500 mm for single tube batten similar to SFA 51	106.12	6.78	7.33	18.22	27408
27409	1500 mm for twin tube batten similar to SFA 74	172.83	6.78	7.33	18.22	27409

Plastic panel diffuser : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per square metre					
27410	for surface/ recess mounted modular fluorescent light fitting/ LED light fitting size	275.06	23.71	25.63	63.75	27410

Starter for fluorescent lighting fittings : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27411	18/ 30/ 36/ 58/ 85 W	-	2.44	2.70	7.22	27411

Condenser for fluorescent lighting fittings : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27412	18/ 30/ 36/ 58/ 85W	-	11.09	13.49	34.39	27412

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Quick start unit for fluorescent lighting fittings : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
		$	$	$	$	
	Each					
27413	30/ 36/ 58/ 85W	-	11.02	13.49	34.39	27413

Ballast for fluorescent lighting fittings : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
		$	$	$	$	
	Each					
27414	18/ 30/ 36/ 58/ 85W single	-	9.07	10.98	26.56	27414

Socket for starter unit of fluorescent lighting fittings : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
		$	$	$	$	
	Each					
27415	Starter unit 2/ 4 pin	-	6.75	7.27	18.11	27415

Electronic ballast : -

Item		Supply and fix							Take down and clear away	Take down and set aside for re-use	Fix only	Item
		Not exceeding 14W	14W - 21W	21W - 28W	35W	49W	54W	80W				
		A	B	C	D	E	F	G	H	I	J	
		$	$	$	$	$	$	$	$	$	$	
	Each											
27416	T5 fluorescent light fitting and compact fluorescent light fitting	217.86	220.35	223.04	225.73	233.59	236.06	238.76	9.07	10.98	26.56	27416

FLUORESCENT LIGHTING FITTINGS (CONT'D)

Dimmable electronic ballast for T5 fluorescent light/ compact fluorescent light fitting : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27417	Not exceeding 14W	314.35	9.07	10.98	26.56	27417
27418	14W - 21W	320.32	9.07	10.98	26.56	27418
27419	21W - 28W	326.14	9.07	10.98	26.56	27419
27420	35W	332.14	9.07	10.98	26.56	27420
27421	49W	349.93	9.07	10.98	26.56	27421
27422	54W	355.94	9.07	10.98	26.56	27422
27423	80W	361.92	9.07	10.98	26.56	27423

Sundry fittings : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27424	Brackets, tubular, comprise flange plate and nipple and 20 mm diameter tube bent to required shape, all galvanized, n.e. 450 mm projection	54.83	8.11	10.14	25.88	27424
27425	Ditto but 450 mm - 600 mm projection	57.96	8.11	10.14	25.88	27425
27426	Brackets, corner fitting, comprise 20 mm diameter tube bent to required shape n.e. 450 mm projection	57.85	9.11	11.19	28.09	27426
27427	Pendant, tubular, comprise male pendant plates, conduit, socket, adaptors and male bush as required and 20 mm diameter tube n.e. 300 mm length, all galvanized	52.25	8.11	10.14	25.88	27427
27428	Extra over modular fluorescent fitting/ LED light fitting for provision of ball-proof wire mesh, 300 x 600 mm	167.04	8.57	10.76	23.71	27428
27429	Ditto but 600 x 600 mm	193.29	8.57	10.76	23.71	27429
27430	Ditto but 300 x 1200 mm	194.91	8.80	11.22	24.43	27430
27431	Ditto but 600 x 1200 mm	249.77	8.80	11.22	24.43	27431
27432	Ditto but 300 x 1500 mm	218.03	9.10	11.41	25.99	27432
27433	Ditto but 600 x 1500 mm	280.00	9.10	11.41	25.99	27433
27434	T8 to T5 Bi-pin lampholder adaptor	37.59	2.05	2.44	6.25	27434
	Per linear metre					
27435	Extra over items 27424 - 27427 for each additional length of 20 mm diameter tube all galvanized for tubular pendant mounting	38.13	4.08	4.76	12.37	27435
27436	Brass chain for lighting fitting, chromium plated, 20 mm oval link with brazed ends	27.88	2.45	2.88	7.16	27436
27437	Chain, hot dip galvanized steel, bright, for lighting fitting c/w screw eyes, screw hocks and 20 mm oval link with welded ends	29.69	2.45	2.88	7.16	27437

LIGHTING FITTINGS

LED down light fitting, recess mounted to false ceiling, integral electronic control gear/ driver, white stove enameled steel/ die cast aluminium body and anodized aluminium reflector (all types) with/ without metal trim : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27438	Down light with up to 3W LED lamp, IP54	885.72	20.37	24.97	70.86	27438
27439	Down light with 3 - 7W LED lamp similar to SFA 224	1,301.70	22.31	26.75	75.88	27439
27440	Down light with 7 - 12W LED lamp similar to SFA 224	1,616.41	22.31	26.75	75.88	27440
27441	Down light with 12 - 16W LED lamp similar to SFA 224	1,976.30	22.31	26.75	75.88	27441
27442	Down light with 3 - 7W LED lamp c/w glass diffuser similar to SFA 224	1,842.18	22.31	26.75	75.88	27442
27443	Down light with 7 - 12W LED lamp c/w glass diffuser similar to SFA 224	2,159.57	22.31	26.75	75.88	27443
27444	Down light with 12 - 16W LED lamp c/w glass diffuser similar to SFA 224	2,560.87	22.31	26.75	75.88	27444
27445	Down light with 3 - 7W LED lamp c/w safety glass diffuser to IP54 similar to SFA 224	3,425.57	22.31	26.75	75.88	27445
27446	Down light with 7 - 12W LED lamp c/w safety glass diffuser to IP54 similar to SFA 224	3,728.28	22.31	26.75	75.88	27446
27447	Down light with 12 - 16W LED lamp c/w safety glass diffuser to IP54 similar to SFA 224	4,098.94	22.31	26.75	75.88	27447
27448	Down light with infra-red lamp, 175 mm diameter	541.80	20.37	24.97	70.86	27448
27449	Down light with 8 - 10W LED lamp c/w dimmable driver	1,850.21	20.37	24.97	70.86	27449
27450	Down light with 10 - 13W LED lamp c/w dimmable driver	1,976.10	20.37	24.97	70.86	27450
27451	Down light with 13 - 22W LED lamp c/w dimmable driver	2,594.09	20.37	24.97	70.86	27451
27452	Down light with 22 - 24W LED lamp c/w dimmable driver	2,731.43	20.37	24.97	70.86	27452

LIGHTING FITTINGS (CONT'D)

LED down light fitting, recess mounted to false ceiling, integral electronic control gear/ driver, white stove enameled steel/ die cast aluminium body and anodized aluminium reflector (all types) with/ without metal trim : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27453	Down light with 8 - 10W LED lamp c/w dimmable driver and 2-hour NiMH emergency power pack	2,266.42	20.37	24.97	70.86	27453
27454	Ditto but with 3-hour NiMH emergency power pack	3,204.87	20.37	24.97	70.86	27454
27455	Down light with 10 - 13W LED lamp c/w dimmable driver and 2-hour NiMH emergency power pack	2,420.63	20.37	24.97	70.86	27455
27456	Ditto but with 3-hour NiMH emergency power pack	3,385.54	20.37	24.97	70.86	27456
27457	Down light with 13 - 22W LED lamp c/w dimmable driver and 2-hour NiMH emergency power pack	3,177.63	20.37	24.97	70.86	27457
27458	Ditto but with 3-hour NiMH emergency power pack	4,290.42	20.37	24.97	70.86	27458
27459	Down light with 22 - 24W LED lamp c/w dimmable driver and 2-hour NiMH emergency power pack	3,345.86	20.37	24.97	70.86	27459
27460	Ditto but with 3-hour NiMH emergency power pack	4,497.77	20.37	24.97	70.86	27460
27461	Down light with 10 - 12W LED lamp c/w clear tempered glass lens, IP65 and 2-hour NiMH emergency power pack	3,073.71	20.37	24.97	70.86	27461
27462	Ditto but with 3-hour NiMH emergency power pack	4,168.97	20.37	24.97	70.86	27462
27463	Down light with 10 - 12W LED lamp c/w matt diffuser	2,159.57	20.37	24.97	70.86	27463
27464	Down light with 18 - 20W LED lamp c/w satin glass diffuser	2,667.36	20.37	24.97	70.86	27464
27465	Down light with 12 - 16W LED lamp, IP54 c/w safety glass diffuser and 2-hour NiMH emergency power pack, similar to SFA 224	3,983.25	20.37	24.97	70.86	27465
27466	Ditto but with 3-hour NiMH emergency power pack	5,267.13	20.37	24.97	70.86	27466
27467	Down light with 16 - 18W LED lamp, IP54 c/w safety glass diffuser and 2-hour NiMH emergency power pack, similar to SFA 224	4,779.90	20.37	24.97	70.86	27467
27468	Ditto but with 3-hour NiMH emergency power pack	6,207.55	20.37	24.97	70.86	27468
27469	Down light with 40W LED lamp, 6500K, similar to SFA 224, IP54	6,207.55	20.37	24.97	70.86	27469
27470	Down light with 42W LED lamp, 3000K, lumen 3800 lm, beam angle 120 similar to SFA 224	5,034.10	20.37	24.97	70.86	27470
27471	Down light with 30W LED lamp, 4000K, c/w non-glare tempered glass diffuser, IP65 similar to SFA 224	5,313.77	20.37	24.97	70.86	27471

Self-contained and maintained type for down light fittings c/w 2-hour NiMH emergency power pack, inverter, transformer and : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27472	3 - 7W LED lamp similar to SFA 224	1,707.37	27.32	33.36	92.51	27472
27473	Ditto but with 3-hour emergency power pack	2,548.15	27.32	33.36	92.51	27473
27474	7 - 12W LED lamp similar to SFA 224	2,011.53	27.32	33.36	92.51	27474
27475	Ditto but with 3-hour emergency power pack	2,877.42	27.32	33.36	92.51	27475
27476	12 - 16W LED lamp similar to SFA 224	2,359.34	27.32	33.36	92.51	27476
27477	Ditto but with 3-hour emergency power pack	3,302.33	27.32	33.36	92.51	27477

LIGHTING FITTINGS (CONT'D)

Surface mounted LED lighting fitting c/w LED driver, LED T5/ T8 tube, (one driver for each set of LED T5/ T8 tube) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27478	600 mm long, 1 no. LED T5/ T8 tube, batten type similar to SFA 50	361.60	32.13	39.55	121.79	27478
27479	600 mm long, 2 no. LED T5/ T8 tube, batten type similar to SFA 69	474.60	35.70	44.10	137.27	27479
27480	1200 mm long, 1 no. LED T5/ T8 tube, batten type similar to SFA 50	452.00	33.81	41.60	126.68	27480
27481	1200 mm long, 2 no. LED T5/ T8 tube, batten type similar to SFA 69	565.00	37.57	46.39	142.78	27481
27482	1500 mm long, 1 no. LED T5/ T8 tube, batten type similar to SFA 50	542.40	39.54	48.80	148.51	27482
27483	1500 mm long, 2 no. LED T5/ T8 tube, batten type similar to SFA 69	678.00	43.94	54.42	167.38	27483

Surface mounted modular LED lighting fitting c/w LED driver, LED T5/ T8 tube, (one driver for each set of LED T5/ T8 tube), aluminium louvres/ reflectors and with/ without polycarbonate diffusers : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27484	200/ 300 mm x 600 mm long, single tube, IP65, min. lumen output 800 lm each tube	1,073.56	32.13	39.55	121.79	27484
27485	200/ 300 mm x 600 mm long, twin tube, IP65, min. lumen output 800 lm each tube	1,488.98	35.70	44.10	137.27	27485
27486	600 mm x 600 mm long, twin tube, IP65, min. lumen output 800 lm each tube	1,667.65	35.70	44.10	137.27	27486
27487	200/ 300 mm x 600 mm long, single tube, min. lumen output 800 lm each tube	850.01	30.51	37.55	115.07	27487
27488	200/ 300 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,175.99	33.90	41.88	129.78	27488
27489	600 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,317.10	33.90	41.88	129.78	27489
27490	200/ 300 mm x 900 mm long, single tube, IP65, min. lumen output 1200 lm each tube	1,178.21	34.59	42.56	130.32	27490
27491	200/ 300 mm x 900 mm long, twin tube, IP65, min. lumen output 1200 lm each tube	1,606.11	38.25	46.56	147.21	27491
27492	600 mm x 900 mm long, twin tube, IP65, min. lumen output 1200 lm each tube	1,798.87	38.25	46.56	147.21	27492
27493	200/ 300 mm x 900 mm long, single tube, min. lumen output 1200 lm each tube	943.48	32.87	40.47	123.28	27493
27494	200/ 300 mm x 900 mm long, twin tube, min. lumen output 1200 lm each tube	1,278.81	36.35	44.30	139.31	27494
27495	600 mm x 900 mm long, twin tube, min. lumen output 1200 lm each tube	1,432.25	36.35	44.30	139.31	27495

LIGHTING FITTINGS (CONT'D)

Surface mounted modular LED lighting fitting c/w LED driver, LED T5/ T8 tube, (one driver for each set of LED T5/ T8 tube), aluminium louvres/ reflectors and with/ without polycarbonate diffusers : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27496	200/ 300 mm x 1200 mm long, single tube, IP65, min. lumen output 1600 lm each tube	1,227.38	35.64	43.81	134.06	27496
27497	200/ 300 mm x 1200 mm long, twin tube, IP65, min. lumen output 1600 lm each tube	1,686.62	39.18	47.04	151.68	27497
27498	600 mm x 1200 mm long, twin tube, IP65, min. lumen output 1600 lm each tube	1,889.00	39.18	47.04	151.68	27498
27499	200/ 300 mm x 1200 mm long, single tube, min. lumen output 1600 lm each tube	1,019.48	33.81	41.60	126.68	27499
27500	200/ 300 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,377.21	37.22	44.75	143.36	27500
27501	600 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,542.46	37.22	44.75	143.36	27501
27502	1200 mm long, single tube, corrosion resistant, IP65, min lumen output 2200 lm each tube c/w 2-hour NiMH emergency power pack	3,717.70	33.81	41.60	126.68	27502
27503	Ditto but with 3-hour NiMH emergency power pack	4,944.24	33.81	41.60	126.68	27503
27504	1200 mm long, single tube, corrosion resistant, IP65, min lumen output 2200 lm each tube	2,788.28	33.81	41.60	126.68	27504
27505	120 mm x 1350 mm long, single tube, IP67, min. lumen output 2200 lm each tube	3,717.70	33.81	41.60	126.68	27505
27506	120 mm x 1350 mm long, single tube, IP67, min. lumen output 2200 lm each tube, c/w 2-hour NiMH emergency power pack	4,647.13	33.81	41.60	126.68	27506
27507	Ditto but with 3-hour NiMH emergency power pack	6,060.24	33.81	41.60	126.68	27507
27508	200/ 300 mm x 1500 mm long, single tube, IP65, min. lumen output 2000 lm each tube	1,622.22	38.45	47.21	163.03	27508
27509	200/ 300 mm x 1500 mm long, twin tube, IP65, min. lumen output 2000 lm each tube	2,210.21	49.78	60.77	177.04	27509
27510	600 mm x 1500 mm long, twin tube, IP65, min. lumen output 2000 lm each tube	2,475.44	49.78	60.77	177.04	27510
27511	200/ 300 mm x 1500 mm long, single tube, min. lumen output 2000 lm each tube	1,374.95	36.41	44.71	157.80	27511
27512	200/ 300 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	1,795.26	48.34	59.00	171.13	27512
27513	600 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	2,010.70	48.34	59.00	171.13	27513

LIGHTING FITTINGS (CONT'D)

Surface mounted modular LED lighting fitting c/w dimmable LED driver, LED T5/ T8 tube, (one driver for each set of LED T5/ T8 tube), aluminium louvres/ reflectors and with/ without polycarbonate diffusers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27514	200/ 300 mm x 600 mm long, single tube, IP65, min. lumen output 800 lm each tube	1,154.39	32.13	39.55	121.79	27514
27515	200/ 300 mm x 600 mm long, twin tube, IP65, min. lumen output 800 lm each tube	1,601.06	35.70	44.10	137.27	27515
27516	600 mm x 600 mm long, twin tube, IP65, min. lumen output 800 lm each tube	1,793.18	35.70	44.10	137.27	27516
27517	200/ 300 mm x 600 mm long, single tube, min. lumen output 800 lm each tube	914.00	30.51	37.55	115.07	27517
27518	200/ 300 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,264.50	33.90	41.88	129.78	27518
27519	600 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,416.23	33.90	41.88	129.78	27519
27520	200/ 300 mm x 900 mm long, single tube, IP65, min. lumen output 1200 lm each tube	1,266.89	34.59	42.56	130.32	27520
27521	200/ 300 mm x 900 mm long, twin tube, IP65, min. lumen output 1200 lm each tube	1,727.02	38.25	46.56	147.21	27521
27522	600 mm x 900 mm long, twin tube, IP65, min. lumen output 1200 lm each tube	1,934.26	38.25	46.56	147.21	27522
27523	200/ 300 mm x 900 mm long, single tube, min. lumen output 1200 lm each tube	1,014.47	32.87	40.47	123.28	27523
27524	200/ 300 mm x 900 mm long, twin tube, min. lumen output 1200 lm each tube	1,375.07	36.35	44.30	139.31	27524
27525	600 mm x 900 mm long, twin tube, min. lumen output 1200 lm each tube	1,540.07	36.35	44.30	139.31	27525
27526	200/ 300 mm x 1200 mm long, single tube, IP65, min. lumen output 1600 lm each tube	1,319.78	35.64	43.81	134.06	27526
27527	200/ 300 mm x 1200 mm long, twin tube, IP65, min. lumen output 1600 lm each tube	1,813.57	39.18	47.04	151.68	27527
27528	600 mm x 1200 mm long, twin tube, IP65, min. lumen output 1600 lm each tube	2,031.18	39.18	47.04	151.68	27528
27529	200/ 300 mm x 1200 mm long, single tube, min. lumen output 1600 lm each tube	1,096.20	33.81	41.60	126.68	27529
27530	200/ 300 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,480.85	37.22	44.75	143.36	27530
27531	600 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,658.57	37.22	44.75	143.36	27531
27532	200/ 300 mm x 1500 mm long, single tube, IP65, min. lumen output 2000 lm each tube	1,744.32	38.45	47.21	163.03	27532
27533	200/ 300 mm x 1500 mm long, twin tube, IP65, min. lumen output 2000 lm each tube	2,376.59	49.78	60.77	177.04	27533
27534	600 mm x 1500 mm long, twin tube, IP65, min. lumen output 2000 lm each tube	2,661.76	49.78	60.77	177.04	27534
27535	200/ 300 mm x 1500 mm long, single tube, min. lumen output 2000 lm each tube	1,478.46	36.41	44.71	157.80	27535
27536	200/ 300 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	1,930.38	48.34	59.00	171.13	27536
27537	600 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	2,162.05	48.34	59.00	171.13	27537

LIGHTING FITTINGS (CONT'D)

LED down light fitting, surface mounted, integral electronic control gear/ driver, stove enameled steel/ die cast aluminium body and anodized aluminium reflector (all types) with/ without metal trim: -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27538	Down light with up to 3W LED lamp, IP54	1,858.85	27.13	33.88	100.86	27538
27539	Down light with 3 - 7W LED lamp similar to SFA 223	2,582.79	27.13	33.88	100.86	27539
27540	Down light with 7 - 12W LED lamp similar to SFA 223	2,788.28	27.13	33.88	100.86	27540
27541	Down light with 12 - 16W LED lamp similar to SFA 223	2,952.66	27.13	33.88	100.86	27541
27542	Down light with 12 - 16W LED lamp c/w 2-hour NiMH emergency power pack, similar to SFA 223	3,850.48	27.13	33.88	100.86	27542
27543	Ditto but with 3-hour NiMH emergency power pack	5,091.55	27.13	33.88	100.86	27543
27544	Down light with 18 - 20W LED lamp similar to SFA 223	4,116.03	27.13	33.88	100.86	27544
27545	Down light with 3 - 7W LED lamp c/w glass diffuser similar to SFA 223	2,593.23	27.13	33.88	100.86	27545
27546	Down light with 7 - 12W LED lamp c/w glass diffuser similar to SFA 223	2,854.66	27.13	33.88	100.86	27546
27547	Down light with 12 - 16W LED lamp c/w glass diffuser similar to SFA 223	3,120.21	27.13	33.88	100.86	27547
27548	Down light with 3 - 7W LED lamp c/w safety glass diffuser to IP54 similar to SFA 223	5,186.47	27.13	33.88	100.86	27548
27549	Down light with 7 - 12W LED lamp c/w safety glass diffuser to IP54 similar to SFA 223	5,709.33	27.13	33.88	100.86	27549
27550	Down light with 12 - 16W LED lamp c/w safety glass diffuser to IP54 similar to SFA 223	6,240.43	27.13	33.88	100.86	27550
27551	Down light with 12 - 16W LED lamp c/w safety glass diffuser to IP54 and 2-hour NiMH emergency power pack, similar to SFA 223	7,302.63	27.13	33.88	100.86	27551
27552	Ditto but with 3-hour NiMH emergency power pack	9,232.65	27.13	33.88	100.86	27552
27553	Down light with 16 - 18W LED lamp c/w safety glass diffuser to IP54 and 2-hour NiMH emergency power pack, similar to SFA 223	7,568.18	27.13	33.88	100.86	27553
27554	Ditto but with 3-hour NiMH emergency power pack	9,568.38	27.13	33.88	100.86	27554
27555	Down light with infra-red lamp, 175 mm diameter	3,452.15	27.13	33.88	100.86	27555
27556	Down light with 8 - 10W LED lamp c/w dimmable driver	2,826.72	27.13	33.88	100.86	27556
27557	Down light with 10 - 13W LED lamp c/w dimmable driver	3,019.05	27.13	33.88	100.86	27557
27558	Down light with 13 - 22W LED lamp c/w dimmable driver	3,963.20	27.13	33.88	100.86	27558
27559	Down light with 22 - 24W LED lamp c/w dimmable driver	4,173.01	27.13	33.88	100.86	27559
27560	Down light with 22 - 24W LED lamp c/w dimmable driver and 2-hour NiMH emergency power pack	5,111.73	27.13	33.88	100.86	27560
27561	Ditto but with 3-hour NiMH emergency power pack	6,618.14	27.13	33.88	100.86	27561
27562	Down light with 10 - 12W LED lamp c/w clear tempered glass lens, IP65 and 2-hour NiMH emergency power pack	4,695.93	27.13	33.88	100.86	27562
27563	Ditto but with 3-hour NiMH emergency power pack	6,104.00	27.13	33.88	100.86	27563
27564	Down light with 10 - 12W LED lamp c/w matt diffuser	3,299.34	27.13	33.88	100.86	27564
27565	Down light with 18 - 20W LED lamp c/w satin glass diffuser	4,075.12	27.13	33.88	100.86	27565
27566	Down light with 36W LED lamp, c/w angle adjustable, die cast aluminium housing, IP65	5,801.52	27.13	33.88	100.86	27566

LIGHTING FITTINGS (CONT'D)

Recess mounted modular LED lighting fitting c/w LED driver, LED T5/ T8 tube, (one driver for each set of LED T5/ T8 tube), aluminium louvres/ reflectors and with/ without polycarbonate diffusers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27567	200/ 300 mm x 600 mm long, single tube, min. lumen output 800 lm each tube	1,082.22	32.72	40.12	119.20	27567
27568	200/ 300 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,191.84	39.48	46.86	125.69	27568
27569	600 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,334.87	39.48	46.86	125.69	27569
27570	200/ 300 mm x 1200 mm long, single tube, min. lumen output 1600 lm each tube	1,298.14	39.48	46.86	125.69	27570
27571	200/ 300 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,406.33	44.25	52.49	133.97	27571
27572	600 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,575.09	44.25	52.49	133.97	27572
27573	200/ 300 mm x 1500 mm long, single tube, min. lumen output 2000 lm each tube	1,370.84	41.95	50.84	133.37	27573
27574	200/ 300 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	1,456.81	49.18	57.72	142.58	27574
27575	600 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	1,631.63	49.18	57.72	142.58	27575

Recess mounted modular LED lighting fitting c/w dimmable LED driver, LED T5/ T8 tube, (one driver for each set of LED T5/ T8 tube), aluminium louvres/ reflectors and with/ without polycarbonate diffusers : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27576	200/ 300 mm x 600 mm long, single tube, min. lumen output 800 lm each tube	1,161.99	32.72	40.12	119.20	27576
27577	200/ 300 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,343.28	39.48	46.86	125.69	27577
27578	600 mm x 600 mm long, twin tube, min. lumen output 800 lm each tube	1,504.47	39.48	46.86	125.69	27578
27579	200/ 300 mm x 1200 mm long, single tube, min. lumen output 1600 lm each tube	1,378.49	39.48	46.86	125.69	27579
27580	200/ 300 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,493.72	44.24	52.49	133.97	27580
27581	600 mm x 1200 mm long, twin tube, min. lumen output 1600 lm each tube	1,673.00	44.24	52.49	133.97	27581
27582	200/ 300 mm x 1500 mm long, single tube, min. lumen output 2000 lm each tube	1,471.66	41.95	50.84	133.37	27582
27583	200/ 300 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	1,543.35	49.18	57.72	142.58	27583
27584	600 mm x 1500 mm long, twin tube, min. lumen output 2000 lm each tube	1,728.55	49.18	57.72	142.58	27584

LIGHTING FITTINGS (CONT'D)

LED circular lighting fitting, pendant mounted to ceiling, integral electronic control gear/ driver, die cast aluminium body, high transmittance diffuser : -

Item		Supply and fix				Take down and clear away	Take down and set aside for re-use	Fix only	Item
		up to 18W	18W to 25W	25W to 35W	35W to 45W				
		A $	B $	C $	D $	E $	F $	G $	
	Each								
27585	LED circular lighting fitting, diameter up to 600 mm	4,132.63	4,520.99	4,982.39	5,111.84	31.24	37.48	80.63	27585
27586	LED circular lighting fitting, diameter up to 600 mm, c/w dimmable driver	5,307.63	5,695.99	6,157.39	6,286.84	31.24	37.48	80.63	27586

Track lighting system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27587	Single-circuit extruded monorail aluminium lighting track, surface/ suspended mounted, 1000 mm in length, 16A max. rating, mains voltage	343.79	24.61	30.77	82.64	27587
27588	Single-circuit extruded monorail aluminium lighting track, surface/ suspended mounted, 2000 mm in length, 16A max. rating, mains-voltage	503.39	23.27	35.21	97.64	27588
27589	End cap for monorail lighting track	32.15	2.60	2.88	7.54	27589
27590	Three phase four circuit six conductor slimline lighting track made from extruded aluminum with powder coated finish c/w components including push-up live end, plug-in coupler, push-up coupler, plug-in coupler, rigid L/ T/ X coupler, flexible coupler, mounting clip, end cap, suspension, mains supply kit, cable entry moulding, etc., two 16 A fused feeds, 1000 mm in length	1,435.98	31.40	38.84	113.12	27590
27591	Spot light with 7 - 9W LED lamp, 90° tiltable bracket, 360° spot/ flood rotatable transadapter, for light track mounting similar to SFA 244	979.77	22.31	26.75	75.88	27591
27592	Ditto but with 3 x 3W LED lamp	1,312.52	22.31	26.75	75.88	27592
27593	Ditto but with 7 - 9W LED lamp and dimmable ballast	1,582.00	22.31	26.75	75.88	27593

LIGHTING FITTINGS (CONT'D)

Bulkhead light fitting c/w electronic control gear/ electronic ballast, lamps, side/ back entry cutting and rubber grommet or stop : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
27594	2 x 8W vandal resistant fluorescent bulkhead with injection moulded polycarbonate diffuser, IP65	820.14	27.05	33.80	100.64	27594
27595	Ditto but 3 x 8W fluorescent light, IP65	1,112.98	27.05	33.80	100.64	27595
27596	Ditto but for 1 x 11W PL fluorescent light, IP65	732.45	27.05	33.80	100.64	27596
27597	Ditto but for 2 x 11W PL fluorescent light, IP65	833.89	27.05	33.80	100.64	27597
27598	Bulkhead lighting fitting IP65 with die-cast aluminium body, moulded glass lens c/w built-in control gear and 1 x 70W CDMT lamp	1,844.41	27.05	33.80	100.64	27598
27599	Bulkhead fitting of IP65 protection c/w 70W CDMT lamp, polycarbonate cover	2,211.75	27.05	33.80	100.64	27599
27600	Bulkhead luminaire c/w 2 x 8W fluorescent lamps, 2-hour NiMH emergency power pack & control gear	698.37	27.05	33.80	100.64	27600
27601	Ditto but with 3-hour NiMH emergency power pack	1,097.83	27.05	33.80	100.64	27601
27602	Traditional bulkhead fitting similar to SFA 203, die cast aluminium casing with polyester powder coated finish, hinged anti vandal polycarbonate diffuser, to IEC 60598, IP 64 c/w 1 x 13W PLC lamp	419.13	27.05	33.80	100.64	27602
27603	Bulkhead fitting, prismatic type, glass diffuser, 35W CDMT lamp similar to SFA 35	1,981.98	27.05	33.80	100.64	27603
27604	Ditto but for 70W SON	2,668.65	27.05	33.80	100.64	27604
27605	Ditto but for 70W CDMT	2,483.52	27.05	33.80	100.64	27605
27606	Bulkhead fitting, IP65 c/w up to 10W LED lamps	3,319.38	27.05	33.80	100.64	27606
27607	Bulkhead fitting, IP65 c/w 10W - 20W LED lamps	3,717.70	27.05	33.80	100.64	27607
27608	Bulkhead fitting, IP65 c/w 20W - 30W LED lamps	4,381.58	27.05	33.80	100.64	27608
27609	Bulkhead fitting, IP65 c/w 30W - 40W LED lamps	5,045.45	27.05	33.80	100.64	27609
27610	Gasket for retaining flange for bulkhead fitting	37.62	4.93	6.67	18.11	27610
27611	Glassware only for bulkhead fitting similar to SFA 35	493.30	13.53	16.18	49.88	27611
27612	Key for bulkhead (supply only) lighting fitting	23.99	-	-	-	27612
27613	Bulkhead lighting fitting, IP65 c/w polycarbonate diffuser and 1 x 26W PLC lamp	759.56	27.05	33.80	100.64	27613

LIGHTING FITTINGS (CONT'D)

Floodlighting fittings including control gear, side/ back entry, cutting, and rubber grommet or stop : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27614	MBIL floodlighting fitting IP54 c/w 750/ 1000/ 1500W control gear	13,905.42	66.22	82.46	253.58	27614
27615	Ditto but 2000W	22,891.43	66.22	82.46	253.58	27615
27616	H.P. sodium (SON) floodlighting fitting IP65, die cast aluminium housing c/w 70W lamp, control gear and anodized aluminium reflector (all types) similar to SFA 205	1,769.54	62.16	78.48	235.57	27616
27617	Ditto but for 150W lamp	2,435.35	62.16	78.48	235.57	27617
27618	Ditto but for 250W lamp	3,267.60	62.16	78.48	235.57	27618
27619	Ditto but for 400W lamp	4,516.01	62.16	78.48	235.57	27619
27620	Ditto but for 70W MBIF lamp	2,533.02	62.16	78.48	235.57	27620
27621	Ditto but for 150W MBIF lamp	3,083.01	62.16	78.48	235.57	27621
27622	Ditto but for 250W MBIF lamp	3,770.53	62.16	78.48	235.57	27622
27623	Ditto but for 400W MBIF lamp	4,801.80	62.16	78.48	235.57	27623
27624	Tungsten halogen floodlight fitting, IP54 c/w lamp, 500W	-	27.23	34.02	101.27	27624
27625	Ditto but with 1000W lamp	-	27.23	34.02	101.27	27625
27626	Ditto but with 1500W lamp	-	27.23	34.02	101.27	27626
27627	High bay floodlight fittings designed and manufactured to comply with IEC 60598-2, IP54 body; extruded aluminium body with high temperature polypropylene side casing and high temperature nylon body; vertical lamp, prismatic glass reflector c/w 250W MBIF lamp, control gear and safety chain	5,548.89	62.16	78.48	235.57	27627
27628	Ditto but with 400W MBIF lamp	6,283.89	62.16	78.48	235.57	27628
27629	Ditto but with 250W SON lamp	4,478.11	62.16	78.48	235.57	27629
27630	Ditto but with 400W SON lamp	4,870.57	62.16	78.48	235.57	27630
27631	High bay floodlight fittings designed and manufactured to comply with IEC 60598-2, IP54 body; extruded aluminium body with high temperature polypropylene side casing and high temperature nylon body; vertical lamp, self-cleaning high purity spun aluminium reflector c/w 250W MBIF lamp, control gear and safety chain	4,742.95	62.16	78.48	235.57	27631
27632	Ditto but with 400W MBIF lamp	5,263.95	62.16	78.48	235.57	27632
27633	Ditto but with 250W SON lamp	3,834.41	62.16	78.48	235.57	27633
27634	Ditto but with 400W SON lamp	4,125.67	62.16	78.48	235.57	27634

LIGHTING FITTINGS (CONT'D)

Floodlighting fittings including control gear, side/ back entry, cutting, and rubber grommet or stop : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27635	High bay floodlight fittings designed and manufactured to comply with IEC 60598-2 IP65 body; technopolymer reinforced with fiber glass body; turned aluminium sheet upper housing with grey powder paint; toughened glass cover with gasket clips; elliptical lamp, polished and anodized aluminium reflector c/w 250W MBIF lamp control gear and safety chain	3,518.03	62.31	78.64	236.05	27635
27636	Ditto but with 400W MBIF lamp	3,822.79	62.31	78.64	236.05	27636
27637	Ditto but with 250W SON lamp	2,523.49	62.31	78.64	236.05	27637
27638	Ditto but with 400W SON lamp	2,696.21	62.31	78.64	236.05	27638
27639	High bay floodlight fittings designed and manufactured to comply with IEC 60598-2 IP54 body; prismatic borosilicate glass retained by a spun aluminium cover sealed reflector; tempered glass cover with stainless steel clips c/w 250W MBIF lamp, control gear and safety chain	5,398.46	62.31	78.64	236.05	27639
27640	Ditto but with 400W MBIF lamp	5,793.69	62.31	78.64	236.05	27640
27641	Ditto but with 250W SON lamp	4,200.65	62.31	78.64	236.05	27641
27642	Ditto but with 400W SON lamp	4,666.94	62.31	78.64	236.05	27642
27643	High bay floodlight fittings designed and manufactured to comply with IEC 60598-2 IP54 body; prismatic borosilicate glass retained by a spun aluminium cover sealed reflector c/w 250W MBIF lamp, control gear and safety chain	4,533.30	62.31	78.64	236.05	27643
27644	Ditto but with 400W MBIF lamp	4,903.05	62.31	78.64	236.05	27644
27645	Ditto but with 250W SON lamp	3,588.70	62.31	78.64	236.05	27645
27646	Ditto but with 400W SON lamp	3,782.41	62.31	78.64	236.05	27646
27647	High bay floodlight c/w up to 60W LED lamp	4,910.77	62.31	78.64	236.05	27647
27648	High bay floodlight c/w 60 - 80W LED lamp	5,481.80	62.31	78.64	236.05	27648
27649	High bay floodlight c/w 80 - 100W LED lamp	5,710.21	62.31	78.64	236.05	27649
27650	High bay floodlight c/w 100 - 150W LED lamp	6,281.22	62.31	78.64	236.05	27650
27651	High bay floodlight, IP65, c/w 200W LED lamp	9,958.13	62.31	78.64	236.05	27651
27652	High bay floodlight, IP65, c/w 250W LED lamp	10,356.45	62.31	78.64	236.05	27652

LIGHTING FITTINGS (CONT'D)

Floodlighting fittings including control gear, side/ back entry, cutting, and rubber grommet or stop : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27653	Twin lamp tennis-court floodlight with heavy gauge aluminium housing, reflector with forward throw cut-off pattern, clear tempered lens c/w 1 x 250W HP sodium lamp and 1 x 400W metal halide lamp and integral control gears, IP65	9,101.54	94.26	117.61	352.75	27653
27654	Tennis court lighting similar to SFA 267, aluminium housing, 4mm toughened glass lens, hinged aluminium lens frame with reinforced corners, sharp cut-off forward throw anodised aluminium reflector c/w control gear and 1 x 1000W/ 1500W metal halide lamp	13,737.02	27.14	33.06	99.02	27654
27655	400W MBI/ T floodlight fitting IP65 c/w GRP body, anodized aluminium reflector, toughened glass front cover, steel galvanized cradle, integral control gear and lamp	4,961.27	81.15	98.45	303.24	27655
27656	1000W SON/ T floodlight fitting IP65 c/w aluminium reflector, galvanized steel body, integral control gear and lamp	10,573.66	81.15	98.45	303.24	27656
27657	Floodlight fitting with mounting box similar to SFA 204, die cast aluminium housing, anodised aluminium reflector, 160° tiltable and 360° rotatable c/w safety glass and 1 x 35W metal halide lamp, IP65	2,639.16	61.90	78.16	234.63	27657
27658	Asymmetrical floodlight fitting similar to SFA 205, marine grade 316 stainless steel construction, anodised aluminium reflector, IP67 c/w safety chain and quick release clips at front cover, adjustable stirrup bracket, internal control gear and 1 x 250W high pressure sodium or metal halide lamp	6,996.38	61.90	78.16	234.63	27658
27659	Floodlight fitting similar to SFA 206, die cast aluminium housing with integral cooling ribs, hinged door frame for reflector changing, cast aluminium swivel with locking teeth at 5° intervals, mounting onto 50 mm square tenon c/w control gear, 1 x 400W high pressure sodium or metal halide lamp, and reflector for narrow vertical flood beam, IP67	10,338.94	61.90	78.16	234.63	27659
27660	Ditto but reflector for wide flood beam	8,838.49	61.90	78.16	234.63	27660
27661	Floodlight fitting similar to SFA 206, die cast aluminium housing with integral cooling ribs, hinged door frame for reflector changing, cast aluminium swivel with locking teeth at 5° intervals, wall mounted c/w control gear, 1 x 70W high pressure sodium or metal halide lamp, and reflector for wide flood beam, IP67	7,348.57	61.90	78.16	234.63	27661
27662	Ditto but stanchion mounted and reflector for wide flood beam	7,148.91	61.90	78.16	234.63	27662
27663	Adjustable compact outdoor floodlight similar to SFA 207, injection moulded polyester body, glass-filled nylon base or spike for mounting, IP54 c/w 1 x 150W high pressure sodium or metal halide lamp	542.59	19.72	24.36	75.31	27663
27664	Floodlight fitting, IP65 c/w 500W LED lamp, CRI not less than 90, luminous efficiency not less than 78 lm/watt	16,145.89	61.90	78.16	234.63	27664

		Supply and fix										Take down and clear away	Take down and set aside for re-use	Fix only	
		c/w Induction lamp				c/w LED lamp									
		Up to 60W	80W	120W	200W	Up to 70W	70W - 100W	100W - 200W	200W - 250W	250W - 400W	1200W				
		A $	B $	C $	D $	E $	F $	G $	H $	I $	J $	K $	L $	M $	
	Each														
27665	Floodlight fitting, IP65	2,890.49	3,084.49	3,278.51	3,666.79	4,953.40	7,169.85	8,630.38	10,622.00	13,011.95	32,291.78	61.90	78.16	234.63	27665

LIGHTING FITTINGS (CONT'D)

Floodlight fitting accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27666	Heat shield for floodlight	1,515.57	13.64	16.33	50.40	27666
27667	Wire guard for floodlight	646.53	13.64	16.33	50.40	27667
27668	Front glass assembly c/w silicone rubber gasket for floodlight	899.76	13.64	16.33	50.40	27668
27669	Floodlight louvre for 750W fitting	1,857.59	19.89	24.49	72.59	27669
27670	Ditto but for 1000W fitting	1,889.24	19.89	24.49	72.59	27670
27671	Ditto but for 1500W fitting	1,934.95	19.89	24.49	72.59	27671
27672	Multi-use or cross arm mounting bracket c/w 2"U" clamps (hot dip galvanized steel)	410.87	19.89	24.54	75.91	27672
27673	Wall bracket (hot dip galvanized steel)	343.78	17.59	22.43	65.22	27673
27674	Stainless steel (304) mounting bracket for floodlight	904.44	17.59	22.43	65.22	27674
27675	Ditto but of stainless steel (316)	1,025.88	17.59	22.43	65.22	27675
27676	Hot dip galvanized steel universal pole clamp for floodlight fitting	131.67	7.27	9.73	27.01	27676
27677	Stainless steel (304) universal pole clamp for floodlight fitting	326.67	7.27	9.73	27.01	27677
27678	Ditto but of stainless steel (316)	364.71	7.27	9.73	27.01	27678
27679	Stirrup assembly (hot dip galvanized steel)	521.71	19.89	24.54	75.91	27679
27680	Stirrup assembly c/w blanking plate and gland (hot dip galvanized)	578.73	19.89	24.54	75.91	27680
27681	Stirrup assembly c/w blanking plate and gland (304 stainless steel)	1,655.66	19.89	24.54	75.91	27681
27682	Stirrup assembly c/w blanking plate and gland (316 stainless steel)	1,731.87	19.89	24.54	75.91	27682
27683	Special wall bracket, hot dip galvanized	541.72	19.89	24.54	75.91	27683
27684	Step up transformer c/w weatherproof metal box rated IP65	2,118.80	25.39	32.04	95.36	27684
27685	Step down transformer c/w enclosure, 220/ 12V, 50 VA	1,097.26	10.67	13.36	38.50	27685

LIGHTING FITTINGS (CONT'D)

Floodlight fitting accessories : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27686	Ballast for 70/ 150/ 250W H.P. Sodium lamp	306.37	13.64	16.31	50.29	27686
27687	Ballast for 400W H.P. Sodium lamp	359.53	13.64	16.31	50.29	27687
27688	Ballast for 150/ 250/ 400W white SON lamp	564.85	13.64	16.31	50.29	27688
27689	Ballast for 250/ 400W MBIF lamp	369.20	13.64	16.31	50.29	27689
27690	Ballast for 750W MBIL lamp	1,539.88	13.64	16.31	50.29	27690
27691	Ballast for 1000W MBIL lamp	1,539.88	13.64	16.31	50.29	27691
27692	Ballast for 1500W MBIL lamp	1,553.61	13.64	16.31	50.29	27692
27693	Ballast for 2000W MBIL lamp	1,566.38	13.64	16.31	50.29	27693
27694	Transformer for 1500W MBIL lamp	2,458.36	13.64	16.31	50.29	27694
27695	Ballast for 50/ 80/ 125W MBF lamp	-	13.64	16.31	50.29	27695
27696	Ballast for 250/ 400W MBF lamp	-	13.64	16.31	50.29	27696
27697	Electronic Ballast for 150W Metal Halide Lamp	1,141.54	13.64	16.31	50.29	27697
27698	Capacitor for 250W/ 400W MBIF lamp	170.66	11.56	14.93	43.04	27698
27699	Capacitor for 750W MBIL lamp	405.45	11.56	14.93	43.04	27699
27700	Capacitor for 1000W MBIL lamp	410.30	11.56	14.93	43.04	27700
27701	Capacitor for 1500W MBIL lamp	420.90	11.56	14.93	43.04	27701
27702	Capacitor for 2000W MBIL lamp	492.82	11.56	14.93	43.04	27702
27703	Ignitor for 70W H.P. Sodium lamp	204.65	11.56	14.93	43.04	27703
27704	Ignitor for 150/ 250/ 400W H.P. Sodium lamp	227.55	11.56	14.93	43.04	27704
27705	Ignitor for 150/ 250/ 400W white SON lamp	232.13	11.56	14.93	43.04	27705
27706	Capacitor for 70W H.P. Sodium white SON lamp 30 mF + 10%	89.62	11.56	14.93	43.04	27706
27707	Capacitor for 150W H.P. Sodium white SON lamp 30 mF + 10%	120.71	11.56	14.93	43.04	27707
27708	Capacitor for 250W H.P. Sodium white SON lamp 30 mF + 10%	159.57	11.56	14.93	43.04	27708
27709	Capacitor for 400W H.P. Sodium white SON lamp 40 mF + 10%	217.86	11.56	14.93	43.04	27709
27710	Ignitor for 250W/ 400W MBIF lamp	431.60	11.56	14.93	43.04	27710
27711	Ignitor for 750W MBIL lamp	452.88	11.56	14.93	43.04	27711
27712	Ignitor for 1000W MBIL lamp	554.64	11.56	14.93	43.04	27712
27713	Ignitor for 1500W MBIL lamp	758.17	11.56	14.93	43.04	27713
27714	Ignitor for 2000W MBIL lamp	836.59	11.56	14.93	43.04	27714
	Per linear meter					
27715	Safety chain, hot dipped galvanized steel (or wrought iron) chain 25 mm oval link c/w shackles	69.04	2.45	2.88	7.16	27715

LIGHTING FITTINGS (CONT'D)

Pole top light fitting, minimum IP65 :-

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27716	Pole top lantern c/w 35W/ 50W/ 70W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 20W - 30W LED lamp and control gear similar to SFA 46 with large canopy	1,859.56	37.44	45.91	139.93	27716
27717	Pole top lantern c/w 35W/ 50W/ 70W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp and control gear similar to SFA 46 with small canopy	1,786.80	37.44	45.91	139.93	27717
27718	Lighting fitting, c/w 70W SON lamp	1,908.44	37.44	45.91	139.93	27718
27719	Ditto but for 70W metal halide lamp	1,683.28	37.44	45.91	139.93	27719
27720	Ditto but for 20W - 30W LED lamp	2,428.22	37.44	45.91	139.93	27720
27721	Pole top adaptor for above	590.36	15.31	20.14	60.04	27721
27722	Pole top fitting similar to SFA 208, 500 mm diameter opal/ clear globe made of impact resistant plastic on a black console, IP44 c/w 1 x 70W/ 100W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp	2,972.61	79.09	99.19	293.81	27722
27723	Ditto but 1 x 26W PLC lamp	2,217.14	79.09	99.19	293.81	27723
27724	Ditto but 1 x 20W - 30W LED lamp	3,326.12	79.09	99.19	293.81	27724
27725	500 mm unbreakable globe only for pole top fitting similar to SFA 208	1,202.39	27.13	33.88	100.86	27725
27726	Pole top luminaire similar to SFA 209, cast aluminium alloy housing with hinged top, clear acrylic lens, IP54 c/w cast aluminium mounting arm, control gear and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	19,246.36	53.48	65.78	198.59	27726
27727	Symmetrical pole top luminaire similar to SFA 210, aluminium alloy body, white/ clear plastic diffuser with optical texture, anodised aluminium reflector, IP44 c/w control gear and 1 x 70W/ 100W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	5,998.88	37.44	45.91	139.93	27727
27728	Pole top luminaire with additional upper light output similar to SFA 211, aluminium alloy body, crystal glass diffuser with optical texture, white louvred reflector, mounting height 3.5m to 5m, IP44 c/w control gear and 1 x 70W/ 100W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	7,130.49	37.44	45.91	139.93	27728
27729	Cylindrical pole top luminaire similar to SFA 212, seamless aluminium housing, die cast aluminium door frame, tempered glass or polycarbonate lens, anodised aluminium reflector, schedule 40 steel yoke c/w control gear and 1 x 70W/ 100W/ 150W high pressure sodium/ metal halide lamp 1 x 35W/ 70W CDMT lamp or 1 x 20 - 30W LED lamp	10,618.19	37.54	46.01	140.21	27729
27730	Single pole top fitting similar to SFA 213, hinged cylindrical aluminium top housing of over 500 mm diameter, injection moulded clear acrylic diffuser, hydroformed specular reflector, c/w control gear and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	14,818.36	37.54	46.01	140.21	27730
27731	Ditto but 1 x 150W high pressure sodium or metal halide lamp	15,363.37	37.54	46.01	140.21	27731
27732	Pole top fitting similar to SFA 214, cylindrical aluminium top housing of 565 mm diameter with polyester powder finish, thermoformed clear acrylic lens, hydroformed anodised aluminium reflector c/w control gear and 1 x 150W high pressure sodium or metal halide lamp	7,471.68	37.54	46.01	140.21	27732
27733	Pole top fitting similar to SFA 214, cylindrical aluminium top housing of 565 mm diameter with polyester powder finish, thermoformed clear acrylic lens, hydroformed anodised aluminium reflector c/w control gear and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	7,218.26	37.54	46.01	140.21	27733
27734	Pole top mounted area light similar to SFA 215, one piece spun aluminium housing with cast aluminium door, clear contoured tempered glass or polycarbonate lens, perimeter forward throw reflector c/w extruded mounting arm, control gear and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	4,131.03	43.62	54.82	163.56	27734

LIGHTING FITTINGS (CONT'D)

Pole top light fitting, minimum IP65 :- (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27735	Pole top mounted area light similar to SFA 215, one piece spun aluminium housing with cast aluminium door, clear contoured tempered glass or polycarbonate lens, perimeter forward throw reflector c/w extruded mounting arm, 3.5m/ 4.5m lamp pole, control gear and 1 x 70W/ 150W high pressure sodium/ metal halide lamp or 1 x 35W/ 70W CDMT lamp or 1 x 20 - 30W LED lamp	8,113.48	289.13	360.64	1,092.68	27735
27736	Ditto but twin lantern	12,356.11	290.84	364.28	1,093.96	27736
27737	Pole top fitting similar to SFA 216, injection moulded frosted clear polycarbonate globe with decorative finial on top of globe and spun aluminium hood c/w 3.4m lamp pole from the fitting manufacturer, control gear and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	47,186.40	289.13	360.64	1,092.68	27737
27738	Lighting fixture similar to SFA 217, moulded aluminium housing and hood, cage of 4 moulded aluminium rods, welded aluminium louvre, symmetrical light distribution, overall height over 1m c/w control gear and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	22,184.28	60.95	70.61	197.91	27738
27739	Pole top luminaire similar to SFA 218, die cast aluminium alloy body, vandal resistant polycarbonate globe of 500 mm diameter, anodised aluminium reflector, IP54 c/w control gear and 1 x 70W/ 150W high pressure sodium/ metal halide lamp or 1 x 35W/ 70W CDMT lamp or 1 x 20 - 30W LED lamp	6,081.86	37.37	45.82	139.66	27739
27740	Pole top globe fitting similar to SFA 219, top half of 400 mm diameter globe being spun aluminium with outside mat and inside anodised, acrylic or polycarbonate diffuser, IP44, c/w control gear and 1 x 50W/ 70W HPS lamp or 1 x 35W/ 70W CDMT lamp or 1 x 20 - 30W LED lamp	7,837.59	37.44	45.91	139.93	27740
27741	Pole top luminaire similar to SFA 220, die cast aluminium alloy body, vandal resistant polycarbonate diffuser, anodised aluminium reflector, IP54 c/w control gear and 1 x 50W/ 70W HPS lamp or 1 x 35W/ 70W CDMT lamp or 1 x 20 - 30W LED lamp	5,584.60	37.44	45.91	139.93	27741
27742	Ditto but double heads and c/w mounting bracket	12,276.94	39.40	50.47	150.10	27742
27743	Side road lantern similar to SFA 221, single piece compression moulded canopy in glass reinforced polyester resin, hinged anti-vandal polycarbonate bowl, anodised aluminium reflector c/w control gear in separate compartment of body and 1 x 70W high pressure sodium/ metal halide lamp or 1 x 35W CDMT lamp or 1 x 20 - 30W LED lamp	3,070.45	37.44	45.91	139.93	27743
27744	Rectangular road lighting similar to SFA 222, body of extruded aluminium sides and sheet aluminium top, toughened soda lime glass lens, anodised aluminium reflector, IP54 c/w control gear in hinged extruded aluminium gear tray and 1 x 100W/ 150W CDMT lamp or 1 x 20 - 30W LED lamp	5,679.72	37.44	45.91	139.93	27744
27745	Stand-alone all-in-one type solar power LED pole top luminaire c/w die cast aluminium body, IP65, battery, self contained with mono-crystalline solar panel, electronic control gear/ driver, automatic switch to grid supply, timer, birds anti-perching device, 10W-24W LED lamp and 25-70Wp solar panel	11,551.43	37.54	46.01	140.21	27745
27746	Ditto but 25 - 34W LED lamp and 60 - 120Wp solar panel	13,277.50	37.54	46.01	140.21	27746
27747	Ditto but 35 - 50W LED lamp and 100 - 200Wp solar panel	19,916.25	37.54	46.01	140.21	27747

LIGHTING FITTINGS (CONT'D)

Wall/ Ceiling mounting luminaire : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27748	100 mm diameter white opal glass cylindrical glassware and gallery similar to SFA 6	183.74	19.72	24.36	75.31	27748
27749	115 mm diameter white opal glass cylindrical glassware and gallery similar to SFA 7	279.18	19.72	24.36	75.31	27749
27750	Surface mounted ceiling downlight similar to SFA 223, die cast aluminium body of 150 mm diameter, anodised aluminium reflector, IP65 c/w safety glass, control gear and 1 x 35W metal halide discharge lamp	3,255.87	27.13	33.88	100.86	27750
27751	Surface mounted ceiling downlight similar to SFA 223, die cast aluminium body of 150 mm diameter, anodised aluminium reflector, IP65 c/w safety glass, control gear and 1 x 18W compact fluorescent lamp or 1 x 20 - 30W LED lamp	1,965.82	27.13	33.88	100.86	27751
27752	Circular surface mounted fluorescent light fitting c/w opal diffuser, 1 x 13W/ 18W compact fluorescent lamp and electronic ballast	657.99	27.74	35.28	106.06	27752
27753	Ditto but 1 x 20W - 30W LED lamp	1,009.46	27.74	35.28	106.06	27753
27754	Surface mounted downlight, white colour cylindrical metal in specular finish, aluminium reflector, 240 mm diameter c/w integral electronic ballast and 2 x 18W PLC lamps (4000K)	410.18	27.23	34.02	101.27	27754
27755	Ditto but 2 x 20W - 30W LED lamp	694.44	27.23	34.02	101.27	27755
27756	Surface mounted light fitting c/w 1 x 18W compact fluorescent lamp and electronic ballast	1,315.25	23.53	29.65	85.11	27756
27757	Ditto but with 2-hour NiMH emergency power pack	2,145.00	23.53	29.65	85.11	27757
27758	Ditto but with 3-hour NiMH emergency power pack	3,128.51	23.53	29.65	85.11	27758
27759	Surface mounted light fitting c/w 1 x 20W - 30W LED lamp	1,921.00	27.23	34.02	101.27	27759
27760	Surface mounted light fitting, die cast aluminium body, polycarbonate diffuser, IP65, c/w driver and 1 x 9 - 12W 2D LED lamp	1,991.63	27.23	34.02	101.27	27760
27761	Surface mounted light fitting, die cast aluminium body, polycarbonate diffuser, IP65, c/w driver and 1 x 12 - 20W 2D LED lamp	3,222.07	27.23	34.02	101.27	27761
27762	Vandal resistant wall mounted luminaire similar to SFA 225, injection moulded polycarbonate body, hinged injection moulded clear prismatic polycarbonate diffuser, IP65 c/w control gear in galvanised steel tray and 1 x 13/ 18/ 26W compact fluorescent lamp	1,326.28	19.80	24.44	75.61	27762
27763	Ditto but with 1 x 70W high pressure sodium lamp	1,887.41	19.80	24.44	75.61	27763
27764	Ditto but with 1 x 70W metal halide lamp	1,638.07	19.80	24.44	75.61	27764
27765	Ditto but 1 x 20W - 30W LED lamp	2,090.93	19.80	24.44	75.61	27765
27766	Wall mounted downlight similar to SFA 226, die cast aluminium body, anodised aluminium reflector, 190 mm diameter, IP65 c/w mounting bracket with adjustable joint up to 12°, safety glass, control gear and 1 x 35W/ 70W CDMT lamp	3,653.91	19.80	24.44	75.61	27766
27767	Surface mounted circular luminaire similar to SFA 227, die cast aluminium alloy body, polycarbonate lens, IP55 c/w control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 20W - 30W LED lamp	1,073.32	27.23	34.02	101.27	27767

LIGHTING FITTINGS (CONT'D)

Wall/ Ceiling mounting luminaire : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27768	Wall mounted downlight similar to SFA 226, die cast aluminium body, anodised aluminium reflector, 190 mm diameter, IP65 c/w mounting bracket with adjustable joint up to 12°, safety glass, control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 20W - 30W LED lamp	3,526.15	19.80	24.44	75.61	27768
27769	Enclosed polycarbonate wall mounting luminaries c/w 35W/ 70W CDMT lamp or 1 x 20W - 30W LED lamp with IP65 protection and vandal-resistant fixings	1,594.35	19.80	24.44	75.61	27769
27770	Surface ceiling and wall luminaire similar to SFA 228, die cast aluminium body, crystal glass with optical texture or impact resistant polycarbonate diffuser, IP65 c/w control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 35W metal halide lamp or 1 x 20W - 30W LED lamp	1,891.76	27.23	34.02	101.27	27770
27771	Recessed wall luminaire similar to SFA 229, marine grade aluminium alloy body and frame, tempered prismatic glass lens, shielded light source, IP55 c/w control gear and 1 x 70W high pressure sodium or 1 x 70W metal halide lamp or 1 x 20W - 30W LED lamp	5,632.25	27.23	34.02	101.27	27771
27772	Wall mounted luminaire with directed light, IP55, c/w 1 x 12W LED lamp similar to SFA 231	3,345.93	27.23	34.02	101.27	27772
27773	Wall luminaire similar to SFA 230, die cast aluminium body, fully shielded light source, IP43, c/w control gear and 1x 18W/ 26W compact fluorescent lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	2,245.34	27.23	34.02	101.27	27773
27774	Wall luminaire with directed light similar to SFA 231, die cast aluminium body, anodised aluminium reflector, safety glass with optical texture, IP55 c/w control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 35W metal halide lamp or 1 x 20W - 30W LED lamp	3,436.60	27.23	34.02	101.27	27774
27775	Wall luminaire with double-sided light output similar to SFA 232, die cast aluminium body, glass optical lens, anodised aluminium reflector, IP44 c/w safety glass, control gear and 1 x 14/ 18W/ 26W compact fluorescent lamp or 1 x 35W metal halide lamp or 1 x 20W - 30W LED lamp	1,991.50	27.23	34.02	101.27	27775
27776	Recessed circular luminaire with shielded light similar to SFA 233, die cast aluminium body, 250 mm outside diameter, c/w matt safety glass, control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 20W - 30W LED lamp	1,578.64	27.23	34.02	101.27	27776
27777	Surface mounted downlight, die cast aluminium housing, IP65 and up to 12W LED lamp	2,069.09	27.23	34.02	101.27	27777
27778	Single mode LED, surface mounted luminaire, IP65 c/w 18 - 20W LED lamp	1,758.05	27.23	34.02	101.27	27778
27779	Ditto c/w 2-hour NiMH emergency power pack	2,055.18	27.23	34.02	101.27	27779
27780	Ditto c/w 3-hour NiMH emergency power pack	2,874.13	27.23	34.02	101.27	27780
27781	Surface mounted dual light, die cast aluminium body, polycarbonate diffuser, IP65, c/w microwave sensor, electronic ballast, 1 x up to 3W LED lamp & 1 x 28W 2D lamp	1,076.62	27.23	34.02	101.27	27781
27782	Surface mounted dual light, die cast aluminium body, polycarbonate diffuser, IP65, c/w microwave sensor, electronic ballast, 1 x up to 3W LED lamp & 1 x 28W 2D lamp and 2-hour NiMH emergency power pack	1,259.41	27.23	34.02	101.27	27782
27783	Ditto but with 3-hour NiMH emergency power pack	2,122.23	27.23	34.02	101.27	27783
27784	Surface mounted dual light , die cast aluminium body, polycarbonate diffuser, IP65, c/w 120 x 360 PIR detector, electronic ballast, 1 x 7W energy saving lamp & 1 x 28W 2D lamp and 2-hour NiMH emergency power pack	1,820.15	27.23	34.02	101.27	27784
27785	Ditto but with 3-hour NiMH emergency power pack	2,371.71	27.23	34.02	101.27	27785

LIGHTING FITTINGS (CONT'D)

Wall/ Ceiling mounting luminaire : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27786	Surface mounted dual light, die cast aluminium body, polycarbonate diffuser, IP65, c/w microwave sensor, electronic ballast, 1 x 28W 2D lamp and 2-hour NiMH emergency power pack	1,174.34	27.23	34.02	101.27	27786
27787	Ditto but with 3-hour NiMH emergency power pack	2,041.85	27.23	34.02	101.27	27787
27788	Surface mounted 2D LED, c/w 20W LED lamp	1,356.00	27.23	34.02	101.27	27788
27789	Ditto but with 60W LED lamp	2,034.00	27.23	34.02	101.27	27789
27790	Ditto but with 120W LED lamp	2,938.00	27.23	34.02	101.27	27790
27791	Surface mounted dual light, IP65 c/w, microwave sensor, 18 - 20W LED lamp and 2-hour NiMH emergency power pack	2,243.06	27.23	34.02	101.27	27791
27792	Ditto but with 3-hour NiMH emergency power pack	3,051.67	27.23	34.02	101.27	27792
27793	Weatherproof ceiling/ wall mounted down light, IP65 c/w 5 - 7W LED lamp	1,885.90	27.23	34.02	101.27	27793
27794	13W 600 mm horizontal fluorescent lighting unit c/w dual voltage safety shaver and lamp tube	1,350.80	27.01	33.73	100.43	27794
27795	Wall mounted fluorescent luminaire c/w 13W fluorescent lamp and control gear with shaver supply unit to IEC 60309-2	1,607.69	39.92	45.44	108.86	27795
27796	Wall mounted vandal resistant light fitting similar to SFA 234, oval polycarbonate housing and guard, opal polycarbonate diffuser, polished aluminium reflector, IP65 c/w control gear and 2 x 9W PL lamp or 2 x 20W - 30W LED lamp	667.98	27.01	33.73	100.43	27796
27797	Wall mounted vandal resistant light fitting similar to SFA 235, circular polycarbonate housing and guard, opal polycarbonate diffuser, polished aluminium reflector, IP65 c/w control gear and 2 x 9W PL lamp or 2 x 20W - 30W LED lamp	701.52	27.01	33.73	100.43	27797
27798	Rectangular recessed fitting similar to SFA 236, aluminium housing, opal toughened glass diffuser, IP54 c/w control gear and 1 x 18W PLC lamp or 1 x 20W - 30W LED lamp	950.30	33.80	42.14	126.05	27798
27799	Ditto but similar to SFA 237 with 45° grille for directed light	949.67	33.80	42.14	126.05	27799
27800	Wall mounted luminaire similar to SFA 238, corrosion resistant aluminium alloy body, vandal resistant polycarbonate diffuser, IP55 c/w wall mounting base and arm, control gear and 1 x 18W PLC lamp or 1 x 20W - 30W LED lamp	2,086.67	27.01	33.73	100.43	27800
27801	Wall mounted circular luminaire similar to SFA 239, die cast aluminium alloy body, over 250 mm diameter, half shielded and polycarbonate lens the other half, IP55 c/w control gear and 1 x 18W PLC lamp or 1 x 20W - 30W LED lamp	1,217.59	27.01	33.73	100.43	27801
27802	Hemispherical surface bulkhead similar to SFA 240, die cast aluminium body, over 250 mm diameter, opal polycarbonate bowl with 4-ring quarter sphere grille, IP65 c/w control gear and 1 x 50W HPS lamp or 1 x 35W/ 70W CDMT lamp or 1 x 20W - 30W LED lamp	2,937.45	27.01	33.73	100.43	27802
27803	Lantern similar to SFA 241, hinged transparent acrylic or polycarbonate refractor bowl, IP54 c/w control gear in separate compartment and 1 x 70W HPS or CDMT lamp or 1 x 20W - 30W LED lamp	1,963.71	37.29	45.73	139.32	27803
27804	Vertical fixing adaptor for lantern similar to SFA 241	505.04	15.20	19.45	58.48	27804

LIGHTING FITTINGS (CONT'D)

Wall/ Ceiling mounting luminaire : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27805	Side entry lantern similar to SFA 242, glass reinforced polyester body, hinged injection moulded bowl, 2 aluminium alloy reflectors c/w control gear and 1 x 70W/ 100W CDMT lamp or 1 x 20W - 30W LED lamp	3,168.29	37.44	45.91	139.93	27805
27806	Side entry lantern similar to SFA 242, glass reinforced polyester body, hinged injection moulded bowl, 2 aluminium alloy reflectors c/w control gear and 1 x 150W CDMT lamp	3,193.07	37.44	45.91	139.93	27806
27807	Side entry lantern similar to SFA 242, glass reinforced polyester body, hinged injection moulded bowl, 2 aluminium alloy reflectors c/w control gear and 1 x 250W CDMT lamp	3,800.02	37.44	45.91	139.93	27807
27808	Side entry lantern similar to SFA 243, die cast aluminium body, injection moulded acrylic or polycarbonate refractor bowl c/w control gear and 1 x 70W/ 100W CDMT lamp or 1 x 20W - 30W LED lamp	3,169.64	37.44	45.91	139.93	27808
27809	Special made wall mount bracket arm for side entry lantern comprising 1 no. 300 x 300 x 9 mm thick mild steel base plate and 1 no. 25 mm diameter x 900 mm long galvanized steel pipe bent to shape and welded to base plate fixed to wall with 4 nos. anchor bolt (9 mm diameter x 75 mm long)	433.70	25.20	31.78	94.58	27809

Spot lights : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27810	Weatherproof spot light of die cast aluminium body c/w wire guard, stand base and 1 x 500W lamp with built-in reflector	276.71	15.31	20.14	60.04	27810
27811	Spot light, in black/ white/ bronze finish with extruded aluminium profile, 90° tiltable bracket, 360° spot/ flood rotatable transadapter, reflector for 1 x 3 - 5W LED lamp suitable for light track mounting similar to SFA 244	849.43	15.31	20.14	60.04	27811
27812	Recessed LED spot light, 1 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tube and accessories	409.89	15.31	20.14	60.04	27812
27813	Recessed LED spot light, 2 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	603.57	15.31	20.14	60.04	27813
27814	Recessed LED spot light, 3 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	752.58	15.31	20.14	60.04	27814
27815	Recessed LED spot light, 4 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	856.88	15.31	20.14	60.04	27815
27816	Surface LED spot light, star wire suspended, 3 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	886.68	15.31	20.14	60.04	27816
27817	Surface LED spot light, row/ matrix wire suspended, 4 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	1,020.78	15.31	20.14	60.04	27817
27818	Surface LED spot light, circle wire suspended, 6 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	1,542.27	15.31	20.14	60.04	27818
27819	Surface LED spot light, matrix wire suspended, 6 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	1,542.27	15.31	20.14	60.04	27819
27820	Surface LED spot light, matrix wire suspended, 8 x 3 - 5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories	2,093.54	15.31	20.14	60.04	27820
27821	Beacon light fitting, 400 mm in height and diameter 150 mm	1,518.76	27.13	33.88	100.86	27821
27822	PAR 38, 120W or 100W GLS eyeball spotlight for light track mounting	-	19.72	24.36	75.31	27822
27823	Surface mounted spot light accent, aluminium housing and reflector, IP65, integral control gear c/w 1 x 35W HITT lamp (metal halide)	1,462.39	19.72	24.36	75.31	27823

LIGHTING FITTINGS (CONT'D)

Recessed steplight : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27824	Recessed rectangular steplight similar to SFA 246, die cast aluminium body, anodised aluminium reflector, glare suppression and 60° light output, IP65 c/w control gear and 1 x 18W PLC lamp or 1 x 20W - 30W LED lamp	1,666.35	27.23	34.02	101.27	27824
27825	Recessed circular steplight similar to SFA 247, die cast aluminium body, IP65 c/w safety glass, control gear and 1 x 26W PLC lamp or 1 x 20W - 30W LED lamp	1,677.64	27.23	34.02	101.27	27825
27826	Recessed rectangular steplight similar to SFA 248, die cast aluminium housing with 45° grille, opal toughened glass diffuser anodised aluminium reflector, IP65 c/w control gear and 1 x 18W PLC lamp or 1 x 20W - 30W LED lamp	1,635.61	27.23	34.02	101.27	27826
27827	Recessed rectangular steplight similar to SFA 249, die cast aluminium body, anodised aluminium reflector, IP64 c/w safety glass, control gear and 1 x 7W/ 9W PL lamp	1,094.91	27.23	34.02	101.27	27827
27828	Recessed rectangular steplight similar to SFA 250, die cast aluminium body, anodised aluminium reflector, glare suppression and 45° light output, IP64 c/w matt safety glass, control gear and 1 x 11W fluorescent lamp	1,244.74	27.23	34.02	101.27	27828

Buried uplight : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27829	Buried uplight similar to SFA 251, die cast aluminium housing and protective front grille, toughened transparent glass diffuser, glass surface temperature 100°C, IP67 c/w matt safety glass, control gear and 1 x 19W/ 23W CFL or 1 x 20W - 30W LED lamp	2,703.91	37.61	46.10	140.49	27829
27830	Buried uplight similar to SFA 251, die cast aluminium housing and protective front grille, toughened transparent glass diffuser, glass surface temperature 100°C, IP67 c/w matt safety glass, control gear and 1 x 40W LED lamp, CRI not less than 90, luminous efficiency not less than 78 lm/watt	3,720.69	37.61	46.10	140.49	27830
27831	Buried uplight similar to SFA 252, die cast aluminium housing and protective front grille, aluminium rotosymmetric reflector, toughened transparent glass diffuser, glass surface temperature 72°C, IP67 c/w control gear and 1 x 70W MBI lamp or 1 x 20W - 30W LED lamp	4,938.11	37.61	46.10	140.49	27831
27832	Buried drive-over luminaire similar to SFA 253, die cast aluminium housing, 15 mm thick toughened glass with maximum surface temperature 75°C, aluminium reflector, internal anti-glare grid in die cast aluminium, IP67 c/w control gear and 1 x 70W metal halide lamp or 1 x 20W - 30W LED lamp	7,250.77	37.61	46.10	140.49	27832
27833	Buried drive-over floodlight similar to SFA 254, glass fiber reinforced polymer housing, tempered heat resistant glass lens, adjustable hydroformed reflector c/w control gear and 1 x 70W metal halide lamp or 1 x 20W - 30W LED lamp	2,721.82	37.61	46.10	140.49	27833
27834	Semi-buried fixture similar to SFA 255 for low level illumination, glass fiber reinforced polymer housing, tempered heat resistant glass multiple zone prismatic refractor at side c/w control gear and 1 x 50W/ 70W metal halide lamp or 1 x 20W - 30W LED lamp	6,758.28	37.61	46.10	140.49	27834
27835	Buried uplight similar to SFA 256, injection moulded ABS housing with cast aluminium/ bronze doors, spun aluminium reflector, tempered glass lens, IP67 c/w control gear and 1 x 70W metal halide lamp or 1 x 20W - 30W LED lamp	7,780.81	27.23	34.02	101.27	27835

LIGHTING FITTINGS (CONT'D)

Buried uplight : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27836	Well light similar to SFA 257 for installation in 230 mm diameter 375 mm deep direct burial pipe, spun copper housing with bronze clamping ring, convex tempered clear glass lens, cast aluminium louvre at grade, IP67 c/w control gear in separate ballast box and 6 - 13W LED lamp	9,796.12	27.23	34.02	101.27	27836
27837	Buried drive-over uplight similar to SFA 258, corrosion resistant aluminium housing of 150 mm diameter, 12 mm thick toughened glass lens, internal die cast aluminium anti-glare grid, drive over load 3500 kg at 30 km/ h, IP67 c/w control gear and LED lamp up to 6W	3,683.08	37.61	46.10	140.49	27837
27838	Buried uplight similar to SFA 259, grade 304 stainless steel body of 250 mm diameter, thermal shock resistant borosilicate glass lens, internal louvred glare shield, IP67 c/w control gear and 1 x 26W compact fluorescent lamp or 1 x 20W - 30W LED lamp	3,311.02	37.61	46.10	140.49	27838

Indicating lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27839	Indicating lamp with polycarbonate diffuser c/w LED lamp up to 3W	398.68	20.32	24.93	70.72	27839

LIGHTING FITTINGS (CONT'D)

Bollard fittings, minimum IP44 : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27840	1m - 1.1m high bollard similar to SFA 260, extruded aluminium housing of 180 mm diameter, vandal resistant clear polycarbonate diffuser, anodised aluminium louvre c/w control gear and 1 x 35W/ 50W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	2,632.26	37.54	46.01	140.21	27840
27841	1m - 1.1m high bollard similar to SFA 260, extruded aluminium housing of 180 mm diameter, vandal resistant clear polycarbonate diffuser, anodised aluminium louvre c/w control gear and 3 - 6W LED lamp	3,718.91	37.54	46.01	140.21	27841
27842	Concrete bollard similar to SFA 261, one piece precast concrete body of minimum 75 mm thickness reinforced with internal steel cage, 13 mm thick hot dip galvanised base plate for anchoring, clear/ opal acrylic inner lens, horizontal cast aluminium grille of minimum thickness 6 mm, vandal resistant clear polycarbonate diffuser c/w control gear and 1 x 70W/ 100W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	18,209.76	37.54	46.01	140.21	27842
27843	1m - 1.1m high bollard similar to SFA 262, extruded aluminium pole, aluminium alloy top and flange, clear polycarbonate prismatic lens c/w control gear and 1 x 18W/ 26W fluorescent lamp or 1 x 20W - 30W LED lamp	7,816.53	23.57	29.71	85.26	27843
27844	Border lighting for low level illumination similar to SFA 263, cast aluminium housing, frosted tempered borosilicate fresnel lens at side c/w control gear and 1 x 50W/ 70W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	3,792.23	37.54	46.01	140.21	27844
27845	1m - 1.1m high bollard similar to SFA 264, cylindrical aluminium body of 150 mm diameter, clear glass bowl with decorative ring, IP44 c/w control gear and 1 x 50W/ 70W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	4,677.33	37.54	46.01	140.21	27845
27846	1m - 1.1m high bollard similar to SFA 265, extruded aluminium pole of diameter 160 mm, die cast aluminium body and louvre, vandal resistant clear polycarbonate lens, IP54 c/w control gear and 1 x 50W/ 70W metal halide/ high pressure sodium lamp or 1 x 35W CDMT lamp or 1 x 20W - 30W LED lamp	4,013.45	37.54	46.01	140.21	27846
27847	Stand-alone solar power LED bollard c/w vandal resistant cast aluminium body, IP65, impact resistance IK10, polycarbonate diffuser, self contained with solar panel, batteries and 1 x up to 3W LED lamp	5,144.84	37.54	46.01	140.21	27847
27848	Stand-alone solar power LED bollard c/w vandal resistant cast aluminium body, IP65, impact resistance IK10, polycarbonate diffuser, self contained with solar panel, batteries and 1 x 3 - 6W LED lamp	5,692.64	37.54	46.01	140.21	27848
27849	Stand-alone solar power LED bollard c/w vandal resistant cast aluminium body, IP65, impact resistance IK10, polycarbonate diffuser, self contained with solar panel, batteries and 1 x 6 - 9W LED lamp	6,240.43	37.54	46.01	140.21	27849
27850	Concrete bollard similar to SFA 261, one piece precast concrete body of minimum 75 mm thickness reinforced with internal steel cage, 13 mm thick hot dip galvanised base plate for anchoring, clear/ opal acrylic inner lens, horizontal cast aluminium grille of minimum thickness 6 mm, vandal resistant clear polycarbonate diffuser c/w control gear and 1 x 20W LED lamp, IP65	9,040.00	37.54	46.01	140.21	27850

LIGHTING FITTINGS (CONT'D)

Fiber optic lighting system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27851	Light generator with closed halogen dichroic lamp (12V/ 50W 24 deg., Ra=100 and colour temperature 3000K). The generator shall concentrate the luminous flux of lamps into a fiber optic harness. Housing to be cast aluminium c/w built in transformer (230V/ 12V 50 VA) and protective dichroic filter	2,005.98	10.71	13.54	42.96	27851
27852	Harness, 2 meters each, made of 16 nos. of fiber optic cables (bundle of 19 optical fibers in a cable diameter of 5 mm) meeting in parallel at the connecting end. Optical fiber to be made of glass (70 µm diameter) or P.M.M.A. of 1 mm diameter (polymethylmethacrylate) suitable to connect to the light generator and the optical termination.	9,759.53	17.73	22.78	70.22	27852
27853	Termination and accessories to put at the end of fiber optic cable equipped with an adjustable glass lens-holder to focus from 19° to 30°	520.13	17.73	22.26	68.16	27853
27854	Ditto with 12V/ 75W 24° lamp	3,008.13	17.73	22.26	68.16	27854
27855	Ditto with 150W metal halide lamp	11,510.44	17.73	22.26	68.16	27855
27856	Ditto with 200W metal halide lamp	12,550.61	17.73	22.26	68.16	27856
	Per linear metre					
27857	Diffusing optical cable suitable to connect to the light generator of 17 mm P.M.M.A. cable with a reflective centre core, an ultra-violet stabilized clear PVC outer protective sheath and a clear mylar wrapping around fiber optics	115.49	15.19	19.20	56.25	27857

Bedhead light fitting : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27858	Bedhead lighting fitting with lamp	1,001.28	16.57	18.42	62.76	27858
27859	Angle poise bedhead lighting fitting c/w lamp	1,448.05	19.84	24.49	75.77	27859

LIGHTING FITTINGS (CONT'D)

External lighting for construction site : - (Items 27860 to 27864 will only be paid for, if ordered by the Maintenance Surveyor in writing.)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Isolating step down transformer 220/ 110V, single phase, having centre tap with secondary winding earthed so that the normal voltage of circuit to earth does not exceed 55V : -					
	Per set					
27860	500 VA	922.23	10.83	13.33	40.61	27860
27861	1000 VA	1,615.01	10.83	13.33	40.61	27861
27862	Weatherproof surface mounted fluorescent light fitting, IP65 c/w T5 fluorescent tube, T5 electronic control gear/ electronic ballast, 1 x 28W	1,495.48	29.48	35.54	93.94	27862
27863	Weatherproof bulkhead fittings rated IP65 c/w glassware, 100W, 110V lamp, side/ back cable entry, cutting, and rubber grommet or stop where applicable	657.78	27.05	33.80	100.64	27863
	Isolating step down transformer 220/ 110V, single phase, having centre tap with secondary winding earthed so that the normal voltage of circuit to earth does not exceed 55V : - (Cont'd)					
	Per set					
27864	Weatherproof bulkhead fittings rated IP65 c/w polycarbonate diffuser, 100W lamp, 110V, side/ back cable entry, cutting, and rubber grommet or stop where applicable	719.08	27.05	33.80	100.64	27864

Miscellaneous lighting fittings : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27865	Surface luminaire similar to SFA 256, circular die cast aluminium casing of minimum overall diameter 380 mm, IP65 c/w control gear and 1 x 70W SON lamp	2,910.52	26.83	33.43	101.81	27865
27866	Garage pit luminaire c/w lamp and control gear suitable for use in Zone 2 hazardous area to IEC 60079-10	5,580.93	27.14	33.06	99.02	27866

LIGHTING FITTINGS (CONT'D)

Shades : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27867	Shades n.e. 150 mm	35.04	3.22	3.63	9.55	27867
27868	Shades (locally made) n.e. 150 mm diameter	20.13	3.22	3.63	9.55	27868
27869	Coolicon shades 230 mm diameter	41.52	3.22	3.63	9.55	27869
27870	Coolicon shades (locally made) 230 mm diameter	26.65	3.22	3.63	9.55	27870
27871	Coolicon shades 280 mm diameter	41.63	3.22	3.63	9.55	27871
27872	Coolicon shades (locally made) 280 mm diameter	29.52	3.22	3.63	9.55	27872

Dome cover, wall mounting : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27873	65 mm diameter	33.04	4.46	5.40	15.57	27873
27874	87 mm diameter	37.05	4.46	5.40	15.57	27874
27875	125 mm diameter	44.05	4.46	5.40	15.57	27875
27876	Dome back plate, side entry	43.45	4.46	5.40	15.57	27876

Dome cover : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27877	Dome cover 65 mm diameter	31.95	4.46	5.40	15.57	27877
27878	Dome cover 87 mm diameter	34.04	4.46	5.40	15.57	27878
27879	Dome cover 125 mm diameter	41.15	4.46	5.40	15.57	27879
27880	Dome back plate, side entry	41.57	4.46	5.40	15.57	27880

LIGHTING FITTINGS (CONT'D)

Sundries : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27881	Weatherproof metal box for 250/ 400W SON control gear	847.82	30.84	37.82	112.31	27881
27882	Weatherproof metal box for 250/ 400W MBIL control gear	888.52	39.55	47.91	146.20	27882
27883	Weatherproof metal box for 750W/ 1000W MBIL control gear	1,052.10	39.55	47.91	146.20	27883
27884	Weatherproof metal box for 1500/ 1600W MBIL control gear	1,078.50	39.55	47.91	146.20	27884
27885	External control gear box c/w gear for 250W SON	1,724.79	32.28	39.92	116.63	27885
27886	External control gear box c/w gear for 400W SON	2,003.83	32.28	39.92	116.63	27886
27887	Pendant, plain, comprising ceiling rose, flex and B.C. lampholder (labour rates including fixing of shade)	71.57	9.15	11.07	33.32	27887

LAMP POLES AND ACCESSORIES

Lamp poles, mild steel c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27888	n.e. 3.5 m	3,338.37	233.07	305.01	893.47	27888
27889	3.5 m - 4.5 m	3,889.92	285.69	358.50	1,091.02	27889
27890	4.5 m - 7.0 m	10,607.56	435.00	546.05	1,663.21	27890
27891	7.0 m - 7.5 m	12,127.28	526.02	656.30	2,005.44	27891
27892	7.5 m - 8.0 m	14,405.30	653.15	814.83	2,495.19	27892
27893	8.0 m - 10.0 m	19,411.63	896.21	1,123.34	3,418.23	27893
27894	10.0 m - 12.0 m	22,890.47	1,086.74	1,359.03	4,147.16	27894

Twin heads lamp pole for SFA 215, 127 mm square straight steel pole flange mounting, gauge 11 galvanised steel with bronze enamel finish : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
27895	4.2 m nominal height	7,191.99	290.84	364.28	1,093.96	27895

LAMP POLES AND ACCESSORIES (CONT'D)

Lamp poles, tubular steel, hot dipped galvanized c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27896	n.e. 4.0 m	4,613.93	275.55	348.04	1,041.39	27896
27897	4.0 m - 4.5 m	4,963.31	309.39	388.21	1,181.44	27897
27898	4.5 m - 7.0 m	11,768.44	435.10	546.19	1,663.64	27898
27899	7.0 m - 7.5 m	13,383.38	511.96	638.71	1,951.60	27899
27900	7.5 m - 8.0 m	16,047.08	663.89	828.20	2,536.13	27900
27901	8.0 m - 12.0 m	25,520.88	1,077.92	1,348.02	4,113.45	27901

Lamp poles, tubular steel, hot dipped galvanized, wall mounted c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27902	n.e. 3.5 m	4,239.67	241.22	315.71	924.75	27902
27903	3.5 m - 4.0 m	4,814.66	274.75	347.05	1,038.37	27903
27904	4.0 m - 4.5 m	5,250.41	300.02	376.43	1,145.62	27904
27905	4.5 m - 7.0 m	10,725.29	442.67	555.62	1,692.47	27905
27906	7.0 m - 7.5 m	13,608.15	530.43	661.83	2,022.32	27906
27907	Hot-dip galvanized flange mounted type tapered polygonal high mast of 30 m nominal mounting height c/w raising and lowering system and head frame for mounting maximum 24 nos. of luminaires with the supply of foundation bolts/ nuts/ washers (The actual rate should be : $530,097.70 for Item 27907A)	53,009.77	7,628.09	12,713.70	32,718.22	27907
27908	4.8 m - 5.0 m aluminium lamp pole	32,797.09	296.49	370.58	1,135.64	27908

LAMP POLES AND ACCESSORIES (CONT'D)

Accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27909	Compression gland	243.77	13.59	17.61	51.88	27909
27910	Working platform (hot dip galvanized steel)	1,974.81	233.28	281.02	707.99	27910
27911	Metal hot dip galvanized cover for weatherproof service box on lamp pole c/w gaskets, screws and washers	589.32	10.29	12.29	31.01	27911
27912	Double head lamp pole bracket at 4.5 m lamp pole, including modification of the 4.5 m lamp pole and removal of the original bracket	468.19	23.59	28.84	84.96	27912
27913	Pole cap	315.57	19.38	24.48	73.99	27913
27914	Connector box	359.07	16.57	20.95	64.68	27914
27915	Service box	359.68	21.49	27.13	82.05	27915
27916	Control box	372.01	21.49	27.13	82.05	27916
27917	Grade 316 stainless steel angle adjustable mounting frame for 400W floodlight	406.86	8.40	11.64	32.33	27917

EMERGENCY LIGHTING

Exit sign box to BS EN 60598-1, BS EN 60598-2-22, BS EN 50172 and BS EN 1838 c/w lamp, 2-hour NiMH emergency power pack, charger, automatic changeover device, inverter/ ballast indications and switch, cables, conduits (surface or concealed in partitions and ceiling), all necessary accessories and connection to power supply switch/ terminal : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27918	Exit sign box, 400 - 650 mm long	1,258.61	74.30	86.67	316.92	27918
27919	Exit sign box, 400 - 650 mm long, c/w 3-hour NiMH emergency power pack	2,149.73	106.83	124.59	525.24	27919
27920	Exit sign box without battery, charger and changeover, 400 - 650 mm long	892.32	74.30	86.67	316.92	27920
27921	Exit sign box using LED as light source, 400 - 650 mm long	1,287.12	74.30	86.67	316.92	27921
27922	Exit sign box using LED as light source without battery, charger and changeover, 400 - 650 mm long	979.05	74.30	86.67	316.92	27922
27923	Exit sign box using LED as light source, 400 - 650 mm long, c/w 3-hour NiMH emergency power pack	2,522.73	74.30	86.67	316.92	27923
27924	Exit sign box, 650 - 1200 mm long	1,267.64	74.30	86.67	316.92	27924
27925	Exit sign box using LED as light source, 650 - 1200 mm long, self testing type, automatic discharge and recharge monthly	1,408.66	74.30	86.67	316.92	27925
27926	Exit sign box using LED as light source, 650 - 1200 mm long, c/w 3-hour NiMH emergency power pack	2,540.81	74.30	86.67	316.92	27926
27927	Exit sign box using LED as light source, 650 - 1200 mm long, self testing type, automatic discharge and recharge monthly, c/w 3-hour NiMH emergency power pack	2,788.28	74.30	86.67	316.92	27927

EMERGENCY LIGHTING (CONT'D)

Exit sign plate or directional sign plate to BS EN 60598-1, BS EN 60598-2-22, BS 5266-1, BS EN 50172 and BS EN 1838 c/w lamp, NiMH 2-hour NiMH emergency power pack, charger, automatic changeover device, clear perspex front plate, coloured perspex back plates plugging and screwing to wall and all necessary accessories and connection to power supply switch/ terminal, suitable for ceiling suspension/ wall mounting : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27928	Exit sign plate or directional sign plate, using fluorescent tube as light source, 400 - 650 mm long	1,216.76	74.30	86.67	316.92	27928
27929	Exit sign plate or directional sign plate using LED as light source, 400 - 650 mm long	1,189.81	74.30	86.67	316.92	27929
27930	Exit sign plate or directional sign plate using LED as light source, 1200 mm long	1,390.57	74.30	86.67	316.92	27930
27931	Exit sign plate or directional sign plate using LED as light source, 400 - 650 mm long, self testing type, automatic discharge and recharge monthly	1,251.50	74.30	86.67	316.92	27931
27932	Exit sign plate or directional sign plate using LED as light source, 400 mm long c/w 3-hour NiMH emergency power pack	1,491.99	74.30	86.67	316.92	27932
27933	Exit sign plate or directional sign plate using LED as light source, 400 mm long, recess mounted	1,294.79	74.30	86.67	316.92	27933

Central battery power supply system for emergency lighting

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Central power supply, monitoring and control panel c/w rectifier/ charger, inverter, storage and all necessary accessories of the battery, switchgear, zone indication and control software and instrumentation, controlling following capacity : -					
	Each					
27934	below 100 Ah	29,165.53	40.84	44.57	179.51	27934
27935	100 - 200 Ah	54,863.39	42.08	45.82	200.55	27935
27936	200 - 300 Ah	79,328.13	43.32	47.06	217.89	27936
27937	300 - 400 Ah (The actual rate should be : $102,139.40 for Item 27937A)	10,213.94	44.57	48.28	237.71	27937
27938	400 - 500 Ah (The actual rate should be : $110,105.20 for Item 27938A)	11,010.52	53.25	56.96	298.38	27938

EMERGENCY LIGHTING (CONT'D)

UPS or static inverter system c/w static transfer switch with synchronizing and phase maintenance bypass switch, storage battery, charger, rectifier, inverter and lock equipment, controlling following capacity : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27939	below 100 Ah	33,357.66	28.46	48.28	206.74	27939
27940	100 - 200 Ah	61,734.29	49.53	53.25	230.28	27940
27941	200 - 300 Ah	90,778.42	50.76	54.47	253.81	27941
27942	300 - 400 Ah (The actual rate should be : $117,167.50 for Item 27942A)	11,716.75	53.25	55.71	277.32	27942
27943	400 - 500 Ah (The actual rate should be : $125,675.90 for Item 27943A)	12,567.59	63.14	65.60	344.19	27943

Self-contained emergency lighting unit, weather and vandal resistant c/w NiMH battery, charger, automatic changeover device and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27944	Luminaire 28W, 2D, with 2-hour NiMH emergency power pack	1,079.57	59.45	69.33	252.57	27944
27945	T8 fluorescent lamp with 2-hour NiMH emergency power pack, electronic ballast, 18/ 36/ 54 W	-	59.45	69.33	252.57	27945
27946	T5 fluorescent lamp with 2-hour NiMH emergency power pack, electronic ballast, 14W	1,079.24	59.45	69.33	252.57	27946
27947	Ditto, 28W	1,210.46	59.45	69.33	252.57	27947
27948	Ditto, 35W	1,345.42	59.45	69.33	252.57	27948
27949	Ditto, 49W	1,528.69	59.45	69.33	252.57	27949
27950	Ditto, 54W	1,819.45	59.45	69.33	252.57	27950

EMERGENCY LIGHTING (CONT'D)

Self-contained emergency lighting unit c/w NiMH battery, charger, automatic changeover device and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27951	Non-maintained type 6V, 10W tungsten halogen recessed emergency luminaries with a red LED to indicate lamp filament failure c/w nickel-metal hydride emergency power pack and silver aluminum reflector of 112 mm diameter	-	27.63	33.97	93.62	27951
27952	Non-maintained type 12V, 2 x 2W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2-hour NiMH emergency power pack	2,248.69	35.66	47.75	186.29	27952
27953	Non-maintained type 12V, 2 x 2W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2-hour NiMH emergency power pack	2,108.10	33.24	43.39	170.97	27953
27954	Non-maintained type 12V, 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 2-hour NiMH emergency power pack	1,284.50	35.66	47.75	186.29	27954
27955	Non-maintained type 12V, 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 3-hour NiMH emergency power pack	1,441.07	35.66	47.75	186.29	27955
27956	Non-maintained type 12V, 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2-hour NiMH emergency power pack	1,204.19	33.24	43.39	170.97	27956
27957	Non-maintained type 12V, 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 3-hour NiMH emergency power pack	1,211.84	33.24	43.39	170.97	27957
27958	Non-maintained type 12V, 2 x 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 2-hour NiMH emergency power pack	3,016.78	35.66	47.75	186.29	27958
27959	Non-maintained type 12V, 2 x 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 3-hour NiMH emergency power pack	3,384.48	35.66	47.75	186.29	27959
27960	Non-maintained type 12V, 2 x 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2-hour NiMH emergency power pack	2,828.18	33.24	43.39	170.97	27960
27961	Non-maintained type 12V, 2 x 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 3-hour NiMH emergency power pack	3,193.02	33.24	43.39	170.97	27961
27962	Modification of the luminaire for connection to the central control panel and centrally supplied emergency lighting point including power supply and control cable installed inside flexible conduit	405.81	-	-	-	27962

NiMH battery and charger kit for self-contained emergency luminaire : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27963	Charger kit installed inside surface mounted luminaire including necessary modification for the addition of the kit	375.25	13.13	13.81	80.48	27963
27964	Charger kit installed inside recessed mounted luminaire including necessary modification for the addition of the kit	373.45	13.13	13.81	80.48	27964
27965	Charger kit installed inside a metal box mounted next to and connected to the recessed mounted luminaire including necessary modification for the addition of the kit	644.12	13.13	13.81	80.48	27965

LED LIGHT STRIPS

Surface mounted flexible LED light strips; LED mounted on printed circuit board, complete with power input cables, power lead connectors, strip to strip connectors, corner connectors, self adhesive backing, etc. : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
27966	Single colour flexible LED light strips; 12V DC; 4 to 8W/ m	173.79	8.43	10.11	13.47	27966
27967	Single colour flexible LED light strips; 12V DC; 8 to 12W/ m	199.29	8.43	10.11	13.47	27967
27968	Single colour flexible LED light strips; 12V DC; 12 to 16W/ m	226.56	8.43	10.11	13.47	27968
27969	Single colour flexible LED light strips; 12V DC; 4 to 8W/ m; IP68	228.95	8.43	10.11	13.47	27969
27970	Single colour flexible LED light strips; 12V DC; 8 to 12W/ m; IP68	254.43	8.43	10.11	13.47	27970
27971	Single colour flexible LED light strips; 12V DC; 12 to 16W/ m; IP68	281.73	8.43	10.11	13.47	27971

Surface mounted modular LED lighting fittings c/w LED driver, IP67, aluminium housing and tempered glass diffuser : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27972	120 mm x 650 mm long, replaceable LED strip board, min. lumen output 2200 lm	3,319.38	32.13	39.55	121.79	27972
27973	120 mm x 1350 mm long, replaceable LED strip board, min. lumen output 4400 lm	7,302.63	32.13	39.55	121.79	27973

Surface mounted modular LED lighting fittings c/w LED driver, IP67, self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length), aluminium housing and tempered glass diffuser : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27974	120 mm x 650 mm long, replaceable LED strip board, min. lumen output 2200 lm	4,647.13	32.13	39.55	121.79	27974
27975	120 mm x 1350 mm long, replaceable LED strip board, min. lumen output 4400 lm	9,294.25	32.13	39.55	121.79	27975

LED LIGHT STRIPS (CONT'D)

LED driver power supply c/w metal/ PVC casing : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
27976	12W; 12V	255.92	16.85	20.20	26.96	27976
27977	18W; 12V	266.90	16.85	20.20	26.96	27977
27978	36W; 12V	317.61	16.85	20.20	26.96	27978
27979	60W; 12V	337.77	16.85	20.20	26.96	27979
27980	100W; 12V	585.98	16.85	20.20	26.96	27980
27981	150W; 12V	615.34	16.85	20.20	26.96	27981
27982	240W; 12V	951.95	16.85	20.20	26.96	27982
27983	320W; 12V	999.37	16.85	20.20	26.96	27983
27984	18W; 12V; IP67	269.64	16.85	20.20	26.96	27984
27985	36W; 12V; IP67	324.43	16.85	20.20	26.96	27985
27986	60W; 12V; IP67	340.44	16.85	20.20	26.96	27986
27987	100W; 12V; IP67	612.67	16.85	20.20	26.96	27987
27988	150W; 12V; IP67	664.29	16.85	20.20	26.96	27988
27989	240W; 12V; IP67	993.31	16.85	20.20	26.96	27989

SIMPLIFIED ITEMS

Section 1 : Installation by galvanized steel surface conduit system/ concealed conduit system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Lighting point/ daylight sensor point/ occupancy sensor point/ motion detector point : -					
	Each					
27990	Lighting point/ daylight sensor point/ occupancy sensor point/ motion detector point c/w trunking, conduits, boxes, PVC cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables	522.29	117.96	-	-	27990
27991	Lighting point/ daylight sensor point/ occupancy sensor point/ motion detector point c/w trunking, conduits, boxes, OHLS cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables	538.69	117.96	-	-	27991
	Add 8% to either of Items 27990 to 27991 inclusive for provision of circuit protective conductor to MCB board in full length of conduit, another 8% for provision of additional cable to feed maintained light point, another 8% for provision of additional cable to feed reasonable & separate control of a twin/ triplet light fitting, and another 8% for provision of additional cable and cable containment to dimmable daylight sensor.					

SIMPLIFIED ITEMS (CONT'D)

Section 1 : Installation by galvanized steel surface conduit system/ concealed conduit system (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Lighting switch point : -					
	Each					
27992	Lighting switch point c/w trunking, conduits, boxes, PVC cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables	267.34	58.12	-	-	27992
27993	Lighting switch point c/w trunking, conduits, boxes, OHLS cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables	306.89	64.07	-	-	27993
	Add 8% to either of Items 27992 to 27993 inclusive for provision of additional cable to dimmer switches.					

Section 2 : Installation by PVC surface conduit system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Lighting point/ daylight sensor point/ occupancy sensor point/ motion detector point : -					
	Each					
27994	Lighting point/ daylight sensor point/ occupancy sensor point/ motion detector point c/w trunking, conduits, boxes, PVC cables, circuit protective conductor and all necessary accessories	392.27	85.00	-	-	27994
	Add 8% to Item 27994 for provision of additional cable to feed reasonable & separate control of a twin/ triplet light fitting and another 8% for provision of additional cable and cable containment to dimmable daylight sensor.					
	Lighting switch point : -					
	Each					
27995	Lighting switch point c/w trunking, conduits, boxes, PVC cables and all necessary accessories	180.86	37.74	-	-	27995
	Add 8% to Item 27995 for provision of additional cable to dimmer switches					

SIMPLIFIED ITEMS (CONT'D)

Section 3 : Installation by surface wiring system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Lighting point : -					
	Each					
27996	Lighting point c/w PVC/ PVC cables, circuit protective conductor, boxes and all necessary accessories.	273.76	37.61	-	-	27996
	Add 8% to item 27996 for provision of additional cable to feed reasonable & separate control of a twin/ triplet light fitting					
	Lighting switch point : -					
	Each					
27997	Lighting switch point c/w PVC/ PVC cables, circuit protective conductor, boxes and all necessary accessories.	103.95	13.55	-	-	27997

Section 28

ELECTRICAL INSTALLATION -

SMALL POWER DISTRIBUTION

KWH METERS AND BOXES

KWH Meter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28001	63A single-phase meter	885.20	17.63	22.98	68.44	28001
28002	80A ditto	896.31	17.63	22.98	68.44	28002
28003	100A ditto	1,088.58	17.63	22.98	68.44	28003
28004	63A/ 100A three-phase (4-wire) whole current meter	1,803.37	22.14	27.48	85.94	28004
28005	200A to 2000A current transformers operated meter (current transformers to be measured separately)	1,803.37	22.14	27.48	85.94	28005

Metal boxes for above KWH meters, approved type : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28006	Up to 100A single-phase	219.72	13.89	17.63	55.30	28006
28007	Up to 2000A three-phase	219.72	13.89	17.63	55.30	28007
28008	Metal box for 4 nos. current transformers	234.09	17.63	22.98	68.92	28008

Measuring Current Transformer : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28009	100/ 5A ratio	235.52	16.89	21.50	66.43	28009
28010	200/ 5A ratio	246.62	16.89	21.50	66.43	28010
28011	400/ 5A ratio	361.63	16.89	21.50	66.43	28011
28012	500/ 5A ratio	368.06	16.89	21.50	66.43	28012
28013	600/ 5A ratio	372.19	16.89	21.50	66.43	28013
28014	1000/ 5A ratio	385.67	16.89	21.50	66.43	28014
28015	2000/ 5A ratio	546.92	16.89	21.50	66.43	28015

KWH METERS AND BOXES (CONT'D)

Measuring Current Transformer (Split Type) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28016	100 or 200/ 5A	1,076.57	16.93	21.55	66.57	28016
28017	400 or 500/ 5A	1,118.47	16.93	21.55	66.57	28017
28018	600/ 5A	1,123.69	16.93	21.55	66.57	28018
28019	1000/ 5A	1,250.85	16.93	21.55	66.57	28019
28020	2000/ 5A	2,390.81	16.93	21.55	66.57	28020
	Each					
28021	60A neutral link for meter board loop wire	117.68	10.48	13.09	40.14	28021

MOUNTING BLOCKS

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28022	Mounting blocks, solid hardwood, 20 mm thick, 75 mm diameter or 75 x 75 mm or 120 x 70 mm	30.41	7.91	9.54	24.34	28022
28023	Ditto but 100 mm diameter or 75 x 150 mm	32.70	7.91	9.54	24.34	28023
28024	Ditto but 150 mm diameter or 150 x 150 mm	41.74	7.91	9.54	24.34	28024
28025	Ditto but 250 mm diameter	61.90	9.16	11.49	29.35	28025
28026	Ditto but 150 x 250 mm	54.10	9.16	11.49	29.35	28026
28027	Ditto but 180 x 250 mm	57.44	9.16	11.49	29.35	28027
28028	Ditto but 200 x 300 mm	62.38	9.16	11.49	29.35	28028
28029	Ditto but 250 x 300 mm	63.44	9.16	11.49	29.35	28029
28030	Ditto but 150 x 380 mm	63.82	9.16	11.49	29.35	28030
28031	Ditto but 200 x 380 mm	65.90	9.16	11.49	29.35	28031
28032	Ditto but 250 x 380 mm	85.19	10.90	13.03	33.17	28032
28033	Ditto but 300 x 300 mm	85.54	10.90	13.03	33.17	28033
28034	Ditto but 300 x 450 mm	103.26	10.90	13.03	33.17	28034
28035	Ditto but 350 x 400 mm	103.47	10.90	13.03	33.17	28035
28036	Mounting blocks, solid hardwood, 32 mm thick, 150 mm diameter, centre pack sunk for BESA box and conduit entry.	120.59	10.90	13.03	33.17	28036
28037	Mounting blocks, solid hardwood, 250 mm x 400 mm x 20 mm thick (approved type) for bell and indicators, etc. c/w hinged cover over transformer and bell units	236.20	15.06	19.05	57.96	28037
28038	Wooden board (approved type) for desk fan fixed to wall	219.12	23.93	29.82	91.01	28038

PLUGS AND SOCKET OUTLETS

The rates include for mounting boxes frames and cutting into wall where applicable.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Plugs only, fused or unfused, bakelite : -					
	Each					
28039	15A/ 13A, 3 pin	28.98	5.12	5.91	18.43	28039
28040	5A, 3 pin	25.31	5.12	5.91	18.43	28040
28041	2A, 3 pin	-	5.12	-	-	28041
28042	Cartridge fuse link to B.S. 1362 (2A to 15A)	10.21	1.42	1.75	4.89	28042
	Plugs only, moulded rubber : -					
	Each					
28043	15A, 3 pin	63.64	5.12	5.91	18.43	28043
28044	13A/ 5A, 3 pin, fused	58.74	5.12	5.91	18.43	28044
	Socket outlets, shuttered type, bakelite : -					
	Each					
28045	15A, 3 pin	68.29	11.39	14.06	42.95	28045
28046	13A, 3 pin	66.63	11.39	14.06	42.95	28046
28047	13A, 3 pin, twin	86.00	11.39	14.06	42.95	28047
28048	5A, 3 pin	66.46	11.39	14.06	42.95	28048
28049	2A, 3 pin (unshuttered)	-	11.39	-	-	28049
28050	13A, 3 pin, socket integrated with 30 mA RCD	634.11	12.26	14.75	47.54	28050
28051	13A, 3 pin, twin socket integrated with 30 mA RCD	792.91	12.26	14.75	47.54	28051
28052	13A, 3 pin c/w minimum 2.0A Universal Serial Bus (USB) port	464.71	11.30	14.06	33.90	28052

PLUGS AND SOCKET OUTLETS (CONT'D)

The rates include for mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Socket outlet, shuttered type, metalclad : -					
	Each					
28053	15A, 3 pin	188.78	11.31	14.00	42.77	28053
28054	13A, 3 pin	169.86	11.31	14.00	42.77	28054
28055	13A, 3 pin, twin	217.32	11.31	14.00	42.77	28055
28056	5A, 3 pin	166.57	11.31	14.00	42.77	28056
28057	13A, 3 pin socket with cover plate	205.18	11.31	14.00	42.77	28057
28058	13A, 3 pin twin socket with cover plate	268.14	11.31	14.00	42.77	28058
28059	13A, 3 pin, socket integrated with 30 mA RCD	796.58	12.23	14.70	47.32	28059
28060	13A, 3 pin, twin socket integrated with 30 mA RCD	908.12	12.23	14.70	47.32	28060
	Socket outlet, round type, 50 mm fixing centre with over lapping or non-over lapping plate : -					
	Each					
28061	2A, 3 pin	-	11.31	-	-	28061
28062	5A, 3 pin	196.23	11.31	14.00	42.77	28062
	Switched-socket outlets with pilot light, shuttered type, bakelite : -					
	Each					
28063	15A, 3 pin	80.76	11.41	14.11	43.13	28063
28064	13A, 3 pin	80.44	11.41	14.11	43.13	28064
28065	13A, 3 pin, twin	105.67	11.41	14.11	43.13	28065
28066	5A, 3 pin	72.59	11.41	14.11	43.13	28066
28067	13A, 3 pin socket with cover plate	113.00	11.41	14.11	43.13	28067
28068	13A, 3 pin twin socket with cover plate	168.18	11.41	14.11	43.13	28068
28069	13A, 3 pin, socket integrated with 30 mA RCD	648.58	12.32	14.80	47.75	28069
28070	13A, 3 pin, twin socket integrated with 30 mA RCD	820.84	12.32	14.80	47.75	28070

PLUGS AND SOCKET OUTLETS (CONT'D)

The rates include for mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Switched-socket outlets with pilot light, shuttered type, metalclad :-					
	Each					
28071	5A, 3 pin	208.48	11.19	13.81	41.79	28071
28072	15A, 3 pin	268.39	11.19	13.81	41.79	28072
28073	13A, 3 pin	239.99	11.19	13.81	41.79	28073
28074	13A, 3 pin, twin	356.37	11.19	13.81	41.79	28074
28075	13A, with 30 mA RCD	862.85	12.16	14.57	46.49	28075
	Switched-socket outlets, shuttered type, bakelite : -					
	Each					
28076	15A, 3 pin	77.63	11.19	13.81	41.79	28076
28077	13A, 3 pin	73.33	11.19	13.81	41.79	28077
28078	13A, 3 pin, with 30 mA RCD	623.80	12.16	14.57	46.49	28078
28079	13A, 3 pin, twin	100.06	11.19	13.81	41.79	28079
28080	Ditto but with 30 mA RCD	665.19	12.16	14.57	46.49	28080
28081	13A, 3 pin, triple	235.04	11.19	13.81	41.79	28081
28082	5A, 3 pin	70.01	11.19	13.81	41.79	28082

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Switched-socket outlets, shuttered type, metalclad : -					
	Each					
28083	15A, 3 pin	229.38	11.22	13.87	41.88	28083
28084	13A, 3 pin	193.19	11.22	13.87	41.88	28084
28085	Ditto but with 30 mA RCD	773.29	12.19	14.61	46.59	28085
28086	13A, 3 pin, twin	313.03	11.22	13.87	41.88	28086
28087	Ditto but with 30 mA RCD	900.68	12.19	14.61	46.59	28087
28088	5A, 3 pin	180.16	11.22	13.87	41.88	28088
28089	13A, 3 pin with cover plate	306.19	11.22	13.87	41.88	28089

PLUGS AND SOCKET OUTLETS (CONT'D)

The rates include for mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Splashproof, flush mounted socket outlet, IP56 : -					
	Each					
28090	13A	373.22	23.40	29.23	88.72	28090
28091	13A, twin	652.71	23.40	29.23	88.72	28091
28092	13A, DP, switch and with 30 mA RCD	1,879.79	24.65	30.77	94.50	28092
	Enclosure for flush mounted splashproof socket : -					
	Each					
28093	1 gang	265.76	11.18	13.81	41.75	28093
28094	2 gang	384.50	11.18	13.81	41.75	28094
	Splashproof, surface mounted socket outlet, IP44 : -					
	Each					
28095	13A, socket with cover plate	171.76	23.40	29.23	88.72	28095
	Splashproof, socket outlets with plugs, IP44 : -					
	Each					
28096	16A, 3 pin	222.44	22.25	27.82	84.40	28096
28097	16A, 5 pin	243.91	27.97	34.09	105.76	28097
28098	32A, 3 pin	329.45	22.25	27.82	84.40	28098
28099	32A, 5 pin	337.13	34.50	43.43	130.16	28099
28100	63A, 3 pin	874.51	34.50	43.43	130.16	28100
28101	63A, 5 pin	997.45	38.73	48.99	148.38	28101

PLUGS AND SOCKET OUTLETS (CONT'D)

The rates include for mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Socket outlet with plug, weatherproof type rated IP65 : -					
	Each					
28102	13A, 3 pin	333.66	23.31	29.11	88.35	28102
28103	15A, 3 pin	393.89	23.31	29.11	88.35	28103
28104	30A, 3 pin	614.18	23.31	29.11	88.35	28104
28105	60A, 3 pin	1,016.10	34.35	43.23	129.61	28105
28106	15A, 5 pin	670.97	28.59	34.82	107.99	28106
28107	30A, 5 pin	727.66	34.35	43.23	129.61	28107
28108	60A, 5 pin	1,223.35	39.92	50.49	152.91	28108
	Switched socket outlet with plug, weatherproof type rated IP65 : -					
	Each					
28109	13A, 3 pin	484.80	23.31	29.11	88.35	28109
28110	15A, 3 pin	697.05	23.31	29.11	88.35	28110
28111	30A, 3 pin	1,012.80	23.31	29.11	88.35	28111
28112	60A, 3 pin	1,610.43	34.35	43.23	129.61	28112
28113	15A, 5 pin	918.34	28.59	34.82	107.99	28113
28114	30A, 5 pin	1,117.22	34.35	43.23	129.61	28114
28115	60A, 5 pin	1,623.78	39.92	50.49	152.91	28115
	Switched socket outlet assemblies, sparkless, c/w plug, chromium plated brass cover, flush or surface pattern : -					
	Each					
28116	13A, 3 pin	1,084.15	23.31	29.11	88.35	28116
28117	13A, 3 pin, twin	2,003.93	23.31	29.11	88.35	28117
28118	15A, 3 pin	1,216.12	23.31	29.11	88.35	28118
28119	30A, 3 pin	1,875.54	23.31	29.11	88.35	28119

PLUGS AND SOCKET OUTLETS (CONT'D)

The rates include for mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Switched socket outlet assemblies, flameproof, c/w plug : -					
	Each					
28120	5A, 3 pin	3,142.56	23.33	29.18	88.52	28120
28121	13A, 3 pin	3,644.44	23.33	29.18	88.52	28121
28122	15A, 3 pin	3,892.62	23.33	29.18	88.52	28122
28123	30A, 3 pin c/w 30 mA RCD	5,601.14	24.88	31.04	94.31	28123
	Shaver supply unit to IEC 61558-1 with isolating transformer to IEC 61558-2-5: -					
	Each					
28124	Dual socket of voltage 110V and 220V	473.18	12.11	14.53	46.31	28124
	Connection unit, Bakelite : -					
	Each					
28125	20A, connection unit, DP	75.18	11.18	13.81	41.75	28125
28126	32A, connection unit, DP	90.83	11.18	13.81	41.75	28126
28127	45A, connection unit, DP	91.32	11.18	13.81	41.75	28127
28128	Fused spur (2 - 13A), DP	81.44	11.13	13.79	41.62	28128
28129	Fused spur (2 - 13A), DP, with pilot light	109.29	11.13	13.79	41.62	28129
28130	Fused spur (2 - 13A), DP, with cable outlet	82.29	11.13	13.79	41.62	28130
28131	Fused spur (2 - 13A), DP, with cable outlet and pilot light	113.27	10.38	13.01	30.57	28131
28132	Fused spur (2 - 13A), DP, switch	96.30	11.13	13.79	41.62	28132
28133	Fused spur (2 - 13A), DP, switch, with pilot light	129.23	11.13	13.79	41.62	28133
28134	Fused spur (2 - 13A), DP, switch, with cable outlet	97.30	11.13	13.79	41.62	28134
28135	Fused spur (2 - 13A), DP, switch, with cable outlet and pilot light	133.93	11.13	13.79	41.62	28135
28136	Fused spur (2 - 13A), DP, switch, with cable outlet and pilot light, IP55	255.86	11.93	14.62	56.67	28136
28137	Fused spur (2 - 13A), DP, switch, with cable outlet, IP65	281.04	11.93	14.62	56.67	28137
28138	32A, TPN connection unit	285.27	34.43	43.32	129.89	28138
28139	30A, 3 terminal junction box	241.06	11.13	13.79	41.62	28139

PLUGS AND SOCKET OUTLETS (CONT'D)

The rates include for mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Connection unit, metalclad : -					
	Each					
28140	Fused spur (2 - 13A fuse), DP	248.10	11.13	13.79	41.62	28140
28141	Fused spur (2 - 13A fuse), DP, with pilot light	297.11	11.13	13.79	41.62	28141
28142	Fused spur (2 - 13A fuse), DP, with cable outlet	283.22	11.13	13.79	41.62	28142
28143	Fused spur (2 - 13A fuse), DP, with cable outlet and pilot light	326.00	11.13	13.79	41.62	28143
28144	Fused spur (2 - 13A fuse), DP, switch	291.18	11.13	13.79	41.62	28144
28145	Fused spur (2 - 13A fuse), DP, switch, with pilot light	365.06	11.13	13.79	41.62	28145
28146	Fused spur (2 - 13A fuse), DP, switch, with cable outlet	347.99	11.13	13.79	41.62	28146
28147	Fused spur (2 - 13A fuse), DP, switch, with cable outlet and pilot light	413.09	11.13	13.79	41.62	28147
	Metal casing and socket c/w 30 mA RCD : -					
	Each					
28148	Galvanized iron casing, single socket	904.54	23.40	29.23	88.72	28148
28149	Ditto but twin	934.63	23.40	29.23	88.72	28149
28150	Ditto but with four sockets	1,073.84	23.40	29.23	88.72	28150
28151	Stainless steel casing, single socket	939.87	23.40	29.23	88.72	28151
28152	Ditto but twin	985.83	23.40	29.23	88.72	28152
28153	Ditto but with four sockets	1,153.65	23.40	29.23	88.72	28153
28154	Metal casing, single socket	720.80	23.40	29.23	88.72	28154
	Telephone outlets : -					
	Each					
28155	1-gang 6-pin telephone socket outlet	70.48	11.13	13.79	41.62	28155

SUB-SWITCHES

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable.

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Plates only, bakelite to suit switches to IEC 60669-1 and socket to BS546 : -					
	Each					
28156	1 switch, 10A, flush	24.71	4.63	5.44	17.62	28156
28157	2 switches, 10A, flush	26.28	4.63	5.44	17.62	28157
28158	3 switches, 10A, flush	28.07	4.63	5.44	17.62	28158
28159	4 switches, 10A, flush	39.03	4.63	5.44	17.62	28159
28160	1 socket, 5/ 13/ 15A, 3 pin, flush	49.91	4.63	5.44	17.62	28160
	Moulded switch plates, c/w fixing screws suitable for 1 gang or 2 gang boxes : -					
	Each					
28161	1 gang plate for 1 gang box	35.11	4.63	5.44	17.62	28161
28162	2 gang plate for 1 gang box	38.54	4.63	5.44	17.62	28162
28163	2 gang plate for 2 gang box	65.14	4.63	5.44	17.62	28163
28164	3 gang plate for 2 gang box	70.27	4.63	5.44	17.62	28164
28165	4 gang plate for 2 gang box	77.01	4.63	5.44	17.62	28165

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Stainless steel or brass switch plates, c/w fixing screws suitable for 1 gang or 2 gang boxes : -					
	Each					
28166	1 gang plate for 1 gang box	140.54	4.63	5.45	17.65	28166
28167	2 gang plate for 1 gang box	162.41	4.63	5.45	17.65	28167
28168	2 gang plate for 2 gang box	178.64	4.63	5.45	17.65	28168
28169	3 gang plate for 2 gang box	195.65	4.63	5.45	17.65	28169
28170	4 gang plate for 2 gang box	213.83	4.63	5.45	17.65	28170

SUB-SWITCHES (CONT'D)

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	White bakelite light switch to IEC 60669-1 : -					
	Each					
28171	10A, 1 gang SP 1 way	55.67	11.13	13.72	41.47	28171
28172	10A, 1 gang SP 2 way	63.49	11.13	13.72	41.47	28172
28173	10A, 2 gang SP 1 way or 2 way	71.02	11.13	13.72	41.47	28173
28174	10A, 3 gang SP 1 way or 2 way	81.60	11.13	13.72	41.47	28174
28175	10A, 2 way with or without "centre off" SP	68.43	11.13	13.72	41.47	28175
28176	10A, intermediate, SP	108.46	11.13	13.72	41.47	28176
28177	10A, 1 way DP	92.33	11.13	13.72	41.47	28177

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Chromium plated grid switch assemblies : -					
	Each					
28178	10A, 1 gang SP 1 way	292.86	11.11	13.72	41.98	28178
28179	10A, 1 gang SP 2 way	305.78	11.11	13.72	41.98	28179
28180	10A, 2 gang SP 1 way or 2 way	337.38	11.11	13.72	41.98	28180
28181	10A, 3 gang SP 1 way or 2 way	500.62	11.11	13.72	41.98	28181
28182	10A, 4 gang SP 1 way or 2 way	543.77	11.11	13.72	41.98	28182
28183	10A, DP 1 way	366.01	11.11	13.72	41.98	28183
28184	20A, DP 1 way	389.95	11.11	13.72	41.98	28184
28185	20A, 1 gang DP with pilot light	413.11	11.11	13.72	41.98	28185
28186	Ditto but 45A	458.58	11.11	13.72	41.98	28186
	Dimmer switch, white, bakelite : -					
	Each					
28187	250W, 1 gang, 1 way or 2 way	204.14	11.11	13.72	41.98	28187
28188	500W, 1 gang, 1 way or 2 way	204.74	11.11	13.72	41.98	28188
28189	250W, 2 gang, 1 way or 2 way	364.81	11.11	13.72	41.98	28189
28190	3 level dimmer switch (50%, 70%, 100%)	155.03	8.63	12.32	38.25	28190
28191	250V/ 6A dimmer switch for any combination of 10 lamps, 0 - 10 V interface	623.31	8.63	12.32	39.98	28191
28192	Multi-sensor dimmer with housing for control of light internist and occupancy switching operation	1,631.49	8.63	12.32	39.98	28192

SUB-SWITCHES (CONT'D)

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Dimmer switch, chromium plated : -					
	Each					
28193	400W, 1 gang, 1 way or 2 way	450.00	11.11	13.72	41.98	28193
28194	500W, 2 gang, 1 way or 2 way	539.27	11.11	13.72	41.98	28194

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	White bakelite DP switch : -					
	Each					
28195	20A	85.36	11.22	13.89	42.41	28195
28196	32A	127.64	11.22	13.89	42.41	28196
28197	45A	159.69	11.22	13.89	42.41	28197
	White bakelite DP switch with pilot light : -					
	Each					
28198	20A	97.34	11.22	13.89	42.41	28198
28199	32A	140.10	11.22	13.89	42.41	28199
28200	45A	168.31	11.22	13.89	42.41	28200
	Metalclad, surface mounted switch : -					
	Each					
28201	10A, 1 gang 1 way or 2 way	146.17	11.22	13.89	42.41	28201
28202	10A, 2 gang 1 way or 2 way	166.34	11.22	13.89	42.41	28202
28203	10A, 3 gang 1 way or 2 way	226.76	11.22	13.89	42.41	28203
28204	20A, DP with pilot light	237.70	11.22	13.89	42.41	28204
28205	45A, DP with pilot light	665.18	11.22	13.89	42.41	28205
28206	32A, TPN with pilot light	800.66	34.30	43.37	130.63	28206
28207	10A, lighting switch, 1 gang chromium plated brass cover	299.85	11.22	13.89	42.41	28207
28208	Ditto but 2 gang	330.92	11.22	13.89	42.41	28208

SUB-SWITCHES (CONT'D)

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Splashproof, flush mounted switch, protection class IP 56 : -					
	Each					
28209	10A, 1 gang 1 way SP	238.06	23.19	29.07	88.80	28209
28210	10A, 1 gang 2 way SP	241.62	23.19	29.07	88.80	28210
28211	10A, 1 gang 1 way DP	374.14	23.19	29.07	88.80	28211
28212	Ditto but 20A	513.86	23.19	29.07	88.80	28212
28213	10A, 2 gang 1 way SP	350.55	23.19	29.07	88.80	28213

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Splashproof, surface mounted switch, protection class IP44 : -					
	Each					
28214	10A, 1 gang 1 way SP	206.51	23.11	28.98	88.46	28214
28215	10A, 1 gang 2 way SP	209.24	23.11	28.98	88.46	28215
28216	10A, 2 gang 1 way SP	310.89	23.11	28.98	88.46	28216
28217	10A, 1 gang 1 way DP	218.22	23.11	28.98	88.46	28217
28218	Ditto but 20A, c/w pilot light	318.38	23.11	28.98	88.46	28218
28219	Switch, flameproof 10A	2,066.41	23.11	28.98	88.46	28219
28220	Ditto but 16A	2,682.94	23.11	28.98	88.46	28220

SUB-SWITCHES (CONT'D)

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Stainless steel (304) plated grid switch c/w metal casing : -					
	Each					
28221	Grid switch plate for 2 gang (switch measured separately)	367.25	16.95	20.34	62.15	28221
28222	Grid switch plate for 3 gang (switch measured separately)	457.65	16.95	20.34	62.15	28222
28223	Grid switch plate for 4 gang (switch measured separately)	514.15	16.95	20.34	62.15	28223
28224	Grid switch plate for 5 gang (switch measured separately)	666.70	16.95	20.34	62.15	28224
28225	Grid switch plate for 6 gang (switch measured separately)	858.80	16.95	20.34	62.15	28225
28226	Grid switch plate for 8 gang (switch measured separately)	983.10	22.60	28.25	90.40	28226
28227	Grid switch plate for 9 gang (switch measured separately)	1,107.40	22.60	28.25	90.40	28227
28228	Grid switch plate for 10 gang (switch measured separately)	1,124.35	22.60	28.25	90.40	28228
28229	Grid switch plate for 12 gang (switch measured separately)	1,299.50	22.60	28.25	90.40	28229
28230	Grid switch plate for 14 gang (switch measured separately)	1,785.40	22.60	28.25	90.40	28230
28231	Grid switch plate for 16 gang (switch measured separately)	2,260.00	22.60	28.25	90.40	28231
28232	Grid switch plate for 18 gang (switch measured separately)	2,994.50	33.90	39.55	113.00	28232
28233	Grid switch plate for 24 gang (switch measured separately)	4,859.00	33.90	39.55	113.00	28233

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Grid switch, with/ without printed message : -					
	Each					
28234	10A, 1 way SP	203.40	16.95	20.34	67.80	28234
28235	10A, 2 way SP	203.40	16.95	20.34	67.80	28235
28236	10A, 2 way SP, retractive	226.00	16.95	20.34	67.80	28236
28237	10A, 2 way SP, centre off retractive	226.00	16.95	20.34	67.80	28237
28238	10A, 1 way DP	316.40	16.95	20.34	67.80	28238
28239	20A, 1 way DP	316.40	16.95	20.34	67.80	28239
28240	20A, 1 way DP, with pilot light	361.60	16.95	20.34	67.80	28240
28241	20A, 1 way DP, push to make	361.60	16.95	20.34	67.80	28241
28242	20A, 1 way DP, push to break, retractive	361.60	16.95	20.34	67.80	28242
28243	20A, intermediate	452.00	16.95	20.34	67.80	28243
28244	Dimmer switch	621.50	16.95	20.34	67.80	28244
28245	Indicator unit	621.50	16.95	20.34	67.80	28245
28246	Blank plate	45.20	11.30	16.95	11.30	28246

SUB-SWITCHES (CONT'D)

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Keyswitch : -					
	Each					
28247	Keytag	69.74	-	-	-	28247
28248	10A, wall unit keyswitch	433.81	23.11	28.98	88.46	28248
28249	20A, DP wall unit keyswitch	481.59	23.11	28.98	88.46	28249

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Float switch : -					
	Each					
28250	Mercury float switch	527.43	30.19	37.88	114.55	28250
28251	Galvanized steel bracket for mercury float switch	170.27	14.62	18.25	55.40	28251
28252	Ditto but of stainless steel 316	411.61	14.62	18.25	55.40	28252
	Ceiling switch, cord or chain operated : -					
	Each					
28253	6A, 1 way or 2 way SP	85.19	11.13	13.76	42.06	28253
28254	10A, 1 way SP	88.47	11.13	13.76	42.06	28254
28255	10A, 2 way SP	94.74	11.13	13.76	42.06	28255
28256	15A, 1 way SP	99.04	11.13	13.76	42.06	28256
28257	16A, 1 way DP	103.56	11.13	13.76	42.06	28257

SUB-SWITCHES (CONT'D)

The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Miscellaneous switch : -					
	Each					
28258	Emergency stop switch, metalclad, heavy duty type	485.00	14.62	18.25	55.40	28258
28259	Push button switch, 5A, bakelite miniature panel mounting	295.81	4.63	5.45	17.65	28259
28260	On-off pull switch, 2A, for fluorescent fitting, fitted with ball chain and metal tassel	78.40	4.63	5.45	17.65	28260
28261	Toggle switch, 10/ 15A, 2 way	63.19	7.80	9.32	27.57	28261
28262	Photo electric daylight switch 220V 50Hz	600.99	29.07	37.57	113.12	28262
28263	Dusk/ Dawn Photo electric switch, light threshold from 20 - 500 lux, adjustable	1,657.95	21.87	27.41	83.63	28263
28264	Photo-electric control 1000W/ 1500VA 220 - 240V with standard 3-prong EEI-NEMA twist lock mounting	705.09	30.96	38.84	117.47	28264
28265	Socket (or mount) with standard EEI-NEMA twist lock receptacle for photo-electric control	130.11	14.93	18.69	56.90	28265

BELLS AND BELL ACCESSORIES

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
28266	Door bell with bakelite case, battery operated type, of any rating	174.73	15.33	18.08	47.12	28266
28267	Door bell, 2 notes, 8V, without transformer	198.27	15.33	18.08	47.12	28267
28268	Door bell, 2 notes, 8V, with 220V/ 8V transformer	244.65	15.33	18.08	47.12	28268
28269	Bell, underdome type, circular 75 mm diameter, 4.5, 6.0 or 12.0V	310.52	15.33	18.08	47.12	28269
28270	Ditto but circular and insulated pattern, 100 mm diameter, 12 or 24V	344.16	15.33	18.08	47.12	28270
28271	Alarm bell, waterproof, 150 mm diameter gong, cast iron pattern continuous ringing, 220V A.C. or 24V D.C.	439.77	15.33	18.08	47.12	28271
28272	Alarm bell, waterproof, 225 mm diameter gong, cast iron pattern continuous ringing, 220V A.C. or 24V D.C.	868.27	15.33	18.08	47.12	28272
28273	Mini buzzer, 51 mm diameter, 8/ 12V A.C.	97.47	15.33	18.08	47.12	28273
28274	Mini buzzer, 71 mm diameter, 8/ 12V A.C.	117.34	15.33	18.08	47.12	28274
28275	Buzzer 24V A.C. with case	160.14	15.33	18.08	47.12	28275
28276	Buzzer 8V A.C. with case	175.39	15.33	18.08	47.12	28276
28277	Bell indicator, unit pendulum type, 6 - 9 ways	73.99	15.33	18.08	47.12	28277
28278	Bell push, flush type with bakelite plate on BS 4662 Box/ IEC 60670 Box	75.79	12.44	15.41	38.39	28278
28279	Weatherproof bell push, rated IP65	346.60	21.58	26.71	81.11	28279
28280	Bell push, foot operated floor type	254.27	12.44	15.41	38.39	28280
28281	Bell push, surface mounted	61.82	12.44	15.41	38.39	28281
28282	Bell transformer, 220/ 4V	238.68	15.33	18.08	47.12	28282
28283	Bell transformer, 220/ 8V	240.19	15.33	18.08	47.12	28283
28284	Bell transformer, 220/ 12V	335.18	15.33	18.08	47.12	28284
28285	Bell transformer, 220/ 24V	350.60	15.33	18.08	47.12	28285
28286	Control relay, with bakelite case plug-in type coil voltage 12/ 24/ 48V	199.06	15.33	18.08	47.12	28286
28287	Ditto but coil voltage 110/ 220V	231.43	15.33	18.08	47.12	28287

CONDUITS AND CONDUIT FITTING

Heavy gauge galvanized welded screwed steel conduit to IEC 61386-21, c/w all necessary accessories and fixed in saddles, chases, screed, within dry partition or on shuttering : -

		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	
	Concealed conduit : -					
	Per linear metre					
28288	20 mm diameter	52.12	-	-	20.72	28288
28289	25 mm diameter	59.34	-	-	20.72	28289
28290	32 mm diameter	69.26	-	-	26.56	28290

CONDUITS AND CONDUIT FITTING (CONT'D)

Heavy gauge galvanized welded screwed steel conduit to IEC 61386-21, c/w all necessary accessories and fixed in saddles, chases, screed, within dry partition or on shuttering : - (Cont'd)

Surface mounted conduit including all types of spacing saddles : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28291	20 mm diameter	85.46	10.94	13.35	44.07	28291
28292	25 mm diameter	106.05	10.94	13.35	44.07	28292
28293	32 mm diameter	127.24	12.44	15.40	49.17	28293
28294	40 mm diameter	132.55	12.60	16.16	51.11	28294
28295	50 mm diameter	165.18	13.18	16.89	58.12	28295

Heavy gauge PVC conduit c/w all necessary accessories and fixed in saddles, chases, screed, within dry partition, or on shuttering : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28296	20 mm diameter	36.09	5.48	6.73	16.80	28296
28297	25 mm diameter	45.27	6.45	8.00	20.60	28297
28298	32 mm diameter	56.82	6.76	8.42	22.22	28298

Draw wire in conduit : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28299	Draw wire	2.28	-	-	1.90	28299

CONDUITS AND CONDUIT FITTING (CONT'D)

Watertight flexible metallic conduit c/w all necessary accessories : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
28300	20 mm diameter	41.20	9.89	11.85	15.41	28300
28301	25 mm diameter	50.76	9.89	11.85	15.41	28301
28302	32 mm diameter	59.72	9.89	11.85	15.41	28302
28303	40 mm diameter	89.86	10.79	12.95	16.76	28303
28304	50 mm diameter	128.12	10.79	12.95	16.76	28304

Watertight flexible metallic conduit with PVC sheathed c/w all necessary accessories : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
28305	20 mm diameter	41.20	9.89	11.85	15.41	28305
28306	25 mm diameter	50.76	9.89	11.85	15.41	28306
28307	32 mm diameter	59.72	9.89	11.85	15.41	28307
28308	40 mm diameter	74.59	10.79	12.95	16.76	28308
28309	50 mm diameter	137.20	10.79	12.95	16.76	28309

Adaptors male/ female for flexible metallic conduit, brass, sweated or screwed onto conduit of the following sizes : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
28310	20 mm diameter	11.98	2.86	3.32	8.49	28310
28311	25 mm diameter	14.40	2.86	3.32	8.49	28311
28312	32 mm diameter	19.09	2.86	3.32	8.49	28312
28313	40 mm diameter	26.49	2.86	3.32	8.49	28313
28314	50 mm diameter	35.12	3.46	4.24	10.70	28314

CONDUITS AND CONDUIT FITTING (CONT'D)

Brass female bushes for conduit of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28315	20 mm diameter	3.75	0.80	0.95	2.29	28315
28316	25 mm diameter	4.57	0.80	0.95	2.29	28316
28317	32 mm diameter	5.43	0.80	0.95	2.29	28317
28318	40 mm diameter	7.01	0.95	1.14	2.62	28318
28319	50 mm diameter	14.22	1.38	1.56	4.14	28319

Brass male bushes for conduit of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28320	20 mm diameter	3.97	0.80	0.95	2.29	28320
28321	25 mm diameter	4.94	0.80	0.95	2.29	28321
28322	32 mm diameter	5.70	0.80	0.95	2.29	28322
28323	40 mm diameter	8.25	0.95	1.14	2.62	28323
28324	50 mm diameter	13.89	1.38	1.56	4.14	28324

Rubber grommets of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28325	20 mm diameter	2.73	0.80	0.95	2.29	28325
28326	25 mm diameter	3.10	0.80	0.95	2.29	28326
28327	32 mm diameter	3.50	0.80	0.95	2.29	28327
28328	40 mm diameter	4.47	0.95	1.14	2.62	28328
28329	50 mm diameter	6.76	1.38	1.56	4.14	28329

CONDUITS AND CONDUIT FITTING (CONT'D)

Conduit boxes, malleable iron (galvanized) for heavy gauge steel conduits, round without lids for conduit of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28330	20 mm diameter standard BESA boxes with 51 mm fixing centres	37.35	7.86	9.50	24.27	28330
28331	20 mm diameter deep pattern standard BESA boxes with 51 mm fixing centres	41.69	7.86	9.50	24.27	28331
28332	Lids and screws for standard BESA boxes	11.13	1.94	2.40	5.92	28332
28333	Break joint ring, galvanized iron	9.86	1.94	2.40	5.92	28333
28334	Metal break ring, or overlapping plate, galvanized iron, suitable for steel conduit box with 51 mm fixing centre	8.77	1.94	2.40	5.92	28334

Heavy spacing saddles for steel conduit of the following sizes : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28335	20 mm diameter	19.40	4.63	5.39	14.05	28335
28336	25 mm diameter	19.92	4.63	5.39	14.05	28336
28337	32 mm diameter	21.04	4.63	5.39	14.05	28337
28338	40 mm diameter	28.87	5.39	6.45	16.31	28338
28339	50 mm diameter	30.56	5.39	6.45	16.31	28339

Spacing saddles for PVC conduit of the following sizes : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28340	20 mm diameter	17.38	4.19	5.11	12.84	28340
28341	25 mm diameter	18.52	4.19	5.11	12.84	28341
28342	32 mm diameter	19.48	4.19	5.11	12.84	28342

CONDUITS AND CONDUIT FITTING (CONT'D)

Solid couplers, screwed, malleable iron, galvanized, for steel conduit of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28343	20 mm diameter	7.35	1.56	1.88	4.64	28343
28344	25 mm diameter	8.40	1.56	1.88	4.64	28344
28345	32 mm diameter	9.65	1.56	1.88	4.64	28345
28346	40 mm diameter	12.69	1.56	1.88	4.64	28346
28347	50 mm diameter	17.64	1.56	1.88	4.64	28347

Adaptable junction boxes, cast iron/ sheet steel, galvanized, c/w cover (including cutting and drilling holes into wall and ceiling as required)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cast iron, square : -					
	Each					
28348	75 x 75 x 50 mm	61.14	10.40	13.03	40.63	28348
28349	100 x 100 x 50 mm	69.05	11.49	13.79	43.04	28349
28350	100 x 100 x 75 mm	73.13	11.49	13.79	43.04	28350
28351	150 x 150 x 75 mm	88.40	11.49	13.79	45.43	28351
28352	225 x 225 x 75 mm	166.82	13.79	17.59	56.23	28352
28353	300 x 300 x 75 mm	276.61	17.59	22.96	70.44	28353
	Cast iron, oblong : -					
	Each					
28354	150 x 75 x 50 mm	72.78	11.49	13.79	43.04	28354
28355	225 x 150 x 75 mm	120.80	11.49	13.79	45.43	28355
28356	300 x 200 x 90 mm	190.92	13.79	17.59	56.23	28356
28357	450 x 300 x 100 mm	346.11	17.59	22.96	70.44	28357

CONDUITS AND CONDUIT FITTING (CONT'D)

Adaptable junction boxes, cast iron/ sheet steel, galvanized, c/w cover (including cutting and drilling holes into wall and ceiling as required) (Cont'd)

Sheet steel, square : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
28358	75 x 75 x 50 mm	58.73	10.42	13.05	40.73	28358
28359	100 x 100 x 50 mm	62.50	10.92	13.55	43.12	28359
28360	150 x 150 x 75 mm	70.48	11.68	14.61	45.52	28360
28361	225 x 225 x 75 mm	98.24	15.36	19.20	59.75	28361
28362	300 x 300 x 75 mm	124.93	17.50	23.00	70.60	28362

PVC adaptable junction box c/w cover (including cutting and drilling holes into wall and ceiling as required) : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
28363	75 x 75 x 44 mm	35.91	7.91	9.55	23.79	28363
28364	100 x 100 x 50 mm	41.49	9.04	10.99	27.58	28364
28365	150 x 150 x 50 mm	66.92	10.60	12.87	32.48	28365
28366	150 x 150 x 75 mm	77.50	10.60	12.87	32.48	28366
28367	225 x 225 x 75 mm	115.83	14.23	18.25	55.04	28367

CONDUITS AND CONDUIT FITTING (CONT'D)

Sheet metal cover plate c/w screws for adaptable junction box of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28368	75 x 75 mm	12.20	2.86	3.32	8.27	28368
28369	100 x 100 mm	13.33	2.86	3.32	8.27	28369
28370	150 x 150 mm	16.20	2.86	3.32	8.27	28370
28371	225 x 225 mm	28.05	2.86	3.32	8.27	28371
28372	300 x 300 mm	41.54	3.94	4.72	11.68	28372
28373	150 x 75 mm	13.51	2.86	3.32	8.27	28373
28374	225 x 150 mm	21.19	2.86	3.32	8.27	28374
28375	300 x 200 mm	30.59	2.86	3.32	8.27	28375
28376	450 x 300 mm	52.88	3.94	4.72	11.68	28376

Galvanized cast iron box for surface mounting, to IEC 60670 or BS 4662 boxes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28377	35 mm deep, 1 gang	12.09	2.86	3.36	5.57	28377
28378	47 mm deep, 1 gang	13.18	2.86	3.36	5.57	28378
28379	35 mm deep, 2 gang	15.81	2.86	3.36	5.57	28379
28380	47 mm deep, 2 gang	19.15	2.86	3.36	5.57	28380

CONDUITS AND CONDUIT FITTING (CONT'D)

Galvanized steel box for flush mounting, to IEC 60670 or BS 4662 boxes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28381	25 mm deep, 1 gang	27.05	7.71	9.47	15.67	28381
28382	25 mm deep, 2 gang	30.68	8.90	10.60	17.85	28382
28383	25 mm deep, 3 gang	34.67	9.88	11.90	19.94	28383
28384	35 mm deep, 1 gang	28.05	7.71	9.47	15.67	28384
28385	35 mm deep, 2 gang	31.18	8.90	10.60	17.85	28385
28386	47 mm deep, 1 gang	30.05	7.71	9.47	15.67	28386
28387	47 mm deep, 2 gang	33.50	8.90	10.60	17.85	28387
28388	44 mm deep for shaver unit	43.48	7.67	9.41	15.58	28388

Galvanized steel box for surface mounting, to IEC 60670 or BS 4662 boxes : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28389	41 mm deep, 1 gang with knockout	25.00	6.79	8.31	13.79	28389
28390	41 mm deep, 2 gang with knockout	29.89	7.42	9.29	15.14	28390
28391	17 mm deep, 1 gang	23.56	6.58	7.86	13.32	28391
28392	25 mm deep, 1 gang	24.05	6.58	7.86	13.32	28392
28393	30 mm or 32 mm deep, 1 gang	24.27	6.58	7.86	13.32	28393
28394	30 mm or 32 mm deep, 2 gang	25.84	7.02	8.53	13.55	28394
28395	30 mm or 32 mm deep, 3 gang	27.54	7.02	8.53	13.55	28395
28396	38 mm or 40 mm deep, 1 gang	26.26	6.79	8.31	13.79	28396
28397	38 mm or 40 mm deep, 2 gang	30.14	7.42	9.29	15.14	28397
28398	38 mm or 40 mm deep for 2 x 1 gang with partition	31.21	7.42	9.29	15.14	28398
28399	44 mm deep, 1 gang	27.40	6.79	8.31	13.79	28399
28400	44 mm deep for shaver unit	38.70	6.79	8.31	13.79	28400

CONDUITS AND CONDUIT FITTING (CONT'D)

PVC switch box : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28401	35 mm deep, 1 gang	11.89	2.83	3.32	8.31	28401
28402	47 mm deep, 1 gang	12.37	2.83	3.32	8.31	28402
28403	47 mm deep, 2 gang	19.88	2.83	3.32	8.31	28403
28404	surface switch box 35 mm deep, 1 gang	12.38	2.83	3.32	8.31	28404
28405	surface switch box 47 mm deep, 1 gang	12.46	2.83	3.32	8.31	28405
28406	surface switch box 47 mm deep, 2 gang	19.85	2.83	3.32	8.31	28406

Steel base box for grid switch : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28407	73 x 73 x 40 mm	80.52	9.89	11.93	29.98	28407
28408	73 x 133 x 40 mm	97.00	10.92	13.13	33.06	28408
28409	133 x 133 x 40 mm	245.42	11.80	14.14	45.12	28409
28410	194 x 133 x 40 mm	268.54	12.85	17.11	49.21	28410

Moulded base box for grid switch : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
28411	1 gang or 2 gang	36.70	7.72	9.25	23.57	28411
28412	3 gang or 4 gang	52.13	7.72	9.25	23.57	28412

CONDUITS AND CONDUIT FITTING (CONT'D)

Blank plate : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28413	White bakelite, 1 gang	14.96	1.66	2.00	4.79	28413
28414	White bakelite, 2 gang	23.71	1.66	2.00	4.79	28414
28415	Stainless steel, 1 gang	50.10	4.84	5.64	17.90	28415
28416	Stainless steel, 2 gang	54.66	4.84	5.64	17.90	28416

Accessories for weatherproof switch/ socket, IP 65 : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28417	Entry blank	26.68	3.50	4.11	10.62	28417
28418	PVC cable entry	27.38	3.50	4.11	10.62	28418
28419	20 mm conduit entry	28.89	3.50	4.11	10.62	28419
28420	Box coupler	15.09	0.76	0.94	2.34	28420
28421	Gel seal for socket	31.93	2.68	3.28	8.12	28421
28422	Surface mounting 1 gang box	93.42	7.72	9.48	23.57	28422
28423	Surface mounting 2 gang box	123.81	7.72	9.48	23.57	28423
28424	1 gang flush mounting frame	206.98	10.98	13.42	40.56	28424
28425	2 gang flush mounting frame	306.78	11.45	13.87	41.66	28425

UNDERFLOOR BUSBAR TRUNKING UNIT

Underfloor busbar trunking unit (with colour) for final circuit distribution c/w trunking coupler, all necessary interconnection wirings and accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28426	32A SPN, 1200 mm long	1,144.01	70.96	88.43	123.01	28426
28427	32A SPN, 2400 mm long	2,271.61	136.38	154.49	174.96	28427

UNDERFLOOR BUSBAR TRUNKING UNIT (CONT'D)

Underfloor busbar trunking accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28428	Flexible connector assembly c/w 2 m long flexible conduit and all necessary wirings	160.22	34.60	51.90	52.68	28428
28429	Cross over bridge assembly for four compartments trunking	1,181.88	67.68	84.07	132.30	28429

FLOOR OUTLET BOX

Floor outlet box or trunking service box c/w base box, cover including carpet frame & lid assembly, blank plate for spare outlet hole, mounting plate with outlet hole suitable for installing power socket, LAN socket and Telephone socket (socket outlet, cabling & wiring facilities to be measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28430	Two compartment type with 3/ 4 outlet holes	1,230.57	70.96	88.43	190.76	28430
28431	Three compartment type with 6/ 9 outlet holes	1,236.63	70.96	88.43	200.12	28431
28432	Four compartment type with 8 outlet holes	1,241.81	70.96	88.43	208.99	28432

CABLE TRUNKING AND CABLE TRAY

Cable trunking galvanized sheet steel suspended from ceiling soffit or fixed to wall with cover, an addition of fifty (50) percent will be made to the rate involving hanger or bracket for trunking installed all the way exceeding 450 mm from ceiling soffit or wall : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Trunking : -					
	Per linear metre					
28433	50 x 50 mm 1 compartment	128.97	16.31	20.76	72.59	28433
28434	50 x 75 mm ditto	137.65	16.89	21.50	76.07	28434
28435	75 x 75 mm ditto	142.81	17.63	22.98	79.38	28435
28436	50 x 100 mm ditto	142.81	17.63	22.98	79.38	28436
28437	75 x 100 mm ditto	147.92	19.85	24.44	88.93	28437
28438	100 x 100 mm ditto	162.17	19.85	24.44	88.93	28438
28439	100 x 150 mm ditto	174.39	21.32	27.30	96.72	28439
28440	150 x 150 mm ditto	202.13	24.41	29.48	106.69	28440
28441	150 x 200 mm ditto	216.32	25.92	32.62	115.69	28441
28442	150 x 250 mm ditto	230.47	28.71	36.35	124.03	28442
28443	150 x 500 mm ditto	306.94	37.74	43.93	148.79	28443
28444	200 x 200 mm ditto	180.91	37.74	43.93	148.79	28444
28445	300 x 300 mm ditto	291.45	37.74	43.93	148.79	28445
28446	50 x 100 mm 2 compartments	155.07	17.63	22.98	79.38	28446
28447	50 x 150 mm ditto	209.45	20.59	25.19	91.09	28447
28448	75 x 100 mm ditto	199.68	20.59	25.19	91.78	28448
28449	75 x 150 mm ditto	218.94	20.59	25.19	91.78	28449
28450	100 x 150 mm ditto	248.95	21.32	27.30	96.72	28450
28451	75 x 100 mm 3 compartments	220.61	20.59	25.19	91.78	28451
28452	75 x 150 mm ditto	239.83	20.59	25.19	91.78	28452
28453	100 x 150 mm ditto	259.38	21.32	27.30	96.72	28453
28454	150 x 150 mm ditto	317.29	24.41	29.48	106.69	28454
28455	150 x 200 mm ditto	345.31	25.92	32.62	115.69	28455

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Cable trunking galvanized sheet steel suspended from ceiling soffit or fixed to wall with cover, an addition of fifty (50) percent will be made to the rate involving hanger or bracket for trunking installed all the way exceeding 450 mm from ceiling soffit or wall : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Trunking cover : -					
	Per linear metre					
28456	50 mm wide	113.80	2.41	2.89	6.93	28456
28457	75 mm wide	117.68	2.41	2.89	6.93	28457
28458	100 mm wide	120.23	2.41	2.89	6.93	28458
28459	150 mm wide	129.58	3.56	4.34	10.48	28459
28460	200 mm wide	139.30	4.34	5.30	12.75	28460
28461	300 mm wide	152.82	5.30	6.40	15.49	28461
28462	500 mm wide	182.13	6.73	8.00	19.28	28462
	Extra over trunking of the following sizes for cross unit 4-way, with 4 connectors : -					
	Each					
28463	50 x 50 mm	125.40	13.90	17.68	53.75	28463
28464	75 x 75 mm	133.81	15.29	19.11	56.53	28464
28465	100 x 100 mm	144.14	16.18	20.03	60.33	28465
28466	100 x 150 mm	153.18	16.93	20.80	62.82	28466
28467	150 x 150 mm	171.24	17.68	23.04	68.49	28467
	Extra over trunking for reducer unit with 2 connectors : -					
	Each					
28468	75 x 75 mm to 100 x 100 mm	124.44	13.13	16.93	50.45	28468
28469	100 x 100 mm to 100 x 150 mm	128.97	13.90	17.68	54.06	28469
28470	100 x 100 mm to 150 x 150 mm	137.98	15.29	19.11	57.52	28470

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Cable trunking galvanized sheet steel suspended from ceiling soffit or fixed to wall with cover, an addition of fifty (50) percent will be made to the rate involving hanger or bracket for trunking installed all the way exceeding 450 mm from ceiling soffit or wall : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Extra over trunking of the following size for flat tee, edge tee unit with connectors : -					
	Each					
28471	50 x 50 mm	117.35	13.13	16.19	48.16	28471
28472	50 x 100/ 75 x 75 mm	122.82	13.13	16.93	50.45	28472
28473	75 x 100 mm	124.77	13.90	17.68	54.06	28473
28474	100 x 100 mm	129.26	13.90	17.68	54.06	28474
28475	100 x 150 mm	134.78	15.29	19.11	57.52	28475
28476	150 x 150 mm	146.04	16.93	20.80	62.82	28476
28477	200 x 200 mm	157.00	17.68	23.04	68.49	28477
	Extra over trunking of the following size for flat elbow, internal or external elbow unit with connectors : -					
	Each					
28478	50 x 50 mm	115.08	12.62	16.25	48.35	28478
28479	50 x 100/ 75 x 75 mm	119.31	13.21	17.01	50.65	28479
28480	50 x 150/ 100 x 100 mm	124.44	13.99	17.76	54.26	28480
28481	75 x 100 mm	120.86	13.99	17.76	54.26	28481
28482	75 x 150 mm	127.33	15.36	19.20	57.74	28482
28483	100 x 150 mm	128.97	15.36	19.20	57.74	28483
28484	150 x 150 mm	137.98	17.01	20.88	63.08	28484
28485	150 x 500 mm	226.64	19.35	25.63	77.63	28485
28486	200 x 200 mm	146.67	17.76	23.11	68.75	28486
28487	300 x 300 mm	191.82	19.35	25.63	77.63	28487
28488	50 x 100 mm 2 compartments	122.53	13.21	17.01	50.65	28488
28489	50 x 150 mm 2 compartments	128.32	13.99	17.76	54.26	28489
28490	100 x 150 mm 2 compartments	132.82	15.36	19.20	57.74	28490
28491	75 x 100 mm 3 compartments	127.33	13.99	17.76	54.26	28491
28492	75 x 150 mm 3 compartments	135.02	14.68	18.50	56.06	28492
28493	100 x 150 mm 3 compartments	136.70	15.36	19.20	57.74	28493
28494	150 x 150 mm 3 compartments	147.67	16.25	20.14	59.92	28494

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Blank end for cable trunking of the following sizes : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28495	50 x 50 mm	55.90	5.44	7.02	16.29	28495
28496	50 x 100/ 75 x 75 mm	57.46	5.44	7.02	16.29	28496
28497	50 x 150/ 100 x 100 mm	59.04	5.44	7.02	16.29	28497
28498	75 x 100 mm	58.31	5.44	7.02	16.29	28498
28499	100 x 150 mm	62.67	5.44	7.02	16.29	28499
28500	150 x 150 mm	64.24	5.45	7.03	16.31	28500
28501	150 x 500 mm	90.14	8.03	10.38	24.66	28501
28502	300 x 300 mm	87.83	8.03	10.38	24.66	28502
28503	Wiring clip for cable trunking	52.74	0.50	0.64	1.36	28503

PVC mini-trunking to IEC 61084-1, c/w all cross over, elbow, tee, blank end and all necessary fixing accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28504	16 x 16 mm	34.86	3.76	4.79	14.57	28504
28505	16 x 25/ 16 x 40/ 25 x 25 mm	45.22	5.74	7.02	17.68	28505
28506	25 x 40/ 25 x 50 mm	54.22	5.74	7.02	17.68	28506
28507	32 x 50/ 50 x 50 mm	83.56	5.74	7.02	17.68	28507

Surface galvanized sheet steel weatherproof trunking, including all cross over, tee, bend, blank end and fixing accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28508	100 x 100 mm	420.94	47.11	58.81	185.70	28508
28509	150 x 150 mm	590.15	56.71	70.15	218.86	28509

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Exposed floor trunking, including all trunking fittings, crossover, tee, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers, pyramid sides : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28510	153 mm x 38 mm (2 compartments) trunking	223.58	19.37	23.90	70.93	28510
28511	228 mm x 38 mm (3 compartments) trunking	267.18	23.26	28.63	87.41	28511
	Each					
28512	153 mm x 38 mm (2 compartments) junction box	439.49	12.63	15.96	49.19	28512
28513	228 mm x 38 mm (3 compartments) junction box	499.09	15.96	19.76	61.52	28513

Flush floor trunking, including all trunking fittings, tee, cross over, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28514	153 mm x 38 mm (2 compartments) trunking	260.40	19.27	23.75	70.50	28514
28515	228 mm x 38 mm (3 compartments) trunking	321.44	23.11	28.46	86.90	28515
	Each					
28516	153 mm x 38 mm (2 compartments) junction box	471.75	12.84	16.19	47.81	28516
28517	228 mm x 38 mm (3 compartments) junction box	527.78	16.19	20.06	59.82	28517

Underfloor trunking, including all trunking fittings, tee, cross over, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28518	153 mm x 38 mm (2 compartments) trunking	103.28	19.27	23.75	70.50	28518
28519	228 mm x 38 mm (3 compartments) trunking	119.96	23.11	28.46	86.90	28519

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Underfloor trunking, including all trunking fittings, tee, cross over, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
28520	153 mm x 38 mm (2 compartments) junction box	187.09	12.84	16.19	47.81	28520
28521	228 mm x 38 mm (3 compartments) junction box	196.98	16.19	20.06	116.15	28521

Skirting trunking, including all trunking fittings, riser bend, outlet lid and other accessories, manufactured from 1.6 mm sheet steel, stove epoxy polyester powder finish : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
28522	153 mm x 38 mm (2 compartments)	205.78	19.27	23.75	70.50	28522
28523	225 mm x 50 mm (2 compartments)	272.36	23.11	28.46	88.09	28523
28524	228 mm x 38 mm (3 compartments)	271.01	23.11	28.46	86.90	28524
28525	228 mm x 50 mm (3 compartments)	273.64	23.68	28.92	89.01	28525
28526	300 mm x 50 mm (3 compartments)	368.54	28.46	35.11	106.64	28526

Sill trunking, including all trunking fittings, riser bend, outlet lid and other accessories, manufactured from 1.2 mm sheet steel, stove epoxy polyester powder finish : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
28527	102 mm x 38 mm (2 compartments)	182.28	19.27	23.75	70.50	28527
28528	153 mm x 38 mm (2 compartments)	205.78	19.27	23.75	70.50	28528

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Galvanized metal sheet tray suspended from ceiling soffit, including all fittings, cross, tee, bend and other accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28529	75 mm wide	116.39	15.26	19.09	60.95	28529
28530	100 mm wide	139.89	16.18	20.03	67.34	28530
28531	150 mm wide	165.74	17.47	21.24	72.13	28531
28532	225 mm wide	199.87	19.20	23.71	79.85	28532
28533	300 mm wide	242.48	19.85	24.44	83.28	28533
28534	450 mm wide	297.88	23.07	28.40	93.50	28534
28535	600 mm wide	362.62	24.41	31.13	100.37	28535
	Each					
28536	650 mm high power post, anodised aluminium body with uPVC cover, twin compartments in cross-section of 100 x 100 mm, composed of one full length post body, two full length cover section, 5 nos. outlet box assembly, one end load plate, one top cover, one end load plate, one earth link strap, and all necessary accessories	1,486.62	27.21	33.15	103.44	28536
28537	3.6 m high power post, anodised aluminium body with uPVC cover, twin compartments in cross-section of 100 x 100 mm, composed of one full length post body, two full length cover section, two 3 m long dividing strip, 6 nos. outlet box assembly, one end load plate, one top end collar with jacking assembly, two end load plate, 3 nos. earth link strap, and all necessary accessories	4,357.69	253.56	310.41	931.09	28537

3 compartments PVC trunking to IEC 1084-1 or BS4678 part 4, size 145 mm x 40 mm : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28538	Straight section of trunking, including blank end, cover and fixing accessories	921.45	22.45	27.72	85.04	28538
	Each					
28539	Angle unit - flat, external or internal, including cover	193.26	16.14	19.94	62.26	28539
28540	Flat tee unit, including cover	211.81	16.14	19.94	62.26	28540

CABLE TRUNKING AND CABLE TRAY (CONT'D)

Plastic cable tray

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
28541	Plastic cable tray, 150 mm wide	433.13	14.81	18.61	59.82	28541

Stainless steel weatherproof cable trunking, size 100 x 100 mm : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
28542	Straight section of trunking, including blank end, cover and fixing accessories	307.83	19.85	24.44	89.18	28542
	Each					
28543	Extra over trunking for flat tee unit, including cover and connector	243.92	13.89	17.63	54.53	28543
28544	Extra over trunking for elbow - flat, internal or external, including cover and connector	223.21	13.89	17.63	54.53	28544

Glass Reinforced Polyester (GRP) cable tray c/w hangers at 1.5m support span : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
28545	200 mm width	634.17	15.75	19.72	64.46	28545
28546	300 mm width	730.68	15.75	19.72	64.46	28546

Stainless steel 304 sheet tray suspended from ceiling soffit, including all fittings, cross, tee, bend and other accessories : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
28547	200 mm wide	137.19	18.61	22.88	77.29	28547
28548	300 mm wide	198.41	19.85	24.44	83.28	28548

SIMPLIFIED ITEMS

Section 1 : Installation by galvanized steel surface conduit system/ concealed conduit system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Power point : -					
	Power point c/w conduits, trunking, boxes, PVC cables and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately), same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables					
	Each					
28549	Single phase, 13A or below	529.66	117.96	-	-	28549
28550	Single phase, 13 - 20A	698.26	141.07	-	-	28550
28551	Single phase, 20 - 45A	771.26	141.07	-	-	28551
28552	Three phases, 45A or below	987.02	141.07	-	-	28552
28553	Three phases, 45 - 65A	1,237.60	141.07	-	-	28553
28554	Extra over power point for twin type outlet	4.53	-	-	-	28554
	Add 13% to either of Items 28549 to 28554 inclusive for provision of circuit protective conductor to MCB board in full length of conduit					
	Power point c/w conduits, trunking, boxes, OHLS cables and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately), same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables					
	Each					
28555	Single phase, 13A or below	622.17	117.96	-	-	28555
28556	Single phase, 13 - 20A	765.34	141.85	-	-	28556
28557	Single phase, 20 - 45A	808.50	141.85	-	-	28557
28558	Three phases, 45A or below	1,080.10	141.85	-	-	28558
28559	Three phases, 45 - 65A	1,338.04	141.85	-	-	28559
28560	Extra over power point for twin type outlet	4.63	-	-	-	28560
	Add 16% to either of Items 28555 to 28560 inclusive for provision of circuit protective conductor to MCB board in full length of conduit					
	Door bell point : -					
	Each					
28561	Door bell point c/w conduits, boxes, PVC cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables	470.74	117.96	-	-	28561

SIMPLIFIED ITEMS (CONT'D)

Section 1 : Installation by galvanized steel surface conduit system/ concealed conduit system (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Telephone, LAN and services outlet point : -					
	Each					
28562	Telephone point/ LAN point/ services point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.	467.55	82.28	-	-	28562

Section 2 : Installation by PVC surface conduit system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Power point : -					
	Power point c/w conduits, trunking, boxes, PVC cables, circuit protective conductor and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately)					
	Each					
28563	Single phase, 13A or below	472.55	85.04	-	-	28563
28564	Single phase, 13 - 20A	562.68	103.94	-	-	28564
28565	Single phase, 20 - 45A	625.30	103.94	-	-	28565
28566	Three phases, 45A or below	926.39	103.94	-	-	28566
28567	Three phases, 45 - 65A	1,145.09	103.94	-	-	28567
28568	Extra over power point for twin type outlet	2.71	-	-	-	28568
	Door bell point : -					
	Each					
28569	Door bell point c/w conduits, boxes, PVC cables and all necessary accessories	354.22	85.00	-	-	28569
	Telephone, LAN and services outlet point : -					
	Each					
28570	Telephone point/ LAN point/ service point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories	231.92	52.90	-	-	28570

SIMPLIFIED ITEMS (CONT'D)

Section 3 : Installation by surface wiring system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Power point c/w PVC/ PVC cables, circuit protective conductor, boxes and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately)					
	Each					
28571	Single phase, 13A or below	383.17	37.61	-	-	28571
28572	Single phase, 13 - 20A	474.86	40.22	-	-	28572
28573	Single phase, 20 - 45A	547.63	40.22	-	-	28573
28574	Three phases, 45A or below	705.87	40.22	-	-	28574
28575	Three phases, 45 - 65A	878.02	40.22	-	-	28575
	Door bell point : -					
	Each					
28576	Door bell point c/w PVC/ PVC cables, circuit protective conductor, boxes and all necessary accessories.	264.08	37.61	-	-	28576

Section 29

ELECTRICAL INSTALLATION -

MAIN DISTRIBUTION SYSTEMS

CABLES (COPPER)

300/ 500V TRS or PVC sheathed flexible cords, twisted core to IEC 60245 or BS 6500 or acceptable recognized international standard, such as BS 7919 : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29001	0.5 mm² 2-core	24.19	1.95	2.41	6.16	29001
29002	0.75 mm² 2-core	24.60	1.95	2.41	6.16	29002
29003	1.5 mm² 2-core	27.41	1.95	2.41	6.16	29003
29004	0.75 mm² 3-core	25.70	1.95	2.41	6.16	29004
29005	1.5 mm² 3-core	31.80	1.95	2.41	6.16	29005
29006	2.5 mm² 3-core	34.61	1.95	2.41	6.16	29006
29007	0.5 mm² 2-core, PVC flexible cords, unsheathed	23.92	1.95	2.41	6.16	29007
29008	0.75 mm² 2-core, PVC flexible cords, unsheathed	24.46	1.95	2.41	6.16	29008
29009	0.75 mm² 3-core, PVC flexible cords, unsheathed	25.49	1.95	2.41	6.16	29009

450/ 750V PVC insulated cable, all colours, to IEC 60227-3, drawn into conduits/ trunkings (conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29010	1.5 mm² 1 core	5.72	0.75	0.94	2.34	29010
29011	2.5 mm² ditto	7.09	0.75	0.94	2.34	29011
29012	4 mm² ditto	9.82	0.75	0.94	2.34	29012
29013	6 mm² ditto	14.40	1.12	1.27	3.13	29013
29014	10 mm² ditto	24.96	1.12	1.27	3.13	29014
29015	16 mm² ditto	31.28	1.12	1.27	3.13	29015
29016	25 mm² ditto	45.17	1.29	1.51	4.06	29016
29017	35 mm² ditto	63.55	1.29	1.51	4.06	29017
29018	50 mm² ditto	84.31	1.51	1.95	4.75	29018
29019	70 mm² ditto	112.91	2.61	2.88	7.51	29019
29020	95 mm² ditto	153.85	2.83	3.47	8.97	29020
29021	120 mm² ditto	210.41	3.54	4.37	12.01	29021
29022	150 mm² ditto	342.73	4.23	5.13	14.71	29022
29023	185 mm² ditto	409.16	5.28	6.62	18.15	29023
29024	240 mm² ditto	598.31	6.12	7.71	21.18	29024

CABLES (COPPER) (CONT'D)

450/ 750V PVC insulated cable, all colours, to IEC 60227-3, drawn into conduits/ trunkings (conduits and trunkings measured separately) : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29025	300 mm² 1 core	723.67	6.12	7.71	21.18	29025
29026	400 mm² ditto	884.50	6.12	7.71	21.18	29026
29027	500 mm² ditto	1,169.89	6.62	8.24	25.13	29027
29028	630 mm² ditto	1,442.63	6.95	8.72	26.71	29028

PVC insulated and PVC sheathed all colours, to IEC 60502-1 (for cables of 600/ 1000V with CSA 50 mm² & above), c/w brass buckle clips or brass fasteners, or fixed to cable trays, or fixed in conduits/ trunkings (cable trays, conduits and trunkings measured separately) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
29029	1.5 mm² 1 core	16.27	2.88	3.54	7.51	29029
29030	2.5 mm² ditto	20.54	2.88	3.54	7.51	29030
29031	4 mm² ditto	30.67	3.47	4.14	8.98	29031
29032	6 mm² ditto	40.91	3.47	4.14	8.98	29032
29033	10 mm² ditto	50.93	3.47	4.14	8.98	29033
29034	16 mm² ditto	57.77	3.47	4.14	8.98	29034
29035	25 mm² ditto	97.86	4.90	5.68	13.39	29035
29036	35 mm² ditto	110.53	4.90	5.68	13.39	29036
29037	50 mm² ditto	169.09	4.90	5.68	13.39	29037
29038	70 mm² ditto	202.12	6.42	7.56	17.76	29038
29039	95 mm² ditto	223.39	8.09	9.66	22.49	29039
29040	120 mm² ditto	248.79	9.55	11.14	26.46	29040
29041	150 mm² ditto	365.86	11.49	13.55	31.65	29041
29042	185 mm² ditto	372.48	12.61	14.96	34.98	29042
29043	240 mm² ditto	472.52	15.67	18.68	43.72	29043
29044	300 mm² ditto	578.15	19.72	23.36	54.76	29044
29045	400 mm² ditto	698.05	22.79	26.87	63.27	29045
29046	500 mm² ditto	911.99	26.52	31.24	73.64	29046

CABLES (COPPER) (CONT'D)

PVC insulated and PVC sheathed all colours, to IEC 60502-1 (for cables of 600/ 1000V with CSA 50 mm² & above), c/w brass buckle clips or brass fasteners, or fixed to cable trays, or fixed in conduits/ trunkings (cable trays, conduits and trunkings measured separately) : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29047	630 mm² 1 core	1,098.11	29.39	34.70	81.26	29047
29048	800 mm² ditto	1,690.86	38.01	44.99	105.93	29048
29049	1000 mm² ditto	1,989.46	49.39	58.43	137.20	29049
29050	1.5 mm² 2-core	19.59	3.47	4.15	9.10	29050
29051	2.5 mm² ditto	26.16	4.62	5.42	12.19	29051
29052	4 mm² ditto	36.76	4.92	5.73	13.46	29052
29053	6 mm² ditto	48.15	4.92	5.73	13.46	29053
29054	10 mm² ditto	86.41	4.98	5.92	14.74	29054
29055	16 mm² ditto	115.51	6.47	7.59	17.82	29055
29056	25 mm² ditto	186.80	7.09	8.40	19.64	29056

450/ 750V low emission and corrosive gases, thermosetting insulated, non-sheathed, single core cable to BS 7211 drawn into conduits/ trunkings (conduits and trunkings measured separately) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
29057	1.5 mm² 1 core	7.45	0.75	0.94	2.34	29057
29058	2.5 mm² ditto	8.53	0.75	0.94	2.34	29058
29059	4 mm² ditto	11.84	0.75	0.94	2.34	29059
29060	6 mm² ditto	17.45	1.12	1.38	3.36	29060
29061	10 mm² ditto	30.19	1.12	1.38	3.36	29061
29062	16 mm² ditto	39.36	1.12	1.38	3.36	29062
29063	25 mm² ditto	55.92	1.38	1.56	4.15	29063
29064	35 mm² ditto	78.46	1.38	1.56	4.15	29064
29065	50 mm² ditto	96.52	1.56	2.03	4.75	29065
29066	70 mm² ditto	131.19	2.49	2.79	7.27	29066
29067	95 mm² ditto	187.11	2.86	3.50	8.99	29067
29068	120 mm² ditto	247.09	3.58	4.38	12.23	29068

CABLES (COPPER) (CONT'D)

450/ 750V low emission and corrosive gases, thermosetting insulated, non-sheathed, single core cable to BS 7211 drawn into conduits/ trunkings (conduits and trunkings measured separately) : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29069	150 mm² 1 core	341.18	4.42	5.42	14.89	29069
29070	185 mm² ditto	477.05	5.30	6.62	18.09	29070
29071	240 mm² ditto	599.95	6.42	7.86	20.46	29071
29072	300 mm² ditto	770.06	6.42	7.86	20.46	29072
29073	400 mm² ditto	930.41	6.42	7.86	20.46	29073
29074	500 mm² ditto	1,413.21	7.04	8.61	24.57	29074
29075	630 mm² ditto	1,788.39	7.33	9.11	26.57	29075

450/ 750V low emission of smoke and corrosive gases, thermosetting insulated and sheathed cable to BS 7211, c/w brass buckle clips or brass fasteners, or fixed to cable trays, or fixed in conduits/ trunkings (cable trays, conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29076	1.5 mm² 2-core	71.94	3.31	3.99	9.10	29076
29077	2.5 mm² ditto	78.70	4.37	5.24	12.29	29077
29078	4 mm² ditto	91.78	4.92	5.73	13.47	29078
29079	6 mm² ditto	101.10	4.92	5.73	13.47	29079
29080	10 mm² ditto	133.41	5.28	6.28	14.96	29080
29081	16 mm² ditto	169.43	6.23	7.42	18.17	29081
29082	25 mm² ditto	232.35	7.11	8.42	19.70	29082
29083	35 mm² ditto	321.43	7.62	8.93	20.54	29083
29084	1.5 mm² 4-core	93.98	4.92	5.73	13.47	29084
29085	2.5 mm² ditto	102.39	5.28	6.23	14.96	29085
29086	4 mm² ditto	145.87	6.23	7.42	18.17	29086
29087	6 mm² ditto	167.81	7.11	8.42	19.70	29087
29088	10 mm² ditto	208.70	7.62	8.93	20.54	29088
29089	16 mm² ditto	258.62	8.11	9.33	22.49	29089
29090	25 mm² ditto	386.15	8.87	10.22	24.66	29090
29091	35 mm² ditto	449.72	9.38	10.74	26.67	29091

CABLES (COPPER) (CONT'D)

600/ 1000V low emission of smoke and corrosive gases, cross-linked polyethylene insulated and sheathed, steel wire armoured cable to IEC 60502-01, c/w cleats or saddles or fixed to cable trays (cable trays measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29092	1.5 mm² 2-core	93.72	7.45	9.10	26.34	29092
29093	2.5 mm² ditto	98.38	7.45	9.10	26.34	29093
29094	4 mm² ditto	119.34	13.16	17.40	50.65	29094
29095	6 mm² ditto	129.40	13.16	17.40	50.65	29095
29096	10 mm² ditto	169.13	16.57	20.40	62.57	29096
29097	16 mm² ditto	196.39	16.57	20.40	62.57	29097
29098	25 mm² ditto	262.82	19.07	23.90	72.99	29098
29099	35 mm² ditto	333.21	20.84	25.92	78.31	29099
29100	50 mm² ditto	453.40	20.97	26.11	79.37	29100
29101	70 mm² ditto	679.86	24.18	30.48	88.22	29101
29102	95 mm² ditto	829.35	25.55	31.32	97.25	29102
29103	120 mm² ditto	1,002.20	26.79	33.82	104.76	29103
29104	150 mm² ditto	1,353.82	30.00	37.96	116.23	29104
29105	1.5 mm² 4-core	141.53	15.36	19.14	58.32	29105
29106	2.5 mm² ditto	161.41	16.57	20.40	62.57	29106
29107	4 mm² ditto	200.09	17.28	21.75	64.44	29107
29108	6 mm² ditto	212.25	18.17	23.19	71.46	29108
29109	10 mm² ditto	234.06	19.11	24.63	74.20	29109
29110	16 mm² ditto	281.55	20.59	25.36	75.28	29110
29111	25 mm² ditto	380.50	20.69	25.46	78.24	29111
29112	35 mm² ditto	436.86	21.40	26.34	80.31	29112
29113	50 mm² ditto	515.09	21.50	26.57	81.44	29113
29114	70 mm² ditto	620.70	23.02	29.33	87.17	29114
29115	95 mm² ditto	857.05	26.49	31.47	97.64	29115
	Per linear metre					
29116	120 mm² 4-core	1,006.86	26.70	33.69	104.33	29116
29117	150 mm² ditto	1,287.22	29.90	37.80	115.77	29117
29118	185 mm² ditto	1,384.57	33.08	40.99	124.10	29118
29119	240 mm² ditto	1,775.92	34.77	43.46	135.53	29119
29120	300 mm² ditto	2,112.12	37.71	47.15	143.14	29120
29121	400 mm² ditto	2,684.09	39.05	49.10	150.14	29121

CABLES (COPPER) (CONT'D)

300/ 500V PVC insulated and PVC sheathed, all colours cores, to IEC 60227-4, c/w brass buckle clips or brass fasteners, or fixed to cable trays, or fixed in conduits/ trunkings (cable trays, conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29122	1.5 mm² 2-core with E.C.C.	19.57	3.28	3.91	8.97	29122
29123	2.5 mm² ditto	24.60	3.28	3.91	8.97	29123
29124	4 mm² ditto	38.74	4.87	5.66	13.35	29124
29125	6 mm² ditto	49.45	4.87	5.66	13.35	29125
29126	10 mm² ditto	91.10	6.18	7.35	17.99	29126
29127	16 mm² ditto	116.24	6.18	7.35	17.99	29127

450/ 750V PVC insulated or ethylene-vinylacetate rubber insulated or other equivalent synthetic insulated, heat resistant, single core, copper cable to IEC 60245-7, all colours, drawn into conduits/ trunking (conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29128	1.5 mm² 1 core	6.05	0.75	0.94	2.34	29128
29129	2.5 mm² ditto	7.63	0.75	0.94	2.34	29129
29130	4 mm² ditto	10.43	0.75	0.94	2.34	29130
29131	6 mm² ditto	16.28	1.12	1.38	3.36	29131
29132	10 mm² ditto	28.58	1.12	1.38	3.36	29132
	Per linear metre					
29133	16 mm² 1 core	40.10	1.12	1.38	3.36	29133
29134	25 mm² ditto	56.40	1.38	1.56	4.15	29134
29135	35 mm² ditto	84.49	1.38	1.56	4.15	29135
29136	50 mm² ditto	118.04	1.56	2.03	4.75	29136
29137	70 mm² ditto	161.78	2.49	2.79	7.27	29137
29138	95 mm² ditto	220.94	2.86	3.50	8.99	29138
29139	120 mm² ditto	299.36	3.40	4.19	11.58	29139
29140	150 mm² ditto	470.81	4.42	5.42	14.89	29140
29141	185 mm² ditto	588.72	5.07	6.23	17.99	29141
29142	240 mm² ditto	751.33	5.91	7.27	20.31	29142

CABLES (COPPER) (CONT'D)

600/ 1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1 c/w cleats or saddles or fixed to cable trays (cable trays measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29143	1.5 mm² 2-core	59.82	7.49	9.11	26.45	29143
29144	2.5 mm² ditto	65.25	7.49	9.11	26.45	29144
29145	4 mm² ditto	101.28	13.21	17.47	50.83	29145
29146	6 mm² ditto	113.86	13.21	17.47	50.83	29146
29147	10 mm² ditto	162.79	16.66	20.48	62.77	29147
29148	16 mm² ditto	168.16	16.66	20.48	62.77	29148
29149	25 mm² ditto	287.84	17.41	21.40	66.32	29149
29150	35 mm² ditto	359.48	18.34	22.51	67.79	29150
29151	50 mm² ditto	478.34	18.50	22.66	68.70	29151
29152	70 mm² ditto	690.59	31.65	38.63	115.40	29152
29153	95 mm² ditto	906.24	33.43	40.67	119.28	29153
29154	120 mm² ditto	1,112.64	35.21	42.70	123.18	29154
29155	1.5 mm² 4-core	109.11	15.62	19.28	59.42	29155
29156	2.5 mm² ditto	119.77	16.66	20.48	62.77	29156
29157	4 mm² ditto	143.10	17.35	21.84	64.68	29157

CABLES (COPPER) (CONT'D)

600/ 1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1 c/w cleats or saddles or fixed to cable trays (cable trays measured separately) : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29158	6 mm² 4-core	149.62	18.27	23.28	71.76	29158
29159	10 mm² ditto	196.72	19.21	24.75	74.50	29159
29160	16 mm² ditto	221.07	19.53	25.10	75.60	29160
29161	25 mm² ditto	271.32	20.76	25.63	78.57	29161
29162	35 mm² ditto	342.73	21.49	26.46	80.67	29162
29163	50 mm² ditto	452.55	21.58	26.67	81.79	29163
29164	70 mm² ditto	581.50	23.11	29.48	87.53	29164
29165	95 mm² ditto	710.71	26.58	31.57	98.02	29165
29166	120 mm² ditto	866.24	26.89	33.97	105.16	29166
29167	150 mm² ditto	1,290.51	30.13	38.13	116.74	29167
29168	185 mm² ditto	1,350.06	33.35	41.29	125.11	29168
29169	240 mm² ditto	1,688.08	34.77	43.46	135.53	29169
29170	300 mm² ditto	1,977.60	37.71	47.15	143.14	29170
29171	400 mm² ditto	2,526.25	39.05	49.10	150.14	29171
29172	1.5 mm² 7-core	209.75	19.05	24.49	73.89	29172
29173	1.5 mm² 12-core	259.89	19.05	24.49	73.89	29173
29174	1.5 mm² 19-core	338.18	21.82	27.41	82.50	29174
29175	1.5 mm² 27-core	425.95	21.89	27.76	83.98	29175
29176	1.5 mm² 37-core	486.58	23.79	29.98	89.29	29176
29177	1.5 mm² 48-core	844.10	25.19	31.20	94.74	29177
29178	2.5 mm² 7-core	263.66	22.91	29.21	86.81	29178
29179	2.5 mm² 12-core	326.92	22.91	29.21	86.81	29179
29180	2.5 mm² 19-core	450.79	25.00	30.62	92.58	29180
29181	2.5 mm² 27-core	568.10	25.81	32.74	96.64	29181
29182	2.5 mm² 37-core	953.23	26.51	33.54	98.71	29182
29183	2.5 mm² 48-core	1,502.26	27.39	34.69	101.81	29183

CABLES (COPPER) (CONT'D)

Fire resistant, low emission of smoke and corrosive gases, thermosetting insulated and sheathed, steel wire armoured multi-core cable to BS 7846 (for voltage rating 600/ 1000V) c/w cleats or saddles, or fixed to cable trays, or fixed in conduits/ trunkings (cable trays, conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29184	1.5 mm² 2-core	125.76	7.45	9.10	26.30	29184
29185	2.5 mm² ditto	153.78	7.45	9.10	26.33	29185
29186	4 mm² ditto	195.68	13.16	17.35	50.54	29186
29187	6 mm² ditto	201.07	13.16	17.35	50.54	29187
29188	10 mm² ditto	227.54	16.51	20.37	62.40	29188
29189	16 mm² ditto	250.11	16.51	20.37	62.40	29189
29190	25 mm² ditto	388.89	19.02	23.85	72.86	29190
29191	35 mm² ditto	433.15	20.78	25.88	78.12	29191
29192	50 mm² ditto	565.96	20.97	26.04	79.18	29192
29193	70 mm² ditto	792.63	22.20	29.19	86.67	29193
29194	95 mm² ditto	986.20	25.54	31.28	97.07	29194
29195	120 mm² ditto	1,285.80	26.78	33.75	104.57	29195
29196	150 mm² ditto	1,521.51	29.96	37.88	116.03	29196
29197	185 mm² ditto	1,672.02	33.14	41.02	124.35	29197
29198	240 mm² ditto	2,053.09	34.85	43.56	135.83	29198
29199	300 mm² ditto	2,488.00	37.74	47.25	143.41	29199
29200	400 mm² ditto	2,946.17	39.17	49.21	150.43	29200

CABLES (COPPER) (CONT'D)

Fire resistant, low emission of smoke and corrosive gases, thermosetting insulated and sheathed, steel wire armoured multi-core cable to BS 7846 (for voltage rating 600/ 1000V) or BS 7629-1 (for voltage rating 300/ 500V), c/w cleats or saddles, or fixed to cable trays, or fixed in conduits/ trunkings (cable trays, conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29201	1.5 mm² 4-core	170.61	15.62	19.28	59.42	29201
29202	2.5 mm² ditto	202.50	16.66	20.51	62.77	29202
29203	4 mm² ditto	222.17	17.35	21.84	64.68	29203
29204	6 mm² ditto	264.07	18.27	23.28	71.76	29204
29205	10 mm² ditto	311.89	19.21	24.75	74.55	29205
29206	16 mm² ditto	350.40	20.69	25.46	75.60	29206
29207	25 mm² ditto	484.44	20.76	25.55	78.57	29207
29208	35 mm² ditto	544.04	21.49	26.46	80.67	29208
29209	50 mm² ditto	686.72	21.58	26.67	81.79	29209
29210	70 mm² ditto	871.67	23.11	29.48	87.53	29210
29211	95 mm² ditto	1,017.57	26.58	31.57	98.02	29211
29212	120 mm² ditto	1,196.91	26.89	33.97	105.16	29212
29213	150 mm² ditto	1,443.90	30.13	38.14	116.74	29213
29214	185 mm² ditto	1,564.80	33.35	41.29	125.11	29214
29215	240 mm² ditto	1,961.62	35.08	43.82	136.66	29215
29216	300 mm² ditto	2,305.56	37.98	47.55	144.27	29216
29217	400 mm² ditto	2,849.09	39.40	49.53	151.35	29217

CABLES (COPPER) (CONT'D)

600/ 1000V fire resistant, low emission of smoke and corrosive gases insulated, non-sheathed, single core cables to IEC 60332-1, IEC 61034-2, IEC 60754-1 and BS 6387 Cat. CWZ in conduits or trunkings (conduits and trunkings measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29218	1.5 mm²	32.65	2.26	3.07	7.41	29218
29219	2.5 mm²	35.41	2.26	3.07	7.41	29219
29220	4 mm²	42.40	2.55	3.36	8.60	29220
29221	6 mm²	49.73	2.55	3.36	8.60	29221
29222	10 mm²	94.75	2.55	3.36	8.60	29222
29223	16 mm²	123.15	2.55	3.36	8.60	29223
29224	25 mm²	163.41	3.50	4.32	13.36	29224
29225	35 mm²	361.91	3.50	4.32	13.36	29225
29226	50 mm²	409.65	3.50	4.32	13.36	29226
29227	70 mm²	507.84	4.92	5.82	18.27	29227
29228	95 mm²	605.59	5.83	8.03	21.40	29228
29229	120 mm²	712.48	7.51	9.15	26.51	29229
29230	150 mm²	896.49	8.26	10.03	31.46	29230
29231	185 mm²	992.69	9.83	12.38	36.21	29231
29232	240 mm²	1,182.75	12.23	14.61	44.74	29232
29233	300 mm²	1,318.44	14.14	18.00	55.04	29233
29234	400 mm²	1,534.13	16.66	20.54	62.90	29234
29235	500 mm²	1,832.02	19.15	24.05	73.44	29235
29236	630 mm²	2,335.45	23.15	29.53	87.71	29236

CABLES (COPPER) (CONT'D)

600/ 1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1, laid in trench or cable ducts including suitable cable bed (excavation backfilling and cable ducts measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29237	1.5 mm² 2-core	47.27	4.38	4.93	17.48	29237
29238	2.5 mm² ditto	53.95	4.38	4.93	17.48	29238
29239	4 mm² ditto	76.47	8.24	9.55	31.46	29239
29240	6 mm² ditto	85.91	8.24	9.55	31.46	29240
29241	10 mm² ditto	127.42	9.55	11.67	35.56	29241
29242	16 mm² ditto	152.57	9.55	11.67	35.56	29242
29243	25 mm² ditto	238.62	11.05	13.12	42.51	29243
29244	35 mm² ditto	317.63	12.77	15.77	44.09	29244
29245	50 mm² ditto	412.57	12.77	15.77	44.09	29245
29246	1.5 mm² 4-core	77.59	9.62	12.59	38.28	29246
29247	2.5 mm² ditto	89.26	11.76	14.35	43.71	29247
29248	4 mm² ditto	112.31	12.59	15.09	45.91	29248
29249	6 mm² ditto	129.35	12.59	15.09	45.91	29249
29250	10 mm² ditto	167.44	13.05	15.87	48.28	29250
29251	16 mm² ditto	219.01	13.05	15.87	48.28	29251
29252	25 mm² ditto	270.45	13.47	16.48	50.52	29252
29253	35 mm² ditto	348.01	14.40	17.76	52.99	29253
29254	50 mm² ditto	456.89	14.40	17.76	52.99	29254
29255	70 mm² ditto	582.85	15.96	19.41	57.39	29255
29256	95 mm² ditto	724.10	16.92	20.77	60.12	29256
29257	120 mm² ditto	848.52	16.92	20.77	60.12	29257
29258	150 mm² ditto	1,219.58	17.88	21.50	64.44	29258

CABLES (COPPER) (CONT'D)

600/ 1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1, laid in trench or cable ducts including suitable cable bed (excavation backfilling and cable ducts measured separately) : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29259	185 mm² 4-core	1,246.37	17.99	22.88	69.09	29259
29260	240 mm² ditto	1,549.56	20.77	25.44	77.41	29260
29261	300 mm² ditto	1,863.34	23.45	28.91	86.92	29261
29262	400 mm² ditto	2,392.59	24.18	29.87	91.61	29262
29263	1.5 mm² 7-core	170.89	12.75	15.29	48.09	29263
29264	1.5 mm² 12-core	225.22	12.75	15.29	48.09	29264
29265	1.5 mm² 19-core	303.04	16.86	20.71	59.90	29265
29266	1.5 mm² 27-core	385.22	16.86	20.71	59.90	29266
29267	1.5 mm² 37-core	454.98	16.86	20.71	62.66	29267
29268	1.5 mm² 48-core	780.29	16.86	20.71	62.66	29268
29269	2.5 mm² 7-core	245.01	16.10	20.09	59.64	29269
29270	2.5 mm² 12-core	311.27	16.10	20.09	59.64	29270
29271	2.5 mm² 19-core	415.11	16.84	21.50	64.52	29271
29272	2.5 mm² 27-core	538.47	17.52	22.26	65.69	29272
29273	2.5 mm² 37-core	920.61	18.22	23.75	70.04	29273
29274	2.5 mm² 48-core	1,403.66	18.26	23.83	71.37	29274

CABLES (COPPER) (CONT'D)

Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, c/w spacing bar type saddles : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29275	6 mm² 1-core	109.61	9.10	11.59	33.99	29275
29276	10 mm² ditto	163.60	9.10	11.66	35.01	29276
29277	16 mm² ditto	203.07	10.49	13.92	39.74	29277
29278	25 mm² ditto	259.74	12.01	14.79	41.87	29278
29279	35 mm² ditto	470.60	13.00	15.59	45.39	29279
29280	50 mm² ditto	536.02	13.81	17.10	47.55	29280
29281	70 mm² ditto	631.09	14.79	18.68	51.49	29281
29282	95 mm² ditto	789.94	18.67	23.32	65.77	29282
29283	120 mm² ditto	928.75	18.67	23.32	65.77	29283
29284	150 mm² ditto	1,128.64	18.67	23.32	65.77	29284
29285	185 mm² ditto	1,308.38	19.41	24.81	70.29	29285
29286	240 mm² ditto	1,600.02	21.15	25.96	73.76	29286
29287	1.5 mm² 2-core	100.11	8.12	9.81	31.20	29287
29288	2.5 mm² ditto	113.18	9.10	11.59	33.99	29288
29289	4 mm² ditto	132.49	9.10	11.66	35.01	29289
29290	6 mm² ditto	162.40	10.19	12.53	37.36	29290
29291	10 mm² ditto	214.15	10.49	13.92	39.74	29291
29292	16 mm² ditto	262.53	12.01	14.74	41.88	29292
29293	25 mm² ditto	412.90	12.51	14.97	45.63	29293
29294	1.5 mm² 3-core	115.53	8.61	10.70	32.60	29294
29295	2.5 mm² ditto	128.63	9.10	11.63	34.50	29295
29296	4 mm² ditto	159.73	9.49	12.27	36.23	29296
29297	6 mm² ditto	197.34	10.35	13.23	38.54	29297
29298	10 mm² ditto	261.78	11.24	14.34	40.82	29298
29299	16 mm² ditto	340.50	12.26	14.86	43.75	29299
29300	25 mm² ditto	495.12	13.00	15.77	47.18	29300
	Per linear metre					
29301	1.5 mm² 4-core	122.75	9.10	11.59	33.99	29301
29302	2.5 mm² ditto	134.97	9.10	11.66	35.01	29302
29303	4 mm² ditto	175.61	9.89	12.88	37.44	29303
29304	6 mm² ditto	218.34	10.49	13.92	39.74	29304
29305	10 mm² ditto	290.84	12.01	14.74	41.88	29305
29306	16 mm² ditto	394.37	12.51	14.97	45.63	29306
29307	25 mm² ditto	542.23	13.46	16.57	48.73	29307

CABLES (COPPER) (CONT'D)

Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, with an overall protection of PVC sheath, c/w spacing bar type saddles : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29308	1 mm² 1-core	36.77	3.31	4.15	12.31	29308
29309	1.5 mm² ditto	42.36	3.31	4.15	12.31	29309
29310	2.5 mm² ditto	47.28	3.31	4.15	12.31	29310
29311	4 mm² ditto	81.53	9.10	11.56	33.88	29311
29312	6 mm² ditto	105.44	9.10	11.56	33.88	29312
29313	10 mm² ditto	160.57	9.10	11.61	34.85	29313
29314	16 mm² ditto	201.92	10.42	13.87	39.57	29314
29315	25 mm² ditto	253.47	11.96	14.70	41.70	29315
29316	35 mm² ditto	463.85	12.96	15.48	45.21	29316
29317	50 mm² ditto	521.13	13.76	17.02	47.36	29317
29318	70 mm² ditto	626.28	14.70	18.60	51.29	29318
29319	95 mm² ditto	794.34	15.55	19.45	57.14	29319
29320	120 mm² ditto	915.74	17.05	20.91	60.47	29320
29321	150 mm² ditto	1,133.24	18.58	23.20	65.46	29321
29322	185 mm² ditto	1,296.68	19.31	24.70	70.01	29322
29323	240 mm² ditto	1,567.94	21.10	25.84	73.45	29323
	Per linear metre					
29324	1 mm² 2-core	86.54	8.11	9.79	31.05	29324
29325	1.5 mm² ditto	97.55	8.11	9.79	31.05	29325
29326	2.5 mm² ditto	111.33	9.10	11.56	33.88	29326
29327	4 mm² ditto	130.05	9.10	11.61	34.85	29327
29328	6 mm² ditto	163.40	10.16	12.50	37.14	29328
29329	10 mm² ditto	215.14	10.42	13.85	39.57	29329
29330	16 mm² ditto	260.89	11.96	14.70	41.75	29330
29331	25 mm² ditto	422.31	12.44	14.90	45.43	29331
29332	1.5 mm² 4-core	120.96	9.10	11.58	33.91	29332
29333	2.5 mm² ditto	135.69	9.10	11.66	34.94	29333
29334	4 mm² ditto	168.68	10.17	12.51	37.27	29334
29335	6 mm² ditto	214.76	10.42	13.89	39.66	29335
29336	10 mm² ditto	280.70	11.99	14.72	41.81	29336
29337	16 mm² ditto	396.53	12.45	14.96	45.52	29337
29338	25 mm² ditto	552.43	13.47	16.50	48.64	29338

CABLES (COPPER) (CONT'D)

Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, laid in trenches (including suitable cable bed) or ducting (ducting, excavation and backing-filling measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29339	1 mm² 2-core	65.57	3.94	4.87	14.88	29339
29340	1.5 mm² ditto	78.31	4.45	5.51	17.33	29340
29341	2.5 mm² ditto	89.74	4.45	5.51	17.33	29341
29342	4 mm² ditto	124.35	8.12	9.45	31.20	29342
29343	6 mm² ditto	148.39	8.12	9.45	31.20	29343
29344	10 mm² ditto	212.64	10.17	12.53	37.27	29344
29345	16 mm² ditto	260.53	10.17	12.53	37.27	29345
29346	25 mm² ditto	410.20	12.67	15.26	47.89	29346
29347	1.5 mm² 4-core	126.27	10.42	13.89	39.66	29347
	Per linear metre					
29348	2.5 mm² 4-core	145.67	11.99	14.72	41.81	29348
29349	4 mm² ditto	181.70	12.32	15.20	43.99	29349
29350	6 mm² ditto	229.92	12.84	15.83	45.32	29350
29351	10 mm² ditto	292.47	13.03	16.50	46.33	29351
29352	16 mm² ditto	412.80	13.37	17.07	47.89	29352

CABLES (COPPER) (CONT'D)

600/ 1000V XLPE/ SWA/ PVC cable to IEC 60502-1, c/w cleats or saddles or fixed to cable trays (cable trays measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29353	500 mm² 1-core	1,495.72	20.92	26.01	73.90	29353
29354	630 mm² ditto	1,657.79	23.04	29.43	87.34	29354
29355	800 mm² ditto	1,932.47	26.83	33.89	104.95	29355
29356	1000 mm² ditto	2,342.86	36.05	45.08	140.04	29356
29357	4 mm² 2-core	100.31	14.93	18.31	51.48	29357
29358	6 mm² ditto	115.55	15.45	19.15	53.08	29358
29359	10 mm² ditto	160.19	15.53	19.21	57.05	29359
29360	16 mm² ditto	182.44	16.33	19.80	60.12	29360
29361	25 mm² ditto	274.54	17.02	20.45	61.45	29361
29362	35 mm² ditto	346.35	17.52	21.74	65.25	29362
29363	50 mm² ditto	459.36	21.65	27.26	77.33	29363
29364	70 mm² ditto	593.17	23.36	28.46	80.67	29364
29365	95 mm² ditto	718.76	24.94	30.19	85.97	29365
29366	4 mm² 4-core	115.46	15.09	18.34	56.40	29366
29367	6 mm² ditto	135.45	15.62	19.64	59.27	29367
29368	10 mm² ditto	165.71	16.71	20.69	60.85	29368
29369	16 mm² ditto	219.97	17.63	21.53	64.21	29369
29370	25 mm² ditto	263.00	18.58	22.49	66.57	29370
29371	35 mm² ditto	335.25	18.84	23.52	70.04	29371
29372	50 mm² ditto	447.24	23.85	29.71	85.09	29372
	Per linear metre					
29373	70 mm² 4-core	578.10	25.72	30.80	88.76	29373
29374	95 mm² ditto	702.75	27.21	32.24	94.60	29374
29375	120 mm² ditto	848.40	28.16	34.40	100.10	29375
29376	150 mm² ditto	1,142.41	29.14	35.21	103.85	29376
29377	185 mm² ditto	1,200.81	30.54	35.92	107.24	29377
29378	240 mm² ditto	1,514.72	31.69	38.33	116.58	29378
29379	300 mm² ditto	1,791.94	34.60	40.73	125.40	29379
29380	400 mm² ditto	2,241.02	35.64	43.11	131.41	29380

CABLES (COPPER) (CONT'D)

600/ 1000V XLPE/ SWA/ PVC cable to IEC 60502-1, laid in trenches (including suitable cable bed) or ducting (ducting, excavation and back-filling measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29381	4 mm² 2-core	74.21	7.05	8.54	26.30	29381
29382	6 mm² ditto	83.52	7.35	8.87	27.66	29382
29383	10 mm² ditto	128.15	7.76	9.29	28.63	29383
29384	16 mm² ditto	141.17	8.43	10.59	29.71	29384
29385	25 mm² ditto	233.24	8.59	10.76	30.69	29385
29386	35 mm² ditto	309.30	9.38	11.49	33.44	29386
29387	50 mm² ditto	412.86	10.74	12.90	35.21	29387
29388	70 mm² ditto	528.74	11.42	13.62	37.88	29388
29389	95 mm² ditto	660.82	12.12	14.93	40.60	29389
29390	4 mm² 4-core	100.02	7.51	9.38	30.27	29390
29391	6 mm² ditto	122.03	7.80	9.66	31.27	29391
29392	10 mm² ditto	150.45	8.12	10.07	32.22	29392
29393	16 mm² ditto	196.15	8.93	11.58	33.44	29393
29394	25 mm² ditto	248.75	8.93	11.76	34.51	29394
29395	35 mm² ditto	332.17	9.70	12.53	38.22	29395
29396	50 mm² ditto	445.95	11.05	13.92	40.82	29396
29397	70 mm² ditto	563.15	11.80	14.66	44.36	29397
29398	95 mm² ditto	700.29	12.49	16.05	48.09	29398
29399	120 mm² ditto	883.13	13.21	17.35	53.68	29399
	Per linear metre					
29400	150 mm² 4-core	1,212.47	15.20	19.31	58.62	29400
29401	185 mm² ditto	1,241.78	16.18	20.20	63.82	29401
29402	240 mm² ditto	1,650.65	17.15	21.65	68.05	29402
29403	300 mm² ditto	1,910.99	18.16	23.11	73.12	29403
29404	400 mm² ditto	2,361.26	19.80	24.02	76.92	29404

CABLES (COPPER) (CONT'D)

Multi-core twisted signal cable, AWG 24, unarmoured, c/w aluminum shield as : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29405	1-pair	38.27	7.36	8.99	27.46	29405
29406	6-pair	111.72	18.87	24.18	73.64	29406
29407	10-pair	146.08	22.05	26.27	84.75	29407

Multi-core twisted signal cable, fire resistant, to IEC60331 as : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
29408	1.5 mm² 2-core	34.86	7.36	8.99	27.46	29408

450/ 750V PVC insulated cable to IEC 60227, c/w brass buckle clips or brass fasteners, or fixed to cable trays (cable trays, measured separately) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
29409	1.5 mm² 1-core	9.37	1.45	1.92	5.91	29409
29410	2.5 mm² ditto	10.68	1.45	1.92	5.91	29410
29411	4 mm² ditto	13.31	1.45	1.92	5.91	29411
29412	6 mm² ditto	16.25	1.45	1.92	5.91	29412
29413	10 mm² ditto	28.57	1.45	1.92	5.91	29413
29414	16 mm² ditto	36.36	1.92	2.41	7.33	29414
29415	25 mm² ditto	51.73	1.92	2.41	7.33	29415
29416	35 mm² ditto	75.16	2.34	2.86	8.43	29416
29417	50 mm² ditto	97.16	2.34	2.86	8.43	29417
29418	70 mm² ditto	133.09	4.06	4.84	13.22	29418
29419	95 mm² ditto	185.57	4.99	5.73	18.00	29419
29420	120 mm² ditto	253.35	6.05	8.32	21.66	29420

CABLES (COPPER) (CONT'D)

Cast iron cable end boxes, double loop in type. Suitable for cables with maximum cross sectional area of conductor up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29421	2 x 16 mm² (conduit outlet)	977.66	118.63	148.01	447.14	29421
29422	2 x 16 mm² (PVC tails outlet)	1,065.80	136.93	171.16	518.96	29422
29423	16 mm² x 2-core (conduit outlet)	1,041.86	124.13	154.93	468.89	29423
29424	16 mm² x 2-core (PVC tails outlet)	1,111.76	140.98	176.54	534.24	29424
29425	1 x 16 mm² x 3-core (conduit outlet)	1,109.61	126.72	158.46	480.46	29425
29426	1 x 16 mm² x 3-core (PVC tails outlet)	1,181.26	145.84	182.07	550.23	29426

Cast iron cable end boxes, flat type, wall mounting : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
29427	16 mm² x 4-core	1,061.05	122.02	152.97	460.99	29427
29428	25 mm² x 4-core	1,128.01	129.37	162.19	489.74	29428
29429	35 - 50 mm² x 3-core	1,292.54	138.29	173.03	522.38	29429
29430	35 - 50 mm² x 4-core	1,491.39	151.34	189.15	573.11	29430
29431	70 mm² x 4-core	1,705.92	172.51	215.76	652.58	29431
29432	95 mm² x 4-core	1,850.95	182.54	228.20	691.49	29432
29433	120 - 150 mm² x 4-core	2,105.07	186.56	233.55	707.53	29433
29434	185 mm² x 4-core	2,520.92	195.17	244.19	738.71	29434
29435	240 mm² x 4-core	2,966.51	217.28	271.84	822.17	29435
29436	300 mm² x 4-core	3,319.18	239.18	299.29	904.40	29436

SERVICE CABLE BOXES

Service cable boxes, cast iron, for PVC insulated, sheathed and armoured cables, as comprising armoured bonds, claw connectors and filling with cold compound, fixed complete. Suitable for cables with maximum cross sectional area of conductor up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29437	16 - 25 mm² 2-core	1,091.87	147.96	-	560.65	29437
29438	35 - 50 mm² 2-core and 16 mm² 4-core	1,180.49	158.52	-	601.47	29438
29439	70 - 95 mm² 2-core and 25 - 50 mm² 4-core	1,538.57	175.22	-	649.31	29439
29440	120 - 185 mm² 2-core and 70 - 120 mm² 4-core	1,908.58	195.05	-	727.18	29440
29441	240 - 300 mm² 2-core and 150 - 185 mm² 4-core	2,728.81	220.93	-	835.42	29441
29442	400 mm² 2-core and 240 - 300 mm² 4-core	3,165.08	253.05	-	936.70	29442

Straight through boxes, cast iron for PVC insulated, sheathed and armoured cables as comprising armoured bonds, jointing sleeves and filling with cold compounds, fixed complete. Suitable for cables with maximum cross sectional area of conductors up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29443	16 - 25 mm² 2-core	1,013.69	147.95	-	565.16	29443
29444	35 - 50 mm² 2-core and 16 mm² 4-core	1,218.39	161.45	-	616.29	29444
29445	70 - 95 mm² 2-core and 25 - 50 mm² 4-core	1,413.29	178.10	-	680.08	29445
29446	120 - 185 mm² 2-core and 70 - 120 mm² 4-core	1,888.85	195.39	-	746.35	29446
29447	240 - 300 mm² 2-core and 150 - 185 mm² 4-core	2,704.46	217.53	-	831.45	29447
29448	400 mm² 2-core and 240 - 300 mm² 4-core	3,517.79	250.68	-	957.66	29448

SERVICE CABLE BOXES (CONT'D)

Plastic straight through cable joint comprising armoured bonds, jointing sleeves and filling with cold compounds, fixed complete. Suitable for cables with maximum cross sectional area of conductor up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29449	1.5 - 4 mm² 2-core	620.99	107.17	-	395.94	29449
29450	6 - 10 mm² 2-core	671.15	120.09	-	449.25	29450
29451	16 - 25 mm² 2-core	742.16	132.39	-	498.38	29451
29452	35 - 50 mm² 2-core and 16 mm² 4-core	945.25	145.36	-	547.03	29452
29453	70 - 95 mm² 2-core and 25 - 50 mm² 4-core	1,157.37	162.17	-	610.55	29453
29454	120 - 185 mm² 2-core and 70 - 120 mm² 4-core	2,314.81	176.11	-	662.41	29454
29455	Link box for 240mm² 1 core MICS cable	1,983.56	23.71	29.58	89.85	29455

Plastic tee cable joint comprising armoured bonds, jointing sleeves and filling with cold compounds, fixed complete. Suitable for cables with maximum cross sectional area of conductor up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29456	1.5 - 6 mm² 2-core	1,004.30	105.01	-	387.95	29456

CABLE FIXING

Terminating glands for PVC insulated steel wire armoured and PVC sheathed overall c/w PVC shroud suitable for cable of overall diameter with maximum outer sheath of : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29457	500 mm² 1-core	195.93	34.44	42.87	132.30	29457
29458	630 mm² ditto	195.93	34.44	42.87	132.30	29458
29459	800 mm² ditto	264.71	42.17	52.68	155.13	29459
29460	1000 mm² ditto	295.21	48.91	62.36	182.07	29460
29461	1.5 - 4 mm² 2-core	95.34	20.93	26.14	76.55	29461
29462	1.5 - 2.5 mm² 4-core, 6 - 10 mm² 2-core	111.62	25.02	30.91	89.54	29462
29463	4 - 6 mm² 4-core, 16 - 35 mm² 2-core	127.33	26.92	34.47	98.88	29463
29464	10 - 35 mm² 4-core, 50 - 95 mm² 2-core	151.45	31.24	39.01	115.44	29464
29465	50 - 95 mm² 4-core	179.17	32.82	42.51	124.29	29465
29466	120 - 150 mm² ditto	192.72	34.16	43.99	128.84	29466
29467	185 mm² ditto	266.54	41.18	51.11	153.51	29467
29468	240 mm² ditto	295.72	49.41	61.21	180.00	29468
29469	300 mm² ditto	386.31	58.88	73.80	223.41	29469
29470	400 mm² ditto	493.31	68.39	84.24	251.20	29470

PVC shroud only for PVC / SWA / PVCS cable of size : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29471	1.5 - 4 mm² 2-core	9.58	-	-	-	29471
29472	1.5 - 2.5 mm² 4-core, 6 - 10 mm² 2-core	14.42	-	-	-	29472
29473	4 - 6 mm² 4-core, 16 - 35 mm² 2-core	14.68	-	-	-	29473
29474	10 - 35 mm² 4-core, 50 - 95 mm² 2-core	26.20	-	-	-	29474
29475	50 - 95 mm² 4-core	27.44	-	-	-	29475
29476	120 - 150 mm² ditto	34.44	-	-	-	29476
29477	185 mm² ditto	39.87	-	-	-	29477
29478	240 mm² ditto	46.68	-	-	-	29478
29479	300 mm² ditto	58.21	-	-	-	29479
29480	400 mm² ditto	63.90	-	-	-	29480

CABLE FIXING (CONT'D)

Saddle clips or bridge, heavy gauge tinned brass, fixed to wood battens with round head brass screws (battens measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29481	20 x 40 mm	7.59	1.29	1.51	4.23	29481
29482	20 x 50 mm	8.02	1.29	1.51	4.23	29482
29483	20 x 60 mm	8.62	1.29	1.51	4.23	29483
29484	20 x 70 mm	10.86	1.45	1.88	5.74	29484
29485	20 x 80 mm	11.66	1.45	1.88	5.74	29485
29486	20 x 100 mm	12.58	1.45	1.88	5.74	29486
29487	20 x 120 mm	12.96	1.45	1.88	5.74	29487

CABLE FIXING (CONT'D)

Complete termination for MICS cables : -

Including : -

(a) a complete seal, (brass pot, disc, compound and required number of 150 mm PVC insulating sleeves for the conductor) and

(b) a complete gland (gland body, gland nut and compression ring).

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29488	6 mm² 1-core	61.21	13.35	17.02	51.84	29488
29489	10 mm² ditto	71.51	14.09	17.90	54.27	29489
29490	16 mm² ditto	86.04	15.65	19.35	58.08	29490
29491	25 mm² ditto	91.58	16.48	20.28	63.43	29491
29492	35 - 50 mm² ditto	104.29	17.91	22.79	69.62	29492
29493	70 mm² ditto	113.70	20.81	25.36	77.97	29493
29494	95 mm² ditto	119.86	21.65	27.58	82.75	29494
29495	120 mm² ditto	125.69	23.04	28.46	88.43	29495
29496	150 mm² ditto	140.85	24.49	29.67	93.96	29496
29497	185 mm² ditto	158.92	25.27	31.63	99.98	29497
29498	240 mm² ditto	186.87	26.02	31.95	103.18	29498
29499	1 mm² 2-core	97.09	16.89	20.59	62.72	29499
29500	1.5 mm² ditto	101.12	17.63	22.43	66.96	29500
29501	2.5 mm² ditto	109.28	19.11	23.33	73.31	29501
29502	4 mm² ditto	114.86	20.76	25.68	78.24	29502
29503	6 mm² ditto	119.95	21.66	27.62	82.75	29503
29504	10 mm² ditto	121.22	21.66	27.62	84.28	29504
29505	16 mm² ditto	130.53	22.40	28.49	89.81	29505
29506	25 mm² ditto	136.78	24.77	30.33	94.97	29506
29507	1.5 mm² 4-core	117.11	20.59	25.19	75.79	29507
29508	2.5 mm² ditto	124.05	21.66	27.14	82.20	29508
29509	4 mm² ditto	128.31	21.96	27.57	84.73	29509
29510	6 mm² ditto	132.00	23.28	28.83	87.56	29510
29511	10 mm² ditto	136.54	23.28	28.83	90.54	29511
29512	16 mm² ditto	142.89	24.77	30.00	95.72	29512
29513	25 mm² ditto	174.40	25.53	32.05	102.15	29513

CABLE FIXING (CONT'D)

Cables cleats, 2-bolt cleat for cable with overall diameter of the following : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29514	50 mm - 75 mm	31.76	5.66	7.27	20.28	29514
29515	75 mm - 100 mm	48.08	7.14	8.80	27.05	29515

Cable tiles approved type (sample to be produced) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29516	450 x 100 x 25 mm	17.97	1.46	1.97	5.84	29516
29517	600 x 175 x 50 mm	27.92	1.97	2.89	8.78	29517

CABLE FIXING (CONT'D)

Cable sockets, forged copper, tinned, for the following size single core cables : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29518	2.5 mm²	9.16	-	-	8.09	29518
29519	4 mm²	13.15	-	-	11.56	29519
29520	6 mm²	13.37	-	-	11.68	29520
29521	10 mm²	14.84	-	-	13.16	29521
29522	16 mm²	16.46	-	-	14.32	29522
29523	25 mm²	17.13	-	-	14.38	29523
29524	35 mm²	22.19	-	-	18.79	29524
29525	50 mm²	26.05	-	-	21.12	29525
29526	70 mm²	33.30	-	-	25.46	29526
29527	95 mm²	41.96	-	-	31.83	29527
29528	120 mm²	51.38	-	-	37.32	29528
29529	150 mm²	59.98	-	-	41.81	29529
29530	185 mm²	71.61	-	-	48.05	29530
29531	240 mm²	86.55	-	-	53.64	29531
29532	300 mm²	105.50	-	-	60.41	29532
29533	400 mm²	134.71	-	-	70.13	29533
29534	500 mm²	164.46	-	-	77.56	29534
29535	630 mm²	221.43	-	-	86.04	29535
29536	800 mm²	342.98	-	-	97.69	29536
29537	1000 mm²	439.86	-	-	113.54	29537

Cable marker : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29538	Concrete cable marker 230 x 180 x 100 mm	61.33	3.19	3.88	10.96	29538
29539	Cable tape off unit with insulating shroud	92.74	9.29	11.67	35.57	29539

CABLE FIXING (CONT'D)

Jointing compound : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per kg					
29540	Jointing compound, cold pouring (Supply only)	144.98	-	-	-	29540

BUSBAR TRUNKING AND BUS DUCT

Busbar trunking, IP54, all-insulated, TPN, c/w ends, elbows and tee units, etc., copper busbar, trunking, supports, hangers, fixing accessories, labels and warning notice of the rated current : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
29541	600A	5,909.13	112.99	168.83	590.28	29541
29542	800A	6,234.27	197.02	252.20	885.29	29542
29543	1000A	7,174.13	228.52	292.64	1,031.33	29543
29544	1200A	8,930.32	260.94	334.74	1,180.47	29544
29545	1350A	9,811.04	282.26	361.24	1,261.36	29545
29546	1600A	11,333.28	313.03	399.85	1,394.56	29546
29547	2000A	13,308.43	343.77	439.32	1,536.62	29547
29548	2500A	18,203.79	377.77	484.08	1,677.45	29548

Busbar trunking, IP65, all-insulated, TPN, c/w ends, elbows and tee units, etc., copper busbar, trunking, supports, hangers, fixing accessories, labels and warning notice of the rated current : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
29549	600A	6,098.72	112.55	168.19	588.01	29549
29550	800A	6,425.73	196.25	251.21	881.91	29550
29551	1000A	7,389.50	227.67	291.53	1,027.38	29551
29552	1200A	9,143.91	259.93	333.49	1,175.95	29552
29553	1350A	10,100.61	281.17	359.88	1,256.56	29553
29554	1600A	11,723.68	311.81	398.34	1,389.23	29554
29555	2000A	13,644.86	342.45	437.68	1,530.75	29555
29556	2500A	18,663.65	376.35	482.23	1,671.13	29556

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

Busbar trunking, IP66, all-insulated, TPN, c/w ends, elbows and tee units, etc., copper busbar, trunking, supports, hangers, fixing accessories, labels and warning notice of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29557	600A	6,392.39	112.55	168.19	588.01	29557
29558	800A	6,734.01	196.25	251.21	881.91	29558
29559	1000A	7,657.74	227.67	291.53	1,027.38	29559
29560	1200A	9,408.27	259.93	333.49	1,175.95	29560
29561	1350A	10,329.68	281.22	359.88	1,256.56	29561
29562	1600A	11,844.39	311.81	398.34	1,389.23	29562
29563	2000A	13,707.71	342.45	437.68	1,530.75	29563
29564	2500A	19,478.45	376.35	482.23	1,671.13	29564

Cable tap box, TPN metal clad with copper busbars for all-insulated totally enclosed plug-in type or feeder type busduct of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29565	600A	13,457.01	126.56	189.73	667.76	29565
29566	800A	14,836.61	151.73	227.89	800.48	29566
29567	1000A	16,105.64	176.27	264.56	936.85	29567
29568	1200A	16,675.53	201.31	300.73	1,072.61	29568
29569	1350A	19,519.65	223.66	335.40	1,194.23	29569
29570	1600A	20,847.36	246.02	368.81	1,313.26	29570
29571	2000A	22,977.80	270.92	406.96	1,456.37	29571
29572	2500A	33,571.83	306.23	457.76	1,652.33	29572

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

90° elbow, edgewise or flatwise, IP54, with copper busbar, trunking, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29573	600A	4,976.93	125.80	188.59	663.76	29573
29574	800A	5,142.21	150.82	226.52	795.70	29574
29575	1000A	5,536.01	175.22	263.01	931.19	29575
29576	1200A	6,101.24	200.12	298.99	1,066.14	29576
29577	1350A	6,481.69	223.66	335.40	1,194.23	29577
29578	1600A	7,011.14	246.02	368.81	1,313.26	29578
29579	2000A	7,662.76	270.92	406.96	1,456.37	29579
29580	2500A	10,580.38	306.23	457.76	1,652.33	29580

90° elbow, edgewise or flatwise, IP65, with copper busbar, trunking, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29581	600A	5,106.12	125.80	188.59	663.76	29581
29582	800A	5,272.07	150.82	226.52	795.67	29582
29583	1000A	5,671.06	175.22	263.01	931.19	29583
29584	1200A	6,250.01	200.12	298.99	1,066.14	29584
29585	1350A	6,638.74	223.66	335.40	1,194.23	29585
29586	1600A	7,181.09	246.02	368.81	1,313.26	29586
29587	2000A	7,847.45	270.92	406.96	1,456.37	29587
29588	2500A	10,770.90	306.23	457.76	1,652.33	29588

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

90° elbow, edgewise or flatwise, IP66, with copper busbar, trunking, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29589	600A	5,357.87	126.05	188.97	665.10	29589
29590	800A	5,524.78	151.10	226.95	797.26	29590
29591	1000A	5,880.68	175.55	263.53	933.09	29591
29592	1200A	6,461.33	200.51	299.56	1,068.31	29592
29593	1350A	6,844.35	224.08	336.07	1,196.69	29593
29594	1600A	7,358.55	246.53	369.58	1,315.96	29594
29595	2000A	7,985.50	271.44	407.76	1,459.38	29595
29596	2500A	11,441.11	306.87	458.69	1,655.77	29596

Combination elbow, IP54, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29597	600A	9,649.27	200.51	299.56	1,068.31	29597
29598	800A	9,923.52	239.99	359.59	1,281.80	29598
29599	1000A	10,651.87	278.84	419.05	1,495.61	29599
29600	1200A	11,721.49	318.83	477.05	1,707.95	29600
29601	1350A	12,429.80	352.40	526.67	1,888.28	29601
29602	1600A	13,438.60	387.53	581.71	2,077.62	29602
29603	2000A	14,685.41	427.82	641.55	2,288.63	29603
29604	2500A	20,425.09	483.10	724.90	2,587.35	29604

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

Combination elbow, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29605	600A	9,906.96	200.51	299.56	1,068.31	29605
29606	800A	10,182.62	239.99	359.59	1,281.80	29606
29607	1000A	10,921.46	278.84	419.05	1,495.61	29607
29608	1200A	12,018.18	318.83	477.05	1,707.95	29608
29609	1350A	12,743.03	352.40	526.67	1,888.28	29609
	Each					
29610	1600A	13,777.77	387.53	581.71	2,077.62	29610
29611	2000A	15,054.10	427.82	641.55	2,288.63	29611
29612	2500A	20,952.79	483.10	724.90	2,587.35	29612

Combination elbow, IP66, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
29613	600A	10,455.87	201.31	300.75	1,072.61	29613
29614	800A	10,734.98	240.93	360.98	1,286.97	29614
29615	1000A	11,390.67	279.91	420.71	1,501.63	29615
29616	1200A	12,496.22	320.05	478.93	1,714.83	29616
29617	1350A	13,212.93	353.78	528.73	1,895.86	29617
29618	1600A	14,195.73	388.98	583.95	2,085.92	29618
29619	2000A	15,398.43	429.51	644.03	2,297.80	29619
29620	2500A	22,241.63	484.97	727.70	2,597.67	29620

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

End closer, IP54, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29621	600A	1,196.52	70.32	106.06	365.13	29621
29622	800A	1,261.51	77.89	116.74	401.90	29622
29623	1000A	1,304.62	84.74	126.75	438.49	29623
29624	1200A	1,360.24	92.07	136.74	475.94	29624
29625	1350A	1,413.37	98.08	147.11	512.13	29625
29626	1600A	1,508.84	109.03	162.88	569.52	29626
29627	2000A	1,604.84	120.23	180.63	628.07	29627
29628	2500A	1,829.83	136.19	204.70	714.28	29628

End closer, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29629	600A	1,196.52	70.32	106.06	365.13	29629
29630	800A	1,261.51	77.89	116.74	401.90	29630
29631	1000A	1,304.62	84.74	126.75	438.49	29631
29632	1200A	1,360.24	92.07	136.74	475.94	29632
29633	1350A	1,413.37	98.08	147.11	512.13	29633
29634	1600A	1,508.84	109.03	162.88	569.54	29634
29635	2000A	1,604.84	120.23	180.63	628.07	29635
29636	2500A	1,829.83	136.19	204.70	714.28	29636

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

End closer, IP66, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29637	600A	1,196.52	69.92	105.43	362.99	29637
29638	800A	1,261.51	77.44	116.03	399.51	29638
29639	1000A	1,304.62	84.23	125.98	435.91	29639
29640	1200A	1,360.24	91.52	135.96	473.10	29640
29641	1350A	1,413.37	97.49	146.24	509.08	29641
29642	1600A	1,508.84	108.39	161.93	566.15	29642
29643	2000A	1,604.84	119.52	179.58	624.33	29643
29644	2500A	1,829.83	135.41	203.50	710.07	29644

Expansion joint, IP54, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29645	600A	13,948.99	125.80	188.59	663.76	29645
29646	800A	14,311.89	150.82	226.52	795.67	29646
29647	1000A	14,366.01	175.22	263.01	931.19	29647
29648	1200A	15,800.07	200.12	298.99	1,066.14	29648
29649	1350A	17,836.68	223.66	335.40	1,194.23	29649
29650	1600A	18,591.17	246.02	368.81	1,313.26	29650
29651	2000A	19,217.50	270.92	406.96	1,456.37	29651
29652	2500A	26,522.26	306.23	457.76	1,652.33	29652

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

Expansion joint, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29653	600A	13,948.99	125.80	188.59	663.76	29653
29654	800A	14,311.89	150.82	226.52	795.67	29654
29655	1000A	14,366.01	175.22	263.01	931.19	29655
29656	1200A	15,800.07	200.12	298.99	1,066.14	29656
29657	1350A	17,836.68	223.66	335.40	1,194.23	29657
29658	1600A	18,591.17	246.02	368.81	1,313.26	29658
29659	2000A	19,217.50	270.92	406.96	1,456.37	29659
29660	2500A	26,522.26	306.23	457.76	1,652.33	29660

Expansion joint, IP66, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29661	600A	13,918.72	126.05	188.97	665.10	29661
29662	800A	14,280.74	151.10	227.02	797.26	29662
29663	1000A	14,334.97	175.55	263.53	933.09	29663
29664	1200A	15,765.93	200.51	299.56	1,068.31	29664
29665	1350A	17,798.21	224.08	336.07	1,196.69	29665
29666	1600A	18,550.71	246.53	369.52	1,315.96	29666
29667	2000A	19,175.77	271.44	407.76	1,459.38	29667
29668	2500A	26,464.41	306.87	458.69	1,655.77	29668

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

Flanged end, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29669	600A	3,380.26	70.04	105.63	363.70	29669
29670	800A	3,725.62	77.56	116.24	400.29	29670
29671	1000A	3,801.70	84.43	126.24	436.77	29671
29672	1200A	4,198.21	91.68	136.28	474.08	29672
29673	1350A	4,426.56	97.67	146.54	510.12	29673
29674	1600A	4,893.96	108.63	162.28	567.29	29674
29675	2000A	5,469.56	119.79	179.92	625.60	29675
29676	2500A	7,891.40	135.65	203.91	711.46	29676

Fuseswitch TPN, metal clad, plug-in type c/w HRC fuses for all-insulated totally enclosed TPN copper busduct of the rated current : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
29677	200A	8,247.72	174.63	229.33	804.79	29677
29678	400A	14,431.58	228.06	299.56	1,068.31	29678
29679	600A	19,377.15	291.53	382.51	1,365.48	29679

Busduct, TPN copper busbars, all-insulated, totally enclosed, indoor feeder type c/w ends, elbows, tee unit, supports, hangers, fixing accessories, etc. of the rated current : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
29680	600A	5,954.02	114.12	169.90	585.79	29680
29681	800A	6,181.05	134.70	200.74	694.92	29681
29682	1000A	7,147.46	154.88	232.37	801.08	29682
29683	1200A	9,021.31	175.66	262.57	911.84	29683
29684	1350A	9,963.94	194.24	291.53	1,003.23	29684
29685	1600A	11,559.12	215.49	321.74	1,112.33	29685
29686	2000A	13,489.73	237.70	356.54	1,232.95	29686
29687	2500A	18,491.29	262.87	393.31	1,356.75	29687

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

Busduct, TPN copper busbars, all-insulated totally enclosed, indoor plug-in type c/w ends, elbows, tee unit, supports, hangers, fixing accessories, etc. of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
29688	600A	6,982.96	114.12	169.90	607.38	29688
29689	800A	7,225.06	134.70	200.74	694.92	29689
29690	1000A	8,240.40	154.88	232.37	801.08	29690
29691	1200A	10,081.20	175.66	262.57	911.84	29691
29692	1350A	11,042.76	194.24	291.53	1,003.23	29692
29693	1600A	12,777.22	215.49	321.74	1,112.33	29693
29694	2000A	14,821.87	237.70	356.54	1,232.95	29694
29695	2500A	20,926.46	262.87	393.31	1,356.75	29695

MCCB, TPN, metal clad, plug-in type, minimum 40 kA at 380V, for all-insulated totally enclosed TPN copper busduct of the rated current : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
29696	200A	9,418.48	181.25	232.37	801.08	29696
29697	400A	14,861.76	236.66	304.09	1,049.84	29697
29698	600A	19,129.78	301.88	387.48	1,339.24	29698

Busduct, TPN copper busbars, all-insulated totally enclosed, outdoor feeder c/w ends, elbows, tee unit, supports, hangers, fixing accessories, etc. of the rated current : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per linear metre					
29699	600A	6,996.16	113.21	168.58	581.28	29699
29700	800A	7,182.99	133.68	199.19	689.53	29700
29701	1000A	7,552.71	153.68	230.57	794.96	29701
29702	1200A	9,031.66	174.30	260.57	904.87	29702
29703	1350A	9,942.98	192.78	289.28	995.53	29703
29704	1600A	11,390.00	213.85	319.29	1,103.83	29704
29705	2000A	13,231.72	235.86	353.83	1,223.50	29705
29706	2500A	18,138.14	260.84	390.28	1,346.46	29706

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

90° offset, edgewise or flatwise, IP54 for all insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29707	600A	10,560.82	199.73	299.56	1,068.31	29707
29708	800A	10,860.77	239.61	358.22	1,281.82	29708
29709	1000A	11,705.22	278.35	418.28	1,493.20	29709
29710	1200A	12,828.31	319.09	476.55	1,707.07	29710
29711	1350A	13,575.97	353.49	530.13	1,895.86	29711
29712	1600A	14,795.18	388.61	583.70	2,086.04	29712
29713	2000A	16,073.14	428.77	643.00	2,300.45	29713
29714	2500A	22,354.68	484.65	727.39	2,609.24	29714

90° offset, edgewise or flatwise, IP65 for all insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29715	600A	10,842.87	200.12	300.18	1,070.45	29715
29716	800A	11,144.32	240.06	358.91	1,284.43	29716
29717	1000A	12,001.39	278.91	419.07	1,496.20	29717
29718	1200A	13,153.00	319.70	477.49	1,710.51	29718
29719	1350A	13,918.04	354.19	531.16	1,899.69	29719
29720	1600A	15,168.54	389.38	584.87	2,090.23	29720
29721	2000A	16,476.68	429.63	644.27	2,305.14	29721
29722	2500A	22,932.19	485.58	728.78	2,614.48	29722

BUSBAR TRUNKING AND BUS DUCT (CONT'D)

90° offset, edgewise or flatwise, IP66 for all insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29723	600A	11,418.53	200.12	300.18	1,070.45	29723
29724	800A	11,723.05	240.06	358.91	1,284.43	29724
29725	1000A	12,001.39	278.91	419.07	1,496.20	29725
29726	1200A	13,602.09	319.70	477.49	1,710.51	29726
29727	1350A	13,918.04	354.19	531.16	1,899.69	29727
29728	1600A	15,594.31	389.38	584.87	2,090.23	29728
29729	2000A	16,816.65	429.63	644.27	2,305.14	29729
29730	2500A	24,289.37	485.58	728.78	2,614.48	29730

Tee unit, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
29731	200A	4,592.14	100.84	171.42	682.32	29731
29732	400A	4,974.72	100.84	183.65	699.36	29732
29733	600A	5,216.13	138.04	206.76	714.16	29733
29734	800A	5,595.45	164.19	246.01	857.91	29734
29735	1000A	6,025.27	191.55	287.23	998.67	29735
29736	1200A	6,708.84	219.93	329.11	1,138.06	29736
29737	1350A	7,148.75	244.78	367.04	1,247.00	29737
29738	1600A	7,743.82	269.63	404.77	1,379.38	29738
29739	2000A	8,498.89	296.64	444.34	1,522.73	29739
29740	2500A	11,726.13	335.56	503.92	1,725.06	29740

Section 30

ELECTRICAL INSTALLATION -

MISCELLANEOUS

DISTRIBUTION BOARDS

Fuseboard to BS EN 60439-3 with 500V fuse base and holder, fixed, connected retained with labels, circuit list etc., including solid copper bars for neutral and for earth, suitable for fuses to IEC 60269-1 (HRC fuses measured separately) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30001	20/ 32A SPN 4 way	1,847.67	40.53	47.81	124.57	30001
30002	20/ 32A SPN 6 way	2,362.54	43.51	51.95	139.26	30002
30003	20/ 32A SPN 8 way	2,773.83	43.51	51.95	139.26	30003
30004	20/ 32A SPN 10 way	3,217.34	45.96	57.54	176.70	30004
30005	20/ 32A SPN 12 way	3,657.40	45.96	57.54	176.70	30005
30006	20/ 32A TPN 2 way	2,464.43	40.53	47.81	124.57	30006
30007	20/ 32A TPN 4 way	3,441.75	45.96	57.54	176.70	30007
30008	20/ 32A TPN 6 way	4,535.64	45.96	57.54	176.70	30008
30009	20/ 32A TPN 8 way	5,740.32	57.54	71.37	220.96	30009
30010	63A TPN 2 way	5,493.28	40.53	47.81	124.57	30010
30011	63A TPN 4 way	7,846.97	45.96	57.54	176.70	30011
30012	63A TPN 6 way	10,240.40	45.96	57.54	176.70	30012
30013	63A TPN 8 way	12,543.95	57.54	71.37	220.96	30013

Metal boxes only for distribution boards 250/ 500 V (as per approved pattern) including solid copper earth bar, neutral bar, circuit list etc., (fuses base and holder not included), for fuse-way of the following sizes : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30014	32A SPN 4 - 6 way	597.33	22.95	28.88	91.38	30014
30015	32A SPN 7 - 9 way	1,030.19	30.85	38.42	123.25	30015
30016	32A SPN 10 - 12 way	1,109.69	43.06	54.22	172.31	30016
30017	32A TPN 2 - 4 way	1,402.82	43.06	54.22	172.31	30017
30018	63A TPN 4 way	2,283.07	43.06	54.22	172.31	30018
30019	63A TPN 6 way	2,442.87	55.03	68.68	219.64	30019
30020	63A TPN 8 way	2,601.58	66.08	83.12	264.40	30020

DISTRIBUTION BOARDS (CONT'D)

MCB distribution boards to IEC 60439-3, metal clad, flush mounting with 100 A DP isolating switch for MCB to IEC 60898 (excluding MCBs and cutting into wall measured separately where applicable) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30021	SPN 4 - 6 way	452.16	15.14	19.55	61.99	30021
30022	SPN 7 - 9 way	527.11	22.89	28.06	88.99	30022
30023	SPN 10 - 12 way	607.43	29.59	37.11	120.07	30023
30024	SPN 13 - 15 way	709.80	37.23	46.34	158.51	30024
30025	SPN 16 - 18 way	793.98	44.35	56.27	202.35	30025

MCB distribution boards to IEC 60439-3, metal clad, surface mounting with 100 A DP isolating switch for MCB to IEC 60898 (excluding MCBs) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30026	SPN 4 - 6 way	538.29	22.95	28.88	92.86	30026
30027	SPN 7 - 9 way	659.16	30.85	38.42	124.16	30027
30028	SPN 10 - 12 way	732.21	43.06	54.22	173.75	30028
30029	SPN 13 - 15 way	805.08	67.65	83.55	274.84	30029
30030	SPN 16 - 18 way	891.11	82.08	102.82	335.32	30030

MCB distribution boards, metal case (locally made) surface mounting, with space for isolating switch if required, fixed, connected with labels, circuit list etc., including solid copper bars for neutral and for earth (MCBs & isolating switch not included) : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30031	SPN 1 - 3 way	311.97	22.48	27.61	86.77	30031
30032	TPN 2 way	435.31	23.39	29.66	94.12	30032

DISTRIBUTION BOARDS (CONT'D)

MCB distribution boards, metal clad, to IEC 60439-3, surface mounting with 80A DP RCCB (30 mA) for MCBs to IEC 60898 (excluding MCBs) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30033	SPN 6 way	816.23	23.39	28.88	90.78	30033
30034	SPN 8 way	864.53	31.13	38.04	121.32	30034

MCB distribution boards, metal clad, to IEC 60439-3, surface mounting split bar board with 80/ 100A DP switch and 60/ 80A, 30 mA RCD for MCBs to IEC 60898 (excluding MCBs) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30035	Single-phase 4 - 6 way	907.74	23.47	28.95	90.97	30035
30036	Single-phase 7 - 9 way	967.17	31.21	38.11	121.54	30036
30037	Single-phase 10 - 12 way	1,037.15	42.91	54.16	171.15	30037

MCB distribution boards, metal clad, to IEC 60439-3, surface mounting with busbar rated at not less than 200A for MCBs to IEC 60898 (excluding MCBs) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30038	TPN 4 way (Direct termination)	1,267.30	42.91	54.16	171.15	30038
30039	TPN 4 way with 100A TP isolator	1,380.33	42.91	54.16	171.15	30039
30040	TPN 6 way (Direct termination)	1,339.07	55.06	68.62	216.63	30040
30041	TPN 6 way with 100A TP isolator	1,563.28	55.06	68.62	216.63	30041
30042	TPN 8 way (Direct termination)	1,594.40	66.16	83.57	264.97	30042
30043	TPN 8 way with 100A TP isolator	1,729.43	66.16	83.57	264.97	30043
30044	TPN 10 way (Direct termination)	1,626.13	79.53	101.78	324.12	30044
30045	TPN 10 way with 100A TP isolator	1,772.81	79.53	101.78	324.12	30045
30046	TPN 12 way (Direct termination)	1,927.89	83.00	104.31	333.32	30046
30047	TPN 12 way with 100A TP isolator	2,264.09	83.00	104.31	333.32	30047
30048	TPN 14/ 16 way (Direct termination)	2,518.14	93.01	116.84	373.87	30048
30049	TPN 14/ 16 way with 100A isolator	2,937.03	93.01	116.84	373.87	30049
30050	TPN 18 way (Direct termination)	3,126.57	109.49	136.85	427.85	30050
30051	TPN 18 way with 160A TP isolator	3,671.79	109.49	136.85	427.85	30051

DISTRIBUTION BOARDS (CONT'D)

MCB distribution board accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30052	Cable clamp	15.65	2.19	2.73	6.78	30052
30053	Blanking plate	9.73	2.19	2.73	6.78	30053
30054	Back plate for mounting 1 - 3 MCB	30.50	2.19	2.73	6.78	30054

Miniature circuit breakers to IEC 60898 with rated instantaneous tripping current of Type B/ Type C classification and rated short circuit breaking capacity of at least 6000 short circuit rating. The rates shall include opening and closing of MCB board covers or front plates, taking down and re-fixing of blanking plate where required : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30055	5/ 10/ 16/ 20/ 32/ 40/ 50/ 63A SP	57.37	6.46	7.66	20.40	30055
30056	5/ 10/ 16/ 20/ 32/ 40/ 50/ 63A DP	144.75	6.46	7.66	20.40	30056
30057	5/ 10/ 16/ 20/ 32/ 40/ 50/ 63A TP	257.28	9.86	11.80	31.23	30057
30058	Complete set 40A lateral main MCB tap off unit	498.41	13.19	16.51	52.75	30058

Arc fault detection devices (AFDDs) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30059	Miniature circuit breakers with AFDDs, 5/ 10/ 13/ 16/ 20/ 25/ 32/ 40A SPN	2,006.94	6.46	7.66	20.40	30059
30060	Residual current circuit breaker with overcurrent protection (RCBO) with AFDDs, 6/ 10/ 13/ 16/ 20/ 25/ 32/ 40A	2,654.64	13.07	15.04	42.08	30060

DISTRIBUTION BOARDS (CONT'D)

Isolating switches, all insulated for MCB board, include opening and closing of MCB board cover/ front plates : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30061	30/ 32A DP	153.69	12.93	15.61	40.48	30061
30062	60/ 63A DP	159.90	12.93	15.61	40.48	30062
30063	100A DP	205.74	14.71	17.45	46.30	30063
30064	200A DP	829.54	15.63	20.09	63.19	30064
30065	63A TP	225.91	14.71	17.45	46.30	30065
30066	100/ 125A TP	277.99	14.71	17.45	46.30	30066
30067	160/ 200A TP	1,239.62	15.63	20.09	63.19	30067

DISTRIBUTION BOARDS (CONT'D)

MCCB distribution boards to IEC 60439-1 and 60439-3 surface mounting with moulded-case isolating switch, suitable for MCCB to IEC 60947-2 : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30068	100A TPN 4 way	3,870.54	54.65	68.09	214.97	30068
30069	200A TPN 4 way	4,117.58	54.65	68.09	214.97	30069
30070	250A TPN 4 way	4,406.24	54.65	68.09	214.97	30070
30071	300A TPN 4 way	4,725.97	54.65	68.09	214.97	30071
30072	400A TPN 4 way	5,235.91	54.65	68.09	214.97	30072
30073	600A TPN 4 way	6,484.90	54.65	68.09	214.97	30073
30074	800A TPN 4 way	7,268.10	54.65	68.09	214.97	30074
30075	200A TPN 6 way	5,182.06	65.70	82.93	262.94	30075
30076	250A TPN 6 way	5,351.87	65.70	82.93	262.94	30076
30077	300A TPN 6 way	5,740.21	65.70	82.93	262.94	30077
30078	400A TPN 6 way	6,497.36	65.70	82.93	262.94	30078
30079	600A TPN 6 way	6,968.54	65.70	82.93	262.94	30079
30080	800A TPN 6 way	7,712.33	65.70	82.93	262.94	30080
30081	100A TPN 8 way	6,227.69	84.24	106.08	334.85	30081
30082	200A TPN 8 way	6,339.01	84.24	106.08	334.85	30082
30083	250A TPN 8 way	6,760.95	84.24	106.08	334.85	30083
30084	300A TPN 8 way	7,070.21	84.24	106.08	334.85	30084
30085	400A TPN 8 way	7,796.30	84.24	106.08	334.85	30085
30086	600A TPN 8 way	8,841.00	84.24	106.08	334.85	30086
30087	800A TPN 8 way	9,818.59	84.24	106.08	334.85	30087
30088	300A TPN 10 way	8,204.56	102.13	128.41	405.50	30088
30089	400A TPN 10 way	8,771.78	102.13	128.41	405.50	30089
30090	600A TPN 10 way	9,817.25	102.13	128.41	405.50	30090
30091	300A TPN 12 way	9,307.00	119.59	149.51	474.87	30091
30092	400A TPN 12 way	9,859.76	119.59	149.51	474.87	30092
30093	600A TPN 12 way	11,298.54	119.59	149.51	474.87	30093
30094	600A TPN 14 way	12,572.37	137.98	172.90	549.19	30094

MOULDED CASE CIRCUIT BREAKERS

TP moulded case circuit breaker (MCCB), 23 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30095	15/ 20/ 30/ 32A	767.81	29.18	36.86	116.08	30095
30096	40/ 50/ 60/ 63A	801.32	37.55	47.08	151.69	30096
30097	75/ 100A	821.10	42.76	53.96	171.04	30097
30098	225/ 300A	2,531.30	42.76	53.96	171.04	30098
30099	400A	2,846.62	42.76	53.96	171.04	30099

TP moulded case circuit breaker (MCCB) c/w shunt trip coil for external tripping or connection, 40 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30100	30/ 32/ 40/ 50A	1,184.90	32.66	41.09	129.18	30100
30101	60/ 63/ 75/ 100A	1,218.80	42.76	53.96	171.04	30101
30102	125/ 150/ 175/ 200/ 225A	1,736.06	42.76	53.96	171.04	30102
30103	250/ 300/ 315/ 350/ 400A	3,834.64	42.76	53.96	171.04	30103
30104	500/ 600/ 630A	5,257.80	50.45	63.51	200.17	30104

TP moulded case circuit breaker (MCCB) c/w shunt trip coil for external tripping or connection, 50 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30105	250 - 400A	5,030.42	42.76	53.96	171.04	30105
30106	500 - 600A	6,476.58	50.45	63.51	200.17	30106
30107	630 - 800A	7,746.14	56.64	72.23	229.33	30107

MOULDED CASE CIRCUIT BREAKERS (CONT'D)

TPN moulded case circuit breaker (MCCB) c/w shunt trip coil for external tripping or connection, 23 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30108	15/ 20/ 30/ 32A	837.71	29.18	36.86	116.08	30108
30109	40/ 50/ 60/ 63A	872.03	37.55	47.08	151.69	30109
30110	75/ 100A	890.28	42.76	53.96	171.04	30110
30111	225/ 300A	3,825.07	42.76	53.96	171.04	30111
30112	400A	4,388.36	42.76	53.96	171.04	30112

SP moulded case circuit breaker (MCCB), 23 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30113	15/ 20/ 30/ 32A	589.37	29.11	36.80	115.83	30113
30114	40/ 50/ 60/ 63A	672.28	37.48	46.95	151.39	30114

TPN moulded case circuit breaker (MCCB) c/w shunt trip coil for external tripping or connection, 40 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30115	Up to 50A	1,530.65	32.59	41.00	128.91	30115
30116	50A to 100A	1,580.37	42.68	53.86	170.70	30116
30117	100A to 250A	2,228.16	42.68	53.86	170.70	30117
30118	250A to 400A	4,082.41	42.68	53.86	170.70	30118
30119	400A to 630A	5,870.12	50.35	63.37	199.78	30119

MOULDED CASE CIRCUIT BREAKERS (CONT'D)

TPN moulded case circuit breaker (MCCB) c/w shunt trip coil for external tripping or connection, 50 kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30120	250 to 400A	6,491.95	42.68	53.86	170.70	30120
30121	500 to 600A	8,629.79	50.35	63.37	199.78	30121
30122	600 to 800A	10,248.64	56.53	72.12	228.89	30122

Metal box for TPN MCCB : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30123	Metal box for TPN MCCB up to 100A	370.36	17.55	21.84	65.31	30123
30124	Metal box for TPN MCCB of 100A to 225A	551.11	17.55	21.84	65.31	30124
30125	Metal box for TPN MCCB of 225A to 400A	731.11	25.59	32.21	100.89	30125
30126	Metal box for TPN MCCB of 400A to 800A	1,386.79	25.59	32.21	100.89	30126

IDMT earth fault relay : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30127	IDMT earth fault relay c/w necessary current transformers, accessories and interconnections etc. including site test to be witnessed and to the satisfaction of the supply company	6,250.43	50.35	63.37	199.78	30127

MOULDED CASE CIRCUIT BREAKERS (CONT'D)

Metal box for IDMT relay : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30128	Metal box for TPN MCCB up to 100A & IDMT relay	666.61	25.97	32.54	102.50	30128
30129	Metal box for TPN MCCB of 100A to 225A & IDMT relay	832.49	25.97	32.54	102.50	30129
30130	Metal box for TPN MCCB of 225A to 400A & IDMT relay	1,065.75	25.97	32.54	102.50	30130
30131	Metal box for TPN MCCB of 400A to 800A & IDMT relay	1,081.27	25.97	32.54	102.50	30131

CONTACTORS

Contactors to IEC 60947-4-1 : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30132	40A or below TPN with 220/ 380V coil	301.04	15.90	20.40	64.84	30132
30133	60A TPN with 220/ 380V coil	458.58	26.01	32.60	103.40	30133
30134	80/ 100A TPN with 220/ 380V coil	744.99	32.66	41.09	129.18	30134
30135	Metal box for 40A or below TPN contactor	199.93	19.50	24.59	75.00	30135
30136	Metal box for 60A TPN contactor	295.85	22.88	28.25	86.86	30136
30137	Metal box for 80/ 100A TPN contactor	449.85	26.01	32.60	102.68	30137

BUSBAR CHAMBER UNITS AND ACCESSORIES

Busbar chamber units, 4 full size solid drawn copper busbars, c/w cover and main terminals : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30138	200A, 600 mm long	2,608.15	115.97	146.13	435.92	30138
30139	200A 900 mm long	3,078.81	163.19	203.60	615.92	30139
30140	200A, 1200 mm long	3,617.56	197.04	247.58	742.48	30140
30141	200A, 1500 mm long	4,536.48	212.50	267.56	794.05	30141
30142	300A, 600 mm long	2,685.60	115.97	146.13	435.92	30142
30143	300A, 900 mm long	3,179.51	163.19	203.60	615.92	30143
30144	300A, 1200 mm long	3,830.55	197.04	247.58	742.48	30144
30145	300A, 1500 mm long	4,823.47	212.50	267.56	794.05	30145

BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)

Busbar chamber units, 4 full size solid drawn copper busbars, c/w cover and main terminals : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30146	400A, 600 mm long	2,912.26	115.97	146.13	435.92	30146
30147	400A, 900 mm long	3,485.45	163.19	203.60	615.92	30147
30148	400A, 1200 mm long	4,929.00	197.04	247.58	742.48	30148
30149	400A, 1500 mm long	5,833.93	212.50	267.56	794.05	30149
30150	500A, 600 mm long	3,341.15	115.97	146.13	435.92	30150
30151	500A, 900 mm long	4,026.16	163.19	203.60	615.92	30151
30152	500A, 1200 mm long	5,778.68	197.04	247.58	742.48	30152
30153	500A, 1500 mm long	6,411.89	212.50	267.56	794.05	30153
30154	630A, 600 mm long	3,856.72	196.64	247.10	741.04	30154
30155	630A, 900 mm long	4,683.77	243.84	307.01	920.98	30155
30156	630A, 1200 mm long	6,323.08	284.65	358.80	1,075.21	30156
30157	630A, 1500 mm long	7,337.77	329.61	413.35	1,244.60	30157
30158	800A, 600 mm long	4,296.46	196.64	247.10	741.04	30158
30159	800A, 900 mm long	5,531.45	243.84	307.01	920.98	30159
30160	800A, 1200 mm long	6,953.96	284.65	358.80	1,075.21	30160
30161	800A, 1500 mm long	8,420.43	329.61	413.35	1,244.60	30161

Cover for busbar chamber unit of the following length and rating between 200A and 800A : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30162	600 mm	389.04	10.06	11.85	30.91	30162
30163	900 mm	453.77	10.06	11.85	30.91	30163
30164	1200 mm	539.41	10.06	11.85	30.91	30164
30165	1500 mm	613.31	10.06	11.85	30.91	30165

BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)

Busbar clamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30166	160A	120.28	3.47	4.34	13.57	30166
30167	160A to 400A	220.98	3.68	4.73	15.06	30167
30168	400A to 800A	306.28	4.18	5.30	16.36	30168

Cable clamps and brass cable sockets for use with busbar chambers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30169	32A/ 63A	93.68	3.47	4.15	10.64	30169
30170	100A	122.36	3.47	4.15	10.64	30170
30171	160A	127.33	5.55	6.71	17.07	30171
30172	200A	134.73	6.51	7.74	20.08	30172
30173	315A	151.80	7.74	9.53	24.20	30173
30174	400A	234.20	8.98	11.03	30.67	30174
30175	500A	258.58	9.88	11.91	33.70	30175
30176	630A	261.56	11.12	13.30	37.23	30176
30177	800A	330.10	14.05	17.24	47.39	30177

BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)

Connection flanges (including cutting and drilling busbar chamber, assembly of switch to flange, and flange to busbar chamber with provision and installation of interconnections as necessary) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30178	SPN 32A/ 63A	120.18	13.09	15.79	52.92	30178
30179	SPN 100A	151.22	17.41	21.57	68.94	30179
30180	TPN 32A	146.06	15.63	19.93	63.90	30180
30181	TPN 63A	183.25	16.64	20.77	65.36	30181
30182	TPN 100A	232.10	19.96	25.88	79.25	30182
30183	TPN 160/ 200A	281.34	24.04	30.98	95.71	30183
30184	TPN 300/ 315A	353.01	32.77	41.37	130.92	30184
30185	TPN 400/ 500A	397.81	40.94	51.26	162.25	30185
30186	TPN 600/ 630/ 800A	448.50	49.82	62.58	197.73	30186

Porcelain support for busbar or for use in link box : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30187	Not exceeding 300A	33.03	6.26	8.70	24.13	30187
30188	300A - 500A	41.84	8.05	10.17	30.78	30188
30189	500A - 1000A	57.35	9.65	12.28	37.49	30189

Cable entry/ conduit box of approved type for switchfuses, all necessary work including cutting and drilling of trunking, assembly and connection of switchfuses, etc. : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30190	TPN 160/ 200A	329.76	32.77	41.37	130.92	30190
30191	TPN 315A	394.83	40.94	51.26	162.25	30191
30192	TPN 400/ 500A	504.12	49.82	62.58	197.73	30192
30193	TPN 630/ 800A	624.46	58.47	72.95	230.75	30193

BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)

Insulating sheet as paxolin or ebonite, etc., used in conjunction with distribution boxes and switch gear (to be drilled and cut to shape as required) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
30194	1.5 mm thick	303.69	38.57	48.21	150.99	30194
30195	3 mm thick	456.55	51.79	64.85	201.56	30195
30196	7 mm thick	773.20	64.85	80.61	250.88	30196
30197	10 mm thick	1,038.21	78.17	97.15	301.94	30197
30198	12 mm thick	1,449.45	103.61	129.51	403.69	30198
30199	20 mm thick	1,771.89	129.51	160.79	505.62	30199
30200	25 mm thick	2,106.47	135.77	169.16	529.37	30200

RESIDUAL CURRENT CIRCUIT BREAKERS

Residual current operated circuit breaker (RCCB) to IEC 61008-1 with minimum rated short circuit breaking capacity of 3 kA : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30201	25/ 32/ 40A DP, 30 mA trip	305.46	13.16	15.14	42.32	30201
30202	25/ 32/ 40A DP, 100 mA trip	445.93	14.48	16.64	45.32	30202
30203	25/ 32/ 40A DP, 300 mA trip	651.05	14.48	16.64	45.32	30203
30204	63A DP, 30 mA trip	411.85	13.16	15.14	42.32	30204
30205	80A DP, 30 mA trip	675.75	13.16	15.14	42.32	30205
30206	100A DP, 30 mA trip	947.52	13.16	15.14	42.32	30206
30207	10/ 13/ 16/ 20/ 25/ 32/ 40A TPN, 30 mA trip	470.97	19.50	24.71	77.71	30207
30208	25/ 40A TPN, 100 mA trip	483.15	19.50	24.71	77.71	30208
30209	63A TPN, 30 mA trip	490.28	19.50	24.71	77.71	30209
30210	63A TPN, 100 mA trip	514.93	19.50	24.71	77.71	30210
30211	63A TPN, 300/ 500 mA trip	657.50	19.50	24.71	77.71	30211
30212	100A TPN, 30 mA trip	1,438.73	19.50	24.71	77.71	30212
30213	100A TPN, 100 mA trip	1,498.40	19.50	24.71	77.71	30213

RESIDUAL CURRENT CIRCUIT BREAKERS (CONT'D)

Residual current operated circuit breaker (RCCB) to IEC 61008-1 with minimum rated short circuit breaking capacity of 22 - 40 kA : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30214	100A TPN, 500 mA trip	3,018.03	25.71	32.09	102.71	30214
30215	200A TPN, 500 mA trip	3,769.69	29.19	36.80	118.66	30215
30216	400A TPN, 500 mA trip	4,561.30	32.79	41.40	132.61	30216

Metal box for RCCB, 10 to 100A SP/ DP : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30217	2 ways	129.77	17.32	21.54	65.12	30217
30218	4 ways	186.80	17.32	21.54	65.12	30218
30219	6 ways	332.15	25.52	31.73	99.32	30219
30220	8 ways	462.99	25.52	31.73	99.32	30220
30221	12 ways	597.40	25.52	31.73	99.32	30221

Metal box for RCCB, 10 to 100A TP : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30222	2 ways	184.55	17.32	21.54	65.12	30222
30223	4 ways	427.08	17.32	21.54	65.12	30223
30224	6 ways	615.04	25.52	31.73	99.32	30224
30225	8 ways	735.77	25.52	31.73	99.32	30225

RESIDUAL CURRENT CIRCUIT BREAKERS (CONT'D)

Residual current operated circuit breaker with integral over current protection (RCBO) to IEC 61009 with rated instantaneous tripping current of Type B/ Type C classification and minimum rated short circuit breaking capacity of 6kA : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30226	10/ 13/ 16/ 20/ 25/ 32/ 40A DP, 30 mA trip	300.33	13.07	15.04	42.08	30226

SWITCH AND FUSE GEAR

Switch fuses, metal clad, surface mounting, c/w HRC fuses : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30227	Switch fuse 20A, SPN	584.19	20.27	25.37	75.96	30227
30228	Ditto 32A, SPN	617.22	22.57	27.71	84.76	30228
30229	Ditto 63A, SPN	704.83	28.59	35.95	108.97	30229
30230	Ditto 100A, SPN	889.89	44.21	55.12	168.51	30230
30231	Ditto 20A, TPN	751.53	25.71	32.28	99.24	30231
30232	Ditto 32A, TPN	797.19	25.71	32.28	99.24	30232
30233	Ditto 63A, TPN	961.90	44.66	56.15	168.51	30233
30234	Ditto 100A, TPN	1,276.90	61.09	76.48	234.64	30234

Neutral terminal : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30235	Neutral terminal for switchfuse 15A/ 30A	72.04	6.67	8.19	20.58	30235
30236	Neutral terminal for switchfuse 60A	78.35	8.70	10.38	26.11	30236
30237	Neutral terminal for switchfuse 100A	97.15	12.08	14.96	43.73	30237

SWITCH AND FUSE GEAR (CONT'D)

Fuse switches, metal clad, c/w conduit boxes, busbar chamber connection flanges and HRC fuses : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30238	160A, TPN	1,961.31	73.30	91.61	276.67	30238
30239	200A, TPN	2,283.76	73.30	91.61	276.67	30239
30240	300A, TPN	4,247.29	117.24	146.21	444.07	30240
30241	400A, TPN	5,053.39	146.65	183.23	547.50	30241
30242	600A, TPN	7,185.82	172.78	214.21	644.29	30242
30243	800A, TPN	9,413.79	196.44	247.39	743.64	30243

Switch fuses all insulated SPN surface mounting, back or side entry c/w IEC 60269-1 fuses : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30244	20A - 80A	633.24	22.48	27.59	84.42	30244

Isolating switches, metal clad, surface mounting : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30245	20A, DP	575.63	22.48	27.59	84.42	30245
30246	32A, DP	598.70	22.48	27.59	84.42	30246
30247	63A, DP	706.18	29.56	36.86	110.20	30247
30248	100A, DP	983.67	29.56	36.86	110.20	30248
30249	20A, TPN	665.78	29.56	36.86	110.20	30249
30250	32A, TPN	712.34	29.56	36.86	110.20	30250
30251	63A, TPN	805.14	31.09	39.09	116.97	30251
30252	100A/ 125A, TPN	1,166.77	32.68	40.89	122.65	30252
30253	160A/ 200A, TPN	2,050.51	72.61	91.48	274.45	30253
30254	250A/ 300A/ 315A, TPN	3,360.26	79.27	98.98	308.31	30254
30255	400A, TPN	3,983.63	85.13	105.90	333.89	30255

SWITCH AND FUSE GEAR (CONT'D)

Isolating switches, indoor type : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30256	20A, DP	408.45	17.76	23.00	67.65	30256
30257	32A, DP	433.46	17.76	23.00	67.65	30257
30258	63A, DP	513.53	22.75	28.26	83.04	30258
30259	80A, DP	587.92	22.75	28.26	83.04	30259
30260	100A, DP	712.79	22.75	28.26	83.04	30260
30261	32A, TPN	628.68	22.79	29.01	84.20	30261
30262	63A, TPN	739.99	24.91	30.78	90.43	30262
30263	100A, TPN	1,094.96	27.43	32.51	96.71	30263
30264	160A, TPN	1,756.97	66.43	81.43	247.28	30264
30265	200A, TPN	1,875.57	66.43	81.43	247.28	30265

Isolating switch, weatherproof rated to IP65 : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30266	20A, DP	695.53	36.60	46.79	143.92	30266
30267	32A, DP	803.87	39.96	49.66	147.62	30267
30268	63A, DP	1,100.01	50.97	65.11	201.12	30268
30269	80A, DP	1,552.50	59.87	73.69	249.17	30269
30270	100A, DP	1,664.56	64.05	78.78	265.95	30270
30271	20A, TPN	831.66	43.76	53.15	147.93	30271
30272	32A, TPN	918.94	45.53	56.82	170.38	30272
30273	63A, TPN	1,114.50	58.73	74.56	221.82	30273
30274	100A, TPN	1,667.44	73.16	90.55	270.09	30274
30275	160A, TPN	2,307.88	86.37	107.16	318.49	30275
30276	200A, TPN	3,013.08	99.35	122.73	368.96	30276

SWITCH AND FUSE GEAR (CONT'D)

Changeover switches, metal clad : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30277	30A/ 32A, DP	2,269.86	22.57	27.71	86.77	30277
30278	60A/ 63A, DP	2,789.62	29.66	37.01	112.93	30278
30279	100A, DP	4,083.49	36.98	46.39	139.63	30279
30280	30A/ 32A, TP	2,295.47	29.66	37.01	112.93	30280
30281	60A/ 63A, TP	2,794.96	36.98	46.39	139.63	30281
30282	100A, TP	4,132.40	50.66	62.88	193.32	30282
30283	30A/ 32A, TPN	2,327.07	36.98	46.39	139.63	30283
30284	60A/ 63A, TPN	3,210.35	45.46	54.65	161.49	30284
30285	100A, TPN	4,168.63	57.84	73.14	216.95	30285

Automatic changeover switch c/w changeover contactor sets, copper bar terminals, earthing connection, pilot lights, miniature circuit breakers, voltage measurement relays, plug-in relay and sockets, on-delay relay, control wirings, marking, terminal blocks, power links, mechanical interlock and metal casing : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30286	40A, DP	1,687.85	51.37	64.04	197.73	30286
30287	60A/ 63A, DP	3,057.05	51.37	64.04	197.73	30287
30288	100A, DP	5,691.44	61.14	75.79	230.69	30288
30289	40A, TPN	1,706.90	51.37	64.04	197.73	30289
30290	60A/ 63A, TPN	3,062.90	51.37	64.04	197.73	30290
30291	100A, TPN	5,759.61	61.14	75.79	230.69	30291
30292	200A, TPN	9,253.31	67.25	83.90	253.64	30292
30293	300A/ 320A, TPN	14,850.49	67.25	83.90	253.64	30293
30294	400A, TPN	22,566.73	67.25	83.90	253.64	30294
30295	60A/ 63A, 4P	3,958.64	53.22	66.34	207.76	30295
30296	100A, 4P	8,998.34	64.24	79.15	242.17	30296
30297	200A, 4P	11,134.90	70.78	84.58	268.48	30297
30298	300A/ 320A, 4P	19,358.34	70.78	84.58	268.48	30298
30299	400A, 4P	28,102.42	70.78	84.58	268.48	30299

FUSE

The rates shall include opening and closing of switch board/ box covering, where required.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Metal clad cutouts, cast metal or sheet steel : -					
	Each					
30300	30A/ 32A, SPN	149.69	15.15	18.79	53.80	30300
30301	60A/ 63A, SPN	166.74	15.15	18.79	53.80	30301
30302	100A, SPN	223.63	22.58	27.94	81.60	30302
30303	30A/ 32A, TPN	241.36	22.58	27.94	81.60	30303
30304	60A/ 63A, TPN	429.34	25.71	32.28	94.73	30304
30305	100A, TPN	518.82	29.62	36.09	108.55	30305

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Fuse holder only ceramic porcelain or thermoplastic, rewirable or cartridge type : -					
	Each					
30306	500V 30A/ 32A	22.49	3.92	4.75	11.44	30306
30307	500V 60A/ 63A	37.53	3.92	4.75	11.44	30307
30308	500V 100A	58.08	3.92	4.75	11.44	30308
30309	500V 200A	70.25	5.65	6.78	17.32	30309
	Fuse base only ceramic porcelain or thermoplastic : -					
	Each					
30310	500V 30A/ 32A	38.13	5.65	6.78	17.32	30310
30311	500V 60A/ 63A	69.70	6.79	8.29	20.93	30311
30312	500V 100A	93.78	7.58	9.11	24.18	30312
30313	500V 200A	105.30	9.11	11.05	28.88	30313
	Cartridge fuse links to IEC 60269-1: -					
	Each					
30314	Suitable for 13A plug-tops, 2A (yellow), 3A (blue), 5A (red), 10A (black) and 13A (brown)	10.37	1.62	1.94	4.80	30314

FUSE (CONT'D)

The rates shall include opening and closing of switch board/ box covering, where required. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	HRC cartridge fuses to IEC 60269-1, with off-set tags or central tags of rating : -					
	Each					
30315	6A or 10A	20.43	2.63	3.22	8.05	30315
30316	16A/ 20A	21.07	2.63	3.22	8.05	30316
30317	25A/ 32A	22.34	2.63	3.22	8.05	30317
30318	40A/ 50A/ 63A	28.87	2.63	3.22	8.05	30318
30319	80A	48.00	3.39	4.15	11.45	30319
30320	100A	49.91	3.39	4.15	11.45	30320
30321	125A/ 160A	70.64	3.79	4.55	13.74	30321
30322	200A	72.00	3.79	4.55	13.74	30322
30323	250A	117.24	4.55	5.31	16.97	30323
30324	315A	129.33	4.55	5.31	16.97	30324
30325	350A	172.27	4.55	5.31	16.97	30325
30326	400A	178.73	5.90	7.44	22.58	30326
30327	450A	231.49	5.90	7.44	22.58	30327
30328	500A	257.03	5.90	7.44	22.58	30328
30329	630A	304.63	7.44	8.98	25.98	30329
30330	800A	389.31	7.44	8.98	25.98	30330
	Semi-enclosed fuse to BS 3036 of rating : -					
	Each					
30331	3/ 5A	21.55	2.63	3.22	8.63	30331
30332	10/ 15/ 20A	27.83	2.63	3.22	9.58	30332
30333	25/ 30A	32.50	2.63	3.22	10.29	30333

TIME SWITCHES & BOXES

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30334	20A (1-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure	388.54	5.97	9.13	23.33	30334
30335	20A (7-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure	642.47	5.97	9.13	23.33	30335
30336	30A (1-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure	510.30	5.97	9.13	23.33	30336
30337	30A (7-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure	777.23	5.97	9.13	23.33	30337
30338	Up to 20A astronomical programmable (24 hours or 7-day) with digital display, integrated with battery back-up to provide 200 hours continuous operation upon power failure	890.61	5.97	9.13	23.33	30338
30339	Metal box for 20A/ 30A time switch	198.47	5.97	9.13	23.33	30339
30340	IP53 Plastic box for 20A/ 30A time switch	606.89	5.97	9.13	23.33	30340
30341	Programmable quartz class changing bell timer with two control output channels, choice of a minimum of 4 melodies, up to 120 weekly programs and 366 weekly programs of minimum one minute setting, with sockets for microphone and external speaker, power failure backup by lithium primary battery and rechargeable NiCd battery for not less than 800 hours	5,385.83	69.01	85.82	266.70	30341

E.L.V. TERMINAL UNITS

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30342	Extra low voltage terminal unit with stainless steel sign plate, each unit shall incorporate a 13A fuse	294.68	10.43	13.05	40.01	30342

EARTHING AND LIGHTNING CONDUCTOR FITTINGS

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
30343	Copper tape, without tinned, 25 x 3mm with saddles	117.58	11.05	13.41	41.41	30343
30344	Copper tape, tinned entire length 25 x 3mm with saddles	122.29	11.05	13.41	41.41	30344
30345	Copper tape, PVC sheathed, 25 x 3mm with saddles	167.17	11.05	13.41	41.41	30345
30346	Copper tape, without tinned, 25 x 3mm laid in trench or duct (ducting, excavation and back-filling measured separately)	104.89	8.84	10.84	30.54	30346
30347	Copper tape, tinned entire length, 25 x 3mm laid in trench or duct (ducting, excavation and back-filling measured separately)	105.73	8.84	10.84	30.54	30347
30348	Aluminum type 25 x 3 mm with saddles (for lightning conductors)	76.09	12.27	15.31	45.97	30348
30349	Braided copper tape with PVC sheath 25 x 3 mm	149.48	11.05	13.41	41.41	30349

EARTHING AND LIGHTNING CONDUCTOR FITTINGS (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30350	Copper bond earth rod 16 mm diameter 1.2 m long consists of pure electrolytic copper uniformly molecularly bonded onto a high tensile steel core to a minimum thickness of 0.25 mm c/w driving head and coupling	155.08	-	-	112.80	30350
30351	Ditto but 2.4 m	243.26	-	-	138.59	30351
30352	Copper earth plate, lattice type 600 x 600 mm (excavation measured separately)	2,414.01	59.87	74.35	226.01	30352
30353	Ditto but 900 x 900 mm (ditto)	3,500.02	60.52	76.31	228.93	30353
30354	Earth clips with plugs, tinned copper, for pipes n.e. 25 mm diameter	22.53	5.84	7.16	18.06	30354
30355	Ditto for pipes exc. 25 mm diameter but n.e. 38 mm diameter	23.87	5.84	7.16	18.06	30355
30356	Ditto for pipes exc. 38 mm diameter but n.e. 75 mm diameter	29.64	5.84	7.16	18.06	30356
30357	Tape clip only, for tape 25 x 3 mm wide	32.93	5.84	7.16	18.06	30357
30358	Saddle only, for securing tapes by and including single set screw	40.62	7.86	9.41	23.85	30358
30359	Light duty air terminal, with 16 mm diameter rod up to 300 mm long (copper rod taper pointed)	179.34	23.67	29.19	89.03	30359
30360	Ditto 300 mm - 500 mm long (ditto)	208.87	23.67	29.19	89.03	30360
30361	Ditto 500 mm - 1000 mm long (ditto)	285.00	23.67	29.19	89.03	30361
30362	Ditto but with 20 mm diameter rod, 1000 mm long (ditto)	323.21	23.67	29.19	89.03	30362
30363	Ditto but with 25 mm diameter rod, 1000 mm long (ditto)	352.01	23.67	29.19	89.03	30363
30364	Multi-pointed air terminal c/w 300 mm - 600 mm long copper rod and base	370.20	23.67	29.19	89.03	30364
30365	Tape connection for 25 mm tape	41.32	8.72	10.44	26.66	30365
30366	Tape to plate connector	67.55	10.85	13.21	36.63	30366
30367	Circular plate type test clamp for 25 mm tape	99.10	10.85	13.21	36.63	30367
30368	Connector clamp for 16 mm, 20 mm and 25 mm diameter rod, pressure type	64.23	10.85	13.21	36.63	30368

		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	
	Per linear metre					
30369	Down conductor for early streamer lightning protection system, composing of two identical conductors placed one coaxially about the other with separation by a layer of insulator to form a high capacitance between the conducting layers, designed to withstand 250 kV transient at 1/ 50 wave to IEC 60230 c/w saddles	980.20	19.01	25.47	64.06	30369

EARTHING AND LIGHTNING CONDUCTOR FITTINGS (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30370	Early streamer emission lightning protection system to French standard NF C17-102, comprising of lightning terminal in a 2 m 316 stainless steel pole, supporting insulation mast/ stainless steel mast, connection clamps, lightning counter and all necessary accessories. The lightning terminal shall generate a leader to capture the lightning and direct it to earth during a lightning event. Radius of protection (level 1) with the terminal 5 m above the protected surface at 20 m striking distance being 48 m. Down conductors shall be measured separately.	47,498.78	603.05	755.95	2,212.00	30370
30371	Ditto but radius of protection (level 1) with the terminal 5 m above the protected surface at 20 m striking distance being 63 m	57,172.54	603.05	755.95	2,212.00	30371
30372	Ditto but radius of protection (level 1) with the terminal 5 m above the protected surface at 20 m striking distance being 79 m	68,742.28	603.05	755.95	2,212.00	30372
30373	Early streamer lightning terminal to French standard NF C17-102; Radius of protection (level 1) with the terminal 5 m above the protected surface at 20 m striking distance being 48 m.	29,641.43	466.27	700.49	1,507.45	30373
30374	Early streamer lightning terminal to French standard NF C17-102; Radius of protection (level 1) with the terminal 5 m above the protected surface at 20 m striking distance being 63 m.	39,057.56	466.27	700.49	1,507.45	30374
30375	Early streamer lightning terminal to French standard NF C17-102; Radius of protection (level 1) with the terminal 5 m above the protected surface at 20 m striking distance being 79 m.	49,398.45	466.27	700.49	1,507.45	30375
30376	Air termination support c/w connection clamps and all necessary accessories	14,076.76	247.04	308.94	748.39	30376
30377	Stainless steel mast assembly	4,378.93	444.67	571.77	1,796.29	30377
30378	Lightning event counter	4,276.97	50.56	63.19	191.51	30378

Power surge protection devices in compliance with IEC 61643-1

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Shunt type Surge Protection Devices for primary incoming power protection : -					
	Each					
30379	20 kA (8/ 20 µs), single-phase	923.00	12.27	16.41	47.92	30379
30380	Ditto but three phase	2,818.76	12.27	16.41	47.92	30380
30381	40 kA (8/ 20 µs), single-phase	933.67	12.27	16.41	47.92	30381
30382	Ditto but three-phase	2,823.37	12.27	16.41	47.92	30382
30383	65 kA (8/ 20 µs), single-phase	1,990.19	16.20	20.02	60.90	30383
30384	Ditto but three-phase	5,562.03	16.20	20.02	60.90	30384
30385	80 kA (8/ 20 µs), single-phase	2,647.94	16.20	20.02	60.90	30385
30386	Ditto but three-phase	7,887.03	16.20	20.02	60.90	30386
30387	100 kA (8/ 20 µs), single-phase	2,705.49	18.77	23.48	71.73	30387
30388	Ditto but three-phase	8,045.09	18.77	23.48	71.73	30388
30389	150 kA (8/ 20 µs), single-phase	3,815.61	18.77	23.48	71.73	30389
30390	Ditto but three-phase c/w counter	13,411.52	18.77	23.48	71.73	30390

EARTHING AND LIGHTNING CONDUCTOR FITTINGS (CONT'D)

Surge Reduction Filters for electronic equipment with surge rating : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30391	6A, 4 - 16 kA (8/ 20 µs), single-phase	3,007.05	12.23	16.37	47.81	30391
30392	10A/ 20A, 40 - 55 kA (8/ 20 µs), single-phase	4,583.48	12.23	16.37	47.81	30392
30393	20A, 40 - 55 kA (8/ 20 µs), three-phase	7,046.99	16.35	19.91	59.90	30393
30394	32A, 135 kA (8/ 20 µs), single-phases	5,414.30	12.23	16.37	47.81	30394
30395	63A/ 125A, 135 kA (8/ 20 µs), single-phase	5,511.30	12.23	16.37	47.81	30395
30396	32A, 135 kA (8/ 20 µs), three-phase	7,540.25	16.35	19.91	59.90	30396
30397	64A, 135 kA (8/ 20 µs), three-phase	7,638.90	16.35	19.91	59.90	30397
30398	125A, 135 kA (8/ 20 µs), three-phase	7,644.38	16.35	19.91	59.90	30398
30399	200A/ 315A, 135 kA (8/ 20 µs), three-phase	7,809.29	16.35	19.91	59.90	30399
30400	630A, 135 kA (8/ 20 µs), three-phase	7,878.63	16.35	19.91	59.90	30400

Surge protectors for radio, telecommunications & signal protection : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30401	500A (8/ 20 µs)	1,790.36	12.23	16.37	47.81	30401
30402	2.5 kA (8/ 20 µs)	1,790.58	12.23	16.37	47.81	30402
30403	10 kA (8/ 20 µs)	1,804.79	12.23	16.37	47.81	30403
30404	20 kA (8/ 20 µs)	1,810.98	12.23	16.37	47.81	30404

Miscellaneous item : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30405	Supplementary bonding to metal type ceiling grid, window frame and service pipes c/w box for wiring not exceeding 2 m	17.02	3.68	-	-	30405

EARTHING AND LIGHTNING CONDUCTOR FITTINGS (CONT'D)

Chemicals for soil treatment : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per kg					
30406	Ammonium chloride	43.75	-	-	24.19	30406
30407	Copper sulphate	47.75	-	-	24.19	30407
30408	Bentonite	44.42	-	-	24.19	30408
30409	Lime powder for mixing of earthing chemical	26.57	-	-	24.19	30409
30410	Industrial salt for mixing of earthing chemical	40.27	-	-	24.19	30410
30411	Carbolic powder for mixing of earthing chemical	42.14	-	-	24.19	30411

ELECTRICAL APPLIANCES

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30412	Electric rice cooker for 10 persons	478.77	5.20	7.31	20.87	30412
30413	Electric rice cooker for 15 persons	649.58	5.20	7.31	20.87	30413
30414	Electric cooker 2 rings	1,918.06	21.78	27.22	81.51	30414
30415	Electric cooker 3 or 4 rings	4,426.62	36.49	46.04	135.26	30415
30416	Water heater, instantaneous type, 6 kW, single-phase	1,569.64	21.78	27.22	81.51	30416
30417	Water heater, instantaneous type, 18 kW, three-phase	2,510.44	21.78	27.22	90.49	30417
30418	Water heater, instantaneous type, 24 kW, three-phase	2,716.41	36.49	46.04	135.26	30418
30419	Electric water heater, storage type, n.e. 10 litres, minimum 3kW, single-phase	2,372.04	21.78	27.22	81.51	30419
30420	Electric water heater, storage type, 13 litres, minimum 3kW, single-phase	2,372.04	21.78	27.22	81.51	30420
30421	Electric water heater, storage type, 25 litres, minimum 3kW, single-phase	2,881.06	21.78	27.22	81.51	30421
30422	Electric water heater, storage type, 38 litres, minimum 3kW, single-phase	3,969.13	21.78	27.22	81.51	30422
30423	Electric water heater, storage type, 57 litres, minimum 3kW, single-phase	4,415.22	21.78	27.22	81.51	30423
30424	Electric water heater, storage type, 90 litres, minimum 2.5kW, single-phase	6,027.89	36.49	46.04	135.26	30424
30425	Electric water heater, storage type, 135 litres, minimum 2.5kW, single-phase	8,186.86	36.49	46.04	135.26	30425
30426	Electric water heater, storage type, 135 litres, minimum 18kW, three-phase	9,113.54	36.49	46.04	135.26	30426
30427	Electric water heater, storage type, 150 litres, minimum 3kW, single-phase	8,878.04	36.49	46.04	135.26	30427
30428	Electric water heater, storage type, 150 litres, minimum 18kW, three-phase	9,888.69	36.49	46.04	135.26	30428
30429	Electric water heater, storage type, 180 litres, minimum 18kW, three-phase	13,515.88	36.49	46.04	135.26	30429
30430	Electric water heater, storage type, 225 litres, minimum 18kW, three-phase	15,716.89	36.49	46.04	135.26	30430
30431	Tubular heater, 300 mm	158.86	11.83	14.86	43.22	30431
30432	Tubular heater, 600 mm	533.62	11.83	14.86	43.22	30432
30433	Tubular heater, 1200 mm	603.66	11.83	14.86	43.22	30433
30434	Kettle, 3.5 - 4.5 litre, 2 kW (max.), single-phase	425.90	5.20	7.31	20.87	30434
30435	Water boiler, 3 kW (max.), single-phase	4,924.78	5.20	7.31	20.87	30435
30436	Tea urn, 18 litres	1,379.05	5.20	7.31	20.87	30436
30437	Electric fire, 1 kW (max.), wall mounted	261.76	14.84	18.45	56.24	30437

ELECTRICAL APPLIANCES (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30438	Radiator, 1.5 kW (max.), oil filled	990.02	21.88	27.33	81.82	30438
30439	Radiator, 2 kW (max.), oil filled	1,063.75	21.88	27.33	81.82	30439
30440	Radiator, 3 kW (max.), oil filled	1,072.51	21.88	27.33	81.82	30440
30441	Radiator, 1 kW (max.), infra-red	526.74	21.88	27.33	81.82	30441
30442	Radiator, 1.5 kW (max.), infra-red	613.38	21.88	27.33	81.82	30442
30443	Radiator, 2 kW (max.), infra-red	627.99	21.88	27.33	81.82	30443
30444	Convector heater, 1.2 kW (max.)	906.32	21.88	27.33	81.82	30444
30445	Wall mounted fan heater, 2 kW (max.)	577.87	21.88	27.33	81.82	30445
30446	Convection heater, heavy duty, wall mounted, 3 kW c/w temperature cut-out and thermostat	7,329.90	22.28	27.66	82.90	30446
30447	Wall clock, 300 mm diameter, battery operated, quartz	399.93	5.21	7.35	20.94	30447
30448	Hand/ face dryer, with/ without deflector for hand or face drying, heater rating not less than 2.2 kW	1,498.65	8.89	11.13	33.99	30448
30449	Hand dryer with drain pan	1,856.33	100.74	151.12	201.48	30449
30450	Hand dryer without drain pan	1,568.83	100.74	151.12	201.48	30450
30451	Hand dryer with HEPA filters, air speed more than 90 to 180 m/s, heater rating up to 1.1kW	8,697.68	100.74	151.12	201.48	30451
30452	Hand dryer with HEPA filters, air speed up to 90 m/s, heater rating 1.1kW - 2.2kW	13,863.48	100.74	151.12	201.48	30452
30453	Hair dryer with movable track	6,590.75	132.36	264.71	330.90	30453
30454	Wall mounted hair dryer	1,136.31	9.06	11.97	34.87	30454
30455	Domestic refrigerator, 170 - 250 litres (CFC free)	3,534.88	21.88	27.33	81.82	30455
30456	Domestic refrigerator, 250 - 320 litres (CFC free)	4,642.58	21.88	27.33	81.82	30456
30457	Domestic refrigerator, 320 - 370 litres (CFC free)	5,502.16	21.88	27.33	81.82	30457
30458	Dehumidifier, moisture removal capacity 13 litres/ day	3,178.35	22.28	27.66	82.90	30458
30459	High capacity industrial type dehumidifier, air flow 2500 m^3/ hr	67,970.60	22.28	27.66	82.90	30459
30460	Ditto but air flow 5000 m^3/ hr	92,737.70	22.28	27.66	82.90	30460
30461	Insect killer, single-phase c/w twin 18W UV fluorescent tubes, effective area not less than 30 m^2 for indoor application .	1,936.01	21.88	27.33	81.82	30461
30462	Ditto but weatherproof type for outdoor application	2,716.41	21.88	27.33	81.82	30462

PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC)

Testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2.

Item		Rate A $	Item
	Testing of installed rising mains and feeder circuit in single-phase or three-phase : - (Testing of plug-in unit/ tee-off switch, sub-main circuit/ final circuit, functional test of RCD shall be measured separately)		
	Per item		
30463	Rating of outgoing switch of switchboard or cut-out switch not exceeding 630A	597.71	30463
30464	Rating of outgoing switch of switchboard or cut-out switch 630A – 1600A	799.08	30464
30465	Rating of outgoing switch of switchboard or cut-out switch 1600A – 3200A	1,247.16	30465
	Testing of plug-in unit/ tee-off switch		
	Each		
30466	Tee off switch/ plug in unit from the rising main	88.26	30466
	Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : -		
	Testing of sub-main circuit : -		
	Per circuit		
30467	Testing of single phase circuit	54.87	30467
30468	Testing of three phase circuit	72.69	30468
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30469	Testing of single phase circuit	243.44	30469
	Testing of residual current device (RCD) : -		
	Each		
30470	Functional test of RCD with or without tester, any rating	51.28	30470
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30471	Testing of single phase circuit	283.65	30471

Item		Rate A $	Item
	PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)		
	Testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. (Cont'd)		
	Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : -		
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30472	Testing of single phase circuit	54.87	30472
30473	Testing of three phase circuit	72.69	30473
	Type of premises : Institution Buildings including Primary, Secondary and Vocational Training School; Police Stations; F.S. Stations; Ambulance Depots; Prestige Buildings including Museums, Art Galleries, Legislative Council Buildings and Court; Playground; Stadium; Sportsground; Park; Hawker Bazaars; Pier; Cemeteries; Public Latrines; Bath House; Refuse Collection Point; Toilet Block; and all other single-user building : -		
	Testing of sub-main circuit : -		
	Per circuit		
30474	Testing of single phase circuit	53.80	30474
30475	Testing of three phase circuit	71.22	30475
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30476	Testing of single phase circuit	238.58	30476
	Testing of residual current device (RCD) : -		
	Each		
30477	Functional test of RCD with or without tester, any rating	51.28	30477
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30478	Testing of single phase circuit	277.96	30478

Item		Rate A $	Item
	PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)		
	Testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. (Cont'd)		
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30479	Testing of single phase circuit	53.80	30479
30480	Testing of three phase circuit	71.22	30480
	Type of premises : Office Building including Office, Government House, Carpark and Post Office; Quarters; Municipal Building including Civic Centre, Community Centre, Culture Centre, Theatre, Swimming Pool, Market, Mortuaries, Libraries, Indoor Game Hall; Industrial Building including Workshop, Depot, Laboratory and Plant; and all other multi-user building : -		
	Testing of sub-main circuit : -		
	Per circuit		
30481	Testing of single phase circuit	52.14	30481
30482	Testing of three phase circuit	69.04	30482
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30483	Testing of single phase circuit	231.25	30483
	Testing of residual current device (RCD) : -		
	Each		
30484	Functional test of RCD with or without tester, any rating	51.28	30484
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30485	Testing of single phase circuit	269.45	30485
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30486	Testing of single phase circuit	52.14	30486
30487	Testing of three phase circuit	69.04	30487

Item		Rate A $	Item
	PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)		
	Testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. (Cont'd)		
	Submission of Form WR2 to EMSD		
	Per item		
30488	Submit Form WR2 to EMSD including endorsement fee	2,548.56	30488
	Per installation		
30489	Testing of power factor correction installation up to 240 kVAr at 380V nominal voltage including PF control relays, circuit protective devices, contactors and capacitors	2,630.00	30489
30490	Testing of power factor correction installation exceeding 240 kVAr at 380V nominal voltage including PF control relays, circuit protective devices, contactors and capacitors	3,501.53	30490
	Current Capacity of Low voltage cubicle switchboard : -		
	Per item		
30491	below 800A 3 Phase (1 - 3 cubicle column)	14,922.17	30491
30492	below 800A 3 Phase (4 - 6 cubicle column)	26,467.52	30492
30493	800A/ 1000A 3 Phase (1 - 3 cubicle column)	14,922.17	30493
30494	800A/ 1000A 3 Phase (4 - 6 cubicle column)	26,467.52	30494
30495	1200A/ 1600A 3 Phase (1 - 3 cubicle column)	16,030.73	30495
30496	1200A/ 1600A 3 Phase (4 - 6 cubicle column)	30,901.82	30496
30497	1200A/ 1600A 3 Phase (7 - 9 cubicle column)	43,856.71	30497
30498	2000A/ 2250A/ 2500A 3 Phase (1 - 3 cubicle column)	16,030.73	30498
30499	2000A/ 2250A/ 2500A 3 Phase (4 - 6 cubicle column)	30,901.82	30499
30500	2000A/ 2250A/ 2500A 3 Phase (7 - 9 cubicle column)	43,856.71	30500
30501	2000A/ 2250A/ 2500A 3 Phase (10 - 12 cubicle column)	58,475.60	30501
30502	2000A/ 2250A/ 2500A 3 Phase (Extra for each addition cubicle column over 12 cubicle column)	4,872.97	30502
30503	3000A/ 3200A 3 Phase (1 - 3 cubicle column)	19,853.85	30503
30504	3000A/ 3200A 3 Phase (4 - 6 cubicle column)	31,454.96	30504
30505	3000A/ 3200A 3 Phase (7 - 9 cubicle column)	51,616.73	30505
30506	3000A/ 3200A 3 Phase (10 - 12 cubicle column)	62,909.89	30506
30507	3000A/ 3200A 3 Phase (Extra for each addition cubicle column over 12 cubicle column)	5,242.50	30507
	Testing of IDMT earth fault relay : -		
	Per item		
30508	Carry out site testing work for IDMT earth fault relay including provision of full set of test report and Form WR2A	7,190.76	30508

PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)

Entrusted testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. The cost of planning and arrangement of venues, engagement of the Independent PITC Checker and uploading the PITC record to the "Electronic System for Planning, Programming, Data Inputting, Storage and Retrievals of Inspection and Maintenance Works in Buildings" shall be deemed to be included in the respective items for PITC works, in addition, the Contractor shall also proceed with the rectification work and submit the test certificate upon completion.

Item		Rate A $	Item
	Testing of installed rising mains and feeder circuit in single-phase or three-phase : - (Testing of plug-in unit/ tee-off switch, sub-main circuit/ final circuit, functional test of RCD shall be measured separately)		
	Per item		
30509	Rating of outgoing switch of switchboard or cut-out switch not exceeding 630A	708.58	30509
30510	Rating of outgoing switch of switchboard or cut-out switch 630A – 1600A	909.96	30510
30511	Rating of outgoing switch of switchboard or cut-out switch 1600A – 3200A	1,358.00	30511
	Testing of plug-in unit/ tee-off switch		
	Each		
30512	Tee off switch/ plug in unit from the rising main	143.70	30512
	Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : -		
	Testing of sub-main circuit : -		
	Per circuit		
30513	Testing of single phase circuit	77.05	30513
30514	Testing of three phase circuit	94.85	30514
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30515	Testing of single phase circuit	265.57	30515
	Testing of residual current device (RCD) : -		
	Each		
30516	Functional test of RCD with or without tester, any rating	53.40	30516

PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)

Entrusted testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. The cost of planning and arrangement of venues, engagement of the Independent PITC Checker and uploading the PITC record to the "Electronic System for Planning, Programming, Data Inputting, Storage and Retrievals of Inspection and Maintenance Works in Buildings" shall be deemed to be included in the respective items for PITC works, in addition, the Contractor shall also proceed with the rectification work and submit the test certificate upon completion. (Cont'd)

Item		Rate A $	Item
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30517	Testing of single phase circuit	305.80	30517
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30518	Testing of single phase circuit	77.05	30518
30519	Testing of three phase circuit	94.85	30519
	Type of premises : Institution Buildings including Primary, Secondary and Vocational Training School; Police Stations; F.S. Stations; Ambulance Depots; Prestige Buildings including Museums, Art Galleries, Legislative Council Buildings and Court; Playground; Stadium; Sportsground; Park; Hawker Bazaars; Pier; Cemeteries; Public Latrines; Bath House; Refuse Collection Point; Toilet Block; and all other single-user building : -		
	Testing of sub-main circuit : -		
	Per circuit		
30520	Testing of single phase circuit	75.96	30520
30521	Testing of three phase circuit	93.42	30521
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30522	Testing of single phase circuit	260.72	30522
	Testing of residual current device (RCD) : -		
	Each		
30523	Functional test of RCD with or without tester, any rating	53.40	30523
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30524	Testing of single phase circuit	300.13	30524

PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)

Entrusted testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. The cost of planning and arrangement of venues, engagement of the Independent PITC Checker and uploading the PITC record to the "Electronic System for Planning, Programming, Data Inputting, Storage and Retrievals of Inspection and Maintenance Works in Buildings" shall be deemed to be included in the respective items for PITC works, in addition, the Contractor shall also proceed with the rectification work and submit the test certificate upon completion. (Cont'd)

Item		Rate A $	Item
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30525	Testing of single phase circuit	75.96	30525
30526	Testing of three phase circuit	93.42	30526
	Type of premises : Office Building including Office, Government House, Carpark and Post Office; Quarters; Municipal Building including Civic Centre, Community Centre, Culture Centre, Theatre, Swimming Pool, Market, Mortuaries, Libraries, Indoor Game Hall; Industrial Building including Workshop, Depot, Laboratory and Plant; and all other multi-user building : -		
	Testing of sub-main circuit : -		
	Per circuit		
30527	Testing of single phase circuit	74.31	30527
30528	Testing of three phase circuit	91.22	30528
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30529	Testing of single phase circuit	253.43	30529
	Testing of residual current device (RCD) : -		
	Each		
30530	Functional test of RCD with or without tester, any rating	53.40	30530
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30531	Testing of single phase circuit	291.65	30531

PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)

Entrusted testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. The cost of planning and arrangement of venues, engagement of the Independent PITC Checker and uploading the PITC record to the "Electronic System for Planning, Programming, Data Inputting, Storage and Retrievals of Inspection and Maintenance Works in Buildings" shall be deemed to be included in the respective items for PITC works, in addition, the Contractor shall also proceed with the rectification work and submit the test certificate upon completion. (Cont'd)

Item		Rate A $	Item
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30532	Testing of single phase circuit	74.31	30532
30533	Testing of three phase circuit	91.22	30533
	Submission of Form WR2 to EMSD		
	Per item		
30534	Submit Form WR2 to EMSD including endorsement fee	2,548.56	30534
	Per installation		
30535	Testing of power factor correction installation up to 240 kVAr at 380V nominal voltage including PF control relays, circuit protective devices, contactors and capacitors	3,738.58	30535
30536	Testing of power factor correction installation exceeding 240 kVAr at 380V nominal voltage including PF control relays, circuit protective devices, contactors and capacitors	4,610.11	30536

PERIODIC INSPECTION, TESTING AND CERTIFICATION (PITC) (CONT'D)

Entrusted testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. The cost of planning and arrangement of venues, engagement of the Independent PITC Checker and uploading the PITC record to the "Electronic System for Planning, Programming, Data Inputting, Storage and Retrievals of Inspection and Maintenance Works in Buildings" shall be deemed to be included in the respective items for PITC works, in addition, the Contractor shall also proceed with the rectification work and submit the test certificate upon completion. (Cont'd)

Item		Rate A $	Item
	Testing and inspection of electrical installation of the low voltage cubicle switchboard where all existing switchgear, busbar, IDMT, circuit breaker, earthing devices and etc. are inspected, tested and issue of test certificate.		
	Current Capacity of Low voltage cubicle switchboard : -		
	Per item		
30537	below 800A 3 Phase (1 - 3 cubicle column)	16,030.73	30537
30538	below 800A 3 Phase (4 - 6 cubicle column)	27,576.10	30538
30539	800A/ 1000A 3 Phase (1 - 3 cubicle column)	16,030.73	30539
30540	800A/ 1000A 3 Phase (4 - 6 cubicle column)	27,576.10	30540
30541	1200A/ 1600A 3 Phase (1 - 3 cubicle column)	17,139.32	30541
30542	1200A/ 1600A 3 Phase (4 - 6 cubicle column)	32,010.40	30542
30543	1200A/ 1600A 3 Phase (7 - 9 cubicle column)	44,965.28	30543
30544	2000A/ 2250A/ 2500A 3 Phase (1 - 3 cubicle column)	17,139.32	30544
30545	2000A/ 2250A/ 2500A 3 Phase (4 - 6 cubicle column)	32,010.40	30545
30546	2000A/ 2250A/ 2500A 3 Phase (7 - 9 cubicle column)	44,965.28	30546
30547	2000A/ 2250A/ 2500A 3 Phase (10 - 12 cubicle column)	59,584.18	30547
30548	2000A/ 2250A/ 2500A 3 Phase (Extra for each addition cubicle column over 12 cubicle column)	4,965.36	30548
30549	3000A/ 3200A 3 Phase (1 - 3 cubicle column)	20,962.43	30549
30550	3000A/ 3200A 3 Phase (4 - 6 cubicle column)	32,563.52	30550
30551	3000A/ 3200A 3 Phase (7 - 9 cubicle column)	52,725.31	30551
30552	3000A/ 3200A 3 Phase (10 - 12 cubicle column)	64,018.48	30552
30553	3000A/ 3200A 3 Phase (Extra for each addition cubicle column over 12 cubicle column)	5,334.87	30553
	Testing of IDMT earth fault relay : -		
	Per item		
30554	Carry out site testing work for IDMT earth fault relay including provision of full set of test report and Form WR2A	8,299.32	30554

Item		Rate A $	Item
	TESTING		
	Testing and inspection of electrical installation comprising sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of first notice of tender invitation c/w the submission of Form WR2 for annual renewal of Dangerous Goods Licence -		
	Type of premises : Dangerous Goods store : -		
	Testing of sub-main circuit : -		
	Per circuit		
30555	Testing of single phase circuit	109.19	30555
30556	Testing of three phase circuit	139.08	30556
	Testing of 13A socket outlet circuit : -		
	Per circuit		
30557	Testing of single phase circuit	324.85	30557
	Testing of residual current device (RCD) : -		
	Each		
30558	Functional test of RCD with or without tester, any rating	53.40	30558
	Testing of final circuit for lighting fittings : -		
	Per circuit		
30559	Testing of single phase circuit	390.90	30559
	Testing of final circuit other than 13A socket outlet and lighting fittings : -		
	Per circuit		
30560	Testing of single phase circuit	109.19	30560
30561	Testing of three phase circuit	139.08	30561

TESTING (CONT'D)

Testing and inspection of electrical installation for domestic quarters where all existing switchgear, wiring, lighting, power points, appliances, etc. are inspected and tested, and test certificate is issued to enable the new tenant to obtain electricity supply from Power Company upon change of tenancy (with usable floor area of quarters) : -

Item		Rate A $	Item
	Per item		
30562	Not exceeding 50 m²	1,736.91	30562
30563	50 m² - 100 m²	2,484.89	30563
30564	100 m² - 150 m²	2,632.55	30564
30565	150 m² - 200 m²	3,149.93	30565
30566	Over 200 m²	5,004.08	30566
	Measurement of circuit : -		
	Per way		
30567	Measurement of current, single phase current	112.86	30567
30568	Measurement of current, three phases current, not exceeding 400A	158.17	30568
30569	Measurement of current, three phases current, exceeding 400A	174.42	30569

(Note : The following items are not applicable for new installation. It will only be paid for testing on existing installation if ordered by the Maintenance Surveyor in writing.)

Item		Rate A $	Item
	Testing of each emergency lighting : -		
	Per item		
30570	Testing and provision of written report of emergency lighting fitting including a discharge test to the central battery, for a minute at the 10-hour discharge rate according to the Fire Services Departments latest requirements for Minimum Fire Service Installation and Equipment and Inspection, Testing and Maintenance of Installation and Equipment published by Fire Services Department and all amendment subsequent thereto issued prior to the date of first notice of tender invitation	164.78	30570
30571	Testing and provision of written report of single battery emergency lighting fitting including testing of self contained battery according to Fire Services Departments latest requirements for Minimum Fire Service Installation and self contained battery Inspection, Testing and Maintenance of Installation and Equipment published by Fire Services Department and all amendment subsequent thereto issued prior to the date of first notice of tender invitation.	139.95	30571
30572	Inspection of emergency lighting by registered fire service contractor	103.84	30572
30573	Issue of FS251 on certification of emergency lighting installation	2,243.10	30573

MISCELLANEOUS

Isolating transformer comply with IEC 60076, including submission of test certificates : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30574	Not exceeding 5 kVA	12,980.66	851.41	1,064.40	3,184.34	30574
30575	5 - 25 kVA	35,140.30	1,272.31	1,587.48	4,761.23	30575
30576	25 - 50 kVA	59,844.25	1,920.04	2,399.40	7,440.12	30576
30577	50 - 100 kVA	77,746.89	2,519.88	3,146.53	9,569.97	30577
30578	Add to last item for each additional 50 kVA or part thereof	18,969.94	639.16	799.33	2,398.72	30578

Active harmonic filter

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Active harmonic filter c/w current transformer, wiring and all necessary accessories; with total rms current rating (Arms) rating up to : -					
	Each					
30579	50A (The actual rate should be : $100,848.90 for Item 30579A)	10,084.89	1,948.59	2,587.42	3,871.59	30579
30580	100A (The actual rate should be : $138,409.50 for Item 30580A)	13,840.95	2,579.45	3,228.40	4,973.65	30580
30581	300A (The actual rate should be : $413,663.50 for Item 30581A)	41,366.35	2,902.29	4,204.22	5,615.07	30581

Surge protection device

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Surge protection device c/w necessary cable and wiring, which shall be capable of diverting the following current levels : -					
	Each					
30582	80A/ 120A/ 160A per phase	10,884.06	82.11	135.20	158.51	30582
30583	200A/ 240A/ 360A/ 480A per phase	11,572.94	82.11	135.20	188.31	30583
30584	600A/ 720A per phase	15,117.07	164.06	193.06	235.29	30584
30585	960A per phase	19,576.74	234.63	293.46	322.56	30585

MISCELLANEOUS (CONT'D)

Electronic power meter c/w current transformer (all types), wiring for sampling current & voltage supply sources, power point with spur/ connection unit and all necessary accessories, using in circuit current rating up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30586	60A/ 100A	24,863.16	1,642.14	2,278.11	2,507.61	30586
30587	200A	27,777.63	1,642.14	2,278.11	2,507.61	30587
30588	400A/ 600A/ 800A	30,971.07	1,966.14	2,938.07	3,123.48	30588
30589	1000A/ 1600A/ 2250A	33,932.27	2,436.12	3,247.71	3,917.44	30589

Microprocessor based digital multifunction power meter c/w current transformer (all types), metal box and all necessary interconnection wiring for sampling current & voltage supply sources, power point with spur/ connection unit and all necessary accessories, using in circuit current rating up to : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30590	Up to 10A	2,872.32	478.52	533.77	894.71	30590
30591	10 - 40A	3,016.96	478.52	533.77	894.71	30591
30592	40 - 125A	5,148.09	478.52	533.77	894.71	30592

Ceiling rose and connector : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30593	Ceiling rose surface 2 or 3 terminal cordgrip pattern	57.54	10.09	12.10	31.14	30593
30594	Ditto, small cap type	45.12	7.94	9.84	30.13	30594
30595	Connector porcelain, single way	9.67	1.34	1.65	4.01	30595
30596	Connector porcelain, double way	10.90	1.34	1.65	4.01	30596
	Per way					
30597	Connector moulded with non-rotable tinned brass inserts 5 - 10A	3.97	0.51	0.61	1.53	30597
30598	Ditto, 15 - 30A	4.83	0.51	0.61	1.53	30598

MISCELLANEOUS (CONT'D)

Sundries : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30599	Provision of framed as-built drawing/ safety instruction/ operation instruction in an aluminium frame suitable for A2 size paper c/w 3 mm thick clear plastic front sheet & wooden back plate	995.37	12.88	15.77	40.09	30599
30600	Ditto, for A3 size paper	853.14	9.73	11.73	30.18	30600
30601	Numbered ferrule for 1 core PVC cable per way	16.95	3.37	-	13.20	30601
30602	Label for distribution board per way	10.18	1.14	1.25	2.58	30602
30603	Adhesive circuitry label at least 4mm in height showing circuit numbers	1.63	0.46	0.49	1.06	30603
30604	Traffolyte type warning notice for switch room, size 300 x 150 mm	164.06	6.43	8.06	22.81	30604
30605	Traffolyte type label with engraved English and Chinese lettering, size up to 0.002 m²	9.27	1.14	1.47	3.81	30605
30606	Traffolyte type label with engraved English and Chinese lettering, size 0.002 - 0.006 m²	20.20	1.14	1.47	3.81	30606
30607	Warning label for different cable colour code	93.36	6.43	8.06	22.81	30607
30608	Label on next date of Periodic Inspection and Testing	46.16	1.14	1.47	3.81	30608
30609	Label on testing of residual current device	30.83	1.14	1.47	3.81	30609

Motor starter D.O.L. T.P. with enclosure : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30610	15/ 30A	746.98	21.12	26.48	81.11	30610
30611	45A	1,293.82	25.79	31.47	98.74	30611
30612	60A	1,509.66	27.30	34.33	104.75	30612
30613	Packing gland for circular P.V.C. or T.R.S. flexible cord (1 mm² or 1.5 mm²) brass, with compression ring as required	19.90	0.33	0.51	1.57	30613

MISCELLANEOUS (CONT'D)

Heat-shrunk corrosion protection sleeve standard length 450 mm suitable for pipe size of : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per piece					
30614	150/ 104 mm	678.19	17.71	21.99	67.33	30614
30615	165/ 127 mm	747.50	19.18	24.17	73.86	30615
30616	196/ 140 mm	814.07	20.62	25.61	79.46	30616
30617	255/ 150 mm	859.68	22.09	27.90	83.96	30617
30618	300/ 210 mm	889.85	22.88	28.63	87.20	30618

Auto transformer : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30619	Auto transformer 15 kVA, single phase, 50 Hz, with 400/ 260/ 240/ 220V tappings	14,387.13	84.15	105.41	326.67	30619
30620	Auto transformer 25 kVA, single phase, 50 Hz, with 400/ 260/ 240/ 220V tappings	19,965.27	84.15	105.41	326.67	30620
30621	Auto transformer 45 kVA, three phases, 50 Hz, with 600/ 420/ 400/ 380/ 346V tappings	28,299.44	92.08	115.06	356.29	30621

Weatherproof stainless steel grade 316 metal box/ chamber other than those item explicitly specified for housing electrical instrument, switches, relays, socket outlets, MCB units etc. with minimum thickness 1.6 mm for casing and 2 mm for front panel, and with hinged cover, lock and handle, viewing glass. Square or rectangular pattern, including all bends, ends, inlets, junctions, connections, flanged joints, bonding and the like of the following sizes in volume: -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30622	Not exceeding 0.005 m^3	939.90	91.53	152.74	182.71	30622
30623	0.005 m^3 - 0.01 m^3	1,049.04	91.53	152.74	182.71	30623
30624	0.01 m^3 - 0.03 m^3	1,554.10	91.53	152.74	182.71	30624
30625	0.03 m^3 - 0.05 m^3	2,212.79	152.17	194.81	242.16	30625
30626	0.05 m^3 - 0.1 m^3	2,830.02	152.17	194.81	242.16	30626
30627	0.1 m^3 - 0.3 m^3	6,939.76	242.16	305.35	332.02	30627

MISCELLANEOUS (CONT'D)

Galvanized sheet metal box/ chamber other than those items explicitly specified for housing electrical instrument, switches, relays, socket outlets, MCB units etc. with minimum thickness 1.6 mm for casing and 2 mm for front panel, and with hinged cover, lock and handle, viewing glass, painted overall where necessary. Square or rectangular pattern, including all bends, ends, inlets, junctions, connections, flanged joints, bonding and the like of the following sizes in volume : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30628	Not exceeding 0.005 m³	347.73	14.63	18.36	55.03	30628
30629	0.005 m³ - 0.01 m³	381.71	14.63	18.36	55.03	30629
30630	0.01 m³ - 0.03 m³	475.52	17.57	22.81	67.55	30630
30631	0.03 m³ - 0.05 m³	731.57	22.17	27.71	83.70	30631
30632	0.05 m³ - 0.1 m³	1,034.15	25.50	32.11	97.59	30632
30633	0.1 m³ - 0.3 m³	2,264.55	36.73	46.23	140.02	30633

Weather proof galvanized sheet metal box/ chamber other than those items explicitly specified for housing electrical instrument, switches, relays, socket outlets, MCB units etc. with minimum thickness 1.6 mm for casing and 2 mm for front panel, and with hinged cover, lock and handle, viewing glass, painted overall where necessary. Square or rectangular pattern, including all bends, ends, inlets, junctions, connections, flanged joints, bonding and the like of the following sizes in volume : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30634	Not exceeding 0.005 m³	480.13	91.53	152.74	182.71	30634
30635	0.005 m³ - 0.01 m³	524.72	91.53	152.74	182.71	30635
30636	0.01 m³ - 0.03 m³	721.11	91.53	152.74	182.71	30636
30637	0.03 m³ - 0.05 m³	1,016.29	152.17	194.81	242.16	30637
30638	0.05 m³ - 0.1 m³	1,268.06	152.17	194.81	242.16	30638
30639	0.1 m³ - 0.3 m³	2,990.58	242.16	305.35	332.02	30639

MISCELLANEOUS (CONT'D)

Emergency call system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30640	Emergency call panel, c/w emergency call button, metal case, weatherproof indication panel integrated with indicating lamp, buzzer unit, mute switch, reset switch, timer for auto-mute of buzzer unit, lamp test button, transformer, conduit and wiring	5,757.25	133.61	154.64	694.92	30640
30641	Emergency call button c/w relay and accessories connected to emergency call panel	619.40	106.07	112.05	231.75	30641
30642	Additional repeater panel connected to emergency call panel to receive repeated signals, c/w metal case, weatherproof indication panel integrated with indicating lamp, buzzer unit, mute switch, reset switch, timer for auto-mute of buzzer unit, lamp test button, transformer, conduit and wiring	4,222.10	111.70	119.37	433.11	30642
30643	Additional 1 emergency call panel connected to emergency call repeater panel, including necessary relay, indicating lamp, wiring and accessories	3,622.86	106.84	140.37	282.10	30643

Buildings Energy Efficiency Ordinance (BEEO) Submission

Item		Rate A $	Item
	All lighting installations, unless otherwise specified, in a prescribed building should be assessed in accordance with the energy efficient requirements, for the premises in accordance with the requirements as specified in the latest edition of Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code or BEC in abbreviation), preparation and completion of the installation summaries and worksheets, including but not limited to Form EE-LG, LG-G, LG-1 and LG-2 as required by the BEEO and to coordinate with the Registered Energy Assessor for submission.		
	Type of premises : Prison; Fire Station; Judiciary Building; Police Station; Correctional Institution; Government Offices Building : - The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:		
	Per item		
30644	Not exceeding 1000 m²	60,625.18	30644
30645	Exceeding 1000 m² but not exceeding 2000 m²	84,875.25	30645
30646	Exceeding 2000 m² but not exceeding 3000 m²	97,000.30	30646
30647	Exceeding 3000 m² (The actual rate should be : $145,500.50 for Item 30647A)	14,550.05	30647
	Type of premises : Hospital/ Health Care Building :- The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:		
	Per item		
30648	Not exceeding 1000 m²	63,656.46	30648
30649	Exceeding 1000 m² but not exceeding 2000 m²	89,119.01	30649
30650	Exceeding 2000 m² but not exceeding 3000 m² (The actual rate should be : $101,850.30 for Item 30650A)	10,185.03	30650
30651	Exceeding 3000 m² (The actual rate should be : $152,775.40 for Item 30651A)	15,277.54	30651

MISCELLANEOUS (CONT'D)

Buildings Energy Efficiency Ordinance (BEEO) Submission (Cont'd)

Item		Rate A $	Item
	Type of premises : District Open Space/ Park (with Toilet Block, Service Block and Fountain); District Open Space/ Park (with Toilet Block and Service Block); District Open Space/ Park (with Toilet Block only); Library; Indoor Games Hall; Indoor Swimming Pool; Sport Ground/ Stadium; School with Noise Abatement; School with No Noise Abatement :- The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:		
	Per item		
30652	Not exceeding 1000 m²	62,443.95	30652
30653	Exceeding 1000 m² but not exceeding 2000 m²	87,421.52	30653
30654	Exceeding 2000 m² but not exceeding 3000 m²	99,910.29	30654
30655	Exceeding 3000 m² (The actual rate should be : $149,865.50 for Item 30655A)	14,986.55	30655
	All electrical installations, unless otherwise specified, in a prescribed building should be assessed in accordance with the energy efficient requirements, for the premises in accordance with the requirements as specified in the latest edition of Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code or BEC in abbreviation), preparation and completion of the installation summaries and worksheets, including but not limited to Form EE-EL, EL-1 to EL-5 as required by the BEEO and to coordinate with the Registered Energy Assessor for submission.		
	Type of premises : Prison; Fire Station; Judiciary Building; Police Station; ;Correctional Institution; Government Offices Building; Hospital/ Health Care Building; District Open Space/ Park (with Toilet Block, Service Block and Fountain); District Open Space/ Park (with Toilet Block and Service Block); District Open Space/ Park (with Toilet Block only); Library; Indoor Games Hall; Indoor Swimming Pool; Sport Ground/ Stadium; School with Noise Abatement; School with No Noise Abatement : - The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:		
	Per item		
30656	Up to 50 nos. of circuits/ motors	5,727.65	30656
30657	51 nos. of circuits to 100 nos. of circuits/ motors	10,716.25	30657
30658	101 nos. of circuits to 200 nos. of circuits/ motors	21,802.01	30658
30659	201 nos. of circuits to 300 nos. of circuits/ motors	32,518.21	30659
30660	301 nos. of circuits to 400 nos. of circuits/ motors	43,603.97	30660
30661	401 nos. of circuits to 500 nos. of circuits/ motors	54,320.21	30661
30662	Every 100 nos. of additional circuits above 500 nos. of circuits/ motors	11,455.26	30662

FANS & VENTILATION SYSTEM

Ceiling fan, c/w regulator and down rod of any length including application of glue to all thread parts of the fan : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30663	900 mm diameter	701.62	38.88	48.44	146.81	30663
30664	1200 mm diameter	756.42	43.96	51.26	155.56	30664
30665	1400 mm diameter	825.52	51.26	58.49	166.80	30665
30666	For existing ceiling fan only, application of rust inhibitor to screw thread, of each ceiling fan down rod (taking down and refix ceiling fan, where required, measured separately)	33.10	-	-	-	30666

FANS & VENTILATION SYSTEM (CONT'D)

Wall mounted fan, 3-speed c/w off pull switch and oscillation control pull switch, cord-operated : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30667	400 mm diameter	710.56	21.06	26.48	81.22	30667
30668	500 mm diameter	1,525.51	28.96	32.48	92.35	30668

Wall mounted rotary fan, industrial type, c/w selector switch for 2 or 3 speed control and oscillation control switch : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30669	600 mm diameter	1,792.68	32.48	36.23	103.41	30669
30670	630 mm diameter	1,910.97	33.59	37.06	106.55	30670

Ceiling mounted rotary fan c/w regulator : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30671	400 mm diameter	1,090.45	29.56	33.72	100.21	30671

Regulator for fan : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30672	Regulator for fan, 3 speed or above	270.62	11.65	14.58	43.25	30672

FANS & VENTILATION SYSTEM (CONT'D)

Domestic type exhaust fan, wall/ window mounted c/w automatic/ cord operated shutter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30673	150 mm diameter	457.33	23.24	29.10	89.37	30673
30674	200 mm diameter	460.33	23.24	29.10	89.37	30674
30675	250 mm diameter	492.17	23.24	29.10	89.37	30675
30676	300 mm diameter	594.11	23.24	29.10	89.37	30676

Domestic type exhaust fan, wall/ window mounted c/w louvre and automatic/ cord operated shutter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30677	150 mm diameter	498.80	28.28	35.47	110.02	30677
30678	200 mm diameter	527.22	28.28	35.47	110.02	30678
30679	250 mm diameter	568.99	28.28	35.47	110.02	30679
30680	300 mm diameter	685.82	28.28	35.47	110.02	30680

Domestic type exhaust fan, wall/ window mounted c/w louvre and electrical operated shutter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30681	150 mm diameter	1,381.12	23.24	29.10	89.37	30681
30682	200 mm diameter	1,616.77	23.24	29.10	89.37	30682
30683	230 mm diameter	1,914.23	23.24	29.10	89.37	30683
30684	300 mm diameter	2,510.97	23.24	29.10	89.37	30684

FANS & VENTILATION SYSTEM (CONT'D)

Exhaust fan, propeller type : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30685	250 mm diameter	734.27	29.64	37.69	114.70	30685
30686	315 mm diameter	939.28	29.64	37.69	114.70	30686
30687	335 mm diameter	1,048.91	29.64	37.69	114.70	30687
30688	400 mm diameter	1,473.41	37.69	47.01	144.63	30688
30689	450 mm diameter	1,629.22	42.57	53.21	162.74	30689
30690	500 mm diameter	1,848.23	47.01	58.50	181.04	30690
30691	630 mm diameter	3,442.25	79.55	98.76	306.03	30691
30692	800 mm diameter	5,621.28	115.71	144.87	447.12	30692

Plate axial fan, wall mounted c/w speed controller : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30693	315 mm diameter; speed up to 1000 rpm, sound level less than 39 dBA	3,787.29	50.70	63.03	191.84	30693
30694	375 mm diameter; speed up to 1000 rpm, sound level less than 45 dBA	4,603.07	63.03	78.91	239.20	30694
30695	450 mm diameter; speed up to 1000rpm, sound level less than 50 dBA	5,663.84	75.09	94.10	287.05	30695
30696	630 mm diameter; speed up to 750 rpm, sound level less than 51 dBA	7,654.70	124.73	155.93	478.75	30696

Fume cupboard exhaust fan : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30697	152 mm diameter; speed up to 3000 rpm	9,902.16	23.24	29.10	89.37	30697
30698	241 mm diameter; speed up to 1500 rpm	11,022.47	39.53	46.79	95.01	30698
30699	241 mm diameter; speed up to 3000 rpm	13,606.77	39.53	46.79	95.01	30699
30700	305 mm diameter; speed up to 1500 rpm	16,420.53	46.79	56.88	104.06	30700

FANS & VENTILATION SYSTEM (CONT'D)

Exhaust fan, axial, speed up to 750 rpm, 380V/ 3-phase/ 50 Hz. : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30701	560 mm diameter, 1.5 m³/ sec. air volume, 30 pa static pressure	7,628.45	60.73	75.50	233.40	30701
30702	600 mm diameter, 2.3 m³/ sec. air volume, 40 pa static pressure	9,503.16	79.55	98.76	306.03	30702
30703	800 mm diameter, 5.0 m³/ sec. air volume, 50 pa static pressure	11,937.51	115.71	144.87	448.53	30703

Wire mesh protective guard for exhaust fan (all types) :-

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30704	250 mm diameter	118.88	21.33	26.35	79.28	30704
30705	315 mm diameter	123.67	21.33	26.35	79.28	30705
30706	335 mm diameter	130.27	22.01	27.02	80.28	30706
30707	400 mm diameter	138.12	22.71	28.44	84.47	30707
30708	450 mm diameter	154.95	25.52	31.76	95.11	30708
30709	500 mm diameter	163.32	26.19	32.48	97.28	30709
30710	630 mm diameter	193.40	26.84	33.75	101.29	30710
30711	800 mm diameter	247.20	27.52	34.44	104.36	30711

Air curtain c/w galvanized sheet metal casing with powder coating finishing coat. Fan motor shall have 2-step air flow rate changeover and c/w a controller of on/ off and Hi/ Lo speed operation, including all supporting mild steel hanger and wall bracket fixed to structural member, c/w all necessary accessories :-

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30712	600 mm long	1,688.17	37.48	46.82	139.84	30712
30713	900 mm long	2,052.27	53.48	61.99	151.19	30713
30714	1200 mm long	2,401.58	70.94	91.65	162.25	30714

BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM

Bedhead trunking : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
30715	Bedhead trunking, constructed from aluminium extrusions of minimum size 180 mm(H) x 90 mm(D), 3 compartments c/w front plate and panel to accommodate electrical and medical gas bedhead services	2,120.17	19.76	21.12	63.51	30715
30716	Ditto, size 250 mm(H) x 90 mm(D)	2,454.64	20.49	21.99	65.92	30716
	Each					
30717	Right angle vertical bend for bedhead trunking	2,021.88	16.75	17.45	52.91	30717
30718	End cap for bedhead trunking	249.74	12.81	13.01	21.14	30718
30719	Bedhead 13A single socket	566.56	13.92	14.71	52.23	30719
30720	Bedhead 13A single socket (switched)	584.63	13.92	14.71	52.23	30720
30721	Bedhead 13A twin socket	854.73	13.92	14.71	52.23	30721
30722	Bedhead 13A single socket c/w RCD	1,842.45	13.92	14.71	52.23	30722
30723	Bedhead 13A single socket (switched) c/w RCD	1,865.82	13.92	14.71	52.23	30723
30724	Bedhead 13A twin socket c/w RCD	2,123.11	13.92	14.71	52.23	30724
30725	Bedhead 13A twin socket (switched) c/w RCD	2,157.33	13.92	14.71	52.23	30725
30726	Bedhead single switch c/w fuse spur	761.10	13.92	14.71	52.23	30726
30727	Bedlight switch c/w bedlight mounting bracket	1,029.06	13.92	14.71	52.23	30727
30728	Bedhead staff call socket	138.36	13.92	14.71	52.23	30728
30729	Angle poise bedlight unit c/w trunking mounting bracket for 11W compact fluorescent lamp	4,227.25	28.17	29.56	106.97	30729

Bedhead trunking-mounted fluorescent luminaries : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30730	400 mm length	2,782.16	21.80	22.53	128.02	30730
30731	600 mm length	3,100.32	21.80	22.53	129.37	30731
30732	1000 mm length	3,727.25	21.80	22.53	130.48	30732

BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)

Indicator lamp : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30733	Overdoor indicator lamp (red)	526.46	13.92	14.71	52.23	30733

Hard-wire staff/ emergency/ nurse call system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30734	Bedhead staff call push/ reset	1,366.23	14.67	15.38	63.80	30734
30735	Bedhead nurse call/ present/ reset unit with reassurance indicator and handset jack socket	2,064.58	14.67	15.38	63.80	30735
30736	Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push unit and handset jack socket	2,428.13	14.67	15.38	63.80	30736
30737	Bedhead RDS control station	2,661.55	14.01	14.76	52.69	30737
30738	Staff/ emergency/ nurse call panel c/w intercom	4,659.43	20.92	22.28	157.69	30738
30739	Nurse call/ reset unit with reset push	1,412.00	17.47	18.18	104.93	30739
30740	Nurse call/ reset unit with reassurance indicator	1,505.56	17.47	18.18	104.93	30740
30741	Nurse call/ reset unit with reassurance indicator and emergency pull/ push unit	1,865.01	18.18	18.92	107.30	30741

Nurse/ staff/ emergency call control & monitoring console/ panel for hard-wire system c/w intercom and wiring : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30742	Up to 10 ways	8,324.30	103.29	110.41	634.99	30742
30743	10 - 20 ways	8,889.10	110.41	117.15	694.01	30743
30744	20 - 30 ways	9,499.12	117.03	123.94	747.77	30744
30745	30 - 40 ways	11,003.59	123.94	130.82	805.84	30745

BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)

Multiplexed/ microprocessor staff/ emergency/ nurse call system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30746	Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push unit and handset jack socket	2,883.64	14.54	15.28	63.80	30746
30747	Bedhead nurse call/ present/ reset unit with reassurance indicator, RDS control and handset jack socket	5,129.69	15.28	15.94	70.53	30747
30748	Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push, RDS control and handset jack socket	5,491.17	15.28	15.94	70.53	30748
30749	Bedhead nurse call/ present/ reset unit with reassurance indicator, RDS control, intercom and handset jack socket	7,141.71	15.28	15.94	70.53	30749
30750	Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push, RDS control, intercom and handset jack socket	7,442.51	15.28	15.94	70.53	30750
30751	Bedhead speaker microphone unit	2,062.20	13.92	14.71	52.23	30751
	Each					
30752	Light dimmer; PCB type	1,730.55	13.92	14.71	52.23	30752
30753	Nurse call/ present/ reset unit	1,668.81	17.47	18.18	104.93	30753
30754	Nurse call/ present/ reset unit with reassurance indicator	1,778.72	17.47	18.18	104.93	30754
30755	Nurse call/ present/ reset unit with reassurance indicator and intercom	3,789.10	18.18	18.92	110.43	30755
30756	Nurse/ staff/ emergency call panel c/w touch screen control, intercom and wiring	87,842.03	85.93	107.46	688.02	30756

Nurse/ staff/ emergency call control & monitoring console/ panel for multiplexed/ microprocessor system c/w intercom and wiring : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30757	Up to 10 ways	12,402.59	110.41	117.15	697.10	30757
30758	10 - 20 ways	15,666.25	117.03	123.94	752.86	30758
30759	20 - 30 ways	19,691.01	123.94	130.82	807.41	30759
30760	30 - 40 ways	23,799.59	130.89	137.67	863.67	30760
30761	40 - 60 ways	39,344.45	145.06	151.78	973.57	30761
30762	Keyboard console, 70 ways c/w LCD display and intercom	68,486.86	155.25	168.72	1,193.68	30762

BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)

Control circuit c/w cables/ wiring, trunking, conduits (surface or concealed in partition and ceiling) and all necessary accessories and connected to nurse/ emergency/ staff call control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30763	Nurse call point	503.13	85.47	92.58	383.30	30763
30764	Nurse present/ reset point	518.58	86.32	93.20	396.30	30764
30765	Nurse call/ present/ reset point	532.93	87.01	94.11	407.48	30765
30766	Emergency call point	503.13	85.47	92.58	383.30	30766
30767	Emergency reset point	503.13	85.47	92.58	383.30	30767
30768	Emergency call/ reset point	518.58	86.32	93.20	396.30	30768
30769	Staff call point	503.13	85.47	92.58	383.30	30769
30770	Staff reset point	503.13	85.47	92.58	383.30	30770
30771	Staff call/ reset point	518.58	86.32	93.20	396.30	30771

BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)

General items applicable to all bedhead trunking and staff/ emergency/ nurse call system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30772	Headset; stethoscope type c/w parking bracket/ hood to bedhead trunking	335.44	2.88	4.24	10.97	30772
30773	Dummy handset jack plug	63.09	2.88	4.24	10.97	30773
30774	Nurse call handset c/w call button only	862.73	7.09	7.83	17.06	30774
30775	Nurse call handset c/w call button and RDS control	997.21	7.09	7.83	17.06	30775
30776	Nurse call handset parking bracket	74.96	7.09	7.83	22.07	30776
30777	Nurse call handset linen clip	40.25	7.09	7.83	22.07	30777
30778	Nurse call handset socket	73.71	7.09	7.83	22.07	30778
30779	Nurse call handset c/w call button, RDS control and intercom microphone	4,835.46	7.09	7.83	22.39	30779
30780	Nurse call handset/ patient remote call unit with nurse call push, power supply unit, reassurance indicator, intercom, bedlight switch, sound channel selector, volume control and flexible cable	5,065.60	7.09	7.83	22.39	30780
30781	Staff call unit, vandal-proof push	465.50	17.47	18.18	104.93	30781
30782	Emergency call unit	1,130.89	17.47	18.18	104.93	30782
30783	Present/ reset unit	469.83	17.47	18.18	104.93	30783
30784	Present/ reset unit with emergency pull/ push unit	1,293.75	18.18	18.92	111.28	30784
30785	Repeater unit with indicator and mute switch	1,401.95	18.18	18.92	111.28	30785
30786	Pull-cord type nurse call unit with reassurance indicator	371.42	17.47	18.18	104.93	30786
30787	Splash-proof nurse call unit with reassurance indicator	639.20	17.47	18.18	104.93	30787
30788	Splash-proof nurse call/ present/ reset unit with reassurance indicator	1,425.13	18.18	18.92	111.28	30788
30789	Splash-proof present/ reset unit	1,027.86	18.18	18.92	111.28	30789
30790	RDS jack socket unit	197.55	7.09	7.83	22.07	30790
30791	Buzzer unit	584.27	13.92	14.71	52.23	30791
30792	Call indicator	373.23	13.92	14.71	52.23	30792
30793	Call indicator c/w buzzer unit	847.59	14.54	15.28	57.84	30793
30794	Power supply unit 220/ 24V or 220/ 28V for multi-zone nurse/ emergency/ staff call system	15,037.22	35.99	39.46	199.55	30794

DETECTION SENSOR

Occupancy/ Motion Sensor : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30795	Wall mounted occupancy sensor, single pole switching, 400W 150° field of view, switches lights ON by passive infrared technology and OFF after an adjustable time delay, with manual overriding switch	429.97	15.92	19.29	47.86	30795
30796	Ditto but single pole and 3 way switching, 180° field of view	569.06	15.92	19.29	47.86	30796
30797	Ceiling mounted occupancy sensor, 10A, 360° detection using passive infrared technology, effective coverage up to 74 m² at 2.4 m ceiling height	1,255.70	15.92	20.42	49.93	30797

DETECTION SENSOR (CONT'D)

Dual Technology Occupancy Sensor: -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
30798	Ceiling mounted occupancy sensor, 360° detection using passive infrared heat change and frequency shifts in ultrasonic wave, effective coverage up to 40 m² at 2.4 m ceiling height, switches lights ON either by passive infrared technology or ultrasonic wave or both and OFF after an adjustable time delay, with manual overriding switch	2,801.95	15.92	20.42	49.93	30798

PHOTOVOLTAIC SYSTEM

Photovoltaic system with photovoltaic modules to IEC 60904, mounted on fixed rack with G.I./aluminium frame, protecting diode, inverter, smart inverter, isolating transformer, data logger, circuit breaker, connectors, distribution board, power and control cable, cable containment work, fixing and wiring works, structurally support, controller, surge protection device and all necessary accessories: -

Item		Mono-crystalline type photovoltaic panel : - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30799	Supply and fix modules of power 180 - 250 Wp	42,961.95	34,369.56	31,505.43	29,500.54	28,641.30	26,636.41	25,061.14	23,772.28	30799
30800	Ditto 250 - 300 Wp	43,111.95	34,603.01	31,766.70	29,781.28	28,930.39	26,944.97	25,385.00	24,108.66	30800
30801	Ditto 300 - 350 Wp	43,261.95	34,834.30	32,025.08	30,058.63	29,215.86	27,249.41	25,704.34	24,440.19	30801
30802	Ditto 350 - 400 Wp	63,254.30	51,090.01	47,035.25	44,196.91	42,980.49	40,142.15	37,912.03	36,087.39	30802
30803	Ditto 400 - 450 Wp	63,404.00	51,365.27	47,352.35	44,543.32	43,339.44	40,530.41	38,323.30	36,517.49	30803
30804	Ditto 450 - 500 Wp	63,554.00	51,637.63	47,665.50	44,885.01	43,693.38	40,912.89	38,728.22	36,940.76	30804
30805	Ditto 500 - 550 Wp	63,704.00	51,906.96	47,974.62	45,221.98	44,042.27	41,289.63	39,126.84	37,357.28	30805
30806	Ditto 550 - 600 Wp	76,109.00	62,186.62	57,545.83	54,297.27	52,905.04	49,656.48	47,104.05	45,015.69	30806
30807	Ditto 600 - 750 Wp	76,259.00	62,477.25	57,883.34	54,667.60	53,289.42	50,073.68	47,547.03	45,479.77	30807
30808	Ditto 750 - 900 Wp	92,644.17	76,100.57	70,586.03	66,725.86	65,071.50	61,211.33	58,178.33	55,696.79	30808
30809	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	10,923.45	9,082.21	8,468.46	8,038.84	7,854.72	7,425.10	7,087.53	6,811.35	30809
30810	Take down and cart away the above mono-crystalline type photovoltaic panel	976.00	976.00	976.00	976.00	976.00	976.00	976.00	976.00	30810
30811	Take down and set aside for re-use ditto	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	30811
30812	Fix only ditto	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	30812

PHOTOVOLTAIC SYSTEM (CONT'D)

Photovoltaic system with photovoltaic modules to IEC 60904, mounted on fixed rack with G.I./aluminium frame, protecting diode, inverter, smart inverter, isolating transformer, data logger, circuit breaker, connectors, distribution board, power and control cable, cable containment work, fixing and wiring works, structurally support, controller, surge protection device and all necessary accessories: - (Cont'd)

Item		Mono-crystalline type photovoltaic panel with anti-reflective coating having a reflectance <= 4% comply to ISO9050 or equivalent) : - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30813	Supply and fix modules of power 180 - 250 Wp	43,391.57	34,713.26	31,820.48	29,795.55	28,927.71	26,902.77	25,311.75	24,010.00	30813
30814	Ditto 250 - 300 Wp	43,543.07	34,949.04	32,084.37	30,079.09	29,219.69	27,214.42	25,638.85	24,349.75	30814
30815	Ditto 300 - 350 Wp	43,694.57	35,182.64	32,345.33	30,359.22	29,508.02	27,521.90	25,961.38	24,684.59	30815
30816	Ditto 350 - 400 Wp	63,886.84	51,600.91	47,505.60	44,638.88	43,410.29	40,543.57	38,291.15	36,448.26	30816
30817	Ditto 400 - 450 Wp	64,038.00	51,879.00	47,826.00	44,989.00	43,773.00	40,936.00	38,707.00	36,883.00	30817
30818	Ditto 450 - 500 Wp	64,190.00	52,154.00	48,142.00	45,334.00	44,130.00	41,322.00	39,116.00	37,310.00	30818
30819	Ditto 500 - 550 Wp	64,341.00	52,426.00	48,454.00	45,674.00	44,483.00	41,703.00	39,518.00	37,731.00	30819
30820	Ditto 550 - 600 Wp	76,870.00	62,808.00	58,121.00	54,840.00	53,434.00	50,153.00	47,575.00	45,466.00	30820
30821	Ditto 600 - 750 Wp	77,022.00	63,102.00	58,462.00	55,214.00	53,822.00	50,574.00	48,023.00	45,935.00	30821
30822	Ditto 750 - 900 Wp	93,570.61	76,861.58	71,291.89	67,393.12	65,722.22	61,823.44	58,760.11	56,253.76	30822
30823	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	11,032.41	9,173.05	8,553.26	8,119.41	7,933.48	7,499.63	7,158.07	6,879.17	30823
30824	Take down and cart away the above mono-crystalline type photovoltaic panel with anti-reflective coating	976.00	976.00	976.00	976.00	976.00	976.00	976.00	976.00	30824
30825	Take down and set aside for re-use ditto	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	30825
30826	Fix only ditto	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	30826

PHOTOVOLTAIC SYSTEM (CONT'D)

Photovoltaic system with photovoltaic modules to IEC 60904, mounted on fixed rack with G.I./aluminium frame, protecting diode, inverter, smart inverter, isolating transformer, data logger, circuit breaker, connectors, distribution board, power and control cable, cable containment work, fixing and wiring works, structurally support, controller, surge protection device and all necessary accessories: - (Cont'd)

Item		Multi-crystalline type photovoltaic panel : - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30827	Supply and fix modules of power 180 - 250 Wp	41,845.25	33,476.20	30,686.52	28,733.74	27,896.83	25,944.06	24,409.73	23,154.37	30827
30828	Ditto 250 - 300 Wp	41,995.25	33,706.71	30,943.87	29,009.88	28,181.02	26,247.03	24,727.47	23,484.19	30828
30829	Ditto 300 - 350 Wp	42,145.25	33,935.14	31,198.43	29,282.74	28,461.73	26,546.03	25,040.85	23,809.33	30829
30830	Ditto 350 - 400 Wp	57,964.57	46,817.54	43,101.86	40,500.89	39,386.18	36,785.21	34,741.59	33,069.53	30830
30831	Ditto 400 - 450 Wp	58,115.00	47,080.51	43,402.34	40,827.63	39,724.18	37,149.46	35,126.47	33,471.30	30831
30832	Ditto 450 - 500 Wp	58,265.00	47,340.31	43,698.75	41,149.66	40,057.19	37,508.09	35,505.23	33,866.53	30832
30833	Ditto 500 - 550 Wp	58,415.00	47,597.41	43,991.54	41,467.44	40,385.68	37,861.57	35,878.35	34,255.71	30833
30834	Ditto 550 - 600 Wp	73,761.00	60,268.13	55,770.51	52,622.18	51,272.89	48,124.55	45,650.86	43,626.93	30834
30835	Ditto 600 - 750 Wp	73,911.00	60,553.59	56,101.12	52,984.39	51,648.65	48,531.92	46,083.06	44,079.45	30835
30836	Ditto 750 - 900 Wp	89,852.75	73,807.62	68,459.24	64,715.37	63,110.86	59,367.00	56,425.39	54,018.62	30836
30837	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	10,627.83	8,836.02	8,238.75	7,820.65	7,641.47	7,223.39	6,894.89	6,626.11	30837
30838	Take down and cart away the above multi-crystalline type photovoltaic panel	976.00	976.00	976.00	976.00	976.00	976.00	976.00	976.00	30838
30839	Take down and set aside for re-use ditto	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	30839
30840	Fix only ditto	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	30840

PHOTOVOLTAIC SYSTEM (CONT'D)

Photovoltaic system with photovoltaic modules to IEC 60904, mounted on fixed rack with G.I./aluminium frame, protecting diode, inverter, smart inverter, isolating transformer, data logger, circuit breaker, connectors, distribution board, power and control cable, cable containment work, fixing and wiring works, structurally support, controller, surge protection device and all necessary accessories: - (Cont'd)

Item		Multi-crystalline type photovoltaic panel with anti-reflective coating having a reflectance <= 4% comply to ISO9050 or equivalent : - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30841	Supply and fix modules of power 180 - 250 Wp	42,263.70	33,810.96	30,993.39	29,021.08	28,175.80	26,203.50	24,653.83	23,385.91	30841
30842	Ditto 250 - 300 Wp	42,415.20	34,043.78	31,253.31	29,299.98	28,462.83	26,509.50	24,974.74	23,719.03	30842
30843	Ditto 300 - 350 Wp	42,566.70	34,274.49	31,510.41	29,575.57	28,746.35	26,811.49	25,291.26	24,047.42	30843
30844	Ditto 350 - 400 Wp	58,544.22	47,285.72	43,532.88	40,905.90	39,780.04	37,153.06	35,089.01	33,400.23	30844
30845	Ditto 400 - 450 Wp	58,696.00	47,551.00	43,836.00	41,236.00	40,121.00	37,521.00	35,478.00	33,806.00	30845
30846	Ditto 450 - 500 Wp	58,848.00	47,814.00	44,136.00	41,561.00	40,458.00	37,883.00	35,860.00	34,205.00	30846
30847	Ditto 500 - 550 Wp	58,999.00	48,073.00	44,431.00	41,882.00	40,790.00	38,240.00	36,237.00	34,598.00	30847
30848	Ditto 550 - 600 Wp	74,499.00	60,871.00	56,328.00	53,148.00	51,786.00	48,606.00	46,107.00	44,063.00	30848
30849	Ditto 600 - 750 Wp	74,650.00	61,159.00	56,662.00	53,514.00	52,165.00	49,017.00	46,544.00	44,520.00	30849
30850	Ditto 750 - 900 Wp	90,751.28	74,545.70	69,143.83	65,362.52	63,741.97	59,960.67	56,989.64	54,558.81	30850
30851	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	10,734.19	8,924.47	8,321.22	7,899.01	7,717.98	7,295.78	6,963.76	6,692.54	30851
30852	Take down and cart away the above multi-crystalline type photovoltaic panel with anti-reflective coating	976.00	976.00	976.00	976.00	976.00	976.00	976.00	976.00	30852
30853	Take down and set aside for re-use ditto	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	30853
30854	Fix only ditto	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	30854

PHOTOVOLTAIC SYSTEM (CONT'D)

Item		Photovoltaic system with copper indium gallium diselenide (CIGS) flexible type modules,smart inverter, data logger, circuit breaker, connectors, cable containment works, fixing and wiring works, structurally support, controller and all necessary accessories: - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30855	Supply and fix modules of power 70 - 100Wp	21,193.32	14,959.99	12,882.21	11,635.54	11,012.21	9,557.76	8,622.76	7,687.76	30855
30856	Ditto 100 - 150Wp	21,401.10	15,167.77	13,089.99	11,843.32	11,219.99	9,765.54	8,830.54	7,895.54	30856
30857	Ditto 150 - 200 Wp	21,608.88	15,375.55	13,297.77	12,051.10	11,427.77	9,973.32	9,038.32	8,103.32	30857
30858	Ditto 200 - 250 Wp	21,816.66	15,583.33	13,505.55	12,258.88	11,635.55	10,181.10	9,246.10	8,311.10	30858
30859	Ditto 250 - 300 Wp	22,024.44	15,791.11	13,713.33	12,466.66	11,843.33	10,388.88	9,453.88	8,518.88	30859
30860	Ditto 300 - 350 Wp	22,440.00	16,206.67	14,128.89	12,882.22	12,258.89	10,804.44	9,869.44	8,934.44	30860
30861	Ditto 350 - 400 Wp	30,158.00	21,933.09	19,191.45	17,546.47	16,723.98	14,804.84	13,571.10	12,337.36	30861
30862	Ditto 400 - 450 Wp	30,706.33	22,481.42	19,739.78	18,094.80	17,272.31	15,353.17	14,119.43	12,885.69	30862
30863	Ditto 450 - 500 Wp	31,254.66	23,029.75	20,288.11	18,643.13	17,820.64	15,901.50	14,667.76	13,434.02	30863
30864	Ditto 500 - 550 Wp	31,802.99	23,578.08	20,836.44	19,191.46	18,368.97	16,449.83	15,216.09	13,982.35	30864
30865	Ditto 550 - 600 Wp	32,351.32	24,126.41	21,384.77	19,739.79	18,917.30	16,998.16	15,764.42	14,530.68	30865
30866	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	365.55	365.55	365.55	365.55	365.55	365.55	365.55	365.55	30866
30867	Take down and cart away the above CIGS flexible type panels	976.00	976.00	976.00	976.00	976.00	976.00	976.00	976.00	30867
30868	Take down and set aside for re-use ditto	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	30868
30869	Fix only ditto	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	30869

PHOTOVOLTAIC SYSTEM (CONT'D)

Item		Mono-crystalline type flexible photovoltaic panel ,smart inverter, data logger,circuit breaker, connectors, cable containment works, fixing and wiring works, structurally support, controller and all necessary accessories: - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30870	Supply and fix module of power 70 - 100Wp	20,565.80	14,270.14	12,171.58	10,912.49	10,282.88	8,813.93	7,869.58	6,925.23	30870
30871	Ditto 100 - 150Wp	20,985.52	14,689.86	12,591.30	11,332.20	10,702.60	9,233.64	8,289.29	7,344.94	30871
30872	Ditto 150 - 200 Wp	21,405.24	15,109.58	13,011.02	11,751.91	11,122.32	9,653.35	8,709.00	7,764.65	30872
30873	Ditto 200 - 250 Wp	21,824.96	15,529.30	13,430.74	12,171.62	11,542.04	10,073.06	9,128.71	8,184.36	30873
30874	Ditto 250 - 300 Wp	22,244.68	15,949.02	13,850.46	12,591.33	11,961.76	10,492.77	9,548.42	8,604.07	30874
30875	Ditto 300 - 350 Wp	22,664.40	16,368.74	14,270.18	13,011.04	12,381.48	10,912.48	9,968.13	9,023.78	30875
30876	Ditto 350 - 400 Wp	30,459.58	22,152.42	19,383.36	17,721.93	16,891.22	14,952.89	13,706.81	12,460.73	30876
30877	Ditto 400 - 450 Wp	31,013.39	22,706.23	19,937.18	18,275.75	17,445.03	15,506.70	14,260.62	13,014.55	30877
30878	Ditto 450 - 500 Wp	31,567.21	23,260.05	20,490.99	18,829.56	17,998.85	16,060.52	14,814.44	13,568.36	30878
30879	Ditto 500 - 550 Wp	32,121.02	23,813.86	21,044.80	19,383.37	18,552.66	16,614.33	15,368.25	14,122.17	30879
30880	Ditto 550 - 600 Wp	32,121.02	23,813.86	21,044.80	19,383.37	18,552.66	16,614.33	15,368.25	14,122.17	30880
30881	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	369.21	369.21	369.21	369.21	369.21	369.21	369.21	369.21	30881
30882	Take down and cart away the above mono-crystalline type flexible panels	976.00	976.00	976.00	976.00	976.00	976.00	976.00	976.00	30882
30883	Take down and set aside for re-use ditto	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	1,151.00	30883
30884	Fix only ditto	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	30884

PHOTOVOLTAIC SYSTEM (CONT'D)

Item		Photovoltaic system with thin-film amorphous silicon type photovoltaic cells, smart inverter, data logger, circuit breaker, connectors, cable containment works, fixing and wiring works, structurally support, controller and all necessary accessories:- (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30885	Supply and fix modules of power 70 - 100Wp	15,680.08	15,635.68	15,562.62	14,627.29	13,358.85	12,109.09	11,061.84	9,799.68	30885
30886	Ditto 100 - 150Wp	16,312.77	16,268.00	16,194.38	15,258.98	13,990.99	12,741.22	11,694.13	10,432.43	30886
30887	Ditto 150 - 200 Wp	16,945.35	16,900.19	16,826.03	15,890.53	14,622.95	13,373.14	12,326.18	11,064.87	30887
30888	Ditto 200 - 250 Wp	23,193.99	23,133.86	23,035.30	21,800.79	20,128.70	18,479.52	17,098.19	15,434.31	30888
30889	Ditto 250 - 300 Wp	24,028.39	23,967.69	23,868.45	22,633.81	20,962.17	19,312.89	17,931.67	16,268.19	30889
30890	Ditto 300 - 350 Wp	24,862.67	24,801.38	24,701.47	23,466.69	21,795.48	20,146.09	18,764.96	17,101.79	30890
30891	Ditto 350 - 400 Wp	25,696.82	25,634.92	25,534.36	24,299.44	22,628.62	20,979.11	19,598.04	17,935.16	30891
30892	Ditto 400 - 450 Wp	26,530.84	26,468.33	26,367.15	25,132.09	23,461.62	21,811.98	20,430.96	18,768.33	30892
30893	Ditto 450 - 500 Wp	27,364.77	27,301.63	27,199.82	25,964.62	24,294.50	22,644.71	21,263.74	19,601.32	30893
30894	Ditto 500 - 600 Wp	28,058.99	27,994.84	27,892.23	26,516.46	24,846.50	23,196.17	21,814.89	20,152.29	30894
30895	Add to last item for each additional 100Wp or part thereof, up to 3000Wp	462.81	462.14	461.61	367.89	368.00	367.64	367.43	367.31	30895
30896	Take down and cart away the above thin-film amorphous silicon type panels	195.20	195.20	195.20	195.20	195.20	195.20	195.20	195.20	30896
30897	Take down and set aside for re-use ditto	230.24	230.24	230.24	230.24	230.24	230.24	230.24	230.24	30897
30898	Fix only ditto	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	30898

		Photovoltaic system with walkable monocrystalline type photovoltaic cell, clear or opal surface tratment with R10-R12 anti-skid to DIN 51 130 or equivalent, IP68, maximum loading allowable not less than 20kPa, smart inverter, data logger, circuit breaker, connectors, wiring works, structurally support, controller and all necessary accessories:- (Total maximum power of PV module under standard test condition)								
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30899	Supply and fix modules of power 18 - 22Wp	22,248.76	15,954.78	13,857.13	12,385.15	11,755.79	10,287.37	9,128.70	8,184.35	30899
30900	Take down and cart away the above walkable monocrystalline type panels	390.41	390.41	390.41	390.41	390.41	390.41	390.41	390.41	30900
30901	Take down and set aside for re-use ditto	460.48	460.48	460.48	460.48	460.48	460.48	460.48	460.48	30901
30902	Fix only ditto	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	1,200.00	30902

PHOTOVOLTAIC SYSTEM (CONT'D)

Item		Building integrated photovoltaic system with mono-crystalline PV panels in the form of double-glazed panels c/w integrated PV cells, mounted horizontally/ vertically as glass panel, smart inverter, data logger, circuit breaker, connectors, wiring works, structurally support, controller and all necessary accessories: - (Total maximum power of PV module under standard test condition)								Item
		Total number of PV panels								
		Up to 20	20 to 40	40 to 60	60 to 80	80 to 100	100 to 150	150 to 200	200 or above	
		A $	B $	C $	D $	E $	F $	G $	H $	
	Each									
30903	Supply and fix modules of power 70 - 90Wp	18,713.00	15,834.00	14,874.00	14,395.00	13,147.00	12,475.00	12,139.00	10,748.00	30903
30904	Ditto 115 - 135Wp	28,069.00	24,326.00	23,079.00	22,455.00	20,833.00	19,960.00	19,524.00	17,715.00	30904
30905	Ditto 135 - 270Wp	68,614.00	60,542.00	57,851.00	56,506.00	53,008.00	51,124.00	50,182.00	46,281.00	30905
30906	Ditto 270 - 350Wp (The actual rate should be : $109,158.00 for Item 30906A)	10,915.80	97,668.00	93,838.00	91,923.00	86,943.00	84,262.00	82,922.00	77,368.00	30906
30907	Ditto 360 - 470Wp (The actual rate should be : $146,584.00 for Item 30907A) (The actual rate should be : $132,624.00 for Item 30907B) (The actual rate should be : $127,970.00 for Item 30907C) (The actual rate should be : $125,643.00 for Item 30907D) (The actual rate should be : $119,594.00 for Item 30907E) (The actual rate should be : $116,337.00 for Item 30907F) (The actual rate should be : $114,708.00 for Item 30907G) (The actual rate should be : $107,960.00 for Item 30907H)	14,658.40	13,262.40	12,797.00	12,564.30	11,959.40	11,633.70	11,470.80	10,796.00	30907
30908	Take down and cart away the above building integrated photovoltaic panels	1,418.99	1,418.99	1,418.99	1,418.99	1,418.99	1,418.99	1,418.99	1,418.99	30908
30909	Take down and set aside for re-use ditto	2,837.97	2,837.97	2,837.97	2,837.97	2,837.97	2,837.97	2,837.97	2,837.97	30909
30910	Fix only ditto	4,256.96	4,256.96	4,256.96	4,256.96	4,256.96	4,256.96	4,256.96	4,256.96	30910

Sundires : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
30911	LCD video display unit, active screen size 480mm diagonally measured, colour display, min. of 1024x768 pixels resolutions c/w all necessary meters, cable and wiring, conduits and trunkings, software and dashboard graphic	26,456.46	12.76	15.05	34.76	30911
30912	Ditto active screen size 480 - 546mm diagonally measured, colour display with min. 3840x2160 pixels resolution	26,654.46	12.76	15.05	34.76	30912
30913	Ditto active screen size 546 - 711mm diagonally measured, colour display with min. 3840x2160 pixels resolution	27,004.46	12.76	15.05	34.76	30913
30914	Ditto active screen size 711 - 1080mm diagonally measured, colour display with min. 3840x2160 pixels resolution	28,784.46	12.76	15.05	34.76	30914
30915	Ditto active screen size 1080 - 1270mm diagonally measured, colour display with min. 3840x2160 pixels resolution	29,594.46	12.76	15.05	34.76	30915
30916	Ditto active screen size 1270 - 1397mm diagonally measured, colour display with min. 3840x2160 pixels resolution	30,216.46	12.76	15.05	34.76	30916
30917	Energy Management and Monitoring System with data logging function for photovoltaic (PV) system include workstation c/w mouse and keyboard, LCD/ LED display monitor of viewable size not less than 530mm (21" diagonally), A3 ink/ laser printer capacble of handing coninuous paper, software, software license and all necessary accessaries, e.g. HDMI cables, Control Cables	14,250.00	-	-	-	30917
30918	Independent calibrated microclimate station including temperature sensor, anemometer, rain sensor, solar irradiance, UV sensor, power and control cable and all necessary accessories to record weather data for estimating the electricity generated from photovoltaic (PV) system	26,600.00	-	-	-	30918
30919	DDC Controller/ Programmable Logic Controller c/w Control Panels, microprocessor, memories, Input/Output Modules, Communication Modules, program/ software, program/ software license, other necessary hardware, cabling and accessories for photovoltaic (PV) system	19,000.00	-	-	-	30919

RECONDITIONING OF LAMP POLE

Refurbishment of lamp pole including surface reconditioning, apply coating with priming paint and finishing paint of identical colours, replacement of safety chain where applicable : -

Item		Rate A $	Item
	Each		
30920	For lamp pole height up to 4.5 m	5,635.90	30920
30921	For lamp pole height 4.5 m to 7.5 m	7,331.09	30921
30922	For lamp pole height 7.5 m to 12 m	9,613.51	30922
30923	For lamp pole height above or equal to 12 m	12,767.37	30923

SUNDRIES

Labour to disconnect all existing electrical installation for an area inside a building, take down and clear the entire electrical installation inside the area (area shall be measured net on the gross floor area of the building covered by the electrical installation) : -

Item		Rate A $	Item
	Per square metre		
30924	For area up to 100 m²	30.50	30924
30925	For area 101 - 500 m²	30.04	30925
30926	For area above 500 m²	29.47	30926

GEARED MOTOR

Geared motor, 24V DC, brushed finishes, including enclosure: -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30927	For power rating up to 10W	1,459.70	29.64	37.69	114.70	30927
30928	For power rating 10W - 20W	1,998.07	29.64	37.69	114.70	30928
30929	For power rating 20W - 30W	2,977.43	29.64	37.69	114.70	30929

PORTABLE INDUCTION LOOP SYSTEM

Portable induction loop system c/w microphone, amplifier, rechargeable battery and charger and aerial : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
30930	Portable induction loop system (one to one type)	2,623.74	85.67	108.23	582.06	30930

Section 31

LOW VOLTAGE CUBICLE SWITCHBOARD

SECTION 31

LOW VOLTAGE CUBICLE SWITCHBOARD

SPECIAL CONDITIONS

Measurement generally **SC31.01**

For the avoidance of doubt, all rates in this Section shall only apply to the works executed by the Approved Suppliers of Materials and Specialist Contractors for Public Works : Low Voltage Cubicle Switchboard Installation.

Unless otherwise specified separately in items under this Section, switchboard cubicle shall be measured on the basis of complete unit.

All electrical and other related work items except those items specifically included in this Section shall be measured and paid for at the appropriate rates under Section 28 - Electrical Installation - Small Power Distribution, Section 29 - Electrical Installation - Main Distribution Systems and Section 30 - Electrical Installation - Miscellaneous or other applicable Work Sections of this Schedule.

Measurement of multi-cubicle type switchboard **SC31.02**

The multi-cubicle type switchboard shall consist of cubicle columns (items are included in this Section) to accommodate different arrangement of switchgear, protective and metering units. To facilitate payment, the basic cubicle column shall consist of two base types basing on their panel widths : -

Type A Cubicle Column : cubicle width - 750mm to 900mm

The cubicle column with this width shall accommodate the major switchgear units, such as air circuit breakers (ACB), automatic changeover units, MCCBs, fuseswitches and overcurrent and earth fault relays units for ACBs etc. It may also accommodate some switchgear units of smaller ratings together with the major units in the same cubicle column as indicated in the Works Order.

Type B Cubicle Column : cubicle width - 350mm to 450mm

The cubicle column with this width shall accommodate largely the smaller switchgear units, such as MCCBs, fuseswitches, switchfuses, isolators etc. of smaller ratings.

The arrangement of a whole cubicle switchboard as specified by the Works Order shall be a combination of different cubicle columns with the abovementioned width types to suit different requirements as required by the Works Order. The rate for the combined switchboard cubicle shall be the summation of the single and/or multiples of the rates of the cubicle columns items under this Section which also describes the requirements on the height and depth of the cubicle columns. The side end panels of the utmost left and right cubicle columns shall be deemed to be included in the rates.

SPECIAL CONDITIONS

Measurement of temporary supply **SC31.03**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

Rates generally **SC31.04**

The rates for all items shall generally include for : -

(a) Colour band and colour identification work.

(b) Lettering and engraving for identification, signs, labels in both English and Chinese.

(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.

(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.

(e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.

(f) Any kind of fixing method including drilling of the background and provision of all supporting frames, fixings, hangers, brackets, nails, bolts, nuts, holes, screws, plugs, shotfired pins and the like.

(g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.

(h) Provision of all indication lamps.

(i) Earth/equipotential bonding.

(j) Design and submission of design drawings and the like.

SPECIAL CONDITIONS

Rates generally (Cont'd) **SC31.04 (Cont'd)**

(k) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.

(l) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.

(m) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.

(n) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.

(o) Provision all necessary power, labour and testing instrument of approved type for testing and commissioning.

(p) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.

(q) Provision of framed schematic diagrams c/w clear plastic front sheet and wooden back plate including fixing to wall.

(r) Provision of complete set of spare fuses complete with spare fuse board as specified.

(s) Provision of manufacturer's guarantee.

Rates for "Take down and clear away" or "Take down and set aside for re-use" **SC31.05**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with low voltage cubicle switchboard installation shall further include for : -

(a) Taking down all associated building services works.

(b) Plugging off remaining ends with plugs or caps as required.

(c) Preparing remaining ends of building services works to receive connections with new work if required.

(d) Making good all works disturbed.

Particular Specification **SC31.06**

The Particular Specification for low voltage cubicle switchboard can be found in the Contract.

LOW VOLTAGE CUBICLE SWITCHBOARD

Multi-cubicle type switchboard, factory built assembly (suitable for incoming/ outgoing cabling from top or bottom), height : 2 to 2.2 m, depth : 1 to 1.5 m c/w compartments for switchgear/ busbars/ cables, segregations, door/ panels, indication labels, engraved labels, push buttons, selector switches, all interconnecting, control and ancillary wiring and fixings, earth terminals, rubber insulating mat, operating handles and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31001	Type A cubicle column (750 - 900 mm)	33,940.43	2,726.42	2,825.71	4,214.66	31001
31002	Type B cubicle column (350 - 450 mm)	27,032.18	2,315.21	2,437.68	3,971.14	31002

Draw-out type air-circuit breaker c/w DC shunt trip coil/ release, electrical and mechanical interlock device and keys, control wiring and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31003	400A; 3-pole	21,400.46	1,485.36	1,646.40	2,633.23	31003
31004	500A; 3-pole	21,926.12	1,485.36	1,646.40	2,633.23	31004
31005	600A; 3-pole	22,376.64	1,485.36	1,646.40	2,633.23	31005
31006	800A; 3-pole	22,677.01	1,542.34	1,703.64	2,756.65	31006
31007	1000A; 3-pole	24,404.06	1,545.57	1,712.38	2,779.63	31007
31008	1200A; 3-pole	25,980.91	1,548.82	1,720.37	2,800.76	31008
31009	1500/ 1600A; 3-pole	28,759.25	1,616.93	1,797.20	2,909.21	31009
31010	2000A; 3-pole	33,940.43	1,690.95	1,894.73	3,067.27	31010
31011	2500A; 3-pole	37,694.88	1,697.37	1,905.77	3,096.27	31011
31012	3000/ 3200A; 3-pole	41,749.70	1,767.20	1,984.86	3,239.80	31012
31013	400A; 4-pole	22,158.90	1,503.53	1,675.18	2,707.62	31013
31014	500A; 4-pole	22,519.32	1,503.53	1,675.18	2,707.62	31014
31015	600A; 4-pole	22,752.10	1,503.53	1,675.18	2,707.62	31015
31016	800A; 4-pole	23,420.38	1,561.95	1,734.47	2,838.30	31016
31017	1000A; 4-pole	25,365.20	1,564.17	1,740.70	2,855.04	31017
31018	1200A; 4-pole	26,761.86	1,568.24	1,746.46	2,870.60	31018
31019	1500/ 1600A; 4-pole	29,089.62	1,632.13	1,824.06	2,980.25	31019
31020	2000A; 4-pole	39,346.84	1,704.63	1,917.96	3,128.65	31020
31021	2500A; 4-pole	43,702.03	1,708.91	1,928.03	3,155.46	31021
31022	3000/ 3200A; 4-pole	49,416.34	1,776.72	2,001.75	3,285.08	31022

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Four-pole air-circuit breaker (ACB) for automatic transfer switch c/w DC shunt trip coil/ release, electrical and mechanical interlock device and keys, control wiring and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31023	1500/ 1600A	43,551.86	2,721.61	3,056.32	6,345.73	31023
31024	2000A	46,555.43	2,782.15	3,119.58	6,462.09	31024

Four-pole automatic changeover switch c/w E&M interlock : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31025	200A	9,386.17	222.28	235.65	569.79	31025
31026	300A	10,670.21	222.28	235.65	569.79	31026

Four-pole automatic changeover contactor c/w E&M interlock : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31027	400A	13,516.08	217.23	231.05	530.47	31027
31028	500A	18,772.36	217.23	231.05	530.47	31028
31029	600/ 630A	28,533.97	217.23	231.05	530.47	31029
31030	800A	36,793.82	220.11	235.31	538.66	31030
31031	1000A	39,046.50	220.11	235.31	538.66	31031

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Moulded case circuit breaker (MCCB) for automatic transfer switch c/w electrical and mechanical interlock device and all necessary accessories; four-pole type : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31032	200A	28,533.97	217.23	231.05	530.47	31032
31033	300A/ 400A	39,046.50	217.23	231.05	530.47	31033
31034	500A/ 600A	43,777.12	217.23	231.05	530.47	31034

Moulded case circuit breaker (MCCB); breaking capacity 50 kA r.m.s. c/w shunt trip coil, wiring and all necessary accessories; three-pole type : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31035	32A to 63A	2,132.54	256.27	269.95	496.51	31035
31036	100A to 200A	2,868.43	263.61	280.21	532.41	31036
31037	225A to 400A	4,152.46	277.91	291.75	569.43	31037
31038	500A	5,856.98	299.31	316.90	658.23	31038
31039	600/ 630A	6,622.89	300.08	317.60	677.36	31039
31040	800A	8,920.64	303.02	322.40	699.54	31040

Moulded case circuit breaker (MCCB); breaking capacity 50 kA r.m.s. c/w shunt trip coil, wiring and all necessary accessories; four-pole type : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31041	100A to 200A	3,394.03	276.00	286.76	556.53	31041
31042	225A to 400A	5,173.69	280.73	294.60	586.92	31042
31043	500A	8,237.30	301.16	319.84	671.02	31043
31044	600/ 630A	8,237.30	301.92	320.57	690.89	31044
31045	800A	10,414.91	304.21	324.51	709.53	31045

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Fuse-switch; TP&N c/w fuses : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
31046	32A	1,351.63	180.82	183.66	356.88	31046
31047	63A	1,501.78	180.82	183.66	356.88	31047
31048	100A	1,651.97	180.82	183.66	356.88	31048
31049	200A	2,102.50	186.24	192.62	392.32	31049
31050	300A	3,604.29	199.06	204.88	472.09	31050
31051	400A	3,904.67	205.50	209.00	475.54	31051
31052	500A	4,580.46	218.97	229.94	614.81	31052
31053	600A	5,856.98	219.27	230.15	615.36	31053

Isolating switch; TP & N : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
31054	32A	938.63	189.72	209.87	451.21	31054
31055	63A	1,201.43	189.72	209.87	451.21	31055
31056	100A	1,389.16	189.72	209.87	451.21	31056
31057	200A	1,877.24	194.62	209.87	480.02	31057
31058	300A	3,153.75	202.68	219.42	548.78	31058
31059	400A	3,664.37	202.68	219.42	548.78	31059
31060	500A	4,392.73	216.27	235.50	632.66	31060
31061	600A	5,106.08	216.27	235.50	632.66	31061

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Power factor correction module; 25kVAr at 380V nominal voltage per stage control c/w capacitor banks, automatic switching facilities, fuses, control relays, contactors, ammeters and all necessary control accessories; wiring and interconnection with other devices for functioning : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31062	150 kVAr	22,091.30	596.17	626.54	1,752.55	31062
31063	200 kVAr	29,727.91	784.03	815.79	2,126.92	31063
31064	250 kVAr	36,418.35	972.18	1,005.19	2,417.66	31064
31065	300 kVAr	42,846.01	1,159.65	1,195.30	3,413.44	31065
31066	Add to last item for each additional 50 kVAr	5,856.98	187.39	190.22	618.88	31066

Real time power factor correction module; 25/ 50kVAr at 380V nominal voltage per stage control c/w capacitor banks, automatic switching facilities, fuses, control relays, ammeters and all necessary control accessories; wiring and interconnection with other devices for functioning : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31067	150 kVAr (The actual rate should be : $108,879.70 for Item 31067A)	10,887.97	596.17	626.54	1,752.55	31067
31068	200 kVAr (The actual rate should be : $119,992.90 for Item 31068A)	11,999.29	784.03	815.79	2,126.92	31068
31069	250 kVAr (The actual rate should be : $128,402.90 for Item 31069A)	12,840.29	972.18	1,005.19	2,417.66	31069
31070	300 kVAr (The actual rate should be : $136,662.80 for Item 31070A)	13,666.28	1,159.65	1,195.30	3,413.44	31070

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Sundries : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31071	Electro-mechanical type earth fault relay (single element) c/w wiring and accessories	4,888.33	238.36	257.97	561.66	31071
31072	Electro-mechanical type overcurrent relay (three element) c/w wiring and accessories	11,128.26	332.58	368.58	766.57	31072
31073	Microprocessor-based digital protection relay c/w wiring and accessories	12,187.01	310.22	342.58	648.10	31073
31074	Secondary battery system comprising trickle type battery chargers, sealed Ni-Cd/ Ni-MH batteries, voltmeter, ammeter and battery test facilities, for voltage rating below 50V D.C.	9,102.56	453.59	493.46	993.02	31074
31075	Voltmeter and associated wiring	1,787.13	275.41	281.79	426.21	31075
31076	Ammeter and associated wiring	1,674.49	275.41	281.79	426.21	31076
31077	Power factor meter and associated wiring	3,153.75	264.30	278.60	630.65	31077
31078	Maximum demand indicating meter and associated wiring	1,088.81	202.60	226.68	275.63	31078
31079	Microprocessor based digital multifunction power meter c/w all necessary interconnection wiring for functioning	5,128.83	293.90	324.91	545.87	31079
31080	Microprocessor based digital power analyzer c/w all necessary interconnection wiring for functioning	9,803.08	422.87	605.80	691.38	31080
31081	Anti-condensation heaters and thermostats in switchboard c/w with wiring and accessories	1,818.72	267.69	271.75	407.93	31081
31082	Undervoltage relay	848.51	179.48	203.38	238.83	31082

Current transformer (for protection) including all wiring and accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31083	200 or 300 or 400 or 500/ 5A	675.80	167.07	187.02	283.53	31083
31084	600 or 800 or 1000/ 5A	713.37	167.07	187.02	283.53	31084
31085	1200 or 1500/ 5A	735.89	167.07	187.02	283.53	31085
31086	1600 or 2000/ 5A	765.90	170.00	190.07	287.96	31086
31087	2250 or 2500/ 5A	788.46	174.73	195.11	298.86	31087
31088	3000/ 5A	863.53	176.68	197.23	304.64	31088
31089	3200/ 5A	938.63	176.68	197.23	304.64	31089

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Current transformer (for measurement) including all wiring and accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
31090	200/ 5A	450.52	167.07	187.02	283.53	31090
31091	300 or 400/ 5A	465.55	167.07	187.02	283.53	31091
31092	500 or 600/ 5A	473.08	167.07	187.02	283.53	31092
	Each					
31093	800/ 5A	488.08	167.07	187.02	283.53	31093
31094	1000/ 5A	525.62	167.07	187.02	283.53	31094
31095	1200/ 5A	540.66	167.07	187.02	283.53	31095
31096	1500 or 1600/ 5A	563.17	167.07	187.02	283.53	31096
31097	2000/ 5A	578.19	167.07	187.02	283.53	31097
31098	2250/ 5A	585.71	167.07	187.02	283.53	31098
31099	2500/ 5A	615.75	167.07	187.02	283.53	31099
31100	3000 or 3200/ 5A	645.77	167.07	187.02	283.53	31100

Copper busbar, triple pole and full neutral, enclosed inside switchboard c/w insulation and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear meter					
31101	400A	3,123.71	107.38	115.52	321.54	31101
31102	600A	3,439.10	114.06	124.53	342.89	31102
31103	800A	4,114.91	119.19	129.80	363.93	31103
31104	1000A	4,520.39	125.62	136.32	383.24	31104
31105	1500A	6,412.62	131.07	142.62	399.03	31105
31106	2000A	7,786.76	136.22	147.77	414.45	31106
31107	2500A	9,664.00	147.26	159.67	456.09	31107
31108	3000A	11,263.41	147.26	159.67	456.09	31108
	Each					
31109	Portable earthing equipment for main incoming air circuit breaker	4,220.02	197.95	210.84	514.56	31109
31110	Hydraulic operated truck for handling air circuit breaker, and all necessary accessories	7,493.92	319.84	423.59	905.02	31110

Item

Item

LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)

Copper busbar, triple pole and full neutral, enclosed inside switchboard c/w insulation and all necessary accessories : - (Cont'd)

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Per square meter					
31111	Rubber mats; ribbed surface comply with BS 921 or IEC 6111, laid in front of and at the rear of switchboard; minimum 10mm thick continuous sheet	750.91	40.61	48.73	203.11	31111

Section 36

HEATING, VENTILATION AND AIR-CONDITIONING - PIPEWORK

SECTION 36

HEATING, VENTILATION AND AIR-CONDITIONING

SPECIAL CONDITIONS

(Note: The following special conditions shall apply equally where appropriate to rates under Sections 36 to 39)

Measurement of power supply	**SC36.01**	All works of electrical power supply up to power supply points (e.g. MCB switchboard or switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Sections 28 to 30 or other applicable Work Sections of this Schedule.
Measurement of water supply or gas supply	**SC36.02**	All works of water supply and gas supply up to the respective termination points for the equipment and boilers shall be measured separately and paid for at the appropriate rates under applicable Work Sections of this Schedule.
Measurement of pipework	**SC36.03**	Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches (but not through the items of in-line equipment, headers and trapping sets).
Measurement of ductwork	**SC36.04**	Ductwork rectangular in section shall be measured in square metres whereas ductwork circular and oval in section shall be measured in linear metres. All types of ductwork shall be measured over all in-line fittings, short running lengths and branches (but not through the items of in-line equipment). Ductwork rectangular in section shall be measured net as the area of sheet material fabricated. Allowance for seams, joints and the like shall be included in the rates.
Measurement of insulation to rectangular ductwork	**SC36.05**	Insulation to ductwork rectangular in section shall be measured in square metres and to the net area in contact with the base of all ducting as installed and over all ducting fittings and joints.
Measurement of insulation to pipework	**SC36.06**	Insulation to pipework shall be measured in linear metres for the diameter of the pipes to be insulated.

SPECIAL CONDITIONS

Measurement of temporary supply

SC36.07

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

Rates generally

SC36.08

The rates for all items shall generally include for : -

(a) Colour band and colour identification work.

(b) Lettering and engraving for identification, signs, labels in both English and Chinese.

(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.

(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.

(e) All supports in outdoor environment which shall be hot dip galvanized, unless they are part of the ex-factory painted proprietary equipment in which case the ex-factory paint finish may be accepted.

(f) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.

(g) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, spring compensated and seismic restraints and isolated components and the like.

(h) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.

SPECIAL CONDITIONS

Rates generally (Cont'd) **SC36.08 (Cont'd)**

(i) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.

(j) Preparing and submitting detail working drawings and combined services drawings as required and all shop drawings for the fabrication and installation.

(k) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.

(l) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.

(m) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.

(n) Submitting all relevant documentation to Fire Services Department and obtaining necessary approval.

(o) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works including soft copies as required.

(p) Provision of schematic diagrams in plastic envelopes including fixing to wall.

(q) Provision of manufacturer's guarantee.

(r) Attending fault and complaint during the Maintenance Period.

(s) Meeting statutory requirements for disposal of waste materials

(t) Submission of sample board for all compact sized materials and accessories, and supply of samples of materials for testing (including testing to destruction).

Rates for equipment **SC36.09**

The rates for equipment (e.g. chillers, heat pumps, air handling units, variable refrigerant volume air-conditioning units, fresh air pre-conditioner, split type air-conditioning units, fan coil units, room coolers, fans, pumps, tanks, heat exchangers and the like) shall further include for : -

(a) All necessary assembly, orientation, alignment, levelling, lifting and bolting down facilities, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.

(b) All supporting frames required for proper installation of equipment except the supporting frames for floor slab structure, reinforcement or other special requirements. When the equipment supporting beams have to be extended beyond the requirements, or have to be incorporated into the elevated structure, the extra structural cost of the supporting frames shall be measured separately and paid for at the appropriate rates under Section 10 Steel and Metal Work. For major equipment or equipment as requested by the Maintenance Surveyor, the Contractor shall submit the installation and structural details of the supporting frames for endorsement by the Maintenance Surveyor before carrying out the installation works.

SPECIAL CONDITIONS

Rates for equipment (Cont'd) **SC36.09 (Cont'd)**

(c) Connections including flexible joints between pipework and equipment.

(d) All necessary operational and control accessories (e.g. valves, gauges, mechanical flow meters, indicating lamps and the like) forming part of the equipment, connection and termination.

(e) Condensate drain pipes forming part of the equipment.

(f) Final connection and terminations to electrical supply, fire alarm, control, monitoring, interfacing and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, short lengths of pipework and necessary accessories required for energizing the equipment to properly operate at specified duties.

(g) Anti-vibration mountings for plant, machinery and the like.

(h) Anti-vibration materials and sound insulating materials in plant and machinery bases, so that when the installed equipment is put into operation, the resulting noise and vibration level at the location within the building and at the building adjacent or nearby shall not exceed the acceptable limit as promulgated by the latest statutory requirements of the Environmental Protection Department.

(i) Thermal insulation for plant, machinery and the like if required.

(j) Direct-on-line or Star-Delta motor starters (if the equipment requires motor starters).

(k) Earth/ equipotential bonding.

(l) Emergency stop button.

Rates for ductwork generally **SC36.10**

The rates for ductwork (rectangular in section or circular or oval in section) shall further include for :-

(a) All short lengths, cutting and waste, joints including stiffeners and flanges in the running length and forming openings for branches.

(b) All connections to fittings, equipment and ancillaries including flexible connections and providing all necessary materials, bolts, nuts, washers, brackets, supports, hangers and everything necessary for making joints and connections.

(c) Alternative method of jointing and fixing as specified (if any).

(d) Connections between ductwork of different materials.

(e) Spring compensated components of ductwork supports.

(f) Ductwork turns, splitter dampers, mid-feathers, air duct cleaning points, access panels and openings, test holes and covers, flashing plates, companion frames and the like.

(g) In-line fittings (e.g. bends, branches, elbows, reducers, tees, air turning vanes and the like).

(h) All necessary components for earth continuity as specified.

SPECIAL CONDITIONS

Rates for ductwork circular or oval in section

SC36.11 The rates for ductwork circular or oval in section shall, in addition to the appropriate sub-clauses of Clause SC36.10, include for insulation including working or cutting around supports, small drains, vents or similar obstructions, joints, bends, tees, duct fittings, stiffeners, access panels, ancillaries and the like, and provision of adhesive, sealing tapes and vapour barriers, and finishing with aluminium foil or cement plaster and painting or metal cladding as required.

Rates for pipework

SC36.12 The rates for pipework shall further include for : -

(a) All short lengths, cutting and waste, and joints in the running length.

(b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).

(c) All in-line pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.

(d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.

(e) Connections between pipework of different materials and differing grades of same material.

(f) Spring compensated components of pipework supports.

(g) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.

(h) Trapping sets.

(i) Any flanges, unions or other devices used solely for erection purposes.

(j) All jointing including provision of flexible connections and/ or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.

(k) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.

(l) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.

(m) Fixing in any position to floors, walls and ceilings and fixing in chases, ducts, false ceilings and similar positions.

SPECIAL CONDITIONS

Rates for in-line pipework equipment

SC36.13 The rates for in-line pipework equipment (e.g. valves, mechanical flow meters, gauges, strainers and the like) shall further include for : -

(a) Cutting and jointing to pipes and fittings.

(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.

Rates for supervisory panel

SC36.14 The supervisory panel shall be measured on the basis of complete unit monitoring and controlling a series of equipment with interaction. Rates for supervisory panel shall further include for all necessary relays, contactors, circuit protection devices, indicating lamps, push button package and selector switches and the like for the supervising the operation of the whole series of equipment. The cable and cable containment to existing equipment or existing panel shall be measured separately and paid for at the appropriate rates under Sections 28 to 30.

For the avoidance of doubt, every set of pump (i.e. one duty pump and one standby pump), condenser, condensation unit, air handling unit, package chiller, heat pump, contactor for a group of fans or fan coil units shall mean one set of equipment. An evaporator and an outdoor condensing unit of a split unit shall also mean one set of equipment. An actuator for operating a motorized valve or damper shall also be regarded as one set of equipment. Switches and devices (e.g. pressure switch, thermostat, humidistat, level switch, sail switch and the like) that provide contacts for control functions shall not be measured as equipment.

Furthermore, the local control panel which is an integral part of the equipment shall be regarded as a complete monitoring and controlling unit including all necessary relays, contactors, circuit protection devices, indicating lamps, push button package and switches and the like for the efficient operation of the equipment and thus shall not be measured separately. Rather, the costs of which shall be deemed to have been included in the rates of the concerned equipment. Only those switches and devices (sensors/ controllers) for additional functions shall be measured separately and the rates thereof shall include for all necessary control wiring to the local control panel.

Rates for boilers

SC36.15 The rates for boilers shall further include for : -

(a) All necessary assembly, orientation, alignment, levelling, lifting and bolting down facilities, together with the provision of shims and packing pieces, strainers, instrumentation and the like.

(b) Supporting frames.

(c) Provision of associated components.

(d) All necessary operational and control accessories (e.g. heat exchanger, air nozzle, valves, thermostat, control panels, gauges, pumps, switches and the like), connection and termination.

SPECIAL CONDITIONS

Rates for boilers (Cont'd) **SC36.15 (Cont'd)**

(e) Thermal insulation.

(f) Storage tank with copper lining internally and thermal insulation and decoration as specified externally.

(g) Final connection and terminations to electrical supply, fire alarm, control, monitoring, interfacing, water supply and/or gas supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, short lengths of pipework and necessary accessories required for energizing the equipment to properly operate at specified duties.

(h) Earth/ equipotential bonding.

Rates for "Take down and clear away" or "Take down and set aside for re-use" **SC36.16**

The rates for "Take down and clear away" or "Take down and set aside for re-use" existing pipework, ductwork, equipment, boiler and the like shall further include for where applicable : -

(a) All in-line pipework fittings and in-line pipework equipment including brackets, supports, hangers and the like.

(b) Cutting into existing pipework, ductwork and the like in position.

(c) Preparing remaining ends to receive joints with new work if required.

(d) Plugging off remaining ends with plugs or caps as required.

(e) In the case of equipment, boiler and the like, taking down all associated plumbing works and/ or building services work.

(f) Making good all works disturbed.

Rates for insulation to rectangular ductwork **SC36.17**

The rates for insulation to ductwork rectangular in section shall further include for : -

(a) All fixings, adhesive, sealing tapes, vapour barriers and the like.

(b) Forming laps, welts, cut outs, recesses and the like.

(c) Pointing, sealing, trowelling smooth, chamfered and sealed edges and the like.

(d) Working around supports, small drains, vents or similar obstructions.

(e) Working around ducting fittings, stiffeners, joints, access panels, ancillaries and the like.

(f) Forming of angles and all other labour.

(g) Finishing with aluminium foils as required.

SPECIAL CONDITIONS

Rates for insulation to pipework **SC36.18** The rates for insulation to pipework shall further include for : -

(a) Cutting into existing insulation to pipework in position.

(b) Taking down existing insulation either in whole or in part as required.

(c) All preparation work including preparing remaining ends to receive new insulation if required.

(d) All fixings, adhesive, sealing tapes, vapour barriers and the like.

(e) Forming laps, welts, cut outs, recesses and the like.

(f) Pointing, sealing, trowelling smooth, chamfered and sealed edges and the like.

(g) Working around supports, small drains, vents or similar obstructions.

(h) Working around in-line fittings, joints and the like.

(i) Forming of angles and all other labour.

(j) Finishing with aluminium foils as required.

(k) Making good all works disturbed.

Cooling capacity criteria **SC36.19** Cooling capacity shall be based on the following criteria except otherwise specified : -

(i)	Condenser	Condensing air temperature (for air-cooled chiller only)	35℃
		Condensing water entering temperature (for water-cooled chiller only)	32℃
		Condensing water leaving temperature (for water-cooled chiller only)	37℃
(ii)	Chiller	Chilled water return temperature	12.5℃
		Chilled water leaving temperature	7℃
(iii)	Air handling equipment	Entering air on evaporator	27℃ DB 21℃ WB
		Supply air	13℃ DB (Saturated)
(iv)	PAU	Entering air	33℃ DB 28℃ WB

SPECIAL CONDITIONS

Rates for pressure vessels

SC36.20 The rates for pressure vessels shall further include for : -

(a) Supply and installation in accordance with the manufacturer's instructions.

(b) Providing and fixing all accessories, fittings and the like as recommended by the manufacturer.

(c) Any colour and shape.

(d) Providing and fixing with anchor bolts.

(e) Cutting mortice, sinking or drilling in concrete, brick, stone or other surfaces as required.

(f) Grouting into new or existing mortice or holes.

(g) Making good disturbed surfaces.

(h) Masking, protecting and cleaning.

(i) Submission of catalogues, technical literature, operation manuals and manufacturer's guarantee for the approval of the Maintenance Surveyor.

(j) Testing and providing test certificates.

(k) Providing Statutory Inspection Certificate.

SPECIAL CONDITIONS

Rates for Buildings Energy Efficiency Ordinance

SC36.21

(a) In order to fulfill the energy efficiency requirements by the Buildings Energy Efficiency Ordinance, the Contractor is required to appoint a Registered Energy Assessors (REA) at his own cost for the completion and submission of the Form of Compliance - Form EE4 to the EMSD for approval including but not limited to compilation and certification of the required forms and worksheets for the electrical installations, lighting installations and air-conditioning installations, where applicable, including any necessary endorsement fees.

(b) The rates as separately scheduled for the Buildings Energy Efficiency Ordinance submission shall generally include for the preparation of the installation summaries, worksheets, relevant drawings, drawing lists and other supportive documents by the Contractor. The Contractor shall further coordinate with the REA and provide the required information at no extra cost for his submission of the Form of Compliance to the EMSD as required to fulfill the latest requirements of the Buildings Energy Efficiency Ordinance.

Rates for interfacing control for monitoring and /or controlling of existing equipment

SC36.22

The interfacing control shall be measured on the basis of connections between a set of existing equipment/panel and network for controlling and/or monitoring equipment, such as central control and monitoring system or automatic fire alarm system, etc. permitting information exchange. Rates for interfacing control shall further include for all necessary control modules, relays, cables and cable containments, and the like for the efficient operation of the whole series of equipment.

For the avoidance of doubt, every set of pump (i.e. one duty pump and one standby pump), condenser, condensation unit, air handling unit, package chiller, heat pump, contactor for a group of fans or fan coil units shall mean one set of equipment. An evaporator and an outdoor condensing unit of a split unit shall also mean one set of equipment. Equipment/panel connecting to other network/ panel shall also be regarded as one set of equipment. Switches and devices (e.g. pressure switch, thermostat, humidistat, level switch, sail switch and the like) that provide contacts for control functions shall not be measured as equipment.

Particular Specification

SC36.23

The Particular Specification for air-conditioning, heating and ventilation can be found in the Contract.

REFRIGERANT CIRCUIT

Copper refrigerant pipes without insulation of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36001	9 mm	135.81	4.75	5.07	75.05	36001
36002	15 mm	165.91	4.96	5.28	85.52	36002
36003	18 mm	181.74	5.28	5.51	91.12	36003
36004	22 mm	208.15	6.07	6.29	96.80	36004
36005	28 mm	250.97	6.40	6.85	108.73	36005
36006	35 mm	307.39	7.24	7.63	116.58	36006

Copper refrigerant pipes c/w polystyrene insulation, cement plaster, painting and finish of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36007	9 mm	259.05	8.12	8.83	125.62	36007
36008	15 mm	312.14	8.57	9.27	143.74	36008
36009	18 mm	342.22	8.83	9.49	151.86	36009
36010	22 mm	382.30	10.12	11.01	161.39	36010
36011	28 mm	452.57	11.24	11.71	178.98	36011
36012	35 mm	528.74	12.19	12.88	193.89	36012

Copper refrigerant pipes c/w phenolic foam insulation of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36013	9 mm	223.43	5.85	6.14	87.21	36013
36014	15 mm	276.40	6.14	6.46	100.94	36014
36015	18 mm	313.11	6.14	6.67	107.18	36015
36016	22 mm	345.54	7.24	7.57	114.77	36016
36017	28 mm	406.76	7.72	8.05	127.32	36017
36018	35 mm	481.94	8.54	8.84	139.41	36018

REFRIGERANT CIRCUIT (CONT'D)

Copper refrigerant pipes c/w phenolic foam insulation, cement plaster, painting and finish of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36019	9 mm	297.70	8.12	8.83	127.10	36019
36020	15 mm	362.46	8.57	9.27	145.39	36020
36021	18 mm	400.44	8.83	9.49	154.35	36021
36022	22 mm	455.15	10.12	11.01	163.74	36022
36023	28 mm	544.14	11.24	11.71	182.70	36023
36024	35 mm	668.87	12.19	12.88	197.64	36024

Copper refrigerant pipes c/w flexible closed cell elastomeric insulation of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36025	9 mm	198.45	5.85	6.14	86.12	36025
36026	15 mm	240.66	6.14	6.46	100.17	36026
36027	18 mm	260.69	6.14	6.67	107.18	36027
36028	22 mm	290.18	7.24	7.57	115.12	36028
36029	28 mm	344.22	7.72	8.05	127.69	36029
36030	35 mm	419.51	8.54	8.84	138.09	36030

Refrigerant circuit accessories

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Refrigerant stop valves for copper refrigerant pipe diameter : -					
	Each					
36031	9 mm	150.35	24.37	31.80	40.13	36031
36032	15 mm	251.79	27.47	35.87	48.80	36032
36033	18 mm	335.51	27.62	36.84	51.13	36033
36034	22 mm	437.34	28.15	37.50	57.95	36034
36035	28 mm	482.51	28.56	38.17	63.62	36035
36036	35 mm	691.44	29.04	39.28	70.52	36036

REFRIGERANT CIRCUIT (CONT'D)

Refrigerant solenoid valves for copper refrigerant pipe diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A	B	C	D	
	Each	$	$	$	$	
36037	9 mm	586.77	25.11	31.99	37.93	36037
36038	15 mm	696.55	29.63	36.22	44.34	36038
36039	18 mm	1,022.38	29.83	37.02	47.44	36039
36040	22 mm	1,446.88	30.70	37.66	51.21	36040
36041	28 mm	1,899.39	31.35	38.35	60.58	36041
36042	35 mm	2,775.51	32.17	39.49	65.98	36042

Cartridge refrigerant filter/dryer for copper refrigerant pipe diameter : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A	B	C	D	
	Each	$	$	$	$	
36043	9 mm	136.29	26.74	34.08	40.47	36043
36044	15 mm	186.28	31.58	38.54	47.31	36044
36045	18 mm	347.01	31.80	39.47	50.62	36045
36046	22 mm	494.42	32.72	40.13	54.65	36046
36047	28 mm	1,112.76	33.40	40.88	64.62	36047
36048	35 mm	1,344.98	34.27	42.05	70.38	36048

Refrigerant oil separator for copper refrigerant pipe diameter : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A	B	C	D	
	Each	$	$	$	$	
36049	9 mm	550.65	26.74	34.08	43.61	36049
36050	15 mm	868.60	31.58	38.54	51.37	36050
36051	18 mm	1,016.52	31.80	39.47	54.73	36051
36052	22 mm	1,176.41	32.72	40.13	59.07	36052
36053	28 mm	1,240.59	33.40	40.88	68.16	36053
36054	35 mm	1,376.29	34.27	42.05	73.76	36054

REFRIGERANT CIRCUIT (CONT'D)

Refrigerant sight glass of copper refrigerant pipe diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36055	9 mm	184.86	25.11	31.99	40.89	36055
36056	15 mm	215.24	29.63	36.22	48.16	36056
36057	18 mm	238.25	29.83	37.02	51.31	36057
36058	22 mm	267.20	30.70	37.66	55.36	36058
36059	28 mm	302.20	31.35	38.35	63.92	36059
36060	35 mm	720.93	32.17	39.49	68.01	36060

Liquid receiver c/w liquid level gauge, purge valve, pressure relief valve and accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36061	0.02 - 0.03 m^3	3,056.26	25.87	28.34	53.17	36061
36062	0.03 - 0.14 m^3	3,689.23	33.90	36.44	70.25	36062
36063	0.14 - 0.2 m^3	4,584.18	37.75	40.23	77.20	36063
36064	0.2 - 0.3 m^3	5,446.43	41.86	44.27	80.85	36064
36065	0.3 - 0.52 m^3	8,114.63	45.80	48.26	91.34	36065

Gauges c/w stop valve : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36066	Refrigerant high pressure gauge	341.15	31.19	37.28	50.92	36066
36067	Refrigerant low pressure gauge	341.15	31.19	37.28	50.92	36067

REFRIGERANT CIRCUIT (CONT'D)

Refrigerant : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per kg					
36068	Refrigerant (R134a) c/w charging	80.97	-	-	18.65	36068
36069	Refrigerant (R407C) c/w charging	249.84	-	-	18.65	36069
36070	Refrigerant (R410a) c/w charging	325.57	-	-	18.65	36070
36071	Lubricating oil c/w charging	258.36	-	-	18.72	36071

Hi /Lo pressure cut-out : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36072	Hi /Lo pressure cut-out c/w manual reset	505.66	26.07	31.52	42.78	36072

Aluminium metal cladding not less than 0.8mm for insulated refrigerant pipe work of diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
36073	9 mm	132.36	0.67	0.84	10.85	36073
36074	15 mm	142.59	0.76	0.89	11.72	36074
36075	18 mm	148.98	0.84	1.04	12.83	36075
36076	22 mm	152.47	0.96	1.14	13.67	36076
36077	28 mm	158.71	1.14	1.36	14.62	36077
36078	35 mm	170.87	1.36	1.58	15.57	36078

VALVE, PIPE WORKS AND ACCESSORIES

Chilled water pipes

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water pipework (bare pipe) of pipe diameter: -					
	Per linear metre					
36079	25 mm	188.79	4.59	5.09	64.21	36079
36080	32 mm	202.13	5.09	5.72	68.26	36080
36081	40 mm	227.10	5.59	6.22	73.30	36081
36082	50 mm	291.69	6.07	6.60	84.92	36082
36083	65 mm	345.22	7.20	7.79	97.03	36083
36084	80 mm	409.72	8.38	9.01	109.41	36084
36085	100 mm	515.12	9.42	10.12	125.00	36085
36086	125 mm	654.78	13.97	15.14	145.88	36086
36087	150 mm	769.86	15.59	16.90	166.14	36087
36088	200 mm	1,023.61	18.27	20.20	202.87	36088
36089	250 mm	1,079.13	20.68	22.46	241.59	36089
36090	300 mm	1,204.69	23.58	27.05	288.41	36090
	Chilled water pipework c/w 50 mm polystyrene insulation, cement plaster, painting & finish of pipe diameter : -					
	Per linear metre					
36091	20 mm or below	246.00	7.04	8.12	103.41	36091
36092	25 mm	275.79	7.98	8.85	112.29	36092
36093	32 mm	299.68	8.85	9.97	119.59	36093
36094	40 mm	327.99	9.73	10.85	128.42	36094
36095	50 mm	389.17	10.64	11.57	148.78	36095
36096	65 mm	454.61	12.54	13.58	170.14	36096
36097	80 mm	528.02	14.66	15.74	191.78	36097
36098	100 mm	647.34	16.49	17.73	219.71	36098
36099	125 mm	765.77	20.74	22.46	250.79	36099
36100	150 mm	930.61	26.76	29.20	291.11	36100
	Per linear metre					
36101	200 mm	1,087.99	28.95	30.30	342.77	36101
36102	250 mm	1,297.86	32.54	34.54	420.83	36102
36103	300 mm	1,463.52	37.30	41.31	502.48	36103

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water pipes (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water pipework c/w 50 mm phenolic foam insulation, cement plaster, painting & finish of pipe diameter : -					
	Per linear metre					
36104	20 mm or below	408.07	7.04	8.12	103.41	36104
36105	25 mm	472.35	7.98	8.85	112.29	36105
36106	32 mm	527.87	8.85	9.97	119.59	36106
36107	40 mm	573.72	9.73	10.85	128.42	36107
36108	50 mm	685.57	10.64	11.57	148.78	36108
36109	65 mm	812.78	12.54	13.58	170.14	36109
36110	80 mm	923.94	14.66	15.74	191.78	36110
36111	100 mm	1,126.58	16.49	17.73	219.71	36111
36112	125 mm	1,554.68	20.74	22.46	250.79	36112
36113	150 mm	1,618.22	26.76	29.20	291.11	36113
36114	200 mm	2,204.74	28.95	30.30	342.77	36114
36115	250 mm	2,663.26	32.54	34.54	420.83	36115
36116	300 mm	3,423.26	37.30	41.31	502.48	36116
	Chilled water pipework c/w 50 mm phenolic foam insulation of pipe diameter : -					
	Per linear metre					
36117	20 mm or below	309.39	4.38	5.12	67.22	36117
36118	25 mm	353.45	4.96	5.75	72.91	36118
36119	32 mm	394.82	5.62	6.40	77.59	36119
36120	40 mm	432.02	6.25	7.04	83.42	36120
36121	50 mm	506.73	6.89	7.68	96.14	36121
36122	65 mm	602.50	7.98	8.76	110.29	36122
36123	80 mm	701.85	9.30	10.03	124.31	36123
36124	100 mm	870.82	10.54	11.45	158.08	36124
36125	125 mm	1,041.43	15.01	16.36	183.78	36125
36126	150 mm	1,288.32	17.32	18.59	210.13	36126
36127	200 mm	1,450.14	18.02	19.70	240.49	36127
36128	250 mm	1,767.53	21.33	23.11	299.92	36128
36129	300 mm	2,057.71	23.98	26.08	362.44	36129

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water pipes (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water pipework c/w 25 mm flexible closed cell elastomeric insulation, cement plaster, painting & finish of pipe diameter : -					
	Per linear metre					
36130	20 mm or below	210.87	7.04	8.12	103.41	36130
36131	25 mm	239.74	7.98	8.85	112.29	36131
36132	32 mm	266.48	8.85	9.97	119.59	36132
36133	40 mm	292.32	9.73	10.85	128.42	36133
36134	50 mm	356.63	10.64	11.57	148.78	36134
36135	65 mm	423.12	12.54	13.58	170.14	36135
36136	80 mm	494.36	14.66	15.74	191.78	36136
36137	100 mm	610.45	16.49	17.73	219.71	36137
36138	150 mm	907.96	27.23	29.56	291.89	36138
	Chilled water pipe c/w 20 mm flexible closed cell elastomeric insulation & finish of pipe diameter : -					
	Per linear metre					
36139	25 mm or below	194.82	7.63	8.45	87.58	36139
36140	32 mm	218.40	8.20	9.15	93.29	36140
36141	40 mm	238.27	9.15	10.05	99.69	36141
36142	50 mm	275.64	10.64	11.57	114.81	36142
36143	65 mm	325.93	12.54	13.58	131.59	36143
36144	80 mm	387.17	14.66	15.74	146.64	36144
36145	100 mm	480.41	16.49	17.73	169.17	36145
36146	125 mm	593.84	21.31	21.61	193.51	36146
36147	150 mm	718.85	27.23	29.56	224.28	36147
36148	200 mm	940.61	38.36	39.13	264.05	36148
36149	250 mm	1,137.58	51.79	56.05	329.54	36149
36150	300 mm	1,328.53	66.26	73.17	444.59	36150

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water pipes (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water pipe c/w 25 mm flexible closed cell elastomeric insulation & finish of pipe diameter : -					
	Per linear metre					
36151	20 mm or below	176.17	4.93	5.51	75.17	36151
36152	25 mm	198.93	5.55	6.17	82.75	36152
36153	32 mm	230.76	6.29	6.89	87.36	36153
36154	40 mm	269.12	6.95	7.79	92.95	36154
36155	50 mm	314.87	7.71	8.64	109.06	36155
	Chilled water pipe c/w 50 mm flexible closed cell elastomeric insulation & finish of pipe diameter : -					
	Per linear metre					
36156	20 mm or below	220.61	4.18	5.85	62.38	36156
36157	25 mm	255.70	4.56	6.51	67.67	36157
36158	32 mm	281.78	5.23	7.30	72.25	36158
36159	40 mm	306.31	5.72	7.98	77.76	36159
36160	50 mm	371.64	6.24	8.60	89.49	36160
36161	65 mm	434.94	7.41	10.05	100.64	36161
36162	80 mm	506.25	8.77	11.67	109.41	36162
36163	100 mm	612.38	11.38	13.24	135.08	36163
36164	150 mm	792.51	17.64	23.45	182.47	36164
	Chilled water pipe c/w 50 mm flexible closed cell elastomeric insulation, cement plaster, painting & finish of pipe diameter : -					
	Per linear metre					
36165	20 mm or below	238.72	6.05	6.69	90.59	36165
36166	25 mm	276.69	6.60	7.45	98.28	36166
36167	32 mm	304.91	7.57	8.35	104.93	36167
36168	40 mm	331.45	8.28	9.13	112.93	36168
36169	50 mm	402.14	9.04	9.84	129.96	36169
36170	65 mm	470.63	10.74	11.50	146.15	36170
36171	80 mm	562.05	12.50	13.24	162.41	36171
36172	100 mm	685.50	13.67	15.04	187.63	36172
36173	150 mm	1,020.47	22.65	24.85	257.21	36173

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water pipes (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Pre-insulated chilled water pipe c/w galvanized iron metal jacket for outdoor conditions : -					
	Per linear metre					
36174	25 mm diameter chilled water pipe c/w 50 mm thick insulation	380.37	5.33	6.12	78.90	36174
36175	32 mm diameter chilled water pipe c/w 50 mm thick insulation	423.91	5.91	6.66	85.73	36175
36176	40 mm diameter chilled water pipe c/w 50 mm thick insulation	454.18	6.66	7.44	91.64	36176
36177	50 mm diameter chilled water pipe c/w 65 mm thick insulation	675.53	7.24	8.12	98.13	36177
36178	65 mm diameter chilled water pipe c/w 65 mm thick insulation	745.60	7.96	8.76	113.54	36178
36179	80 mm diameter chilled water pipe c/w 65 mm thick insulation	848.32	9.21	10.12	129.78	36179
36180	100 mm diameter chilled water pipe c/w 65 mm thick insulation	1,002.06	10.85	11.80	145.49	36180
36181	125 mm diameter chilled water pipe c/w 65 mm thick insulation	1,185.49	12.38	13.24	167.79	36181
36182	150 mm diameter chilled water pipe c/w 75 mm thick insulation	1,690.46	20.35	22.01	222.59	36182
36183	200 mm diameter chilled water pipe c/w 75 mm thick insulation	2,125.00	30.57	32.88	288.30	36183
36184	250 mm diameter chilled water pipe c/w 75 mm thick insulation	2,621.55	40.65	45.23	363.09	36184
36185	300 mm diameter chilled water pipe c/w 75 mm thick insulation	3,001.46	50.77	57.35	437.55	36185
	Pre-insulated chilled water pipe c/w galvanized iron metal jacket for indoor conditions : -					
	Per linear metre					
36186	25 mm diameter chilled water pipe c/w 25 mm thick insulation	254.04	5.33	6.12	78.49	36186
36187	32 mm diameter chilled water pipe c/w 25 mm thick insulation	285.79	5.91	6.66	85.33	36187
36188	40 mm diameter chilled water pipe c/w 25 mm thick insulation	310.77	6.66	7.44	91.22	36188
36189	50 mm diameter chilled water pipe c/w 40 mm thick insulation	464.62	7.24	8.12	97.88	36189
36190	65 mm diameter chilled water pipe c/w 40 mm thick insulation	536.94	7.96	8.76	113.12	36190
36191	80 mm diameter chilled water pipe c/w 40 mm thick insulation	592.65	9.21	10.12	129.61	36191
36192	100 mm diameter chilled water pipe c/w 40 mm thick insulation	784.20	10.85	11.80	145.43	36192
36193	125 mm diameter chilled water pipe c/w 40 mm thick insulation	899.23	12.38	13.24	167.73	36193
36194	150 mm diameter chilled water pipe c/w 50 mm thick insulation	1,173.01	20.35	22.01	221.75	36194
36195	200 mm diameter chilled water pipe c/w 50 mm thick insulation	1,466.07	30.57	32.88	288.24	36195
36196	250 mm diameter chilled water pipe c/w 50 mm thick insulation	1,833.96	40.65	45.23	363.01	36196
36197	300 mm diameter chilled water pipe c/w 50 mm thick insulation	2,196.56	50.77	57.35	436.27	36197

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Condensate drain

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	GI drain pipe c/w 50 mm phenolic foam insulation, cement plaster, painting & finish of pipe diameter : -					
	Per linear metre					
36198	20 mm or below	420.69	7.04	8.12	103.41	36198
36199	25 mm	491.44	7.98	8.85	112.29	36199
36200	32 mm	550.49	8.85	9.97	119.59	36200
36201	40 mm	591.71	9.73	10.85	128.42	36201
36202	50 mm	717.93	10.64	11.57	148.78	36202
36203	65 mm	856.65	12.54	13.58	170.14	36203
36204	80 mm	994.30	14.66	15.74	191.78	36204
	GI drain pipe c/w 50 mm polystyrene insulation, cement plaster, painting & finish of pipe diameter : -					
	Per linear metre					
36205	20 mm or below	257.73	7.04	8.12	103.41	36205
36206	25 mm	299.71	7.98	8.85	112.29	36206
36207	32 mm	333.86	8.85	9.97	119.59	36207
36208	40 mm	358.28	9.73	10.85	128.42	36208
36209	50 mm	437.06	10.64	11.57	148.78	36209
36210	65 mm	510.90	12.54	13.58	170.14	36210
36211	80 mm	602.58	14.66	15.74	191.78	36211
	GI drain pipe c/w 20 mm flexible closed cell elastomeric insulation and finish of pipe diameter : -					
	Per linear metre					
36212	20 mm or below	219.37	7.04	8.12	103.41	36212
36213	25 mm	263.15	7.98	8.85	112.29	36213
36214	32 mm	298.52	8.85	9.97	119.59	36214
36215	40 mm	322.08	9.73	10.85	128.42	36215
36216	50 mm	400.28	10.64	11.57	148.78	36216

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Condensate drain (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	PVC drain pipe c/w 20 mm flexible closed cell elastomeric insulation and finish of pipe diameter :-					
	Per linear metre					
36217	20 mm or below	194.74	7.20	8.31	106.02	36217
36218	25 mm	214.75	8.15	9.06	115.15	36218
36219	32 mm	234.55	9.06	10.17	122.71	36219
	PVC flexible drain pipe of pipe diameter : -					
	Per linear metre					
36220	20 mm or below	39.22	5.44	5.94	26.79	36220
36221	25 mm	55.29	7.20	7.85	37.57	36221
36222	32 mm	61.70	8.15	8.63	41.57	36222
	GI drain pan c/w insulation of size : -					
	Each					
36223	Up to 0.55 m²	395.19	8.17	8.63	59.33	36223
36224	0.55 - 0.73 m²	500.19	17.52	25.29	88.95	36224
36225	0.73 - 0.9 m²	632.10	37.54	45.54	118.05	36225
	GI drain pan of size : -					
	Each					
36226	Up to 0.55 m²	232.55	6.58	6.60	53.89	36226
36227	0.55 - 0.73 m²	282.04	13.77	20.57	76.32	36227
36228	0.73 - 0.9 m²	342.51	32.80	39.54	101.97	36228
	Stainless steel drain pan c/w insulation of size : -					
	Each					
36229	Up to 0.55 m²	479.53	8.17	8.63	59.33	36229
36230	0.55 - 0.73 m²	637.32	17.52	25.29	88.95	36230
36231	0.73 - 0.9 m²	831.36	37.54	45.54	118.05	36231

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Condensate drain (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Stainless steel drain pan of size : -					
	Each					
36232	Up to 0.55 m²	311.54	6.58	6.60	53.89	36232
36233	0.55 - 0.73 m²	406.75	13.77	20.57	76.32	36233
36234	0.73 - 0.9 m²	525.99	32.80	39.54	101.97	36234
	uPVC pipework of diameter : -					
	Per linear metre					
36235	25 mm or below	99.99	4.76	5.59	36.19	36235
36236	32 mm	118.47	5.39	6.16	38.08	36236
36237	40 mm	152.79	5.94	6.81	40.75	36237
36238	50 mm	195.73	6.60	7.37	46.87	36238
36239	65 mm	261.82	7.59	8.46	53.42	36239
36240	80 mm	346.14	8.94	9.81	60.36	36240
36241	100 mm	387.73	10.10	11.19	77.48	36241
36242	150 mm	564.45	16.66	18.22	103.06	36242

Chilled water valves

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Chilled water gate valves : -					
	Each					
36243	20 mm or below	197.72	25.56	32.14	40.49	36243
36244	25 mm	249.56	26.06	32.84	44.06	36244
36245	32 mm	342.84	26.51	33.28	47.37	36245
36246	40 mm	435.50	27.39	34.10	50.85	36246
36247	50 mm	708.70	28.75	35.22	54.26	36247
36248	65 mm	1,411.61	30.33	36.82	57.69	36248
36249	80 mm	1,648.88	31.91	38.83	60.49	36249
36250	100 mm	1,980.72	36.76	43.95	68.09	36250
36251	150 mm	3,524.04	48.66	57.32	87.96	36251

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water check valves : -					
	Each					
36252	20 mm or below	312.17	25.56	32.14	40.49	36252
36253	25 mm	343.47	26.06	32.84	44.06	36253
36254	32 mm	403.39	26.51	33.28	47.37	36254
36255	40 mm	510.82	27.39	34.10	50.85	36255
36256	50 mm	670.17	28.75	35.22	54.26	36256
36257	65 mm	721.66	30.33	36.82	57.69	36257
36258	80 mm	871.40	31.91	38.83	60.49	36258
36259	100 mm	1,433.19	36.76	43.95	68.09	36259
36260	150 mm	2,384.98	48.66	57.32	87.96	36260
	Chilled water globe valves : -					
	Each					
36261	20 mm or below	414.34	25.56	32.14	40.49	36261
36262	25 mm	491.98	26.06	32.84	44.06	36262
36263	32 mm	504.71	26.51	33.28	47.37	36263
36264	40 mm	661.51	27.39	34.10	50.85	36264
36265	50 mm	958.38	28.75	35.22	54.26	36265
36266	65 mm	1,160.49	30.33	36.82	57.69	36266
36267	80 mm	1,502.03	31.91	38.83	60.49	36267
36268	100 mm	1,982.86	36.76	43.95	68.09	36268
36269	150 mm	3,570.60	48.66	57.32	87.96	36269
	Pressure reducing valve : -					
	Each					
36270	15 mm or below	626.30	20.10	25.11	29.39	36270
36271	20 mm	776.93	20.77	25.72	33.80	36271
36272	25 mm	909.97	21.33	26.40	36.14	36272
36273	32 mm	1,127.20	21.90	26.92	39.49	36273
36274	40 mm	1,332.48	22.29	27.53	42.78	36274

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Balancing valve : -					
	Each					
36275	20 mm or below	474.71	19.14	24.28	33.58	36275
36276	25 mm	509.17	21.04	25.89	36.48	36276
36277	32 mm	547.13	21.57	26.40	40.23	36277
36278	40 mm	654.94	22.43	27.17	42.63	36278
36279	50 mm	1,375.15	22.89	28.16	45.46	36279
36280	65 mm	2,156.13	24.44	29.35	48.50	36280
36281	80 mm	3,843.70	25.87	31.09	50.77	36281
36282	100 mm	5,975.35	29.95	34.62	57.17	36282
36283	150 mm	8,966.03	40.83	60.01	91.95	36283

Chilled water valves c/w 50 mm phenolic foam insulation

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Chilled water gate valves c/w filled galvanized steel split boxes : -					
	Each					
36284	n.e. 20 mm	257.19	32.42	39.71	48.16	36284
36285	25 mm	310.12	32.95	40.65	52.73	36285
36286	32 mm	404.18	33.50	41.23	56.68	36286
36287	40 mm	498.21	34.27	41.79	61.16	36287
36288	50 mm	775.27	35.72	43.15	65.29	36288
36289	65 mm	1,488.06	37.72	44.47	69.54	36289
36290	80 mm	1,728.70	39.70	47.30	73.81	36290
36291	100 mm	2,064.31	41.91	49.41	76.52	36291
36292	150 mm	3,627.51	53.16	60.81	93.28	36292

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water check valves c/w filled galvanized steel split boxes : -					
	Each					
36293	n.e. 20 mm	375.62	32.42	39.71	48.16	36293
36294	25 mm	406.62	32.95	40.65	52.73	36294
36295	32 mm	466.58	33.50	41.23	56.68	36295
36296	40 mm	575.14	34.27	41.79	61.16	36296
36297	50 mm	735.99	35.72	43.15	65.29	36297
36298	65 mm	788.56	37.72	44.47	69.54	36298
36299	80 mm	940.54	39.70	47.30	73.81	36299
36300	100 mm	1,510.38	41.91	49.41	76.52	36300
36301	150 mm	2,474.49	53.16	60.81	93.28	36301
	Chilled water globe valves c/w filled galvanized steel split boxes : -					
	Each					
36302	n.e. 20 mm	480.72	32.42	39.71	48.16	36302
36303	25 mm	555.00	32.95	40.65	52.73	36303
36304	32 mm	568.39	33.50	41.23	56.68	36304
36305	40 mm	727.35	34.27	41.79	61.16	36305
36306	50 mm	1,028.67	35.72	43.15	65.29	36306
36307	65 mm	1,233.59	37.72	44.47	69.54	36307
36308	80 mm	1,580.19	39.70	47.30	73.81	36308
36309	100 mm	2,067.18	41.91	49.41	76.52	36309
36310	150 mm	3,677.87	53.16	60.81	93.28	36310

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water 2 way modulating control valve c/w electric motors couplings, unions, adapters and filled galvanized steel split box : -					
	Each					
36311	n.e. 20 mm	562.38	25.93	31.67	41.09	36311
36312	25 mm	709.98	26.68	32.62	44.58	36312
36313	32 mm	1,251.84	40.70	49.89	68.78	36313
36314	40 mm	2,045.84	41.46	50.62	74.23	36314
36315	50 mm	2,675.39	43.12	52.43	79.54	36315
36316	65 mm	5,985.27	44.08	54.16	83.15	36316
36317	80 mm	8,659.21	48.43	57.69	90.24	36317
36318	100 mm	12,213.46	51.12	60.36	94.03	36318
36319	150 mm	16,376.50	53.09	64.27	101.36	36319
	Chilled water 3 way modulating control valve c/w electric motors couplings, unions, adapters and filled galvanized steel split box : -					
	Each					
36320	n.e. 20 mm	562.38	25.93	31.67	41.09	36320
36321	25 mm	709.98	26.68	32.62	44.58	36321
36322	32 mm	1,251.84	40.70	49.89	68.78	36322
36323	40 mm	2,045.84	41.46	50.62	74.23	36323
36324	50 mm	2,675.39	43.12	52.43	79.54	36324
36325	65 mm	5,985.27	44.08	54.16	83.15	36325
36326	80 mm	8,659.21	48.43	57.69	90.24	36326
36327	100 mm	12,213.46	51.12	60.36	94.03	36327
36328	150 mm	16,376.50	53.09	64.27	101.36	36328

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water 2 way, 2 position electric control valve c/w motor, couplings, unions, adapters and filled galvanized steel split boxes : -					
	Each					
36329	n.e. 20 mm	497.64	25.93	31.67	41.09	36329
36330	25 mm	642.57	26.68	32.62	44.58	36330
36331	32 mm	1,023.10	40.70	49.89	68.78	36331
36332	40 mm	1,516.69	41.46	50.62	74.23	36332
36333	50 mm	2,165.03	43.12	52.43	79.54	36333
36334	65 mm	4,819.50	44.08	54.16	83.15	36334
36335	80 mm	7,535.12	48.43	57.69	90.24	36335
36336	100 mm	11,129.22	51.12	60.36	94.03	36336
36337	150 mm	13,867.96	53.09	64.27	101.36	36337
	Chilled water 3 way, 2 position electric control valve c/w motor, couplings, unions, adapters and filled galvanized steel split boxes : -					
	Each					
36338	n.e. 20 mm	497.64	25.93	31.67	41.09	36338
36339	25 mm	642.57	26.68	32.62	44.58	36339
36340	32 mm	1,023.10	40.70	49.89	68.78	36340
36341	40 mm	1,516.69	41.46	50.62	74.23	36341
36342	50 mm	2,165.03	43.12	52.43	79.54	36342
36343	65 mm	4,819.50	44.08	54.16	83.15	36343
36344	80 mm	7,535.12	48.43	57.69	90.24	36344
36345	100 mm	11,129.22	51.12	60.36	94.03	36345
36346	150 mm	13,867.96	53.09	64.27	101.36	36346

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Chilled water 2 way electric operated solenoid valve c/w unions, adapters, filled galvanized steel split box, insulation and finish : -					
	Each					
36347	n.e. 20 mm	504.18	36.32	44.84	60.03	36347
36348	25 mm	746.76	36.96	45.43	64.31	36348
36349	32 mm	910.10	37.67	46.12	66.61	36349
36350	40 mm	1,349.16	38.50	46.92	74.23	36350
36351	50 mm	1,871.36	40.19	48.50	78.57	36351
36352	65 mm	4,097.26	40.99	50.09	80.73	36352
36353	80 mm	6,420.66	44.85	53.17	87.77	36353
36354	100 mm	9,610.81	47.02	55.55	91.32	36354
36355	150 mm	14,417.73	56.05	66.12	109.01	36355
	Chilled water double regulating valve c/w metering station, insulation and finish, filled galvanized iron split boxes : -					
	Each					
36356	40 mm	1,174.49	38.50	46.92	74.23	36356
36357	50 mm	1,553.07	40.19	48.50	78.57	36357
36358	65 mm	3,256.08	40.99	50.09	80.73	36358
36359	80 mm	5,014.00	44.85	53.17	87.77	36359
36360	100 mm	5,278.82	47.02	55.55	91.32	36360
36361	150 mm	6,225.27	53.73	60.81	98.07	36361
	Pressure reducing valve : -					
	Each					
36362	15 mm or below	756.51	21.40	26.44	32.33	36362
36363	20 mm	940.01	21.87	27.00	37.57	36363
36364	25 mm	1,095.08	22.33	27.45	39.62	36364
36365	32 mm	1,367.53	22.89	28.24	43.84	36365
36366	40 mm	1,618.58	23.45	28.69	47.02	36366

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Balancing valve : -					
	Each					
36367	n.e. 20 mm	488.48	21.19	25.79	35.41	36367
36368	25 mm	524.96	21.85	26.80	38.19	36368
36369	32 mm	668.95	26.74	32.84	48.92	36369
36370	40 mm	740.82	27.35	33.40	52.56	36370
36371	50 mm	880.01	28.52	34.50	56.10	36371
36372	65 mm	1,775.84	29.09	35.58	58.49	36372
36373	80 mm	2,833.67	31.89	37.86	63.40	36373
36374	100 mm	5,162.13	33.53	39.57	65.86	36374
36375	150 mm	7,935.78	42.65	48.85	81.42	36375

Chilled water pipe work accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36376	Water flow switch	869.46	5.62	8.08	14.83	36376
36377	Direct reading type electromagnetic/ultrasonic water flow meter c/w flow sensor, an integral signal converter/transmitter and a digital display unit	8,689.07	42.24	43.40	78.66	36377
36378	Pressure gauge & cock	226.86	5.62	8.08	14.83	36378
36379	Thermometer & stainless steel thermometer well	2,946.77	20.09	24.28	52.83	36379
36380	Low temperature cutout thermostat with manual reset	353.88	5.62	8.08	14.83	36380

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Gate valve for sea water application 316 stainless steel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36381	25 mm	1,068.78	26.08	32.08	44.64	36381
36382	32 mm	1,136.58	26.74	32.84	48.92	36382
36383	40 mm	1,248.74	27.35	33.40	52.56	36383
36384	50 mm	1,366.70	28.52	34.50	56.10	36384
36385	65 mm	1,516.29	29.09	35.58	58.49	36385
	Each					
36386	80 mm	1,762.52	31.89	37.86	63.40	36386
36387	100 mm	2,442.37	33.53	39.57	65.86	36387
36388	125 mm	3,192.29	37.57	42.47	72.43	36388
36389	150 mm	3,940.68	42.65	48.85	81.42	36389
36390	200 mm	6,893.58	51.12	57.36	93.90	36390

Globe valve for sea water application 316 stainless steel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36391	25 mm	786.59	26.08	32.08	44.64	36391
36392	32 mm	949.13	26.74	32.84	48.92	36392
36393	40 mm	1,178.83	27.35	33.40	52.56	36393
36394	50 mm	1,422.81	28.52	34.50	56.10	36394
36395	65 mm	1,792.64	29.09	35.58	58.49	36395
36396	80 mm	2,137.00	31.89	37.86	63.40	36396
36397	100 mm	2,846.34	33.53	39.57	65.86	36397
36398	125 mm	3,759.38	37.57	42.47	72.43	36398
36399	150 mm	5,754.56	42.65	48.85	81.42	36399
36400	200 mm	10,282.37	51.12	57.36	93.90	36400

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Swing check valve for sea water application 316 stainless steel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36401	25 mm	561.94	26.08	32.08	44.64	36401
36402	32 mm	628.20	26.74	32.84	48.92	36402
36403	40 mm	788.78	27.35	33.40	52.56	36403
36404	50 mm	978.63	28.52	34.50	56.10	36404
36405	65 mm	1,286.37	29.09	35.58	58.49	36405
	Each					
36406	80 mm	1,509.22	31.89	37.86	63.40	36406
36407	100 mm	2,151.58	33.53	39.57	65.86	36407
36408	150 mm	3,750.80	42.65	48.85	81.42	36408
36409	200 mm	6,576.01	51.12	57.36	93.90	36409

Drain cock : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36410	25 mm diameter or below	258.35	26.08	32.08	44.64	36410
36411	50 mm diameter	315.78	28.52	34.50	56.10	36411

Strainer : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36412	32 mm diameter or below	287.34	23.73	29.14	43.12	36412
36413	50 mm diameter	336.30	25.31	30.61	49.45	36413
36414	80 mm diameter	401.57	28.27	33.59	55.91	36414
36415	100 mm diameter	438.01	29.74	35.14	58.13	36415
36416	125 mm diameter	457.58	31.98	37.14	61.88	36416
36417	150 mm diameter	495.86	37.86	43.35	71.74	36417

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Pipework vibration isolation

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Pipe flexible rubber connector : -					
	Each					
36418	50 mm	543.82	25.31	30.61	49.45	36418
36419	65 mm	715.63	25.79	31.58	51.60	36419
36420	80 mm	815.67	28.27	33.59	55.91	36420
36421	100 mm	893.56	29.74	35.14	58.13	36421
36422	125 mm	1,369.53	33.80	37.14	64.75	36422
36423	150 mm	2,524.59	37.86	43.35	71.74	36423
	Pipe flexible metallic hose : -					
	Per linear metre					
36424	50 mm	668.34	1.24	1.39	16.14	36424
36425	65 mm	822.76	1.45	1.70	18.35	36425
36426	80 mm	921.07	1.70	1.81	21.11	36426
36427	100 mm	1,005.88	1.81	1.92	26.87	36427
36428	125 mm	1,509.51	2.32	2.57	31.10	36428
36429	150 mm	2,591.03	2.85	3.12	35.44	36429

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Sundries : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36430	Chiller sequence controller including transmitter, etc.	846.18	13.57	15.67	27.62	36430
36431	Water flow sensor c/w all necessary mounting accessories	679.36	10.95	12.49	22.08	36431
36432	Temperature sensor	291.11	10.95	12.49	23.80	36432
36433	Sail switch	317.05	9.88	11.88	20.71	36433
36434	Electromagnetic flow meter c/w digital display unit	4,919.28	94.16	135.48	292.78	36434
36435	Chemical storage tank	7,766.91	82.18	125.76	217.78	36435
36436	Chemical feed pump	5,384.10	70.84	100.22	197.29	36436
36437	Manual air vent	123.00	17.75	20.15	36.76	36437
36438	Automatic air vent	198.83	19.32	21.48	38.76	36438
36439	Temperature gauge with pocket	901.58	17.16	19.39	37.13	36439
36440	Testing point	404.80	13.57	14.95	26.07	36440

Butterfly valve : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36441	25 mm or below	410.64	24.08	29.61	41.04	36441
36442	32 mm	517.82	24.67	30.33	44.94	36442
36443	40 mm	645.47	25.23	30.84	48.31	36443
36444	50 mm	778.28	26.34	31.85	51.56	36444
36445	65 mm	1,609.99	26.84	32.84	53.78	36445
36446	80 mm	1,697.33	29.43	34.93	58.30	36446
36447	100 mm	1,827.52	30.94	36.53	60.58	36447
36448	125 mm	1,963.39	33.85	39.74	68.33	36448
36449	150 mm	2,238.76	39.39	45.10	74.78	36449

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Protection coating paint : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
36450	Protection coating paint for thermal insulation (flexible closed cell elastomeric) of same manufacturer as the thermal insulation for refrigerant pipework (25mm diameter or below) at outdoor area	122.37	-	-	-	36450

Insulation to pipework

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Polystyrene insulation c/w cement plaster, finish and painting for chilled water pipework of diameter : -					
	Per linear metre					
36451	25 mm or below	116.44	5.62	6.26	35.80	36451
36452	32 mm	124.77	5.85	6.66	37.93	36452
36453	40 mm	132.98	6.23	6.95	40.13	36453
36454	50 mm	150.47	7.63	8.34	46.60	36454
36455	65 mm	170.23	8.23	8.95	53.39	36455
36456	80 mm	188.80	8.85	9.63	61.62	36456
36457	100 mm	223.31	11.64	12.46	72.33	36457
36458	125 mm	259.43	13.67	14.45	80.93	36458
36459	150 mm	294.04	15.67	16.40	94.69	36459
36460	200 mm	357.23	18.85	19.83	114.16	36460
36461	250 mm	453.40	24.35	25.35	147.13	36461
36462	300 mm	689.77	37.46	40.88	221.51	36462

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Insulation to pipework (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Flexible closed cell elastomeric insulation c/w cement plaster, painting and finish for chilled water pipework of diameter : -					
	Per linear metre					
36463	25 mm or below	87.38	5.62	6.26	35.80	36463
36464	32 mm	96.33	5.85	6.66	37.93	36464
36465	40 mm	102.97	6.23	6.95	40.13	36465
36466	50 mm	120.36	7.63	8.34	46.60	36466
36467	65 mm	138.45	8.23	8.95	53.39	36467
36468	80 mm	158.45	8.85	9.63	61.62	36468
36469	100 mm	184.68	11.64	12.46	72.33	36469
36470	150 mm	258.89	15.67	16.40	94.69	36470
	Aluminium metal cladding for insulated chilled water pipes of diameter : -					
	Per linear metre					
36471	25 mm or below	127.83	0.85	1.04	11.96	36471
36472	32 mm	135.98	1.04	1.14	12.84	36472
36473	40 mm	144.15	1.14	1.24	13.72	36473
36474	50 mm	157.45	1.24	1.39	15.80	36474
36475	65 mm	177.26	1.46	1.58	18.37	36475
36476	80 mm	197.09	1.58	1.71	21.21	36476
36477	100 mm	220.51	1.71	1.82	27.12	36477
36478	125 mm	246.24	2.37	2.63	30.52	36478
36479	150 mm	278.76	2.85	3.12	33.80	36479
36480	200 mm	322.68	3.25	3.46	38.84	36480
36481	250 mm	392.91	3.93	4.26	48.16	36481
36482	300 mm	473.09	4.85	5.31	59.34	36482

VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)

Insulation to pipework (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Phenolic foam insulation c/w cement plaster, painting and finish for chilled water pipework of diameter : -					
	Per linear metre					
36483	25 mm or below	268.95	5.62	6.26	35.80	36483
36484	32 mm	302.32	5.85	6.66	37.93	36484
36485	40 mm	326.31	6.23	6.95	40.13	36485
36486	50 mm	382.80	7.63	8.34	46.60	36486
36487	65 mm	448.35	8.23	8.95	53.39	36487
36488	80 mm	504.75	8.85	9.63	61.62	36488
36489	100 mm	596.46	11.64	12.46	72.33	36489
36490	150 mm	857.66	15.67	16.40	94.69	36490
	Phenolic foam insulation for chilled water pipework of diameter : -					
	Per linear metre					
36491	25 mm or below	182.87	0.85	1.04	11.96	36491
36492	32 mm	203.29	1.04	1.14	12.84	36492
36493	40 mm	219.04	1.14	1.24	13.72	36493
36494	50 mm	252.72	1.24	1.39	15.80	36494
36495	65 mm	300.96	1.39	1.58	18.37	36495
36496	80 mm	337.70	1.58	1.71	21.21	36496
36497	100 mm	407.12	1.71	1.82	27.12	36497
36498	150 mm	584.42	2.85	3.12	33.80	36498

Flue pipe : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
36499	200 mm stainless steel flue pipe c/w fittings, 50 mm thick fiberglass insulation and 0.8 mm galvanized iron sheet cladding rain cap and steel wire	3,288.66	13.84	23.76	41.70	36499

STEAM AND HOT WATER SYSTEM

Black mild steel steam return pipeworks c/w preformed rigid glass fiber insulation system, hammered aluminium sheeting of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Heavy quality					
	Per linear metre					
36500	15 mm	191.20	6.37	7.24	81.03	36500
36501	20 mm	223.74	6.75	7.64	99.36	36501
36502	25 mm	261.48	7.64	8.49	107.92	36502
36503	32 mm	300.91	8.49	9.29	115.32	36503
36504	40 mm	330.42	9.38	10.31	123.90	36504
36505	50 mm	420.71	10.50	11.14	143.58	36505
36506	65 mm	514.04	12.09	13.15	164.43	36506
36507	80 mm	623.47	14.19	15.01	185.29	36507
36508	100 mm	869.72	15.96	17.05	213.52	36508
36509	150 mm	1,158.68	26.76	28.26	283.47	36509

Copper pipe for cold water system of pipe diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36510	below 12 mm	90.63	4.00	4.31	59.83	36510
36511	12 mm	106.00	4.10	4.44	64.25	36511
36512	15 mm	125.85	4.18	4.58	69.50	36512
36513	18 mm	145.19	4.44	4.76	72.52	36513
36514	22 mm	171.09	5.45	5.65	78.13	36514
36515	28 mm	207.65	5.65	5.86	87.32	36515
36516	35 mm	281.72	6.44	6.69	92.50	36516
36517	42 mm	324.99	6.85	7.13	100.90	36517
36518	54 mm	398.25	7.64	7.85	115.98	36518
36519	67 mm	541.73	7.79	8.06	127.95	36519

STEAM AND HOT WATER SYSTEM (CONT'D)

Copper pipe for cold water system of pipe diameter : - (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
36520	76 mm	722.84	9.29	9.80	138.92	36520
36521	108 mm	943.00	10.75	11.12	178.38	36521
36522	133 mm	1,097.94	12.77	13.10	207.21	36522
36523	159 mm	1,269.82	14.45	14.84	238.59	36523

Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation.

		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	
	Y-type strainers c/w filled aluminium split boxes : -					
	Each					
36524	32 mm or below	502.04	32.65	40.52	64.48	36524
36525	40 mm	530.77	33.53	41.32	69.34	36525
36526	50 mm	578.72	35.14	42.56	72.98	36526
36527	65 mm	642.80	35.98	44.58	77.43	36527
36528	80 mm	654.41	39.90	47.05	83.74	36528
36529	100 mm	780.37	42.00	49.92	87.32	36529
36530	150 mm	872.85	52.70	60.30	108.55	36530
	Globe valve c/w filled aluminium split boxes : -					
	Each					
36531	15 mm	137.28	32.10	39.90	51.45	36531
36532	20 mm	175.41	32.95	40.54	56.36	36532
36533	25 mm	222.73	33.61	41.31	61.92	36533
36534	32 mm	302.48	34.27	42.02	67.03	36534
36535	40 mm	394.12	35.20	42.44	71.54	36535
36536	50 mm	593.74	36.57	43.75	76.52	36536

STEAM AND HOT WATER SYSTEM (CONT'D)

Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Parallel slide valve c/w filled aluminium split boxes : -					
	Each					
36537	65 mm	2,703.19	35.23	43.29	76.48	36537
36538	80 mm	4,699.48	38.88	46.01	83.27	36538
36539	100 mm	7,119.85	41.56	48.68	86.12	36539
36540	150 mm	13,366.68	51.88	60.06	106.57	36540
	Safety and relief valve c/w filled aluminium split boxes : -					
	Each					
36541	32 mm or below	1,586.77	35.48	43.40	69.07	36541
36542	40 mm	2,343.10	36.19	44.00	74.47	36542
36543	50 mm	2,833.14	37.91	45.67	80.05	36543
36544	65 mm	5,684.54	38.60	47.23	83.45	36544
36545	80 mm	8,475.60	42.18	50.24	90.26	36545
36546	100 mm	12,271.88	44.73	52.53	93.94	36546
36547	150 mm	15,735.82	56.59	64.64	115.79	36547
	Pressure reducing valve c/w filled aluminium split boxes : -					
	Each					
36548	32 mm or below	2,524.63	35.48	43.40	69.07	36548
36549	40 mm	3,134.09	36.19	44.00	74.47	36549
36550	50 mm	3,877.29	37.91	45.67	80.05	36550
36551	65 mm	4,991.52	38.60	47.23	83.45	36551
36552	80 mm	7,391.23	42.18	50.24	90.26	36552
36553	100 mm	8,320.02	44.73	52.53	93.94	36553
36554	150 mm	10,423.56	56.59	64.64	115.79	36554
	Temperature and pressure gauge : -					
	Each					
36555	Temperature gauge c/w filled aluminium split boxes	1,251.11	20.68	24.00	48.80	36555
36556	Pressure gauge c/w filled aluminium split boxes	338.68	20.68	24.00	48.80	36556

STEAM AND HOT WATER SYSTEM (CONT'D)

Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Steam separator c/w filled aluminium split boxes : -					
	Each					
36557	32 mm or below	3,749.80	35.48	43.40	69.07	36557
36558	40 mm	4,682.51	36.19	44.00	74.47	36558
36559	50 mm	5,846.02	37.91	45.67	80.05	36559
36560	65 mm	7,563.69	38.60	47.23	83.45	36560
36561	80 mm	9,184.02	42.18	50.24	90.26	36561
36562	100 mm	11,419.45	44.73	52.53	93.94	36562
36563	150 mm	16,625.34	56.59	64.64	115.79	36563
	Steam trap set comprising of globe valve, strainer, float operated steam trap, sight glass, check valve, gate valve and all union c/w filled aluminium split boxes; connect to pipe diameter of : -					
	Per set					
36564	32 mm or below	8,375.85	153.67	185.83	684.68	36564
36565	40 mm	11,013.32	180.40	208.03	725.49	36565
36566	50 mm	12,481.05	201.59	231.73	756.67	36566
36567	65 mm	14,895.85	227.32	250.51	808.26	36567
36568	80 mm	16,971.26	251.12	276.64	851.12	36568
36569	100 mm	20,205.07	270.14	300.42	911.39	36569
36570	150 mm	27,337.06	293.85	325.67	949.18	36570
	Check valve c/w filled aluminium split boxes : -					
	Each					
36571	65 mm	765.42	35.46	43.58	77.07	36571
36572	80 mm	922.89	38.88	45.32	82.98	36572
36573	100 mm	1,468.95	40.47	47.96	84.20	36573
36574	150 mm	2,414.19	50.52	58.70	102.50	36574

STEAM AND HOT WATER SYSTEM (CONT'D)

Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Drain valve c/w hose union ends and loose key and filled aluminium split box : -					
	Each					
36575	50 mm	812.63	34.89	42.12	73.63	36575
36576	65 mm	1,065.32	35.76	43.99	74.82	36576
36577	80 mm	1,339.46	39.21	47.96	83.33	36577
36578	100 mm	1,714.31	41.08	50.25	85.00	36578
36579	150 mm	2,642.09	52.74	59.77	104.41	36579
	Gate valve c/w filled aluminium split boxes : -					
	Each					
36580	50 mm	1,088.63	34.89	42.12	73.63	36580
36581	65 mm	1,224.52	35.76	43.99	74.82	36581
36582	80 mm	1,437.57	39.21	47.96	83.33	36582
36583	100 mm	1,829.56	41.08	50.25	85.00	36583
36584	150 mm	3,435.74	52.74	59.77	104.41	36584

STEAM AND HOT WATER SYSTEM (CONT'D)

Insulation of pipeworks

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Preformed rigid glass fiber insulation c/w hammered aluminium cladding for black mild steel condensate pipe of diameter : -					
	Per linear metre					
36585	15 mm	77.90	5.54	5.74	28.53	36585
36586	20 mm	91.37	6.29	6.46	35.40	36586
36587	25 mm	103.76	6.44	6.58	39.79	36587
36588	32 mm	112.08	6.60	7.13	41.76	36588
36589	40 mm	123.00	7.20	8.20	44.58	36589
36590	50 mm	143.22	8.38	9.53	50.84	36590
36591	65 mm	166.78	9.53	10.31	58.83	36591
36592	80 mm	192.22	10.41	11.35	67.14	36592
36593	100 mm	224.78	13.28	14.18	76.42	36593
36594	150 mm	366.59	18.34	19.32	101.39	36594
	Preformed rigid glass fiber insulation c/w hammered aluminium cladding for black mild steel steam pipe of diameter : -					
	Per linear metre					
36595	15 mm	107.14	5.54	5.74	28.53	36595
36596	20 mm	122.47	6.29	6.46	35.40	36596
36597	25 mm	134.30	6.44	6.58	39.79	36597
36598	32 mm	147.37	6.60	7.13	41.76	36598
36599	40 mm	159.06	7.20	8.20	44.58	36599
36600	50 mm	212.04	8.38	9.53	50.84	36600
36601	65 mm	243.23	9.53	10.31	58.83	36601
36602	80 mm	311.23	10.41	11.35	67.14	36602
36603	100 mm	477.17	13.28	14.18	76.42	36603
36604	150 mm	591.30	18.34	19.32	101.39	36604

STEAM AND HOT WATER SYSTEM (CONT'D)

Insulation of pipeworks (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Preformed rigid glass fiber insulation c/w hammered aluminium cladding for copper pipe of hot water system of diameter : -					
	Per linear metre					
36605	n.e. 12 mm	95.00	5.36	6.18	41.76	36605
36606	12 mm	102.62	5.94	6.69	46.47	36606
36607	15 mm	107.02	6.47	7.13	49.32	36607
36608	18 mm	113.56	6.96	7.74	52.65	36608
36609	22 mm	149.74	7.54	8.34	55.23	36609
36610	28 mm	167.36	8.00	8.77	61.68	36610
36611	35 mm	184.76	8.68	9.36	65.52	36611
36612	42 mm	197.93	9.29	10.20	72.34	36612
36613	54 mm	225.09	10.11	10.76	81.81	36613
36614	67 mm	257.36	10.85	11.62	92.47	36614
36615	76 mm	279.57	12.54	14.29	101.87	36615
36616	108 mm	403.80	15.61	16.97	126.19	36616
36617	133 mm	519.76	18.45	21.02	148.74	36617
36618	159 mm	591.58	22.11	23.11	169.96	36618

Plugged branch : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
36619	25 mm plugged branch	48.82	6.29	7.93	19.04	36619

Section 37

HEATING, VENTILATION AND AIR-CONDITIONING - DUCTWORK

AIR DUCTS, THERMAL INSULATION & ACCESSORIES

Sheet metal ducts (rates for taking down of ductwork shall include for taking down of ALL duct accessories including dampers, registers, diffuser, heater, batteries, etc.)

GI sheet metal ductwork/ air plenum; un-insulated : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37001	0.6 mm thick	476.65	11.33	14.62	11.57	37001
37002	0.8 mm thick	542.07	13.01	15.23	13.29	37002
37003	1.0 mm thick	573.14	13.68	16.06	13.98	37003
37004	1.2 mm thick	644.48	14.40	16.80	14.71	37004
37005	1.5 mm thick	762.17	15.24	17.67	15.57	37005

Glass fibre duct (rectangular/round/oval shape) : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37006	48 kg/ m³	741.79	12.88	15.10	13.16	37006
37007	64 kg/ m³	769.62	13.57	15.93	13.87	37007

Factory made GI round/oval spiral duct c/w insulation equivalent round diameter for equal capacity and friction loss : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
37008	Up to 165 mm diameter	1,099.94	53.35	57.63	54.51	37008
37009	165 - 255 mm diameter	1,153.96	60.91	65.33	62.23	37009
37010	255 - 355 mm diameter	1,308.33	64.52	69.13	65.93	37010
37011	355 - 470 mm diameter	1,472.10	68.38	72.94	69.87	37011
37012	470 - 546 mm diameter	1,623.98	72.24	76.82	73.81	37012
37013	546 - 622 mm diameter	1,761.09	76.03	84.41	77.68	37013
37014	622 - 800 mm diameter	2,037.40	79.62	87.99	81.36	37014
37015	800 - 1000 mm diameter	2,347.86	83.65	92.01	85.49	37015

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Ductboard air duct : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37016	Ductboard air duct/ air plenum (phenolic foam or PU)	592.13	13.44	15.74	13.72	37016

0.8 mm thick grade 316 stainless steel round duct with hairline finish c/w stainless steel frame support and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
37017	150 mm diameter	1,062.81	4.16	7.24	4.25	37017
37018	200 mm diameter	1,879.95	5.54	9.64	5.65	37018
37019	250 mm diameter	2,958.27	6.93	12.07	7.07	37019
37020	600 mm diameter	9,640.91	16.60	28.95	16.96	37020
37021	700 mm diameter	11,523.19	19.38	33.78	19.80	37021
37022	800 mm diameter	12,022.51	22.15	38.61	22.62	37022

Stainless steel grade 304 sheet metal air duct/ air plenum : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37023	0.6 mm thick	948.98	11.33	14.62	11.57	37023
37024	0.8 mm thick	1,204.43	13.01	15.23	13.29	37024
37025	1.0 mm thick	1,457.18	13.68	16.06	13.98	37025
37026	1.2 mm thick	1,573.02	14.40	16.80	14.71	37026
37027	1.5 mm thick	2,059.58	15.24	17.67	15.57	37027

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Stainless steel grade 304 sheet metal air duct/ air plenum with colour powder coating on one surface : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37028	0.6 mm thick	1,099.91	11.33	14.62	11.57	37028
37029	0.8 mm thick	1,340.42	13.01	15.23	13.29	37029
37030	1.0 mm thick	1,581.61	13.68	16.06	13.98	37030

Stainless steel 316 sheet metal air duct/ air plenum : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37031	0.6 mm thick	1,180.63	11.33	14.62	11.57	37031
37032	0.8 mm thick	1,420.26	13.01	15.23	13.29	37032
37033	1.0 mm thick	1,687.90	13.68	16.06	13.98	37033
37034	1.2 mm thick	1,923.13	14.40	16.80	14.71	37034
37035	1.5 mm thick	2,404.23	15.24	17.67	15.57	37035

Factory made aluminium flexible duct bare without insulation : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
37036	Up to 153 mm diameter	350.84	12.49	14.63	12.76	37036
37037	153 - 204 mm diameter	387.89	13.15	15.44	13.43	37037
37038	204 - 254 mm diameter	447.93	13.85	16.14	14.16	37038
37039	254 - 305 mm diameter	626.20	14.64	16.96	14.96	37039

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Factory made aluminium flexible duct with 25 mm thick fiberglass insulation : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
37040	Up to 153 mm diameter	494.97	18.78	24.46	19.19	37040
37041	153 - 204 mm diameter	580.97	19.41	25.30	19.83	37041
37042	204 - 254 mm diameter	693.70	20.09	25.97	20.53	37042
37043	254 - 305 mm diameter	909.33	20.85	26.60	21.30	37043

UPVC seamless circular duct : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
37044	150 mm diameter	240.36	12.49	14.62	12.76	37044
37045	200 mm diameter	308.54	13.87	16.14	14.17	37045
37046	250 mm diameter	377.35	15.40	17.70	15.73	37046

Slim duct in associated with air-conditioning installation

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Slim duct system, suitable in use at corrosive environment (Rates shall include all associated mounting bracket, support and fittings including all straight runs, joints, flanges, tees and elbows etc.), U.V. resistant and fireproof to BS 476 Part 7 Class I : -					
	Per linear metre					
37047	Slim duct; n.e. 300 mm girth	253.37	1.89	11.57	1.93	37047
37048	Slim duct; 300 - 400 mm girth	381.25	1.89	11.57	1.93	37048
37049	Slim duct; 400 - 500 mm girth	452.87	1.89	12.84	1.93	37049
37050	Slim duct; 500 - 600 mm girth	524.49	1.89	14.11	1.93	37050

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Insulation for air duct/ air plenum

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Polystyrene insulation c/w cement plaster, galvanized wire netting, painting and finish : -					
	Per square metre					
37051	25 mm thick	488.06	13.70	19.41	13.99	37051
37052	32 mm thick	495.10	13.77	19.48	14.06	37052
37053	50 mm thick	563.53	14.45	20.15	14.76	37053
37054	75 mm thick	691.93	15.19	20.86	44.85	37054
	Fiberglass insulation : -					
	Per square metre					
37055	25 mm thick; density 32 kg/ m³	132.00	6.08	9.90	6.22	37055
37056	32 mm thick; density 32 kg/ m³	137.01	6.15	9.96	6.29	37056
37057	50 mm thick; density 32 kg/ m³	185.63	6.81	10.57	6.96	37057
37058	75 mm thick; density 32 kg/ m³	453.01	7.54	11.24	23.37	37058
37059	25 mm thick; density 48 kg/ m³	221.37	6.81	10.57	6.96	37059
37060	32 mm thick; density 48 kg/ m³	228.37	6.87	10.65	7.02	37060
37061	50 mm thick; density 48 kg /m³	296.32	7.48	11.41	7.65	37061
37062	75 mm thick; density 48 kg /m³	622.90	8.16	12.24	24.62	37062
37063	25 mm thick; density 64 kg/ m³	333.62	7.48	11.41	7.65	37063
37064	32 mm thick; density 64 kg/ m³	341.14	7.56	11.47	7.73	37064
37065	50 mm thick; density 64 kg/ m³	414.22	8.31	12.10	8.48	37065
37066	75 mm thick; density 64 kg/ m³	849.40	9.12	12.79	25.57	37066
	Phenolic foam insulation : -					
	Per square metre					
37067	25 mm thick	356.82	5.85	7.35	5.97	37067
37068	32 mm thick	372.86	5.91	7.49	6.03	37068
37069	50 mm thick	528.66	6.50	8.83	6.64	37069
37070	75 mm thick	980.24	7.15	10.31	24.51	37070

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Insulation for air duct/ air plenum (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Phenolic foam insulation c/w cement plaster, galvanized wire netting, painting and finish : -					
	Per square metre					
37071	25 mm thick	563.49	12.84	18.18	13.11	37071
37072	32 mm thick	580.39	12.91	18.54	13.18	37072
37073	50 mm thick	744.52	13.57	21.99	13.87	37073
37074	75 mm thick	1,153.24	14.31	25.80	45.13	37074
	Flexible closed cell elastomeric insulation c/w cement plaster, galvanized wire netting, painting and finish : -					
	Per square metre					
37075	25 mm thick	607.88	12.84	18.18	13.11	37075
37076	32 mm thick	625.56	12.91	18.54	13.18	37076
37077	50 mm thick	797.28	13.57	21.99	13.87	37077
37078	75 mm thick	1,268.56	14.31	25.80	45.13	37078
	Flexible closed cell elastomeric insulation : -					
	Per square metre					
37079	19 mm thick	416.74	5.85	7.35	5.97	37079
37080	25 mm thick	499.72	6.50	8.00	6.64	37080
37081	32 mm thick	507.60	6.50	8.08	6.64	37081
37082	50 mm thick	584.20	6.50	8.83	6.64	37082
37083	75 mm thick	1,095.58	6.50	9.64	23.37	37083
	Flexible closed cell elastomeric internal lining to air duct/ air plenum : -					
	Per square metre					
37084	19 mm thick	454.89	5.85	7.35	5.97	37084
37085	25 mm thick	542.37	6.50	8.00	6.64	37085
37086	32 mm thick	567.09	6.76	8.26	8.41	37086
37087	50 mm thick	807.27	9.24	10.79	25.62	37087
37088	75 mm thick	1,153.24	11.97	13.57	30.35	37088
37089	Vapour barrier of double faced aluminium foil	46.24	5.72	7.16	5.84	37089
37090	Aluminium cladding for air ductwork; hammer finish	481.87	5.72	7.16	5.84	37090

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Proprietary fire protection ductwork of non-combustible calcium silicate board reinforced with selected fibres and fillers. The board has smooth surface on one face and a lightly textured sanded surface on the other, without insulation : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37091	9 mm thick	1,191.27	12.46	16.35	12.74	37091
37092	12 mm thick	1,616.38	12.96	17.73	13.24	37092
37093	25 mm thick	2,068.82	15.15	19.70	15.49	37093

Proprietary fire protection ductwork of non-combustible composite panel of fibre reinforced cement, mechanically bonded to punched steel sheet on both surfaces, without insulation : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37094	9 mm thick	1,679.52	17.33	20.81	17.71	37094
37095	12 mm thick	2,382.56	18.28	22.07	18.68	37095
37096	25mm thick	2,892.20	20.95	24.31	21.40	37096

Air diffusers / grilles

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Air diffusers / grilles of all shape (aluminium type) c/w volume control damper of size : -					
	Each					
37097	Up to 0.1 m²	356.29	5.71	7.13	5.83	37097
37098	0.1 - 0.3 m²	702.18	6.98	8.55	7.13	37098
37099	0.3 - 0.5 m²	1,539.48	8.43	9.86	8.61	37099
37100	0.5 - 0.8 m²	2,435.01	9.86	11.29	10.08	37100

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Air diffusers / grilles (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Air diffusers / grilles of all shape (aluminium type) of size : -					
	Each					
37101	Up to 0.1 m²	283.70	5.71	7.13	16.52	37101
37102	0.1 - 0.3 m²	694.48	6.98	8.55	19.14	37102
37103	0.3 - 0.5 m²	1,014.85	8.43	9.86	21.48	37103
37104	0.5 - 0.8 m²	1,986.51	9.86	11.29	23.67	37104
	Air diffusers / grilles of all shape (metal type c/w painting) c/w volume control damper of size : -					
	Each					
37105	Up to 0.1 m²	275.39	5.71	7.13	5.83	37105
37106	0.1 - 0.3 m²	531.35	6.98	8.55	7.13	37106
37107	0.3 - 0.5 m²	1,037.19	8.43	9.86	8.61	37107
37108	0.5 - 0.8 m²	2,051.04	9.86	11.29	10.08	37108
	Air diffusers / grilles of all shape (metal type c/w painting) of size : -					
	Each					
37109	Up to 0.1 m²	148.18	5.71	7.13	16.52	37109
37110	0.1 - 0.3 m²	285.91	6.98	8.55	19.14	37110
37111	0.3 - 0.5 m²	558.13	8.43	9.86	21.48	37111
37112	0.5 - 0.8 m²	1,103.61	9.86	11.29	23.67	37112

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Linear diffusers

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Aluminium linear slot diffuser c/w adjustable damper and accessories : -					
	Per linear metre					
37113	1 slot	476.00	7.03	9.21	7.18	37113
37114	2 slots	570.83	7.03	9.21	7.18	37114
37115	3 slots	668.37	7.03	9.21	7.18	37115
37116	4 slots	761.16	7.03	9.21	7.18	37116

Linear air grille

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Aluminium linear bar grille c/w blank-off plate where applicable : -					
	Per linear metre					
37117	Up to 100 mm width	430.93	8.76	13.15	8.95	37117
37118	100 mm - 200 mm width	517.12	8.76	13.15	8.95	37118
37119	200 mm - 300 mm width	603.31	8.76	13.15	8.95	37119
	Aluminium linear bar grille with volume control damper c/w blank-off plate where applicable : -					
	Per linear metre					
37120	Up to 100 mm width	560.20	10.53	15.76	10.75	37120
37121	100 mm -200 mm width	646.39	10.53	15.76	10.75	37121
37122	200 mm - 300 mm width	732.58	10.53	15.76	10.75	37122
	Aluminium linear bar grille with detachable core and volume control damper c/w blank-off plate where applicable : -					
	Per linear metre					
37123	Up to 100 mm width	646.39	13.15	17.53	13.43	37123
37124	100 mm - 200 mm width	732.58	13.15	17.53	13.43	37124
37125	200 mm - 300 mm width	818.78	13.15	17.53	13.43	37125

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Transfer air grille

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Transfer air grille (metal type c/w painting) : -					
	Each					
37126	Up to 0.1 m²	296.34	5.71	7.13	16.52	37126
37127	0.1 to 0.3 m²	607.51	6.98	8.55	19.14	37127
37128	0.3 to 0.5 m²	953.79	8.43	9.86	21.48	37128
37129	0.5 to 0.8 m²	1,278.09	9.86	11.29	23.67	37129
	Transfer air grille (aluminium type) : -					
	Each					
37130	Up to 0.1 m²	431.87	5.71	7.13	16.52	37130
37131	0.1 to 0.3 m²	1,166.04	6.98	8.55	19.14	37131
37132	0.3 to 0.5 m²	1,585.81	8.43	9.86	21.48	37132
37133	0.5 to 0.8 m²	1,902.98	9.86	11.29	23.67	37133

Return air grille

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Return air grille (metal type c/w painting) c/w air filter (including hinged type) : -					
	Each					
37134	Up to 0.1 m²	429.52	5.71	7.77	5.83	37134
37135	0.1 - 0.3 m²	880.46	6.98	9.89	7.13	37135
37136	0.3 - 0.5 m²	1,383.45	8.43	10.67	8.61	37136
37137	0.5 - 0.8 m²	1,849.14	9.13	11.35	9.33	37137
37138	0.8 - 1.1 m²	2,314.81	9.13	11.35	9.33	37138

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Return air grille (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Return air grille (aluminium type) c/w air filter : -					
	Each					
37139	Up to 0.1 m²	514.08	7.03	9.21	7.18	37139
37140	0.1 - 0.3 m²	1,386.37	7.80	10.64	7.97	37140
37141	0.3 - 0.5 m²	1,880.78	8.45	11.29	8.64	37141
37142	0.5 - 0.8 m²	2,263.80	9.86	13.32	10.08	37142
37143	0.8 - 1.1 m²	2,646.83	9.86	13.32	10.08	37143

Exhaust air grille c/w volume control damper

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Aluminium type : -					
	Each					
37144	Up to 0.2 m²	485.74	7.03	9.21	7.18	37144
37145	0.2 - 0.4 m²	763.48	7.80	9.89	7.97	37145
37146	0.4 - 0.6 m²	1,130.57	8.45	10.67	8.64	37146
	Metal type with painting : -					
	Each					
37147	Up to 0.2 m²	366.40	7.03	9.21	7.18	37147
37148	0.2 - 0.4 m²	519.00	7.80	9.89	7.97	37148
37149	0.4 - 0.6 m²	888.47	8.45	10.67	8.64	37149
	Stainless steel 316 type : -					
	Each					
37150	Up to 0.2 m²	3,925.72	7.03	9.21	17.64	37150
37151	0.2 - 0.4 m²	6,025.72	7.80	9.89	18.65	37151
37152	0.4 - 0.6 m²	8,125.72	8.45	10.67	19.87	37152

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Exhaust air grille c/w volume control damper (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Stainless steel 304 type : -					
	Each					
37153	Up to 0.2 m²	3,425.72	7.03	9.21	17.64	37153
37154	0.2 - 0.4 m²	5,525.72	7.80	9.89	18.65	37154
37155	0.4 - 0.6 m²	7,125.72	8.45	10.67	19.87	37155

Duct work accessories : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
37156	Flexible Joints, a heavy glass fabric, double-coated	334.71	6.44	8.09	6.59	37156
37157	Flexible Joints, a heavy glass fabric, double-coated c/w insulation	505.57	6.44	8.76	6.59	37157

Dampers

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Fire damper (all type c/w holding frame, enclosure, access panel, electro- thermal link etc.) of F.S.D. approved type : -					
	Each					
37158	Up to 0.1 m²	923.59	11.11	16.64	11.35	37158
37159	0.1 - 0.3 m²	1,401.10	12.40	17.94	12.67	37159
37160	0.3 - 0.5 m²	1,818.10	13.68	19.24	13.98	37160
37161	0.5 - 0.8 m²	2,480.12	15.22	20.76	15.55	37161

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Dampers (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Fire damper (all type c/w stainless steel blades, galvanised steel holding frame, enclosure, access panel, electro thermal link etc.) of F.S.D. approved type : -					
	Each					
37162	Up to 0.1 m²	1,264.19	11.11	16.64	11.35	37162
37163	0.1 - 0.3 m²	1,917.77	12.40	17.94	12.67	37163
37164	0.3 - 0.5 m²	2,488.55	13.68	19.24	13.98	37164
37165	0.5 - 0.8 m²	3,394.71	15.22	20.76	15.55	37165
	Fire damper (all type c/w holding frame, enclosure, access panel, fusible link etc.) of F.S.D. approved type : -					
	Each					
37166	Up to 0.1 m²	849.70	6.07	9.24	6.20	37166
37167	0.1 - 0.3 m²	1,289.01	6.81	9.97	6.96	37167
37168	0.3 - 0.5 m²	1,672.66	7.50	10.66	7.66	37168
37169	0.5 - 0.8 m²	2,281.73	8.34	11.50	8.52	37169
	Fire damper (all type c/w stainless steel blades, galvanised steel holding frame, enclosure, access panel, fusible link etc.) of F.S.D. approved type : -					
	Each					
37170	Up to 0.1 m²	1,163.03	6.07	9.24	6.20	37170
37171	0.1 - 0.3 m²	1,764.34	6.81	9.97	6.96	37171
37172	0.3 - 0.5 m²	2,289.47	7.50	10.66	7.66	37172
37173	0.5 - 0.8 m²	3,123.15	8.34	11.50	8.52	37173
	Combined smoke and fire damper c/w holding frame, enclosure, access panel, fusible link or electromagnet release of F.S.D. approved type : -					
	Each					
37174	Up to 0.1 m²	3,890.38	6.44	9.80	6.59	37174
37175	0.1 - 0.3 m²	5,267.47	7.20	10.54	7.36	37175
37176	0.3 - 0.5 m²	7,141.14	7.94	11.29	8.11	37176
37177	0.5 - 0.8 m²	9,213.30	8.85	12.19	9.04	37177

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Dampers (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Combined smoke and fire damper c/w actuator and electrical connection : -					
	Each					
37178	Up to 0.1 m²	3,163.49	5.75	8.76	5.89	37178
37179	0.1 - 0.3 m²	4,459.10	6.25	9.21	6.38	37179
37180	0.3 - 0.5 m²	5,810.25	6.77	9.77	6.92	37180
37181	0.5 - 0.8 m²	6,754.95	7.71	10.55	7.87	37181
	Fire damper to louver door c/w all necessary accessories of F.S.D. approved type : -					
	Each					
37182	Up to 0.1 m²	1,146.18	122.65	130.48	125.31	37182
37183	0.1 - 0.3 m²	1,408.08	138.52	145.54	141.53	37183
37184	0.3 - 0.5 m²	1,647.97	150.41	158.79	153.69	37184
37185	0.5 - 0.8 m²	2,011.77	165.49	173.07	169.09	37185
	Motorized damper c/w actuator, coupling, electrical connection, connected to an electricity supply point : -					
	Each					
37186	Up to 0.1 m²	1,582.38	23.75	38.60	24.28	37186
37187	0.1 - 0.3 m²	3,142.87	34.32	48.16	35.06	37187
37188	0.3 - 0.5 m²	4,185.29	38.18	59.62	39.01	37188
37189	0.5 - 0.8 m²	5,166.96	43.96	67.12	44.92	37189
	Stainless steel 304 volume control damper (motorized type) c/w actuator, coupling, electrical connection, connected to an electricity supply point : -					
	Each					
37190	Up to 0.1 m²	3,870.67	17.57	25.93	17.95	37190
37191	0.1 - 0.3 m²	5,384.40	17.57	25.93	17.95	37191
37192	0.3 - 0.5 m²	7,170.29	17.57	25.93	17.95	37192
37193	0.5 - 0.8 m²	8,852.10	17.57	25.93	17.95	37193

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Dampers (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Stainless steel 316 volume control damper (motorized type) c/w actuator, coupling, electrical connection, connected to an electricity supply point : -					
	Each					
37194	Up to 0.1 m²	4,962.00	17.57	25.93	17.95	37194
37195	0.1 - 0.3 m²	6,422.62	17.57	25.93	17.95	37195
37196	0.3 - 0.5 m²	8,071.06	17.57	25.93	17.95	37196
37197	0.5 - 0.8 m²	9,964.15	17.57	25.93	17.95	37197
37198	Damper actuator that shall be of the linear or rotary type for either modulating or two-positioning control.	1,774.76	18.86	30.46	19.27	37198
	Self-closing (non-return) damper c/w device for position and locking the damper blades, access panel and label etc. : -					
	Each					
37199	Up to 0.1 m²	207.29	5.30	8.03	5.42	37199
37200	0.1 - 0.3 m²	402.90	5.86	8.63	5.99	37200
37201	0.3 - 0.5 m²	779.80	6.50	9.21	6.64	37201
37202	0.5 - 0.8 m²	1,552.76	7.20	9.90	7.36	37202
	Air filter c/w enclosure, holding frame and air gasket : -					
	Per square metre of surface area facing air stream					
37203	Filter for FCU/fresh air filter/pre-filter	1,944.94	10.46	14.11	10.69	37203
37204	Main filter cartridge type	2,430.14	10.46	14.11	10.69	37204
37205	HEPA filter	4,857.80	10.46	14.11	10.69	37205
37206	Bag filter of high efficiency with extended area, deep pleated type mounted to modular sections and equipped with holding frames & c/w at least four heavy duty spring type positive sealing latches (Air velocity flow rate of 1.0 to 3.5 m³/s)	1,642.06	10.54	15.02	10.76	37206

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Perforated diffuser c/w volume control damper and HEPA filter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per set					
37207	1200 mm x 600 mm	13,601.29	24.36	32.75	24.90	37207
37208	600 mm x 600 mm	7,245.13	19.42	26.10	19.85	37208

Electro-static filter and accessories

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal airflow rate : -					
	Per set					
37209	Up to 0.5 m³/s	6,779.65	16.75	20.25	17.12	37209
37210	0.5 - 1 m³/s	13,473.67	20.15	23.63	20.57	37210
37211	1 - 2 m³/s	27,096.81	23.32	26.94	23.83	37211
37212	2 - 3 m³/s	28,969.08	26.62	30.23	27.20	37212
37213	3 - 4 m³/s	31,789.89	29.99	33.59	30.64	37213
37214	4 - 5 m³/s	36,356.52	33.18	37.13	33.90	37214
37215	5 - 6 m³/s	41,898.43	36.50	40.23	37.29	37215

Active carbon filter c/w high-grade activated carbon filters and pre-filter and housed in a frame structure

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal airflow rate : -					
	Per set					
37216	Up to 0.5 m³/s	6,074.50	10.88	14.67	11.12	37216
37217	0.5 - 1 m³/s	9,075.72	14.50	18.17	14.82	37217
37218	1 - 2 m³/s	14,179.83	18.14	21.89	18.53	37218
37219	2 - 3 m³/s	20,298.00	21.76	25.54	22.24	37219
37220	3 - 4 m³/s	24,220.24	25.21	29.09	25.76	37220
37221	4 - 5 m³/s	32,098.33	28.69	32.57	29.32	37221
37222	5 - 6 m³/s	38,218.86	32.33	36.22	33.03	37222

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Electric duct heater of black sheathed element type c/w enclosure, access panel, safety cut-off, thermostat, sail switch and accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
37223	Up to 3 kW	2,401.46	10.15	12.16	10.36	37223
37224	3 - 6 kW	3,008.70	10.77	12.90	11.01	37224
37225	6 - 9 kW	3,590.44	11.54	13.57	11.80	37225
37226	9 - 12 kW	3,995.56	12.16	14.27	12.43	37226

Duct silencers : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Pet set					
37227	Up to 0.5 m^3/s	3,162.40	20.71	34.60	21.16	37227
37228	0.5 - 0.75 m^3/s	3,339.69	25.32	39.23	25.87	37228
37229	0.75 - 1.0 m^3/s	4,586.73	31.03	45.11	31.70	37229
37230	Add to last item for each additional 0.25 m^3/s or part thereof	1,264.06	4.78	5.54	4.89	37230

Ductwork acoustic insulation : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37231	Ductwork acoustic insulation, 50mm thick including metal perforated sheet	1,160.42	11.85	17.33	12.11	37231

Duct access panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
37232	Up to 0.1 m^2	343.12	8.95	10.49	9.15	37232
37233	0.1 - 0.25 m^2	510.93	10.50	12.05	10.73	37233
37234	0.25 - 0.5 m^2	900.51	12.75	14.27	13.02	37234

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Regulation damper / volume control damper: -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
37235	Regulation damper / volume control damper c/w operating handle, access panel, device for position and locking the damper blades, label etc.	322.54	17.55	23.33	17.92	37235
37236	Stainless steel regulation damper / volume control damper c/w operating handle, access panel, device for position and locking the damper blades, label etc.	2,217.72	17.55	23.33	17.92	37236

Galvanized iron wire mesh : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37237	Galvanized iron wire mesh (straight lattice mesh/diamond mesh)	178.52	12.07	14.45	12.34	37237

Galvanized iron air duct c/w volume control damper, painted with anti-corrosive paint : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37238	1.0 mm thick	663.74	13.62	20.01	13.91	37238
37239	1.2 mm thick	748.50	15.10	21.66	15.43	37239

Anti-acidic/anti-corrosive PVC duct for exhaust fans of diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per linear metre					
37240	150 mm	1,189.73	6.81	11.85	6.96	37240
37241	250 mm	1,245.08	8.35	13.62	8.54	37241
37242	300 mm	1,444.92	10.12	15.35	10.34	37242

AIR DUCTS, THERMAL INSULATION & ACCESSORIES (CONT'D)

Air duct cleaning : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
37243	Air duct cleaning point c/w metal flange and air tight screw plug fixing on air duct with no work on ceiling or demountable ceiling	62.70	-	-	-	37243
37244	Air duct cleaning point c/w metal flange, extended collar, air tight screw plug fixing on air duct with fixed ceiling	75.34	-	-	-	37244
	Per linear metre					
37245	Air duct cleaning and disinfection process with proprietary type compressed air lance, disinfection application lance, sampling probe and necessary accessories, video recording, video inspection and reporting	117.71	-	-	-	37245
	Per point					
37246	Inspection and photograph taking using borescope, c/w particulate and micro-biological monitoring report	531.46	-	-	-	37246

Protection coating paint : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
37247	Protection coating paint for thermal insulation (flexible closed cell elastomeric) of same manufacturer as the thermal insulation for ductwork at outdoor area	1,529.48	-	-	-	37247

Section 38

HEATING, VENTILATION AND AIR-CONDITIONING - EQUIPMENT

UNITARY AIR CONDITIONERS

Air to air packaged air conditioner (refrigerant R22) c/w motors, compressors, filter, filter chamber, noise control equipment, copper tube with pre-corrosion resisting treated aluminium fins cooling coils, condensers, blowers, starters, refrigerant, drain pan, emergency stop button, probe type smoke detector, local control panel.

External or internally mounted, of cooling capacity : -

Each

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
38001	Up to 15 kW	-	236.62	261.53	906.60	38001
38002	15 - 21 kW	-	256.62	271.52	929.03	38002
38003	21 - 30 kW	-	262.98	296.47	946.97	38003
38004	30 - 50 kW	-	269.37	311.17	977.62	38004

Air to air packaged air conditioner (refrigerant zero ODP) c/w motors, compressors, filter, filter chamber, noise control equipment, copper tube with pre-corrosion resisting treated aluminium fins cooling coils, condensers, blowers, starters, refrigerant, drain pan, emergency stop button, probe type smoke detector, local control panel.

External or internally mounted, of cooling capacity : -

Each

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
38005	Up to 15 kW	29,065.46	236.62	261.53	906.60	38005
38006	15 - 21 kW	37,439.21	256.62	271.52	929.03	38006
38007	21 - 30 kW	54,521.62	262.98	296.47	946.97	38007
38008	30 - 50 kW	68,840.14	269.37	311.17	977.62	38008
38009	50 - 61 kW	79,144.82	278.06	322.38	1,008.97	38009
38010	61 - 91 kW	94,042.79	280.66	336.29	1,041.51	38010

UNITARY AIR CONDITIONERS (CONT'D)

Air cooled packaged heat recovery chiller (refrigerant zero ODP) c/w motor, compressor, condenser, blower, noise control equipment, copper tube with pre- corrosion resisting treated copper fins evaporators, filter drier, water strainer, crank case heater, switch, muffler, refrigerant, oil separator, safety cutout, control metering device, temperature thermometers, starter, receiver, seamless copper tubing, weather-proof cabinet, emergency stop button.

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Cooling capacity : -					
	Each					
38011	300 - 400 kW ..... (The actual rate should be : $1,316,497.00 for Item 38011A)	13,164.97	5,051.56	6,797.18	18,684.06	38011
38012	400 - 500 kW ..... (The actual rate should be : $1,464,593.00 for Item 38012A)	14,645.93	5,580.81	7,497.47	20,737.44	38012
38013	500 - 600 kW ..... (The actual rate should be : $1,717,534.00 for Item 38013A)	17,175.34	6,587.09	8,222.69	23,690.13	38013
38014	600 - 700 kW ..... (The actual rate should be : $2,056,248.00 for Item 38014A)	20,562.48	7,221.27	9,332.77	25,742.82	38014
38015	700 - 800 kW ..... (The actual rate should be : $2,297,674.00 for Item 38015A)	22,976.74	7,562.98	9,465.04	27,196.08	38015
38016	800 - 900 kW ..... (The actual rate should be : $2,510,154.00 for Item 38016A)	25,101.54	7,759.48	9,729.90	28,237.07	38016
	Acoustic enclosure for above chillers : -					
	Each					
38017	300 - 400 kW ..... (The actual rate should be : $138,214.50 for Item 38017A)	13,821.45	899.50	1,373.23	3,166.52	38017
38018	400 - 500 kW ..... (The actual rate should be : $155,178.10 for Item 38018A)	15,517.81	1,033.00	1,472.62	3,736.13	38018
38019	500 - 600 kW ..... (The actual rate should be : $192,333.90 for Item 38019A)	19,233.39	1,322.83	1,924.53	5,044.12	38019
38020	600 - 700 kW ..... (The actual rate should be : $242,346.80 for Item 38020A)	24,234.68	1,547.07	2,157.06	5,905.73	38020
38021	700 - 800 kW ..... (The actual rate should be : $269,238.20 for Item 38021A)	26,923.82	1,752.02	2,622.38	6,611.88	38021
38022	800 - 900 kW ..... (The actual rate should be : $290,672.00 for Item 38022A)	29,067.20	1,933.24	2,901.59	7,294.41	38022

UNITARY AIR CONDITIONERS (CONT'D)

Air cooled packaged water chiller (refrigerant zero ODP) for external mounting c/w motors, compressors, condensers, blowers, noise control equipment, copper tube with pre-corrosion resisting treated copper fins, evaporators, filter drier, water strainer, capacity controller, liquid receivers, starters, refrigerant, weather-proof cabinet, emergency stop button, local control panel.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38023	Up to 44 kW (The actual rate should be : $121,560.00 for Item 38023A)	12,156.00	1,390.18	1,680.13	5,292.49	38023
38024	44 - 68 kW (The actual rate should be : $162,769.20 for Item 38024A)	16,276.92	1,714.99	2,516.28	7,041.64	38024
38025	68 - 100 kW (The actual rate should be : $245,187.70 for Item 38025A)	24,518.77	2,288.92	3,395.34	9,144.04	38025
38026	100 - 150kW (The actual rate should be : $342,934.60 for Item 38026A)	34,293.46	2,823.93	4,194.54	9,720.46	38026
38027	150 - 200 kW (The actual rate should be : $426,696.00 for Item 38027A)	42,669.60	3,530.14	5,062.48	11,769.32	38027
38028	200 - 300 kW (The actual rate should be : $492,909.20 for Item 38028A)	49,290.92	3,733.66	5,446.66	13,041.69	38028
38029	300 - 350 kW (The actual rate should be : $788,958.70 for Item 38029A)	78,895.87	4,510.99	6,000.21	13,824.25	38029
38030	350 - 450 kW (The actual rate should be : $902,207.20 for Item 38030A)	90,220.72	5,312.10	7,266.70	15,615.06	38030
	Acoustic enclosure for above chillers : -					
	Each					
38031	Up to 100 kW	48,350.91	400.00	657.91	2,147.90	38031
38032	100 - 150 kW	67,506.37	479.44	808.79	2,327.31	38032
38033	150 - 200 kW	84,218.16	566.07	1,101.73	2,812.98	38033
38034	200 - 300 kW	97,854.29	681.54	1,266.49	2,963.06	38034
38035	300 - 350 kW (The actual rate should be : $157,431.60 for Item 38035A)	15,743.16	799.92	1,390.41	3,404.46	38035
38036	350 - 450 kW (The actual rate should be : $191,960.90 for Item 38036A)	19,196.09	963.61	1,537.66	3,592.30	38036

UNITARY AIR CONDITIONERS (CONT'D)

Air cooled packaged water chiller (refrigerant zero ODP) for external mounting c/w motors, 'scroll' compressor, condensers, blowers, copper tube with pre-corrosion resisting treated aluminium fins, evaporator, filter drier, water strainer, capacity controller, starters, refrigerant, weather-proof cabinet, emergency stop button, local control panel, expansion vessel and circulating pump set.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38037	Up to 25 kW	85,534.10	1,129.76	1,442.48	5,333.11	38037
38038	25 - 45 kW (The actual rate should be : $117,483.50 for Item 38038A)	11,748.35	1,372.02	1,611.03	6,244.01	38038
38039	45 - 100 kW (The actual rate should be : $281,111.50 for Item 38039A)	28,111.15	1,849.47	2,694.56	7,492.76	38039
38040	100 - 140 kW (The actual rate should be : $335,135.00 for Item 38040A)	33,513.50	2,694.56	3,821.19	9,313.87	38040
38041	140 - 170 kW (The actual rate should be : $378,113.90 for Item 38041A)	37,811.39	2,821.46	4,216.88	10,041.15	38041
38042	170 - 230 kW (The actual rate should be : $490,121.30 for Item 38042A)	49,012.13	3,546.40	4,825.29	11,383.64	38042
38043	230 - 300 kW (The actual rate should be : $620,796.60 for Item 38043A)	62,079.66	4,392.15	5,535.11	12,949.88	38043
38044	300 - 350 kW (The actual rate should be : $714,136.10 for Item 38044A)	71,413.61	4,996.30	6,042.12	14,068.64	38044
38045	350 - 400 kW (The actual rate should be : $807,475.40 for Item 38045A)	80,747.54	5,600.40	6,549.13	15,187.40	38045

UNITARY AIR CONDITIONERS (CONT'D)

Air cooled packaged water chiller (refrigerant zero ODP) for external mounting c/w motors, 'screw' compressor, condensers, blowers, copper tube with pre-corrosion resisting treated aluminium fins, evaporator, filter drier, water strainer, capacity controller, starters, refrigerant, weather-proof cabinet, emergency stop button, local control panel, expansion vessel and circulating pump set.

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Cooling capacity : -					
	Each					
38046	Up to 25 kW	58,117.31	1,020.11	1,300.90	4,823.38	38046
38047	25 - 45 kW (The actual rate should be : $104,449.90 for Item 38047A)	10,444.99	1,235.47	1,446.80	5,648.46	38047
38048	45 - 100 kW (The actual rate should be : $220,501.10 for Item 38048A)	22,050.11	1,657.38	2,408.13	6,778.12	38048
38049	100 - 140 kW (The actual rate should be : $330,300.30 for Item 38049A)	33,030.03	2,408.13	3,404.67	8,405.48	38049
38050	140 - 170 kW (The actual rate should be : $422,885.00 for Item 38050A)	42,288.50	2,523.17	3,762.21	9,043.20	38050
38051	170 - 230 kW (The actual rate should be : $509,051.90 for Item 38051A)	50,905.19	3,167.34	4,294.01	10,234.20	38051
38052	230 - 300 kW (The actual rate should be : $609,580.00 for Item 38052A)	60,958.00	3,918.92	4,914.46	11,623.70	38052
38053	300 - 350 kW (The actual rate should be : $681,385.60 for Item 38053A)	68,138.56	4,455.74	5,357.64	12,616.20	38053
38054	350 - 400 kW (The actual rate should be : $753,191.50 for Item 38054A)	75,319.15	4,992.57	5,800.80	13,608.71	38054

Water-cooled packaged chiller (refrigerant zero ODP) c/w motor, semi-hermetic screw type compressor, shell and tube evaporator / condenser, refrigeration components, control panel : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Cooling capacity : -					
	Each					
38055	400 - 500 kW (The actual rate should be : $854,674.90 for Item 38055A)	85,467.49	4,523.44	6,111.74	13,835.37	38055
38056	500 - 600 kW (The actual rate should be : $993,151.70 for Item 38056A)	99,315.17	5,429.85	7,338.07	16,553.39	38056
38057	600 - 700 kW (The actual rate should be : $1,185,485.00 for Item 38057A)	11,854.85	6,254.38	8,466.92	19,804.83	38057
38058	700 - 800 kW (The actual rate should be : $1,396,067.00 for Item 38058A)	13,960.67	7,343.11	9,938.23	23,303.31	38058
38059	800 - 900 kW (The actual rate should be : $1,759,908.00 for Item 38059A)	17,599.08	9,996.93	12,911.43	29,669.43	38059
38060	900 - 1000 kW (The actual rate should be : $2,036,340.00 for Item 38060A)	20,363.40	12,867.58	16,796.39	35,354.28	38060

UNITARY AIR CONDITIONERS (CONT'D)

Water-cooled packaged chiller (refrigerant zero ODP) c/w motor, semi-hermetic screw type compressor, shell and tube evaporator / condenser, refrigeration components, control panel : - (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Automatic tube cleaning system for above chiller : -					
	Each					
38061	400 - 500 kW	20,871.10	64.33	67.20	423.05	38061
38062	500 - 600 kW	23,414.59	70.72	73.76	465.13	38062
38063	600 - 700 kW	25,107.11	76.03	79.34	497.78	38063
38064	700 - 800 kW	26,316.33	80.14	83.67	534.67	38064
38065	800 - 900 kW	27,934.76	84.38	88.02	556.33	38065
38066	900 - 1000 kW	29,158.40	86.02	90.60	596.71	38066

Air to air split type air conditioners (refrigerant zero ODP) of cooling capacity as specified (direct expansion)

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Condensing units c/w motors, compressors, condenser, copper tubes and pre-painted anti-corrosion resin coated aluminium fins, blowers, filter drier, refrigerant, refrigerant pipework to the internally mounted AHU/ FCU, starters, weather-proof cabinet, emergency stop button, liquid receivers.					
	Cooling capacity : -					
	Each					
38067	Up to 14 kW	22,980.09	603.57	844.26	2,355.12	38067
38068	14 - 20 kW	29,710.87	723.03	906.72	2,766.58	38068
38069	20 - 30 kW	40,966.22	748.55	949.38	3,063.50	38069
38070	30 - 44 kW	53,419.50	823.92	1,013.34	3,337.44	38070
38071	44 - 58 kW	80,780.69	890.00	1,084.89	3,605.36	38071
38072	58 - 86 kW (The actual rate should be : $105,790.40 for Item 38072A)	10,579.04	986.38	1,185.60	3,842.33	38072

UNITARY AIR CONDITIONERS (CONT'D)

Air to air split type air conditioners (refrigerant zero ODP) of cooling capacity as specified (direct expansion) (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Condensing units c/w motors, compressors, condenser, copper tubes and pre-painted anti-corrosion resin coated aluminium fins, blowers, filter drier, refrigerant, refrigerant pipework to the internally mounted PAU, starters, weather-proof cabinet, emergency stop button, liquid receivers.					
	Cooling capacity : -					
	Each					
38073	Up to 14 kW	24,372.45	624.82	904.70	3,231.11	38073
38074	14 - 20 kW	30,744.38	695.11	1,016.72	3,231.11	38074
38075	20 - 30 kW	43,943.73	781.69	1,032.85	3,231.11	38075
38076	30 - 44 kW	60,417.31	805.59	1,211.21	3,520.06	38076
38077	44 - 58 kW	97,449.74	900.05	1,318.44	3,733.78	38077
38078	58 - 86 kW (The actual rate should be : $122,005.90 for Item 38078A)	12,200.59	1,012.73	1,435.15	4,011.61	38078
	Internal mounted DX AHU/ FCU of copper tube and pre-treated anti-corrosion aluminium fin cooling coil, c/w filter chamber, flexible connector, air filters, filter clog indicator, starters, emergency stop button, local control panel.					
	Cooling capacity : -					
	Each					
38079	Up to 14 kW	11,465.50	190.52	308.39	959.48	38079
38080	14 - 20 kW	13,897.78	213.49	329.06	1,015.00	38080
38081	20 - 30 kW	17,645.76	223.80	337.43	1,070.19	38081
38082	30 - 44 kW	27,398.77	235.93	343.34	1,126.54	38082
38083	44 - 58 kW	35,973.41	259.36	361.40	1,182.75	38083
38084	58 - 86 kW	43,317.40	266.99	375.52	1,216.37	38084
	Internal mounted DX PAU of copper tube and pre-treated anti-corrosion aluminium fin cooling coil, c/w filter chamber, flexible connector, air filters, filter clog indicator, starters, emergency stop button, local control panel.					
	Cooling capacity : -					
	Each					
38085	Up to 14 kW	11,454.19	196.06	310.51	1,016.44	38085
38086	14 - 20 kW	13,876.71	218.87	329.80	1,112.29	38086
38087	20 - 30 kW	17,620.63	229.74	338.05	1,180.56	38087
38088	30 - 44 kW	29,189.43	242.57	343.49	1,254.31	38088
38089	44 - 58 kW	38,129.44	259.44	363.75	1,333.39	38089
38090	58 - 86 kW	44,811.88	267.38	380.27	1,391.70	38090

UNITARY AIR CONDITIONERS (CONT'D)

Air to air split type room air conditioner (direct expansion type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipework c/w insulation not exceeding manufacturer's maximum permitted length, refrigerant, local control panel.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Complete set with indoor unit of wall mounted type, cooling only					
	Cooling capacity : -					
	Each					
38091	Up to 3.5 kW	13,182.84	450.40	544.03	1,741.79	38091
38092	3.5 - 5.2 kW	18,067.83	488.65	584.58	1,871.00	38092
38093	5.2 - 6.5 kW	23,197.13	525.78	622.00	2,106.76	38093
38094	6.5 - 7.5 kW	27,738.01	562.83	660.55	2,223.02	38094
38095	7.5 - 9.5 kW	32,884.01	599.69	698.70	2,322.09	38095
38096	9.5 - 12 kW	40,707.15	636.51	731.23	2,444.19	38096
	Complete set with indoor unit of ceiling suspended type, cooling only					
	Cooling capacity : -					
	Each					
38097	Up to 6.5 kW	22,165.54	583.58	688.74	2,183.78	38097
38098	6.5 - 7.5 kW	25,041.14	622.97	732.79	2,273.80	38098
38099	7.5 - 9 kW	31,129.37	661.50	773.45	2,338.85	38099
38100	9 - 11 kW	37,138.40	699.63	813.31	2,462.04	38100
38101	11 - 13 kW	44,502.57	777.13	897.03	2,583.32	38101
38102	13 - 17 kW	54,446.36	849.12	969.37	2,718.23	38102
	Complete set with indoor unit of ceiling cassette type, cooling only					
	Cooling capacity : -					
	Each					
38103	Up to 5 kW	19,294.59	553.50	626.04	1,655.76	38103
38104	5 - 6 kW	22,773.39	565.82	653.64	1,848.84	38104
38105	6 - 8 kW	29,731.05	590.52	708.85	2,235.04	38105
38106	8 -11 kW	40,264.96	675.29	770.98	2,458.91	38106
38107	11 - 13 kW	47,492.77	699.63	813.31	2,564.95	38107
38108	13 - 16.5 kW	60,669.29	783.87	900.75	2,678.16	38108

UNITARY AIR CONDITIONERS (CONT'D)

Air to air split type room air conditioner (direct expansion type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipework c/w insulation not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Complete set with indoor unit of ceiling mounted ducted type, cooling only					
	Cooling capacity : -					
	Each					
38109	Up to 5 kW	15,435.68	553.50	626.04	1,655.76	38109
38110	5 - 6 kW	18,218.73	565.82	653.64	1,848.84	38110
38111	6 - 8 kW	23,784.83	590.52	708.85	2,235.04	38111
38112	8 -11 kW	32,211.99	675.29	770.98	2,458.91	38112
38113	11 - 13 kW	37,994.21	699.63	813.31	2,564.95	38113
38114	13 - 16.5 kW	48,535.43	783.87	900.75	2,678.16	38114
	Complete set with indoor unit of wall mounted type; cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38115	Up to 6 kW (cooling) and up to 7.5 kW (heating)	22,908.83	569.60	664.60	2,108.94	38115
38116	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	29,076.89	618.83	716.25	2,271.70	38116
38117	8 - 11 kW (cooling) and 9 - 11 kW (heating)	38,328.96	692.64	793.72	2,515.81	38117
	Complete set with indoor unit of ceiling suspended type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38118	Up to 6 kW (cooling) and up to 7.5 kW (heating)	25,444.80	567.27	662.26	2,331.51	38118
38119	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	32,034.92	668.90	774.50	2,465.52	38119
38120	8 - 11 kW (cooling) and 9 - 11 kW (heating)	41,920.13	821.35	942.85	2,666.57	38120
	Complete set with indoor unit of ceiling cassette type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38121	Up to 6 kW (cooling) and up to 7.5 kW (heating)	27,100.99	562.34	699.81	2,171.79	38121
38122	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	34,887.87	647.15	771.91	2,352.17	38122
38123	8 - 11 kW (cooling) and 9 - 11 kW (heating)	46,568.19	774.38	880.10	2,622.73	38123

UNITARY AIR CONDITIONERS (CONT'D)

Air to air split type room air conditioner (direct expansion type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipework c/w insulation not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Complete set with indoor unit of ceiling mounted ducted type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38124	Up to 6 kW (cooling) and up to 7.5 kW (heating)	21,680.81	562.34	699.81	2,171.79	38124
38125	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	27,910.29	647.15	771.91	2,352.17	38125
38126	8 - 11 kW (cooling) and 9 - 11 kW (heating)	37,254.54	774.38	880.10	2,622.73	38126

Air to air split type room air conditioner (Inverter type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipe work c/w insulation not exceeding manufacturer's maximum permitted length, refrigerant, local control panel.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Complete set with indoor unit of wall mounted type, cooling only					
	Cooling capacity : -					
	Each					
38127	Up to 3.5 kW	14,321.42	450.40	544.03	1,741.79	38127
38128	3.5 - 5.2 kW	19,341.30	488.65	584.58	1,871.00	38128
38129	5.2 - 6.5 kW	24,139.71	525.78	622.00	2,106.76	38129
38130	6.5 - 7.5 kW	28,790.48	562.83	660.55	2,223.02	38130
38131	7.5 - 9.5 kW	33,957.99	599.69	698.70	2,322.09	38131
38132	9.5 - 12.0 kW	41,340.18	636.51	731.23	2,444.19	38132
	Complete set with indoor unit of ceiling suspended type, cooling only					
	Cooling capacity : -					
	Each					
38133	Up to 6.5 kW	25,983.90	583.58	688.74	2,183.78	38133
38134	6.5 - 7.5 kW	30,931.70	622.97	732.79	2,273.80	38134
38135	7.5 - 9 kW	35,854.31	661.50	773.45	2,338.85	38135
38136	9 - 11 kW	42,330.07	699.63	813.31	2,462.04	38136
38137	11 - 13 kW	53,660.71	777.13	897.03	2,583.32	38137
38138	13 - 17 kW	61,269.14	849.12	969.37	2,718.23	38138

UNITARY AIR CONDITIONERS (CONT'D)

Air to air split type room air conditioner (Inverter type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipe work c/w insulation not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Complete set with indoor unit of ceiling cassette type, cooling only					
	Cooling capacity : -					
	Each					
38139	Up to 5 kW	20,064.12	553.50	626.04	1,655.76	38139
38140	5 - 6 kW	24,476.01	565.82	653.64	1,848.84	38140
38141	6 - 8 kW	30,999.73	590.52	708.85	2,235.04	38141
38142	8 -11 kW	41,192.79	675.29	770.98	2,458.91	38142
38143	11 - 13 kW	48,966.69	699.63	813.31	2,564.95	38143
38144	13 - 16.5 kW	61,731.22	783.87	900.75	2,678.16	38144
	Complete set with indoor unit of ceiling mounted ducted type, cooling only					
	Cooling capacity : -					
	Each					
38145	Up to 5 kW	19,957.82	553.50	626.04	1,655.76	38145
38146	5 - 6 kW	26,743.82	565.82	653.64	1,848.84	38146
38147	6 - 8 kW	31,047.27	590.52	708.85	2,235.04	38147
38148	8 -11 kW	42,782.78	675.29	770.98	2,458.91	38148
38149	11 - 13 kW	52,192.02	699.63	813.31	2,564.95	38149
38150	13 - 16.5 kW	58,120.66	783.87	900.75	2,678.16	38150
	Complete set with indoor unit of wall mounted type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38151	Up to 6 kW (cooling) and up to 7.5 kW (heating)	26,723.26	569.60	664.60	2,108.94	38151
38152	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	36,616.10	618.83	716.25	2,271.70	38152
38153	8 - 11 kW (cooling) and 9 - 11 kW (heating)	51,455.40	692.64	793.72	2,515.81	38153

UNITARY AIR CONDITIONERS (CONT'D)

Air to air split type room air conditioner (Inverter type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipe work c/w insulation not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Complete set with indoor unit of ceiling suspended type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38154	Up to 6 kW (cooling) and up to 7.5 kW (heating)	33,951.82	567.27	662.26	2,331.51	38154
38155	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	44,237.49	668.90	774.50	2,465.52	38155
38156	8 - 11 kW (cooling) and 9 - 11 kW (heating)	51,187.42	821.35	942.85	2,666.57	38156
	Complete set with indoor unit of ceiling cassette type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38157	Up to 6 kW (cooling) and up to 7.5 kW (heating)	38,336.90	562.34	699.81	2,171.79	38157
38158	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	47,937.87	647.15	771.91	2,352.17	38158
38159	8 - 11 kW (cooling) and 9 - 11 kW (heating)	59,697.51	774.38	880.10	2,622.73	38159
	Complete set with indoor unit of ceiling mounted ducted type, cooling/ heating (heat pump)					
	Cooling and heating capacity : -					
	Each					
38160	Up to 6 kW (cooling) and up to 7.5 kW (heating)	27,229.70	562.34	699.81	2,171.79	38160
38161	6 - 8 kW (cooling) and 7.5 - 9 kW (heating)	35,526.51	647.15	771.91	2,352.17	38161
38162	8 - 11 kW (cooling) and 9 - 11 kW (heating)	44,516.87	774.38	880.10	2,622.73	38162
	Window-split type air-conditioner with remote controller					
	Cooling capacity : -					
	Each					
38163	Up to 2.8 kW	12,612.51	489.43	590.85	1,890.85	38163
38164	2.8 - 3.7 kW	16,309.76	530.94	634.38	2,071.48	38164
38165	3.7 - 5.5 kW	21,296.86	572.32	677.76	2,298.28	38165
38166	3.7 - 5.5 kW for dual indoor units	25,460.31	658.52	784.64	2,730.80	38166
38167	5.5 - 7.0 kW	25,452.80	606.81	713.93	2,487.28	38167
38168	7.0 - 7.9kW	27,946.35	635.56	744.07	2,644.75	38168

UNITARY AIR CONDITIONERS (CONT'D)

Stainless steel 316 panel housing; weatherproof type : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38169	Panel for housing gauges for split type A/C outdoor units (gauges measured separately)	1,039.07	111.33	192.34	434.73	38169

Computer room air conditioning unit (direct expansion type with refrigerant zero ODP), indoor and outdoor unit (outdoor unit shall consist of copper pipes and pre-treated anti-corrosion aluminium fins) with electrode boiler humidifier, electric reheat, microprocessor control with local alarm and BMS interface provisions, high efficient filter, refrigerant pipework with length not exceeding manufacturer's maximum permitted length, local control panel. Operating room conditions are 22°C, 50% RH at ambient 35°C.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38170	Up to 13 kW	90,389.32	694.26	907.11	2,904.35	38170
38171	13 - 26 kW (The actual rate should be : $118,467.60 for Item 38171A)	11,846.76	843.70	1,050.85	3,406.66	38171
38172	26 - 35 kW (The actual rate should be : $139,080.60 for Item 38172A)	13,908.06	924.00	1,140.27	3,633.84	38172
38173	35 - 50 kW (The actual rate should be : $157,686.50 for Item 38173A)	15,768.65	1,003.76	1,220.17	3,859.05	38173
38174	50 - 75 kW (The actual rate should be : $206,404.10 for Item 38174A)	20,640.41	1,069.84	1,268.21	4,021.07	38174
38175	75 - 84 kW (The actual rate should be : $223,942.50 for Item 38175A)	22,394.25	1,093.63	1,285.50	4,079.40	38175

UNITARY AIR CONDITIONERS (CONT'D)

Computer room air conditioning unit (direct expansion type with refrigerant zero ODP), indoor and outdoor unit (outdoor unit shall consist of copper pipes and pre-treated anti-corrosion aluminium fins) with electrode boiler humidifier, electric reheat, microprocessor control with local alarm and BMS interface provisions, high efficient filter, EC plug fans, refrigerant pipework with length not exceeding manufacturer's maximum permitted length, local control panel. Operating room conditions are 22°C, 50% RH at ambient 35°C.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38176	Up to 13 kW	99,360.00	694.26	907.11	2,904.35	38176
38177	13 - 26 kW (The actual rate should be : $118,800.00 for Item 38177A)	11,880.00	843.70	1,050.85	3,406.66	38177
38178	26 - 35 kW (The actual rate should be : $140,400.00 for Item 38178A)	14,040.00	924.00	1,140.27	3,633.84	38178
38179	35 - 50 kW (The actual rate should be : $162,000.00 for Item 38179A)	16,200.00	1,003.76	1,220.17	3,859.05	38179
38180	50 - 75 kW (The actual rate should be : $216,000.00 for Item 38180A)	21,600.00	1,069.84	1,268.21	4,021.07	38180
38181	75 - 84 kW (The actual rate should be : $250,800.00 for Item 38181A)	25,080.00	1,093.63	1,285.50	4,079.40	38181
	Acoustic enclosure for above computer room air conditioning units c/w acoustic panels and supporting framework: -					
	Each					
38182	Up to 13 kW	9,889.62	199.76	355.22	1,178.70	38182
38183	13 - 26 kW	11,103.42	224.28	398.82	1,323.38	38183
38184	26 - 35 kW	13,762.02	277.98	494.32	1,640.24	38184
38185	35 - 50 kW	17,340.59	350.25	622.86	2,066.75	38185
38186	50 - 75 kW	19,264.75	389.10	691.97	2,296.10	38186
38187	75 - 84 kW	20,798.37	420.09	747.05	2,478.89	38187

Water leakage detection system : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38188	Water leakage detection system with control panel providing audio and visual alarm, location of leak and BMS interface provisions connected to water-sensing cable for operation	23,092.48	333.44	361.75	1,129.02	38188
38189	Water leakage detection system with control panel providing audio and visual alarm, location of leak and BMS interface provisions connected to water-sensing cable for operation and to SMS and email notification system	37,800.00	648.00	648.00	1,620.00	38189

UNITARY AIR CONDITIONERS (CONT'D)

Water leakage detection system : - (Cont'd)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Per linear metre					
38190	Water leakage sensing cable complete with branch connector, zone connector, compatible with the above water detection system c/w all necessary mountings	265.41	3.46	7.94	32.28	38190
	Each					
38191	Water leakage detection sensor; point type, complete with detection module, stainless steel probes, controller with buzzer, control panel, cables and cable containments, and all necessary accessories and BMS interface provisions	6,685.53	188.02	250.70	313.36	38191
38192	Water leakage detection sensor; point type, complete with cables and containments	592.93	18.08	24.10	30.14	38192
	Per set					
38193	Temperature and humidity recorder	8,627.23	7.16	9.07	56.65	38193

Reheat coil air conditioners for dehumidity Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat humidistat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit.

		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	
	Ceiling concealed type : -					
	Per set					
38194	Up to 5.8 kW	58,984.81	151.43	766.55	804.75	38194
38195	5.8 - 14.5 kW	80,855.24	151.43	1,075.92	1,175.17	38195
	Ceiling suspended type : -					
	Per set					
38196	Up to 5.8 kW	52,870.84	151.43	766.55	884.84	38196
38197	5.8 - 14.5 kW	74,114.54	151.43	1,075.92	1,175.17	38197

UNITARY AIR CONDITIONERS (CONT'D)

Variable refrigerant volume (VRV) system (refrigerant zero ODP)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Outdoor condensing units c/w insulated gate bipolar transistor type inverter or the equivalent, hermetic scroll compressor, anti-corrosion resin coated condensing fin,propeller fan, accumulator, high pressure switch, crank case heater, over current protection for inverter, short recycling timer and oil recovery system, refrigerant(zero ODP), refrigerant pipework c/w insulation (with length not exceeding manufacturer's maximum permitted length) to the indoor units, weather proof cabinet, emergency stop button, local control panel for operation.					
	Cooling and heating, capacity : -					
	Per set					
38198	Up to 8 kW	44,771.73	803.35	876.38	2,921.28	38198
38199	8 - 14 kW	90,363.25	876.38	949.41	3,067.34	38199
38200	14 - 20 kW (The actual rate should be : $123,759.20 for Item 38200A)	12,375.92	912.92	1,097.39	3,542.64	38200
38201	20 - 30 kW (The actual rate should be : $130,343.10 for Item 38201A)	13,034.31	1,053.87	1,254.38	3,811.61	38201
38202	30 - 44 kW (The actual rate should be : $178,907.40 for Item 38202A)	17,890.74	1,196.14	1,405.16	4,046.47	38202
38203	44 - 58 kW (The actual rate should be : $234,914.90 for Item 38203A)	23,491.49	1,332.96	1,527.99	4,287.89	38203
38204	58 - 86 kW (The actual rate should be : $324,508.00 for Item 38204A)	32,450.80	1,507.36	1,766.69	4,564.62	38204
38205	86 - 90 kW (The actual rate should be : $337,307.00 for Item 38205A)	33,730.70	1,532.29	1,800.78	4,604.15	38205
	Stainless steel 316 panel housing; weatherproof type : -					
	Each					
38206	Panel for housing gauges for VRV outdoor units (gauges measured separately)	1,071.00	111.33	192.34	434.73	38206

UNITARY AIR CONDITIONERS (CONT'D)

Variable refrigerant volume (VRV) system (refrigerant zero ODP) (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Water cooled outdoor condensing units c/w insulated gate bipolar transistor type inverter or the equivalent, hermetic scroll compressor, over current protection for inverter, and short recycling timer, refrigerant (zero ODP), refrigerant pipework c/w insulation (with length notexceeding manufacturer's maximum permitted length) to the indoor units, weather proof cabinet, emergency stop button, local control panel for operation.					
	Cooling and heating (heat pump), capacity : -					
	Per set					
38207	up to 22.7 kW (The actual rate should be : $134,851.80 for Item 38207A)	13,485.18	983.97	1,169.17	3,618.07	38207
38208	22.7 - 27.0 kW (The actual rate should be : $162,997.80 for Item 38208A)	16,299.78	1,150.31	1,356.79	4,070.78	38208
38209	27 - 45.4 kW (The actual rate should be : $190,168.20 for Item 38209A)	19,016.82	1,285.31	1,530.75	4,479.86	38209
38210	45.4 - 49.7 kW (The actual rate should be : $241,100.10 for Item 38210A)	24,110.01	1,511.69	1,745.19	5,095.68	38210
38211	49.7- 54.0 kW (The actual rate should be : $302,444.80 for Item 38211A)	30,244.48	1,803.36	2,115.03	5,809.54	38211

Internally mounted refrigerant distributing and recirculating unit c/w valves, wiring and all necessary devices for controlling refrigerant flows and distributions : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per set					
38212	Up to 6 branches (The actual rate should be : $149,218.80 for Item 38212A)	14,921.88	369.75	1,887.73	2,211.24	38212
38213	Up to 10 branches (The actual rate should be : $240,366.10 for Item 38213A)	24,036.61	441.38	2,243.33	2,650.38	38213

VRV master controller : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Water cooled outdoor condensing units c/w insulated gate bipolar transistor type inverter or the equivalent, hermetic scroll compressor, over current protection for inverter, and short recycling timer, refrigerant (zero ODP), refrigerant pipework c/w insulation (with length notexceeding manufacturer's maximum permitted length) to the indoor units, weather proof cabinet, emergency stop button, local control panel for operation.					
	Per set					
38214	VRV air-conditioning unit master controller	21,233.88	492.97	1,478.98	2,957.94	38214

UNITARY AIR CONDITIONERS (CONT'D)

Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit.

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Ceiling cassette type/ concealed type; cooling only					
	Cooling capacity : -					
	Per set					
38215	Up to 3.8 kW	15,408.93	129.41	144.40	566.70	38215
38216	3.8 - 5.8 kW	16,722.93	145.30	161.23	614.91	38216
38217	5.8 - 9.4 kW	20,408.85	158.74	175.77	664.20	38217
38218	9.4 - 14.5 kW	23,338.39	172.54	190.31	713.56	38218
38219	14.5 -22.3 kW	30,093.36	258.36	292.90	1,016.58	38219
38220	22.3 - 29.1 kW	36,134.46	344.53	375.50	1,520.09	38220
	Ceiling suspended type; cooling only					
	Cooling capacity : -					
	Per set					
38221	Up to 3.8 kW	14,482.76	107.92	118.75	498.12	38221
38222	3.8 - 5.8 kW	16,432.50	123.08	134.56	552.13	38222
38223	5.8 - 9.4 kW	17,029.26	138.98	146.41	607.57	38223
38224	9.4 - 14.5 kW	18,224.07	145.91	168.21	662.26	38224

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Ceiling mounted ducted type, cooling only					
	Cooling capacity : -					
	Per set					
38225	Up to 3.8 kW	13,048.83	107.92	118.75	498.12	38225
38226	3.8 - 5.8 kW	14,285.91	123.08	134.56	552.13	38226
38227	5.8 - 9.4 kW	17,408.35	138.98	146.41	607.57	38227
38228	9.4 - 14.5 kW	19,727.46	145.91	168.21	662.26	38228

UNITARY AIR CONDITIONERS (CONT'D)

Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Exposed wall mounted type, cooling only					
	Cooling capacity : -					
	Per set					
38229	Up to 3.8 kW	13,896.74	91.36	100.81	418.63	38229
38230	3.8 - 5.8 kW	15,831.47	104.06	113.73	464.70	38230
38231	5.8 - 9.4 kW	16,383.04	117.24	123.35	531.68	38231
38232	9.4 - 14.5 kW	17,562.82	123.08	141.37	581.27	38232
	Ceiling cassette type/ concealed type; cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38233	Up to 3.8 kW	16,301.72	129.41	144.40	566.70	38233
38234	3.8 - 5.8 kW	17,830.01	145.30	161.23	614.91	38234
38235	5.8 - 9.4 kW	21,767.89	158.74	175.77	664.20	38235
38236	9.4 - 14.5 kW	24,611.16	172.54	190.31	713.56	38236
	Ceiling suspended type; cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38237	Up to 3.8 kW	17,894.39	107.92	118.75	498.12	38237
38238	3.8 - 5.8 kW	18,717.06	123.08	134.56	552.13	38238
38239	5.8 - 9.4 kW	19,429.96	138.98	146.41	607.57	38239
38240	9.4 - 14.5 kW	20,655.21	145.91	168.21	662.26	38240
	Ceiling mounted ducted type, cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38241	Up to 3.8 kW	13,911.22	107.92	118.75	498.12	38241
38242	3.8 - 5.8 kW	15,228.78	123.08	134.56	552.13	38242
38243	5.8 - 9.4 kW	18,635.22	138.98	146.41	607.57	38243
38244	9.4 - 14.5 kW	21,038.36	145.91	168.21	662.26	38244

UNITARY AIR CONDITIONERS (CONT'D)

Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Exposed wall mounted type, cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38245	Up to 2.3 kW	10,758.15	363.61	441.67	1,238.36	38245
38246	2.3 - 2.9 kW	13,268.17	390.66	472.61	1,433.63	38246
38247	2.9 - 3.7 kW	17,791.81	425.17	504.97	1,617.98	38247
38248	3.7 - 4.7 kW	22,316.58	459.96	537.99	1,690.79	38248
38249	4.7 - 5.8 kW	28,655.57	491.21	570.81	1,774.47	38249
38250	5.8 - 7.3 kW	34,488.19	522.65	600.98	1,844.53	38250

Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w stepless DC fan motor(s), filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit.

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Ceiling cassette type/ concealed type; cooling only					
	Cooling capacity : -					
	Per set					
38251	Up to 3.8 kW	15,120.00	129.41	144.40	566.70	38251
38252	3.8 - 5.8 kW	18,360.00	145.30	161.23	614.91	38252
38253	5.8 - 9.4 kW	21,600.00	158.74	175.77	664.20	38253
38254	9.4 - 14.5 kW	25,920.00	172.54	190.31	713.56	38254
38255	14.5 -22.3 kW	30,240.00	258.36	292.90	1,016.58	38255
38256	22.3 - 29.1 kW	35,640.00	344.53	375.50	1,520.09	38256
	Ceiling suspended type; cooling only					
	Cooling capacity : -					
	Per set					
38257	Up to 3.8 kW	18,360.00	107.92	118.75	498.12	38257
38258	3.8 - 5.8 kW	21,600.00	123.08	134.56	552.13	38258
38259	5.8 - 9.4 kW	25,920.00	138.98	146.41	607.57	38259
38260	9.4 - 14.5 kW	30,240.00	145.91	168.21	662.26	38260

UNITARY AIR CONDITIONERS (CONT'D)

Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w stepless DC fan motor(s), filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted ducted type, cooling only					
	Cooling capacity : -					
	Per set					
38261	Up to 3.8 kW	12,960.00	107.92	118.75	498.12	38261
38262	3.8 - 5.8 kW	15,120.00	123.08	134.56	552.13	38262
38263	5.8 - 9.4 kW	17,280.00	138.98	146.41	607.57	38263
38264	9.4 - 14.5 kW	20,520.00	145.91	168.21	662.26	38264
	Exposed wall mounted type, cooling only					
	Cooling capacity : -					
	Per set					
38265	Up to 3.8 kW	9,720.00	91.36	100.81	418.63	38265
38266	3.8 - 5.8 kW	10,800.00	104.06	113.73	464.70	38266
38267	5.8 - 9.4 kW	12,960.00	117.24	123.35	531.68	38267
38268	9.4 - 14.5 kW	15,120.00	123.08	141.37	581.27	38268
	Ceiling cassette type/ concealed type; cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38269	Up to 3.8 kW	15,120.00	129.41	144.40	566.70	38269
38270	3.8 - 5.8 kW	18,360.00	145.30	161.23	614.91	38270
38271	5.8 - 9.4 kW	21,600.00	158.74	175.77	664.20	38271
38272	9.4 - 14.5 kW	25,920.00	172.54	190.31	713.56	38272
	Ceiling suspended type; cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38273	Up to 3.8 kW	18,360.00	107.92	118.75	498.12	38273
38274	3.8 - 5.8 kW	21,600.00	123.08	134.56	552.13	38274
38275	5.8 - 9.4 kW	25,920.00	138.98	146.41	607.57	38275
38276	9.4 - 14.5 kW	30,240.00	145.91	168.21	662.26	38276

UNITARY AIR CONDITIONERS (CONT'D)

Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w stepless DC fan motor(s), filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted ducted type, cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38277	Up to 3.8 kW	12,960.00	107.92	118.75	498.12	38277
38278	3.8 - 5.8 kW	15,120.00	123.08	134.56	552.13	38278
38279	5.8 - 9.4 kW	17,280.00	138.98	146.41	607.57	38279
38280	9.4 - 14.5 kW	20,520.00	145.91	168.21	662.26	38280
	Exposed wall mounted type, cooling and heating (heat pump)					
	Cooling and heating capacity : -					
	Per set					
38281	Up to 2.3 kW	9,720.00	363.61	441.67	1,238.36	38281
38282	2.3 - 2.9 kW	10,800.00	390.66	472.61	1,433.63	38282
38283	2.9 - 3.7 kW	12,960.00	425.17	504.97	1,617.98	38283
38284	3.7 - 4.7 kW	15,120.00	459.96	537.99	1,690.79	38284
38285	4.7 - 5.8 kW	17,280.00	491.21	570.81	1,774.47	38285
38286	5.8 - 7.3 kW	20,520.00	522.65	600.98	1,844.53	38286

Room cooler, (refrigerant R22), c/w aluminium supporting frame, stainless steel drain pan, all condensate drain pipework (size of drain pan to match with room cooler)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38287	Up to 2.8 kW	-	77.72	97.88	395.67	38287
38288	2.8 - 3.7 kW	-	98.69	145.27	478.31	38288
38289	3.7 - 4.6 kW	-	131.61	181.47	524.09	38289
38290	4.6 - 5.5 kW	-	143.37	215.13	695.89	38290
38291	5.5 - 6.3 kW	-	202.81	285.57	763.59	38291

UNITARY AIR CONDITIONERS (CONT'D)

Room cooler, (refrigerant zero ODP, exclude R410A and R32), c/w aluminium supporting frame, stainless steel drain pan, all condensate drain pipework (size of drain pan to match with room cooler)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38292	Up to 2.8 kW	6,447.62	79.41	99.98	404.21	38292
38293	2.8 - 3.7 kW	7,736.54	100.82	148.38	488.61	38293
38294	3.7 - 4.6 kW	8,819.13	134.46	185.38	535.38	38294
38295	4.6 - 5.5 kW	10,216.79	146.48	219.30	710.80	38295
38296	5.5 - 6.3 kW	12,439.39	206.68	291.75	779.96	38296
38297	6.3 - 7.2 kW	13,484.21	227.70	344.83	942.53	38297

Room cooler, (R410A and R32), c/w aluminium supporting frame, stainless steel drain pan, all condensate drain pipework (size of drain pan to match with room cooler)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38298	Up to 2.8 kW	4,527.20	79.41	99.98	404.21	38298
38299	2.8 - 3.7 kW	5,457.45	100.82	148.38	488.61	38299
38300	3.7 - 4.6 kW	6,697.77	134.46	185.38	535.38	38300
38301	4.6 - 5.5 kW	7,690.05	146.48	219.30	710.80	38301
38302	5.5 - 6.3 kW	8,992.39	206.68	291.75	779.96	38302
38303	6.3 - 7.2 kW	10,046.67	227.70	344.83	942.53	38303

UNITARY AIR CONDITIONERS (CONT'D)

Inverter window type cooling room cooler with / without remote, (refrigerant zero ODP), c/w aluminium supporting frame, stainless drain pan, all condensate drain pipework (size of drain pan to match with room cooler), all condensate drain pipework (size of drain pan to match with room cooler)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38304	Up to 2.8 kW	7,737.14	97.20	118.80	432.00	38304
38305	2.8 - 3.7 kW	9,283.85	118.80	140.40	518.40	38305
38306	3.7 - 4.6 kW	10,582.96	140.40	162.00	626.40	38306
38307	4.6 - 5.5 kW	12,260.15	162.00	194.40	745.20	38307
38308	5.5 - 6.5 kW	14,927.27	194.40	226.80	885.60	38308

Internal mounted direct expansion fan coil unit for all fresh air intake with copper tube and aluminium fins, connection to VRV outdoor unit, c/w all necessary accessories. Opening outside condition are 33°C DB / 28°C WB for summer and 0°C DB / -2.9°C WB for winter

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling and heating capacity : -					
	Each					
38309	Up to 9 kW	35,028.47	1,196.77	1,504.28	2,145.33	38309
38310	9 kW - 16 kW	46,134.41	1,196.77	1,504.28	2,145.33	38310
38311	16 kW - 22 kW	62,931.91	1,657.91	2,241.72	3,195.71	38311
38312	22 kW - 28 kW	72,221.38	1,657.91	2,241.72	3,195.71	38312

UNITARY AIR CONDITIONERS (CONT'D)

Cold room air conditioning unit (direct expansion type), indoor and outdoor unit c/w refrigerant (zero ODP), pipework not exceeding manufacturer's maximum permitted length, local control panel c/w 1 set point.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cold room of not less than 2.5 m height at 35°C ambient and indoor condition of 0°C - 4°C : -					
	Each					
38313	Cold room size up to 10 m² ..... (The actual rate should be : $406,025.40 for Item 38313A)	40,602.54	1,481.54	1,943.50	6,518.24	38313
38314	Cold room size 10 - 20 m² ..... (The actual rate should be : $431,685.20 for Item 38314A)	43,168.52	1,694.83	2,150.30	7,085.92	38314
38315	Cold room size 20 - 30 m² ..... (The actual rate should be : $500,041.80 for Item 38315A)	50,004.18	1,970.30	2,421.54	7,699.05	38315
38316	Cold room size 30 - 40 m² ..... (The actual rate should be : $563,737.70 for Item 38316A)	56,373.77	2,138.43	2,665.29	8,349.90	38316
38317	Cold room size 40 - 50 m² ..... (The actual rate should be : $629,949.50 for Item 38317A)	62,994.95	2,393.03	2,860.70	8,932.92	38317
38318	Cold room size 50 - 60 m² ..... (The actual rate should be : $786,926.20 for Item 38318A)	78,692.62	2,544.87	3,166.01	9,502.00	38318

Air cooled rooftop unit c/w direct-driven, hermetic, scroll type compressor, centrifugal supply air fans, outdoor fans, motors, copper tube aluminium FC fins coil selection, 25 mm throwaway filters, temperature sensors, remote human interface, refrigerant (zero ODP) fully charged, emergency stop button, local control panel. Supply and fix with standard delivery and lifting method, such as using goods lifts of the building. (Remark: extra cost for delivery in case good lifts are not available shall be quoted separately)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air flow rate and (cooling capacity) : -					
	Each					
38319	2.3 m³/ s (44 kW) to 2.9 m³/ s (50 kW) ..... (The actual rate should be : $145,757.30 for Item 38319A)	14,575.73	1,246.49	2,742.30	5,009.57	38319
38320	2.9 m³/ s (50 kW) to 3.8 m³/ s (69 kW) ..... (The actual rate should be : $170,084.20 for Item 38320A)	17,008.42	1,553.93	2,973.11	5,309.99	38320
38321	3.8 m³/ s (69 kW) to 4.3 m³/ s (88 kW) ..... (The actual rate should be : $222,845.30 for Item 38321A)	22,284.53	1,864.01	3,216.08	5,624.48	38321
38322	4.3 m³/ s (88 kW) to 5.7 m³/ s (126 kW) ..... (The actual rate should be : $276,098.90 for Item 38322A)	27,609.89	2,165.13	3,464.39	5,926.56	38322
38323	5.7 m³/ s (126 kW) to 6.8 m³/ s (149 kW) ..... (The actual rate should be : $348,057.10 for Item 38323A)	34,805.71	2,473.74	3,710.52	7,459.79	38323
38324	6.8 m³/ s (149 kW) to 7.3 m³/ s (160 kW) ..... (The actual rate should be : $380,765.30 for Item 38324A)	38,076.53	2,614.04	3,822.43	8,156.70	38324

AIR HANDLING & TREATMENT EQUIPMENT

Air handling units (chilled/ hot water) of copper tube aluminium fin cooling / heating coil, c/w double skin insulated galvanized iron casing, motor, blower, water pipe work, filter chamber, pre-filters and high efficiency filters, starters, thermostat/ humidistat, emergency stop button, probe type smoke detector, filter clog indicator, stainless steel drain pan, associated power and control wiring.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air supply rate : -					
	Each					
38325	Up to 1 m³/ s	51,119.96	295.74	438.51	1,342.70	38325
38326	1 - 2 m³/ s	67,588.29	358.18	480.93	1,448.93	38326
38327	2 - 3 m³/ s	87,477.63	371.22	554.48	1,609.53	38327
38328	3 - 4 m³/ s (The actual rate should be : $112,549.40 for Item 38328A)	11,254.94	484.54	613.47	1,734.24	38328
38329	4 - 5 m³/ s (The actual rate should be : $129,689.20 for Item 38329A)	12,968.92	537.35	667.40	1,839.13	38329
38330	5 - 6 m³/ s (The actual rate should be : $147,780.20 for Item 38330A)	14,778.02	601.47	725.55	1,949.23	38330
	Add 13% to either of Items 38325 to 38330 using EC fan					

Air handling units (chilled/ hot water) of copper tube aluminium fin cooling / heating coil, c/w double skin insulated galvanized iron casing, dual motors, blower, water pipe work, filter chamber, pre-filters and high efficiency filters, starters, thermostat/ humidistat, emergency stop button, probe type smoke detector, filter clog indicator, stainless steel drain pan, associated power and control wiring.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air supply rate : -					
	Each					
38331	Up to 1 m³/ s	64,656.69	295.74	438.51	1,342.70	38331
38332	1 - 2 m³/ s	81,017.95	358.18	480.93	1,448.93	38332
38333	2 - 3 m³/ s (The actual rate should be : $101,169.30 for Item 38333A)	10,116.93	371.22	554.48	1,609.53	38333
38334	3 - 4 m³/ s (The actual rate should be : $127,653.40 for Item 38334A)	12,765.34	484.54	613.47	1,734.24	38334
38335	4 - 5 m³/ s (The actual rate should be : $144,148.20 for Item 38335A)	14,414.82	537.35	667.40	1,839.13	38335
38336	5 - 6 m³/ s (The actual rate should be : $160,730.00 for Item 38336A)	16,073.00	601.47	725.55	1,949.23	38336
	Add 13% to either of Items 38331 to 38336 using EC fan					

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

AHU system (multi zone control) of copper tube aluminium fin cooling / heating coil for energy saving (energy saving in design and during operation) and space saving (4 different temperatures of air can be supplied in one machine), c/w PU double skin cold insulated aluminium frame casing, 2-speed motor, centrifugal fans, pre-filter, medium filter, 1-4 zones supply air motorized damper, fresh air motorized damper, return air motorized damper, motorized water valve, fresh air temp. sensor, humidity sensor, room air temp. sensor, supply air temp. sensor, pressure switch, CCMS controller, associated power and control wiring

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air supply rate : -					
	Each					
38337	Up to 2 m³/ s (The actual rate should be : $147,079.10 for Item 38337A)	14,707.91	492.32	680.10	2,365.17	38337
38338	2 - 4 m³/ s (The actual rate should be : $154,367.90 for Item 38338A)	15,436.79	594.36	824.57	2,454.08	38338
38339	4 - 6 m³/ s (The actual rate should be : $180,639.40 for Item 38339A)	18,063.94	762.00	944.54	2,684.88	38339
38340	6 - 8 m³/ s (The actual rate should be : $220,650.20 for Item 38340A)	22,065.02	805.15	1,001.10	2,862.81	38340
38341	8 - 10 m³/ s (The actual rate should be : $256,247.60 for Item 38341A)	25,624.76	871.48	1,050.95	3,016.07	38341
38342	10 - 14 m³/ s (The actual rate should be : $302,695.50 for Item 38342A)	30,269.55	905.70	1,108.61	3,225.51	38342
	Add 13% to either of Items 38337 to 38342 using EC fan					

Dehumidifier heat pipes of 2 rows copper tube aluminium fin coils, c/w zero ODP refrigerant, galvanised steel frame, G.I. steel casing, coating and condensate pans : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38343	2.8 - 9.3 m²	37,395.20	216.65	321.79	1,008.12	38343
38344	9.3 - 16.3 m²	43,051.18	263.12	350.71	1,097.90	38344
38345	16.3 - 21 m²	48,108.74	271.45	402.09	1,217.64	38345
38346	21 - 25.6 m²	55,069.29	356.44	446.28	1,313.78	38346
38347	25.6 - 28 m²	57,089.83	395.32	487.15	1,396.47	38347

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Dehumidifier, wall/ ceiling mounted with drainage connection of daily moisture removal capacity : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38348	Up to 15 litres	12,472.87	434.02	465.38	1,173.10	38348
38349	15 - 30 litres	52,402.31	480.79	520.56	1,458.39	38349
38350	30 - 60 litres	70,629.14	523.64	571.94	1,635.19	38350

Dehumidifier, ceiling cassette type with drainage connection of daily moisture removal capacity : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38351	Up to 15 litres	1,998.69	434.02	465.38	1,173.10	38351
38352	15 - 30 litres	8,397.10	480.79	520.56	1,458.39	38352
38353	30 - 60 litres	11,317.81	523.64	571.94	1,635.19	38353

Computer room air conditioning unit (chilled water type), unit shall consist of copper pipes and aluminium fins, with electrode boiler humidifier, electric reheat, microprocessor control with local alarm and BMS interface provisions, high efficient filter, local control panel. Operating cooling capacity rated at 7°C/ 12.5°C chilled water in/ out temperature and 22°C, 50% RH.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cooling capacity : -					
	Each					
38354	Up to 15 kW	77,343.52	1,249.87	1,568.01	5,371.68	38354
38355	15 - 33 kW (The actual rate should be : $103,697.50 for Item 38355A)	10,369.75	1,499.89	2,081.62	6,139.01	38355
38356	33 - 64 kW (The actual rate should be : $137,108.50 for Item 38356A)	13,710.85	1,746.36	2,608.85	6,895.92	38356
38357	64 - 100 kW (The actual rate should be : $182,865.10 for Item 38357A)	18,286.51	1,995.58	3,121.16	7,634.39	38357
38358	100 - 150 kW (The actual rate should be : $258,500.00 for Item 38358A)	25,850.00	2,341.71	3,832.72	8,660.05	38358
	Add 10% to either of Items 38354 to 38358 using EC fan					

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Air purifier unit, corona discharge type, c/w local control panel, removable electrode tubes, painted heavy steel power generator, remote control with regulator, stainless steel casing, fuse, on/ off switch, safety door switches, auto-off-manual switch, hour run meter, ampere meter, power electrode assembles.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air supply rate : -					
	Each					
38359	Up to 0.5 m³/ s	15,301.30	103.61	174.04	795.64	38359
38360	0.5 - 1 m³/ s	22,660.54	110.60	181.48	835.54	38360
38361	1 - 2 m³/ s	33,850.48	117.27	188.30	905.86	38361
38362	2 -3 m³/ s	65,128.06	124.16	195.16	956.09	38362
38363	3 -4 m³/ s	87,289.76	127.89	198.98	1,024.99	38363
38364	4 - 5 m³/ s (The actual rate should be : $108,461.40 for Item 38364A)	10,846.14	131.57	202.56	1,084.53	38364
38365	5 - 6 m³/ s (The actual rate should be : $129,213.60 for Item 38365A)	12,921.36	138.45	209.59	1,182.09	38365
38366	6 - 7 m³/ s (The actual rate should be : $140,400.00 for Item 38366A)	14,040.00	151.20	237.60	1,296.00	38366
38367	7 - 8 m³/ s (The actual rate should be : $162,000.00 for Item 38367A)	16,200.00	172.80	280.80	1,512.00	38367
38368	8 - 9 m³/ s (The actual rate should be : $194,400.00 for Item 38368A)	19,440.00	205.20	334.80	1,728.00	38368
38369	9 - 10 m³/ s (The actual rate should be : $226,800.00 for Item 38369A)	22,680.00	237.60	399.60	2,052.00	38369

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Ultra violet sterilizer; factory assembled and tested, capable of killing airborne microbial contaminants with 90% of removal efficiency, UV lamps with control circuit, power generator, lamp support and inspection, access door with safety switch, manual control and CCMS control, local control panel, on/ off switch, overload protective device, auto-off-manual switch, hour run meter, ampere meter.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air supply rate : -					
	Per set					
38370	Up to 0.5 m³/ s	17,633.30	80.28	133.83	721.55	38370
38371	0.5 - 1 m³/ s	22,851.96	104.39	147.21	770.45	38371
38372	1 - 2 m³/ s	30,095.70	116.47	188.78	872.54	38372
38373	2 -3 m³/ s	50,835.73	136.44	225.16	924.84	38373
38374	3 -4 m³/ s	59,329.03	154.87	259.38	988.67	38374
38375	4 - 5 m³/ s	80,494.39	172.08	269.19	1,038.66	38375
38376	5 - 6 m³/ s	89,058.74	193.60	316.87	1,072.54	38376
38377	6 - 7 m³/ s	97,200.00	216.00	356.40	1,188.00	38377
38378	7 - 8 m³/ s (The actual rate should be : $118,800.00 for Item 38378A)	11,880.00	259.20	432.00	1,404.00	38378
38379	8 - 9 m³/ s (The actual rate should be : $140,400.00 for Item 38379A)	14,040.00	302.40	518.40	1,620.00	38379
38380	9 - 10 m³/ s (The actual rate should be : $162,000.00 for Item 38380A)	16,200.00	367.20	615.60	1,944.00	38380

Air pressure stabilizer / air pressure control valves, imported proprietary manufacture, c/w high speed sealed-for-life ball bearings, adjustable centrally located balance weight mechanism.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Blade size 300 - 430 mm for number of : -					
	Per set					
38381	1 blade	8,548.65	141.42	146.29	544.55	38381
38382	2 blades	14,662.07	149.59	155.87	627.13	38382
38383	3 blades	21,778.18	152.44	165.87	711.64	38383
38384	4 blades	28,864.36	169.49	180.73	746.23	38384
38385	5 blades	37,252.55	179.09	197.61	794.55	38385

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Air pressure stabilizer / air pressure control valves, imported proprietary manufacture, c/w high speed sealed-for-life ball bearings, adjustable centrally located balance weight mechanism. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Blade size 430 - 610 mm for number of : -					
	Per set					
38386	1 blade	16,785.37	137.59	146.56	539.15	38386
38387	2 blades	23,711.15	147.88	161.56	624.11	38387
38388	3 blades	31,477.65	151.50	165.74	753.03	38388
38389	4 blades	39,472.47	158.00	180.14	781.50	38389
38390	5 blades	47,715.57	164.46	197.51	837.31	38390
	2-hour fire rated; blade size 300 - 430 mm for number of : -					
	Per set					
38391	1 blade	13,528.68	141.42	146.29	544.55	38391
38392	2 blades	24,665.35	149.59	155.87	627.13	38392
38393	3 blades	36,099.43	152.44	165.87	711.64	38393
38394	4 blades	45,585.59	169.49	180.73	746.23	38394
38395	5 blades	59,738.69	179.09	197.61	794.55	38395
	2-hour fire rated; blade size 430 - 610 mm for number of : -					
	Per set					
38396	1 blade	27,519.94	137.59	146.56	539.15	38396
38397	2 blades	37,245.47	147.88	161.56	624.11	38397
38398	3 blades	49,429.43	151.50	165.74	753.03	38398
38399	4 blades	61,266.06	158.00	180.14	781.50	38399
38400	5 blades	74,610.01	164.46	197.51	837.31	38400

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chilled water fan-coil units of 2 rows copper tube aluminium fin cooling coils, c/w stepless DC fan motor(s), thermostat, controller, filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted, concealed type c/w casing with nominal supply air rate at medium speed : -					
	Each					
38401	Up to 0.095 m³/ s	9,313.12	160.67	277.52	1,095.48	38401
38402	0.095 - 0.141 m³/ s	10,058.16	189.89	321.34	1,168.51	38402
38403	0.141 - 0.192 m³/ s	12,687.97	233.71	350.55	1,241.54	38403
38404	0.192 - 0.284 m³/ s	12,552.24	262.92	394.37	1,314.57	38404
38405	0.284 - 0.384 m³/ s	13,197.06	328.65	438.19	1,387.61	38405
38406	0.384 - 0.479 m³/ s	12,539.18	379.77	482.01	1,460.64	38406
38407	0.479 - 0.565 m³/ s	13,010.25	423.58	511.22	1,533.67	38407
38408	0.565 - 0.665 m³/ s	14,735.65	467.40	584.26	1,606.70	38408

Chilled water fan-coil units of 3 rows copper tube aluminium fin cooling coils, c/w stepless DC fan motor(s), thermostat, controller, filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted, concealed type c/w casing with nominal supply air rate at medium speed : -					
	Each					
38409	Up to 0.095 m³/ s	9,685.64	175.27	292.13	1,168.51	38409
38410	0.095 - 0.141 m³/ s	10,430.68	219.10	350.55	1,241.54	38410
38411	0.141 - 0.192 m³/ s	13,322.38	262.92	379.77	1,314.57	38411
38412	0.192 - 0.284 m³/ s	13,122.80	306.74	408.98	1,387.61	38412
38413	0.284 - 0.384 m³/ s	13,746.94	350.55	482.01	1,460.64	38413
38414	0.384 - 0.479 m³/ s	13,021.45	394.37	511.22	1,533.67	38414
38415	0.479 - 0.565 m³/ s	13,320.01	438.19	555.04	1,606.70	38415
38416	0.565 - 0.665 m³/ s	15,196.14	511.22	598.87	1,679.73	38416

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chilled water fan-coil units of 4 rows copper tube aluminium fin cooling coils, c/w stepless DC fan motor(s), thermostat, controller, filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted, concealed type c/w casing with nominal supply air rate at medium speed : -					
	Each					
38417	Up to 0.095 m³/ s	9,871.91	219.10	321.34	1,241.54	38417
38418	0.095 - 0.141 m³/ s	10,616.93	262.92	379.77	1,314.57	38418
38419	0.141 - 0.192 m³/ s	13,745.30	306.74	408.98	1,387.61	38419
38420	0.192 - 0.284 m³/ s	13,693.35	350.55	482.01	1,460.64	38420
38421	0.284 - 0.384 m³/ s	14,296.82	394.37	511.22	1,533.67	38421
38422	0.384 - 0.479 m³/ s	13,342.98	438.19	555.04	1,606.70	38422
38423	0.479 - 0.565 m³/ s	13,629.79	511.22	598.87	1,679.73	38423
38424	0.565 - 0.665 m³/ s	16,577.62	555.04	657.29	1,752.77	38424

Chilled water fan-coil units of 4 rows copper tube aluminium fin cooling coils, c/w filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately)

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Ceiling mounted, surface mounted c/w casing with nominal supply air rate at medium speed : -					
	Each					
38425	Up to 0.095 m³/ s	9,566.88	158.52	288.24	921.29	38425
38426	0.095 - 0.142 m³/ s	10,113.11	196.98	330.28	978.33	38426
38427	0.142 - 0.190 m³/ s	12,451.20	240.69	361.08	1,016.99	38427
38428	0.190 - 0.284 m³/ s	13,085.80	270.85	399.34	1,132.89	38428
38429	0.284 - 0.378 m³/ s	14,411.07	336.34	427.43	1,188.35	38429
38430	0.378 - 0.473 m³/ s	17,387.26	337.87	466.86	1,309.17	38430
38431	0.473 - 0.567 m³/ s	18,303.82	379.82	507.42	1,389.62	38431
38432	0.567 - 0.659 m³/ s	19,596.01	415.46	548.49	1,445.38	38432

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chilled water fan-coil units of 4 rows copper tube aluminium fin cooling coils, c/w filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately) (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted fan coil unit, concealed type without casing with nominal supply air rate at medium speed : -					
	Each					
38433	Up to 0.095 m³/ s	6,705.26	182.01	308.96	963.58	38433
38434	0.095 - 0.142 m³/ s	7,211.70	223.89	355.87	1,012.93	38434
38435	0.142 - 0.190 m³/ s	8,736.35	267.28	395.24	1,061.21	38435
38436	0.190 - 0.284 m³/ s	9,087.82	332.49	441.99	1,186.68	38436
38437	0.284 - 0.378 m³/ s	9,729.62	351.96	474.13	1,237.11	38437
38438	0.378 - 0.473 m³/ s	10,309.66	360.75	513.27	1,361.38	38438
38439	0.473 - 0.567 m³/ s	10,775.69	402.51	552.88	1,443.21	38439
38440	0.567 - 0.659 m³/ s	11,459.02	452.10	590.98	1,516.34	38440
	Vertical floor/ wall mounted fan coil unit, surface mounting c/w casing with nominal supply air rate at medium speed : -					
	Each					
38441	Up to 0.095 m³/ s	9,711.26	100.57	216.55	838.61	38441
38442	0.095 - 0.142 m³/ s	10,151.11	141.67	255.26	889.02	38442
38443	0.142 - 0.190 m³/ s	12,446.52	164.63	286.34	926.11	38443
38444	0.190 - 0.284 m³/ s	12,826.94	195.47	325.63	1,037.95	38444
38445	0.284 - 0.378 m³/ s	14,034.33	230.67	353.50	1,095.79	38445
38446	0.378 - 0.473 m³/ s	16,429.65	263.90	393.52	1,208.76	38446
38447	0.473 - 0.567 m³/ s	17,084.80	306.89	433.52	1,288.21	38447
38448	0.567 - 0.659 m³/ s	18,243.45	343.59	475.18	1,341.43	38448

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chilled water fan-coil units of 4 rows copper tube aluminium fin cooling coils, c/w filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately) (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Vertical floor/ wall mounted fan coil unit, concealed type, without casing with nominal supply air rate at medium speed : -					
	Each					
38449	Up to 0.095 m³/ s	8,109.82	120.70	252.45	878.71	38449
38450	0.095 - 0.142 m³/ s	8,939.80	159.66	287.03	938.17	38450
38451	0.142 - 0.190 m³/ s	10,744.87	203.57	334.55	978.17	38451
38452	0.190 - 0.284 m³/ s	11,245.71	234.53	365.59	1,092.73	38452
38453	0.284 - 0.378 m³/ s	11,844.25	269.65	396.22	1,149.87	38453
38454	0.378 - 0.473 m³/ s	13,157.23	303.20	440.38	1,267.98	38454
38455	0.473 - 0.567 m³/ s	13,562.64	346.12	474.42	1,348.56	38455
38456	0.567 - 0.659 m³/ s	14,575.71	385.86	523.18	1,403.75	38456

Chiller water fan-coil units of 3 rows copper tube aluminium fin cooling coils, c/w filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately)

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Ceiling mounted, surface mounted c/w casing with nominal supply air rate at medium speed : -					
	Each					
38457	Up to 0.095 m³/ s	8,610.19	142.67	259.44	829.17	38457
38458	0.095 - 0.142 m³/ s	9,101.80	177.27	297.26	880.51	38458
38459	0.142 - 0.190 m³/ s	11,206.09	216.63	324.97	915.29	38459
38460	0.190 - 0.284 m³/ s	11,777.22	243.79	359.42	1,019.60	38460
38461	0.284 - 0.378 m³/ s	12,969.97	302.72	384.69	1,069.52	38461
38462	0.378 - 0.473 m³/ s	15,648.52	304.08	420.17	1,178.26	38462
38463	0.473 - 0.576 m³/ s	16,473.43	341.84	456.67	1,250.66	38463
38464	0.576 - 0.659 m³/ s	17,636.41	373.91	493.65	1,300.83	38464

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chiller water fan-coil units of 3 rows copper tube aluminium fin cooling coils, c/w filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately) (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted fan coil unit, concealed type without casing with nominal supply air rate at medium speed : -					
	Each					
38465	Up to 0.095 m³/ s	6,034.74	163.80	278.08	867.22	38465
38466	0.095 - 0.142 m³/ s	6,490.52	201.50	320.28	911.64	38466
38467	0.142 - 0.190 m³/ s	7,862.72	240.57	355.71	955.08	38467
38468	0.190 - 0.284 m³/ s	8,179.03	299.24	397.79	1,068.02	38468
38469	0.284 - 0.378 m³/ s	8,756.66	316.76	426.70	1,113.40	38469
38470	0.378 - 0.473 m³/ s	9,278.70	324.68	461.93	1,225.25	38470
38471	0.473 - 0.576 m³/ s	9,698.13	362.27	497.58	1,298.89	38471
38472	0.576 - 0.659 m³/ s	10,313.13	406.89	531.87	1,364.71	38472
	Vertical floor / wall mounted fan coil unit, surface mounting c/w casing with nominal supply air rate at medium speed : -					
	Each					
38473	Up to 0.095 m³/ s	8,740.14	90.51	194.90	754.74	38473
38474	0.095 - 0.142 m³/ s	9,136.00	127.51	229.74	800.11	38474
38475	0.142 - 0.190 m³/ s	11,201.86	148.17	257.72	833.51	38475
38476	0.190 - 0.284 m³/ s	11,544.27	175.94	293.07	934.15	38476
38477	0.284 - 0.378 m³/ s	12,630.89	207.58	318.14	986.22	38477
38478	0.378 - 0.473 m³/ s	14,786.67	237.49	354.19	1,087.87	38478
38479	0.473 - 0.576 m³/ s	15,376.32	276.21	390.18	1,159.39	38479
38480	0.576 - 0.659 m³/ s	16,419.12	309.22	427.68	1,207.29	38480

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chiller water fan-coil units of 3 rows copper tube aluminium fin cooling coils, c/w filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/ indicating heating (if required) (main chilled water distribution pipes to be measured separately) (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Vertical floor / wall mounted fan coil unit, concealed type without casing with nominal supply air rate at medium speed : -					
	Each					
38481	Up to 0.095 m³/ s	7,298.85	108.62	227.22	790.85	38481
38482	0.095 - 0.142 m³/ s	8,045.83	143.69	258.33	844.35	38482
38483	0.142 - 0.190 m³/ s	9,670.37	183.22	301.10	880.36	38483
38484	0.190 - 0.284 m³/ s	10,121.15	211.07	329.02	983.46	38484
38485	0.284 - 0.378 m³/ s	10,659.82	242.68	356.61	1,034.87	38485
38486	0.378 - 0.473 m³/ s	11,841.51	272.87	396.35	1,141.19	38486
38487	0.473 - 0.567 m³/ s	12,206.38	311.52	426.99	1,213.71	38487
38488	0.567 - 0.659 m³/ s	13,118.15	347.26	470.87	1,263.39	38488

Chilled water fan-coil unit of cassette type, c/w condensate drain pump, overflow indication and alarm, 10 m insulated condensate drain pipes, chilled water pipes, condensate pans, coils, filters, face panel with discharge and return air grilles, ceiling mounted with nominal supply air rate at medium speed : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38489	Up to 0.17 m³/ s	11,444.41	192.68	324.30	990.28	38489
38490	0.17 - 0.2 m³/ s	12,992.93	256.68	388.71	1,134.32	38490
38491	0.2 - 0.34 m³/ s	13,305.34	351.61	453.95	1,228.99	38491
38492	0.34 - 0.5 m³/ s	13,710.02	385.19	518.59	1,416.64	38492

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Chilled water fan-coil unit of cassette type, c/w built-in heater, overheat protection device, condensate drain pump, overflow indication and alarm, face panel with discharge and return air grilles, coils, filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, ceiling mounted with nominal supply air rate at medium speed : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38493	Up to 0.17 m³/ s	11,967.05	198.80	324.30	923.37	38493
38494	0.17 - 0.2 m³/ s	13,244.17	256.68	388.71	1,080.49	38494
38495	0.2 - 0.34 m³/ s	13,739.76	320.92	453.95	1,228.99	38495
38496	0.34 - 0.5 m³/ s	14,423.03	385.19	518.59	1,322.62	38496

Chilled water fan-coil unit of cassette type, c/w stepless DC fan motor(s), condensate drain pump, overflow indication and alarm, 10 m insulated condensate drain pipes, chilled water pipes, condensate pans, coils, filters, face panel with discharge and return air grilles, ceiling mounted with nominal supply air rate at medium speed : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38497	Up to 0.17 m³/ s	12,540.00	198.80	324.30	923.37	38497
38498	0.17 - 0.2 m³/ s	14,820.00	256.68	388.71	1,080.49	38498
38499	0.2 - 0.34 m³/ s	17,100.00	320.92	453.95	1,228.99	38499
38500	0.34 - 0.5 m³/ s	20,520.00	385.19	518.59	1,322.62	38500

Chilled water fan-coil unit of cassette type, c/w stepless DC fan motor(s), built-in heater, overheat protection device, condensate drain pump, overflow indication and alarm, face panel with discharge and return air grilles, coils, filters, 10 m insulated condensate drain pipes, chilled water pipes and condensate pans, ceiling mounted with nominal supply air rate at medium speed : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38501	Up to 0.17 m³/ s	14,820.00	198.80	324.30	923.37	38501
38502	0.17 - 0.2 m³/ s	17,100.00	256.68	388.71	1,080.49	38502
38503	0.2 - 0.34 m³/ s	20,520.00	320.92	453.95	1,228.99	38503
38504	0.34 - 0.5 m³/ s	23,940.00	385.19	518.59	1,322.62	38504

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Fan coil unit controller : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
38505	Fan coil unit controller c/w thermostat, temperature and speed control/ indicating, and all necessary accessories	728.98	15.83	19.55	91.33	38505

Stainless steel 316 panel housing; weatherproof type : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
38506	Weatherproof sheet metal box/ panel c/ w contactors, fused spur units, cable terminals, mounting din rails for fan coil units	2,737.73	104.48	181.41	407.73	38506

Chilled water fresh air pretreating unit c/w blower, blower motor, cooling/ heating coil of copper tube resin coated aluminium fins, double skin casing, insulated drip pan, thermostats/ humidistat, filter chamber and filters, starter, emergency stop button, probe type smoke detector, filter clog indicator, chilled water pipework (main chilled water distribution pipes to be measured separately)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Nominal supply air rate at medium speed : -					
	Each					
38507	Up to 1 m^3/ s	48,802.74	326.10	452.63	1,213.97	38507
38508	1 - 2 m^3/ s	66,165.98	445.60	630.07	1,695.53	38508
38509	2 - 3 m^3/ s	74,408.31	502.12	711.72	1,904.98	38509
38510	3 - 4 m^3/ s	99,277.22	650.61	930.88	2,500.13	38510
38511	4 - 5 m^3/ s (The actual rate should be : $114,439.90 for Item 38511A)	11,443.99	745.20	1,060.55	2,854.78	38511
38512	5 - 6 m^3/ s (The actual rate should be : $127,518.20 for Item 38512A)	12,751.82	853.60	1,196.26	3,241.62	38512
38513	6 - 7 m^3/ s (The actual rate should be : $162,000.00 for Item 38513A)	16,200.00	972.00	1,404.00	3,780.00	38513
38514	7 - 8 m^3/ s (The actual rate should be : $205,200.00 for Item 38514A)	20,520.00	1,296.00	1,728.00	4,536.00	38514
38515	8 - 9 m^3/ s (The actual rate should be : $248,400.00 for Item 38515A)	24,840.00	1,620.00	2,052.00	5,400.00	38515
38516	9 - 10 m^3/ s (The actual rate should be : $302,400.00 for Item 38516A)	30,240.00	1,944.00	2,484.00	6,480.00	38516

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Variable air volume equipment

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	VAV linear diffuser with acoustic air boot : -					
	Each					
38517	Up to 0.1 m^3/s	635.66	7.64	9.36	64.34	38517
38518	0.1 - 0.2 m^3/s	738.76	8.46	10.03	65.87	38518
38519	0.2 - 0.3 m^3/s	887.61	9.06	10.64	68.59	38519
38520	0.3 - 0.4 m^3/s	1,010.84	9.75	11.54	71.39	38520
	VAV diffuser of all shape c/w thermo actuator, constructed of pressed mild steel sheet with powder coating finish, auto air flow adjustment from 30% to 100% for normal flow rate only of neck size : -					
	Each					
38521	Up to 0.018 m^2	6,950.66	84.05	169.27	486.89	38521
38522	0.018 - 0.032 m^2	7,280.38	85.83	171.48	492.18	38522
38523	0.032 - 0.051 m^2	7,569.47	87.60	173.75	498.42	38523
38524	0.051 - 0.073 m^2	7,876.20	89.42	176.10	503.39	38524
	VAV multi-outlet air distribution box (octopus) connected to terminal box and ductwork : -					
	Each					
38525	Up to 0.3 m^3/s	443.30	9.45	11.19	71.24	38525
38526	0.3 - 0.4 m^3/s	506.97	11.19	12.77	73.99	38526
38527	0.4 - 0.5 m^3/s	549.70	12.63	14.45	76.83	38527
38528	0.5 - 0.6 m^3/s	606.23	14.20	15.99	79.67	38528
	VAV thermostatic controller : -					
	Each					
38529	VAV thermostatic controller c/w all necessary accessories	-	16.83	-	-	38529

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Variable air volume equipment (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	VAV/ CAV terminal box c/w insulation, acoustical baffles, damper regulating controller and damper actuator : -					
	Each					
38530	Up to 0.3 m³/ s	7,568.71	79.35	151.69	469.47	38530
38531	0.3 - 0.4 m³/ s	8,094.34	80.67	153.69	475.46	38531
38532	0.4 - 0.5 m³/ s	8,667.80	82.11	155.09	478.19	38532
38533	0.5 - 0.6 m³/ s	8,768.69	83.52	156.55	484.35	38533
	Dry steam humidifier, steam injection type using electric elements/ electrodes, automatic water level control, overflow protection and drain connection.					
	Each					
38534	Up to 15 kg/ hr	47,873.46	228.49	230.87	572.84	38534
38535	15 - 30 kg/ hr	60,302.31	285.53	288.50	648.00	38535
38536	30 - 60 kg/ hr	84,052.96	342.46	346.01	718.47	38536
	Window / wall mounted paper plate type fresh air pre-conditioner c/w motor and 2 fans, non-flammable heat exchange element, air supply/ exhaust pipes, remote controller, a fresh air and washable air filters in both fresh and weatherproof covers in exhaust streams, casings and mounting; hinged access openable panel and outdoor-air shutter.					
		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
38537	65 m³/ hr - 105 m³/ hr	6,088.66	299.55	316.06	1,237.30	38537
38538	105 m³/ hr – 200 m³/ hr	9,551.30	365.16	379.77	1,460.64	38538

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Desiccant type fresh air pre-conditioner c/w total energy wheel with desiccant coating, an exhaust fan motor, flanged collars, a fresh air and washable air filters in both fresh and exhaust streams, casings and mounting; hinged access openable panel.

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Nominal supply air rate at medium speed : -					
	Each					
38539	Up to 0.125 m³/ s	21,610.18	299.55	316.06	1,014.66	38539
38540	0.125 - 0.25 m³/ s	29,079.15	379.95	395.48	1,045.42	38540
38541	0.25 - 0.5 m³/ s	57,037.64	399.29	422.21	1,091.42	38541
38542	0.5 - 0.8 m³/ s	70,158.80	410.00	444.16	1,114.94	38542
38543	0.8 - 1.4 m³/ s (The actual rate should be : $110,984.60 for Item 38543A)	11,098.46	420.53	455.06	1,142.61	38543
38544	1.4 - 2 m³/ s (The actual rate should be : $148,420.70 for Item 38544A)	14,842.07	431.59	465.66	1,170.21	38544
38545	2 - 2.9 m³/ s (The actual rate should be : $166,019.20 for Item 38545A)	16,601.92	442.18	476.84	1,198.06	38545
38546	2.9 - 3.6 m³/ s (The actual rate should be : $195,803.60 for Item 38546A)	19,580.36	453.38	488.37	1,225.69	38546

Paper plate type fresh air pre-conditioner c/w supply air fan, non-flammable heat exchange element, exhaust air fan and resin set (washable) filter, motor, flanged collars, indoor and outdoor temperature sensors, remote controller.

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Ceiling mounted ducted type, nominal supply air rate at medium speed : -					
	Each					
38547	Up to 0.05 m³/ s	24,090.56	386.90	459.39	1,522.37	38547
38548	0.05 - 0.25 m³/ s	45,050.05	453.75	535.97	1,733.04	38548
38549	0.25 - 0.5 m³/ s	82,777.14	537.27	631.69	1,996.39	38549
38550	0.5 - 0.8 m³/ s (The actual rate should be : $100,263.50 for Item 38550A)	10,026.35	637.52	746.55	2,312.41	38550
38551	0.8 - 1.4 m³/ s (The actual rate should be : $128,877.60 for Item 38551A)	12,887.76	731.23	872.95	2,669.81	38551
38552	1.4 - 2 m³/ s (The actual rate should be : $167,029.80 for Item 38552A)	16,702.98	851.26	985.70	3,025.83	38552
38553	2 - 2.9 m³/ s (The actual rate should be : $214,720.00 for Item 38553A)	21,472.00	944.56	1,078.16	3,290.36	38553
38554	2.9 - 3.6 m³/ s (The actual rate should be : $265,589.40 for Item 38554A)	26,558.94	1,094.66	1,211.07	3,630.62	38554
	Add 13% to either of Items 38547 to 38554 using EC fan					

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Thermostat and humidistat : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38555	Space thermostat/ controller c/w wiring, conduit and necessary accessories	388.90	9.63	11.98	61.09	38555
38556	Space thermostat/ controller with digital setting and monitoring display c/w wiring, conduit and all functional accessories	838.20	9.63	11.98	61.09	38556
38557	Space humidistat c/w wiring, conduit and necessary accessories	382.92	9.63	11.98	61.09	38557

Electrostatic precipitator c/w galvanized sheet metal housing, auto clean electrostatic filter c/w ioniser collector section and motorized washer/ adhesive applicator section, solenoid valve, manifold drive motor, manifold limit switch, timer control with field adjustable timer and timer bypass switch, access door with indicating light, internal panel with LED lights and digital readout, at least 10 to 15 steps of output voltage adjustment, remote relays, power supply indicating lamps, circuit breaker, manual reset button, time delay safety type door interlock switches : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nominal air supply rate : -					
	Each					
38558	Up to 1.5 m³/ s	40,807.57	1,454.39	2,219.01	7,775.30	38558
38559	1.5 - 3 m³/ s	54,819.74	1,761.27	2,610.05	8,764.16	38559
38560	3 - 4.5 m³/ s	75,438.57	2,132.93	3,070.03	9,878.79	38560
38561	4.5 - 6 m³/ s	85,947.71	2,583.03	3,611.04	11,135.16	38561
38562	6 - 9 m³/ s (The actual rate should be : $119,411.00 for Item 38562A)	11,941.10	3,128.08	4,247.40	12,551.33	38562
38563	9 - 12 m³/ s (The actual rate should be : $139,261.60 for Item 38563A)	13,926.16	3,891.16	5,138.29	14,533.95	38563
38564	12 - 15 m³/ s (The actual rate should be : $168,453.80 for Item 38564A)	16,845.38	4,578.06	6,091.77	16,329.49	38564

Thermo ventilator

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Ceiling mounted thermo ventilator c/w PTC heater, fan motors shall have minimum 2-step air flow rate changeover and c/w a remote controller of on/ off, 'Hi/ Lo speed operation, adjustable air direction, timer, filters, including all supporting framework and all necessary accessories : -					
	Each					
38565	Minimum air flow rate 175 m³/ hr	2,405.17	79.21	99.75	403.29	38565

AIR HANDLING & TREATMENT EQUIPMENT (CONT'D)

Portable type air-conditioner

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Portable type air-conditioner using refrigerant R410A, fan motors shall have 'minimum 2-stepair flow rate changeover and c/w a remote controller of on/ off, 'Hi/ Lo' speed operation, timer, filters, casters : -					
	Cooling capacity : -					
	Each					
38566	Up to 3.0 kW	1,560.73	31.35	39.21	114.29	38566
38567	3.0 to 4.4 kW	1,938.00	31.35	39.21	114.29	38567

WATER TANK AND ACCESSORIES

Water tank

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Sheet metal water tank (feed & expansion) c/w ball valve, vent, overflow, drain and mild steel support, anti-rust painting & accessories of effective water capacity : -					
	Each					
38568	Up to 250 litres	10,600.47	143.36	251.31	1,017.84	38568
38569	250 litres - 350 litres	11,675.39	178.70	288.93	1,147.56	38569
38570	350 litres - 500 litres	15,375.65	214.38	324.69	1,269.13	38570
	Reinforced fiberglass water tank (feed & expansion) c/w ball valve, vent, overflow, drain and mild steel support, painting & accessories of effective water capacity : -					
	Each					
38571	Up to 250 litres	6,536.01	199.24	322.08	1,141.45	38571
38572	250 litres - 350 litres	11,400.28	248.36	370.28	1,286.93	38572
38573	350 litres - 500 litres	11,989.29	297.94	416.12	1,423.25	38573

Water level controller : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38574	Three water level controller for water tank for pump control and alarm c/w probes, contacts, wiring and electrical connection to pump control panel and accessories	1,956.36	79.54	143.10	238.27	38574

WATER TANK AND ACCESSORIES (CONT'D)

Chilled water differential pressure by-pass valve system

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38575	Chilled water differential pressure by-pass valve system c/w 80 dia. ball valve comprise of modulating actuator with signal output & pressure controller	15,637.82	203.82	304.29	1,251.76	38575

PUMP & ACCESSORIES

Centrifugal fresh water pump for non-portable application, horizontal split casing type, c/w motor, drain and vent, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38576	Up to 2.5 kW	26,583.43	120.85	163.09	886.79	38576
38577	2.5 - 5 kW	28,929.04	124.89	167.23	941.89	38577
38578	5 - 10 kW	52,124.05	130.90	173.46	1,024.54	38578
38579	10 - 15 kW	60,134.28	138.94	181.76	1,134.75	38579
38580	15 - 20 kW	68,168.13	147.08	189.29	1,322.28	38580
38581	20 - 30 kW	76,638.26	155.32	198.19	1,450.99	38581

Centrifugal salt water pump, horizontal split casing type, c/w motor, drain and vent, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38582	Up to 2.5 kW	46,130.08	120.85	163.09	886.79	38582
38583	2.5 - 5 kW	47,693.81	124.89	167.23	941.89	38583
38584	5 - 10 kW	61,753.74	130.90	173.46	1,024.54	38584
38585	10 - 15 kW	72,403.65	138.94	181.76	1,134.75	38585
38586	15 - 20 kW	80,509.38	147.08	189.29	1,322.28	38586
38587	20 - 30 kW	89,012.99	155.32	198.19	1,450.99	38587
38588	30 - 50 kW	98,651.03	163.58	205.95	1,580.73	38588

PUMP & ACCESSORIES (CONT'D)

Fresh water pump for portable application, vertical multi-stage centrifugal type, c/w motor, drain and vent, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38589	Up to 2.5 kW	34,759.90	120.85	163.09	886.79	38589
38590	2.5 - 5 kW	41,590.70	124.89	167.23	941.89	38590
38591	5 - 10 kW	75,553.46	130.90	173.46	1,024.54	38591
38592	10 - 15 kW (The actual rate should be : $102,767.40 for Item 38592A)	10,276.74	138.94	181.76	1,134.75	38592
38593	15 - 20 kW (The actual rate should be : $123,281.80 for Item 38593A)	12,328.18	147.08	189.29	1,322.28	38593
38594	20 - 30 kW (The actual rate should be : $191,171.00 for Item 38594A)	19,117.10	155.32	198.19	1,450.99	38594

Fresh water pump for non-portable application, vertical spindle type centrifugal type, multi-stage configuration (if required), c/w motor, drain and vent, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38595	Up to 2.5 kW	21,381.32	120.85	163.09	886.79	38595
38596	2.5 - 5 kW	31,513.32	124.89	167.23	941.89	38596
38597	5 - 10 kW	40,977.63	130.90	173.46	1,024.54	38597
38598	10 - 15 kW	49,336.34	138.94	181.76	1,134.75	38598
38599	15 - 20 kW	57,695.07	147.08	189.29	1,322.28	38599
38600	20 - 30 kW	74,412.47	155.32	198.19	1,450.99	38600

Waste water pump c/w motor, drain and vent, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38601	Up to 2.5 kW	32,838.35	120.85	163.09	886.79	38601
38602	2.5 - 5 kW	34,402.09	124.89	167.23	941.89	38602
38603	5 - 10 kW	61,798.38	130.90	173.46	1,024.54	38603
38604	10 - 15 kW	71,847.69	138.94	181.76	1,134.75	38604
38605	15 - 20 kW	81,486.99	147.08	189.29	1,322.28	38605

PUMP & ACCESSORIES (CONT'D)

Water booster pump set (1 duty and 1 standby) c/w motor as a composite unit, strainer, drain and vent, starters, local control panel, membrane pressure vessel, sensors, pressure switches, valve and all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38606	Up to 2.5 kW	79,931.33	435.59	635.57	1,760.11	38606
38607	2.5 - 5 kW (The actual rate should be : $119,542.00 for Item 38607A)	11,954.20	455.83	676.01	1,936.59	38607
38608	5 - 10 kW (The actual rate should be : $151,020.00 for Item 38608A)	15,102.00	486.17	736.67	2,201.30	38608
38609	10 - 15 kW (The actual rate should be : $170,687.40 for Item 38609A)	17,068.74	526.61	817.57	2,554.26	38609
38610	15 - 20 kW (The actual rate should be : $183,051.60 for Item 38610A)	18,305.16	565.23	896.60	2,907.58	38610

Flush water pump c/w motor, drain and vent, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38611	Up to 2.5 kW	32,838.35	120.85	163.09	886.79	38611
38612	2.5 - 5 kW	34,402.09	124.89	167.23	941.89	38612
38613	5 - 10 kW	61,798.38	130.90	173.46	1,024.54	38613
38614	10 - 15 kW	71,847.69	138.94	181.76	1,134.75	38614
38615	15 - 20 kW	81,486.99	147.08	189.29	1,322.28	38615

Centrifugal hot water pump, horizontal split casing type, c/w motor, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38616	Up to 2.5 kW	65,879.43	120.85	163.09	886.79	38616
38617	2.5 - 5 kW	67,327.32	124.89	167.23	941.89	38617
38618	5 - 10 kW (The actual rate should be : $111,477.50 for Item 38618A)	11,147.75	130.90	173.46	1,024.54	38618
38619	10 - 15 kW (The actual rate should be : $129,672.80 for Item 38619A)	12,967.28	138.94	181.76	1,134.75	38619
38620	15 - 20 kW (The actual rate should be : $147,389.50 for Item 38620A)	14,738.95	147.08	189.29	1,322.28	38620

PUMP & ACCESSORIES (CONT'D)

Submersible type sewage pump (max. 10 m discharge head) up to 5 m water depth, handling sewage containing solid particles up to 50 mm diameter, non-cocking, c/w electric motor, guide pole, starters and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38621	Up to 1 kW	16,350.94	155.49	207.80	882.12	38621
38622	1 - 2 kW	19,131.91	155.49	207.80	882.12	38622
38623	2 - 3 kW	25,446.31	155.49	207.80	882.12	38623
38624	3 - 4 kW	25,613.52	155.49	207.80	882.12	38624
38625	4 - 5 kW	41,318.40	155.49	207.80	882.12	38625

Sewage transfer pump sets (max. 10 m discharge head); handling sewage containing solid particles up to 50 mm diameter; direct driven by motors; water seal connection; vents; drain; priming plug; associated pipeworks and associated pipeworks and anti-vibration mountings; adjacent emergency stops; all necessary components and accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38626	Up to 1 kW	37,938.34	155.49	207.80	882.12	38626
38627	1 - 2 kW	39,901.51	155.49	207.80	882.12	38627
38628	2 - 3 kW	50,200.28	155.49	207.80	882.12	38628
38629	3 - 4 kW	52,225.68	155.49	207.80	882.12	38629
38630	4 - 5 kW	52,397.57	155.49	207.80	882.12	38630

Sump pump, vertical centrifugal type, c/w submersible electric motor, pump control & H/L alarm, guide bars, cable supports & lifting chains, factory built-in suspension devices and discharge elbow for wet sump installation and cast iron/ steel base for dry sump installation, starter and local control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38631	Up to 2.5 kW	40,294.56	120.85	163.09	886.79	38631
38632	2.5 - 5 kW	41,100.44	124.89	167.23	941.89	38632
38633	5 - 10 kW	51,720.43	130.90	173.46	1,024.54	38633
38634	10 - 15 kW	57,342.73	138.94	181.76	1,134.75	38634
38635	15 - 20 kW	76,237.15	147.08	189.29	1,322.28	38635
38636	20 - 30 kW (The actual rate should be : $100,634.20 for Item 38636A)	10,063.42	155.32	198.19	1,450.99	38636

PUMP & ACCESSORIES (CONT'D)

End suction pump for portable application, centrifugal type, multi-stage configuration (if required), c/w anti-vibration mounting, flexible joints, drain, vent, motor, starter and local control panel and local wiring : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38637	Up to 2.5 kW	26,941.25	120.85	163.09	886.79	38637
38638	2.5 - 5 kW	44,370.66	124.89	167.23	941.89	38638
38639	5 - 10 kW	49,665.03	130.90	173.46	1,024.54	38639
38640	10 - 15 kW	53,249.23	138.94	181.76	1,134.75	38640
38641	15 - 20 kW	57,986.99	147.08	189.29	1,322.28	38641
38642	20 - 30 kW	67,462.55	155.32	198.19	1,450.99	38642

End suction pump for non-portable application, multi-stage configuration (if required), c/w anti-vibration mounting, flexible joints , drain, vent, motor, starter and local control panel and local wiring : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38643	Up to 2.5 kW	26,786.14	120.85	163.09	886.79	38643
38644	2.5 - 5 kW	42,396.59	124.89	167.23	941.89	38644
38645	5 - 10 kW	46,248.39	130.90	173.46	1,024.54	38645
38646	10 - 15 kW	50,381.13	138.94	181.76	1,134.75	38646
38647	15 - 20 kW	54,139.32	147.08	189.29	1,322.28	38647
38648	20 - 30 kW	61,655.67	155.32	198.19	1,450.99	38648

PUMP & ACCESSORIES (CONT'D)

Cooling tower c/w induced or forced draught fans, glass reinforced plastics (GRP) casing, open distribution pans or troughs fitted with coarse mesh grids, filled sheets with film-type vacuum-formed PVC c/w louvres and drift eliminators, metal parts with stainless steel to SS316 or the better equivalent, inlet/ outlet water gate valve, drain, strainer, starter panel and local control panel, plus all related necessary accessories with nominal heat rejection capacity : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38649	22 - 45 kW	12,852.53	428.72	558.43	1,309.18	38649
38650	45 - 69 kW	13,901.16	489.40	617.66	1,466.41	38650
38651	69 - 100 kW	16,376.67	549.15	677.49	1,593.68	38651
38652	100 - 150 kW	19,829.18	611.34	740.66	1,780.94	38652
38653	150 - 200 kW	24,460.95	672.10	801.89	1,931.11	38653
38654	200 - 300 kW	31,245.96	738.79	869.60	2,088.41	38654
38655	300 - 350 kW	43,789.60	800.92	933.31	2,219.38	38655
38656	350 - 450 kW	50,426.59	861.12	993.70	2,392.06	38656

Condensate drain sump pump : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38657	Condensate drain sump pump c/w electrical connection	2,833.27	84.61	106.88	444.15	38657

FANS & VENTILATION SYSTEM

Dark room cowl : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38658	Dark room cowl for 230 mm diameter.	1,822.79	21.04	27.97	60.43	38658

S.S. vent washer system c/w pump, exhaust blower, exhaust air duct, inspection door : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38659	2 m x 1.53 m x 0.683 m	93,847.58	543.44	685.98	2,337.79	38659

FANS & VENTILATION SYSTEM (CONT'D)

Fan chamber c/w access panels for fans of diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
38660	Up to 300 mm	2,564.59	17.32	23.05	45.45	38660
38661	300 - 380 mm	3,090.46	17.94	24.49	49.79	38661
38662	380 - 500 mm	3,592.29	18.74	25.92	54.07	38662
38663	500 - 610 mm	4,916.91	19.39	27.35	58.36	38663
38664	610 - 800 mm	6,439.19	20.02	32.17	62.67	38664

Acoustic fan chamber c/w access panels for fans of diameter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
38665	Up to 300 mm	4,093.48	24.52	30.43	67.73	38665
38666	300 - 380 mm	5,069.17	25.31	31.89	72.20	38666
38667	380 - 500 mm	6,308.85	25.97	33.29	76.51	38667
38668	500 - 610 mm	7,957.36	26.66	34.63	80.86	38668
38669	610 - 800 mm	9,896.90	27.45	39.62	85.19	38669

Axial-flow fan, aerofoil type c/w local control panel

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Motor speed up to 1000 r.p.m., fan diameter : -					
	Each					
38670	Up to 300 mm	5,119.35	47.56	60.13	182.11	38670
38671	300 - 380 mm	5,745.50	51.60	64.13	197.33	38671
38672	380 - 500 mm	7,633.69	55.60	68.15	212.52	38672
38673	500 - 610 mm	8,859.05	59.48	72.15	227.58	38673
38674	610 - 800 mm	11,981.64	63.48	76.16	242.78	38674

FANS & VENTILATION SYSTEM (CONT'D)

Axial-flow fan, aerofoil type c/w local control panel (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Motor speed up to 1000 - 1500 r.p.m., fan diameter : -					
	Each					
38675	Up to 300 mm	5,340.53	47.56	60.13	182.11	38675
38676	300 - 380 mm	7,287.08	51.60	64.13	197.33	38676
38677	380 - 500 mm	8,120.53	55.60	68.15	212.52	38677
38678	500 - 610 mm	9,372.90	59.48	72.15	227.58	38678
38679	610 - 800 mm	12,395.10	63.48	76.16	242.78	38679

Air conducting fan, c/w fan mounting plate, remote controller and all necessary accessories.

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Nominal supply air rate at medium speed : -					
	Each					
38680	Up to 0.375 m^3/ s	6,719.38	246.52	345.11	532.44	38680
38681	0.375 - 0.583 m^3/ s	9,428.80	295.80	443.68	640.89	38681

Air swing fan, c/w fan mounting plate, remote controller and all necessary accessories.

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Nominal supply air rate at medium speed : -					
	Each					
38682	Up to 0.0583 m^3/ s	7,803.16	246.52	345.11	591.59	38682
38683	0.0583 - 0.1041 m^3/ s	8,778.54	295.80	443.68	709.90	38683

FANS & VENTILATION SYSTEM (CONT'D)

Bifurcated fan : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38684	Bifurcated fan type, minimum air volume flow rate at 820 1/ s and static pressure at 20 Pa	6,660.39	54.65	66.31	209.12	38684

Centrifugal fan, backward/ forward bladed type c/w motor, drive belt and pulley, casing, access panel, metal enclosure, air plenum, starters and local control panel.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Fan diameter : -					
	Each					
38685	Up to 300 mm	6,075.55	80.08	121.69	357.71	38685
38686	300 - 380 mm	8,460.11	91.07	127.00	388.01	38686
38687	380 - 500 mm	12,626.17	97.30	140.35	408.72	38687
38688	500 - 610 mm	19,536.77	108.02	148.03	426.44	38688
38689	610 - 800 mm	32,327.13	120.36	155.87	444.15	38689

Roof extraction fan c/w motor, centrifugal/ mixed flow blower, casing, cowl, base, back -draught damper, bird entry preventer guard, control switch and starter.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Motor speed up to 900 r.p.m. (50-100 Pa), flow rate : -					
	Each					
38690	Up to 0.5 m^3/ s	4,818.84	88.02	130.40	373.39	38690
38691	0.5 - 1 m^3/ s	5,738.16	99.54	135.98	406.13	38691
38692	1 - 1.5 m^3/ s	6,248.74	105.87	149.28	427.05	38692

FANS & VENTILATION SYSTEM (CONT'D)

Roof extraction fan c/w motor, centrifugal/ mixed flow blower, casing, cowl, base, back -draught damper, bird entry preventer guard, control switch and starter. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Motor speed up to 1400 r.p.m. (75-125 Pa), flow rate : -					
	Each					
38693	Up to 1 m^3/ s	6,233.05	99.54	135.98	406.13	38693
38694	1 - 1.5 m^3/ s	8,000.79	105.87	149.28	427.05	38694
38695	1.5 - 2 m^3/ s	12,316.37	118.15	158.70	448.64	38695
38696	2 - 4 m^3/ s	18,500.21	135.02	176.73	486.00	38696

In line belt-driven fan c/w stator vanes, motors, drivers, guards, casing, starters and local control panel of fan diameter : -

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
38697	Up to 200 mm diameter (Motor speed up to 900 r.p.m.)	5,382.69	53.47	68.93	231.51	38697
38698	200 - 300 mm diameter (Motor speed up to 900 r.p.m.)	9,142.65	55.81	72.87	237.21	38698
38699	300 - 450 mm diameter (Motor speed up to 900 r.p.m.)	11,013.59	58.15	76.82	244.65	38699
38700	Up to 200 mm diameter (Motor speed 900 - 1500 r.p.m.)	5,680.24	53.47	68.93	231.51	38700
38701	200 - 300 mm diameter (Motor speed 900 - 1500 r.p.m.)	9,772.55	55.81	72.87	237.21	38701
38702	300 - 450 mm diameter (Motor speed 900 - 1500 r.p.m.)	11,965.05	58.15	76.82	244.65	38702

FANS & VENTILATION SYSTEM (CONT'D)

Propeller fan c/w galvanized iron casing with acoustic lining. Air flow rate based on static pressure 50 Pa : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38703	Up to 0.3 m³/ s	4,423.93	83.09	126.47	371.28	38703
38704	0.3 - 0.6 m³/ s	4,619.21	94.61	132.01	403.24	38704
38705	0.6 - 0.8 m³/ s	5,113.15	101.14	145.87	424.79	38705
38706	0.8 - 1.0 m³/ s	5,308.11	112.28	153.85	443.20	38706
38707	1.0 - 1.2 m³/ s	5,993.84	125.09	161.99	461.57	38707
38708	1.2 - 1.8 m³/ s	8,050.99	163.49	186.45	516.66	38708
38709	1.8 - 2.4 m³/ s	10,108.20	201.91	210.91	571.77	38709
38710	2.4 - 2.6 m³/ s	10,793.90	214.70	219.06	590.13	38710
38711	2.6 - 3.2 m³/ s	12,851.08	243.52	253.12	645.24	38711
38712	3.2 - 3.8 m³/ s	14,908.24	267.97	291.54	700.34	38712
38713	3.8 - 4.4 m³/ s	16,965.40	292.42	329.96	755.46	38713
38714	4.4 - 5.0 m³/ s	19,022.58	316.92	368.36	810.59	38714
38715	5.0 - 5.6 m³/ s	21,079.75	341.33	406.78	865.72	38715
38716	5.6 - 6.2 m³/ s	23,136.93	365.79	445.19	920.83	38716
38717	6.2 - 6.8 m³/ s	25,194.10	390.26	483.58	975.95	38717
38718	6.8 - 7.0 m³/ s	25,879.81	398.42	496.40	994.34	38718

Direct-drive inline duct fan c/w acoustic casing and local control panel, fan diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38719	Up to 100 mm (Motor speed up to 3000 r.p.m.)	2,663.52	176.51	219.37	501.95	38719
38720	100 - 200 mm (Motor speed up to 3000 r.p.m.)	7,453.79	203.77	246.92	536.54	38720
38721	200 - 250 mm (Motor speed up to 3000 r.p.m.)	10,911.30	217.27	260.53	553.84	38721
38722	250 - 280 mm (Motor speed up to 3000 r.p.m.)	13,473.18	230.86	274.33	571.16	38722
38723	280 - 315 mm (Motor speed up to 3000 r.p.m.)	15,094.64	244.48	287.94	605.73	38723
38724	315 - 400 mm (Motor speed up to 3000 r.p.m.)	21,894.89	258.08	301.72	623.04	38724

FANS & VENTILATION SYSTEM (CONT'D)

PVC direct-drive inline duct fan c/w acoustic casing and local control panel, fan diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38725	200 mm	17,710.55	203.77	246.92	536.54	38725

Flameproof in-line fan : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38726	Flameproof in-line fan, 880 r.p.m., fan diameter up to 330 mm	11,098.69	255.24	298.38	616.14	38726

Exhaust fan c/w automatic motorized weather-proof louvre, propeller type, fan diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38727	150 mm	1,750.44	27.47	34.42	55.03	38727
38728	230 mm	2,664.19	30.25	37.23	61.84	38728
38729	300 mm	3,328.06	33.04	39.84	68.81	38729

Aluminium acoustic box c/w propeller fan : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38730	Aluminium acoustic box c/w 250 mm diameter propeller fan of duty (0.17 m^3/ s, 40 Pa) and air grilles. Nominal size 450 x 450 x 700 mm	4,733.68	229.32	276.38	608.96	38730

FANS & VENTILATION SYSTEM (CONT'D)

Blower fan, in-line silent centrifugal type, impeller diameter : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38731	Up to 100 mm	1,317.54	53.47	68.93	231.51	38731
38732	100 - 200 mm	2,635.08	55.81	72.87	237.21	38732
38733	200 - 300 mm	3,952.62	58.15	76.82	244.65	38733

Motor starter c/w push buttons, relays, circuit protective device : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38734	Up to 2.2 kW rating	590.60	11.11	14.95	56.41	38734
38735	2.2 - 5.5 kW rating	627.30	12.63	18.55	63.48	38735
38736	5.5 - 11 kW rating	3,113.08	14.84	22.33	70.57	38736
38737	11 - 15 kW rating	4,849.66	18.45	26.05	81.76	38737

Contactor : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38738	30 A SP & N	251.44	9.61	12.67	38.44	38738
38739	60 A SP & N	503.10	14.90	18.44	66.03	38739
38740	100 A SP & N	826.07	20.74	26.44	74.34	38740
38741	30 A TP & N	288.46	10.88	14.19	45.54	38741
38742	60 A TP & N	918.06	17.32	22.41	71.97	38742
38743	100 A TP & N	1,194.14	22.71	29.46	92.30	38743

FANS & VENTILATION SYSTEM (CONT'D)

Time switch c/w overriding switch : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
38744	24-hour dial	677.79	6.25	9.38	23.45	38744
38745	7-day clock	1,091.40	6.25	9.38	23.45	38745
38746	with 3-minute delay	489.32	6.25	9.38	23.45	38746

Soft motor starter : -

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
38747	Up to 2.2 kW rating	12,221.33	29.64	37.20	113.31	38747
38748	2.2 - 5.5 kW rating	14,252.90	37.23	44.94	127.51	38748
38749	5.5 - 12 kW rating	15,714.22	44.38	52.08	141.70	38749
38750	12 - 22 kW rating	16,937.08	52.14	59.83	155.77	38750
38751	22 - 37 kW rating	22,873.00	59.28	67.09	169.96	38751

Grease filter type kitchen exhaust hood

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Exhaust hood of 316 stainless steel sheet 1.2 mm thick with hair line finish c/w minimum 38 mm stainless steel angle iron frame and supports, 50 mm thick grease filters, filter washing facilities, flushed fluorescent lighting with heat resistant wired glass diffusers and accessories with height up to and including 1.2 m, with the hood bottom perimeter to reference dimension.					
	Hood undersurface area of : -					
	Each					
38752	Up to 3 m²	26,637.89	322.52	511.80	1,709.86	38752
38753	3 - 4 m²	33,385.45	486.97	658.82	2,128.07	38753
38754	4 - 5 m²	40,557.34	597.60	785.17	2,413.51	38754
38755	5 - 6 m²	48,332.29	753.16	880.18	2,468.72	38755

FANS & VENTILATION SYSTEM (CONT'D)

Grease filter type kitchen exhaust hood (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Washable grease filter : -					
	Each					
38756	500 x 500 x 50 mm thick	651.12	6.69	10.60	20.68	38756
	Cleaning tank : -					
	Each					
38757	Stainless steel cleaning tank	7,458.64	33.98	42.94	132.53	38757
	Per litre					
38758	Cleaning detergent	91.46	-	-	-	38758

Water scrubbing type exhaust hood of 316 stainless steel sheet 1.2 mm thick with hair line finish c/w minimum 38 mm stainless steel angle iron frame and support, grease filters filter washing facilities, rotary baffles, inspection door, water recirculation system, control panel, flushed fluorescent lighting with heat resistant wired glass diffusers and accessories (with height up to and including 1.2 m, with the hood bottom perimeter as reference dimension), jet spray nozzles.

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Hood undersurface area of : -					
	Each					
38759	Up to 4 m²	81,618.97	528.35	718.47	2,261.29	38759
38760	4 - 5 m²	15,539.61	653.04	851.68	2,563.62	38760
	(The actual rate should be : $155,396.10 for Item 38760A)					
38761	5 - 6 m²	16,850.89	823.59	1,012.45	2,835.27	38761
	(The actual rate should be : $168,508.90 for Item 38761A)					
38762	Add to last item for each additional square metre or part thereof	13,348.01	147.61	160.78	287.01	38762
	Vehicle exhaust hose and hose reel : -					
	Per set					
38763	Vehicle exhaust hose reel c/w nozzle, hose clip, 10 m exhaust hose of 50 mm diameter c/w control panel and all necessary accessories	60,629.46	219.27	324.30	797.06	38763
38764	50 mm diameter. exhaust hose 10 m long	8,074.20	24.85	41.98	73.30	38764

FANS & VENTILATION SYSTEM (CONT'D)

Water scrubbing type exhaust hood of 316 stainless steel sheet 1.2 mm thick with hair line finish c/w minimum 38 mm stainless steel angle iron frame and support, grease filters filter washing facilities, rotary baffles, inspection door, water recirculation system, control panel, flushed fluorescent lighting with heat resistant wired glass diffusers and accessories (with height up to and including 1.2 m, with the hood bottom perimeter as reference dimension), jet spray nozzles. (Cont'd)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Sundries : -					
	Each					
38765	Acoustic enclosure for housing centrifugal fan	4,393.97	82.22	103.71	247.76	38765
38766	Silencer of 304 stainless steel construction c/w corrosion resistant flanges 300 mm (diameter) x 1200 mm (long)	7,795.67	23.93	43.44	128.29	38766
	Acoustic louver					
	Per cubic metre					
38767	Acoustic insulation silencer, stainless steel 316 c/w corrosion resistant	1,346.25	17.94	26.44	60.14	38767
	Acoustic enclosure for heat pump : -					
	Each					
38768	50 - 100 kW	62,694.74	342.82	565.96	1,916.06	38768
38769	100 - 150 kW	86,233.01	410.85	697.78	2,086.53	38769
38770	150 - 200 kW (The actual rate should be : $106,653.50 for Item 38770A)	10,665.35	486.97	953.99	2,529.60	38770
38771	200 - 300 kW (The actual rate should be : $125,854.70 for Item 38771A)	12,585.47	587.02	1,096.94	2,657.58	38771
	High pressure cleansing unit : -					
	Per set					
38772	Wall mounted unit flow rate 15.7 l/ min at 175 bar pressure	28,846.82	121.05	146.41	389.61	38772
	Full package 2 pump unit at 400 kPa working pressure : -					
	Per set					
38773	Up to 0.5 kW	7,244.62	66.81	94.41	312.20	38773
38774	0.5 - 2 kW	14,252.14	88.78	104.99	354.71	38774
38775	2 - 5 kW	26,324.10	96.45	111.21	368.93	38775

FANS & VENTILATION SYSTEM (CONT'D)

Water scrubber/ multi-throat venture scrubber c/w packings, FRP centrifugal fan, mist eliminator, pipework, nozzle, sump, 3 nos. recycling pump c/w pump motor, flow sensor, flow switch, air release valve, chemical metering pump, ORP and pH analyzer transmitter, chemical tank, fully enclosed acoustic panel chamber, local control panel for design flow rate of : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per set					
38776	4.4 - 5.5 m³/ s (The actual rate should be : $443,705.50 for Item 38776A)	44,370.55	2,583.03	3,611.04	11,135.16	38776
38777	5.5 - 8 m³/ s (The actual rate should be : $691,235.80 for Item 38777A)	69,123.58	3,128.08	4,247.40	12,551.33	38777
38778	8 - 11.5 m³/ s (The actual rate should be : $1,037,778.00 for Item 38778A)	10,377.78	3,891.16	5,138.29	14,533.95	38778
38779	11.5 - 14.5 m³/ s (The actual rate should be : $1,287,921.00 for Item 38779A)	12,879.21	4,578.06	6,091.77	16,329.49	38779
	Silencer of PVC/ PP construction c/w corrosion resistant flanges : -					
	Each					
38780	Up to 0.5 m³/ s	7,922.63	28.84	46.02	157.30	38780
38781	0.5 - 1 m³/ s	12,944.32	39.05	57.32	192.39	38781
38782	1 - 1.5 m³/ s	14,764.33	60.79	73.14	219.86	38782
38783	1.5 - 2 m³/ s	19,504.91	73.14	91.98	247.49	38783
38784	Add to last item for each additional 0.5 m³/ s or part thereof	4,304.98	7.96	12.72	30.61	38784
	Sundries : -					
	Each					
38785	Chemical dosing tank c/w accessories, chemical metering pump set	2,705.19	12.10	23.93	50.74	38785
38786	ORP analyzer c/w sensor, transmitter and accessories	2,063.55	12.59	16.35	38.36	38786
38787	pH analyzer c/w sensor, transmitter and accessories	2,057.55	12.59	16.35	38.36	38787
38788	Portable chemical pump for NaOH/ NaOCl	2,304.82	20.15	32.51	76.85	38788

ENERGY SAVING CONTROL SYSTEM

Energy savings control system for mechanical ventilation integrated with natural ventilation : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38789	Wind speed sensor	16,475.18	84.20	109.97	306.48	38789
38790	Wind direction sensor	19,264.34	84.57	110.18	309.04	38790
38791	Wind speed and direction controller c/w power cables, control cables, contactors metal enclosure and all necessary accessories	8,475.39	243.32	365.48	922.37	38791

VARIABLE SPEED MOTOR DRIVE

Variable speed motor drive of rating : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38792	Up to 5 kW	16,453.68	17.85	23.24	68.01	38792
38793	5 - 10 kW	19,537.03	23.93	31.97	91.72	38793
38794	10 - 15 kW	22,428.86	30.04	40.66	115.42	38794
38795	15 - 20 kW	25,017.62	36.33	48.24	137.50	38795
38796	20 - 30 kW	45,792.31	40.23	54.60	158.28	38796
38797	30 - 40 kW	50,909.47	48.51	65.64	176.02	38797
38798	40 - 50 kW	58,366.74	54.93	70.51	192.30	38798
38799	50 - 60 kW	66,882.52	60.23	74.92	196.67	38799

METAL WORKS IN ASSOCIATED WITH AIR-CONDITIONING INSTALLATION

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
38800	Elevated or overhauling platform for A/ C equipment c/w metal work, railing, cat ladder, painting as per Structural Engineer's recommended detail (to be measured on platform surface area)	4,068.23	67.86	95.81	229.20	38800
	Each					
38801	Surveyor's certificate for steel service platform for maintenance of A/ C equipment	10,902.58	-	-	-	38801

STEAM AND HOT WATER SYSTEM

Steam plant and equipment c/w steam boiler, combustion chamber, automatic burner with controls, blow-down valve, all necessary valves, tanks, thermometer, steam pressure gauge, boiler feed pump with controls, water level gauge glass, water level control, local control panel and protection, drip tray, cleaning tools, chemical dosing equipment, draught gauge, meters, quartz clock and condensate/ feed tank : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38802	Water heating capacity 401 - 500 kg/ hr (The actual rate should be : $988,670.30 for Item 38802A)	98,867.03	7,369.92	8,470.86	18,861.23	38802

Air-water heat pump (zero ODP refrigerant) c/w motor, compressor, condenser, evaporator coil, centrifugal blower, automatic safety controls within common cabinet, refrigerant receiver, moisture indicator, sight glass, thermal expansion valve, filter drier, heat exchanger, lockout relay, fan motor, thermal overload protector, time delay, phase monitor, hour meter and control panel : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38803	Water heating capacity 8 - 14 kW	65,946.48	496.09	595.54	2,530.52	38803
38804	Water heating capacity 14 - 28 kW (The actual rate should be : $121,232.90 for Item 38804A)	12,123.29	748.49	877.23	4,310.79	38804
38805	Water heating capacity 28 - 44 kW (The actual rate should be : $268,831.00 for Item 38805A)	26,883.10	1,039.67	1,158.63	6,021.39	38805
38806	Water heating capacity 44 - 68 kW (The actual rate should be : $332,388.20 for Item 38806A)	33,238.82	1,410.62	2,204.49	7,718.22	38806
38807	Water heating capacity 68 - 100 kW (The actual rate should be : $399,562.60 for Item 38807A)	39,956.26	1,801.89	3,346.30	9,469.35	38807
38808	Water heating capacity 100 - 150 kW (The actual rate should be : $489,840.20 for Item 38808A)	48,984.02	2,844.53	4,244.14	11,419.37	38808

STEAM AND HOT WATER SYSTEM (CONT'D)

Air-cooled packaged heat pump (zero ODP refrigerant) for external mounting c/w evaporators, condensers, fans, compressors, motors, water circulation pumps, pressure relief valves, expansion tanks, starters, refrigerant, expansion tank, buffer tank, noise equipment, copper tube with pre-corrosion resisting treated copper fins, filter driers, water strainer, capacity controller, liquid receivers, starters, weather-proof cabinet, emergency stop button, all necessary safety and operational control and accessories, local control panel connected to electricity supply point, proper mounting and support including I-beams and concrete plinth, flexible pipe connection, chilled water pipework for connection

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Heat pump capacity : -					
	Each					
38809	8 - 14 kW (The actual rate should be : $125,525.10 for Item 38809A)	12,552.51	745.63	953.55	3,350.87	38809
38810	14 - 28 kW (The actual rate should be : $175,916.30 for Item 38810A)	17,591.63	919.32	1,175.06	3,604.91	38810
38811	28 - 44 kW (The actual rate should be : $250,145.60 for Item 38811A)	25,014.56	1,262.41	1,531.95	3,850.93	38811
38812	44 - 68 kW (The actual rate should be : $327,284.50 for Item 38812A)	32,728.45	1,493.48	2,221.83	6,200.31	38812
38813	68 - 100 kW (The actual rate should be : $503,242.00 for Item 38813A)	50,324.20	2,002.50	2,999.36	8,048.44	38813
38814	100 - 150 kW (The actual rate should be : $691,779.30 for Item 38814A)	69,177.93	2,482.85	3,693.94	8,549.83	38814
38815	150 - 200 kW (The actual rate should be : $844,524.70 for Item 38815A)	84,452.47	3,103.84	4,430.49	10,386.87	38815
38816	200 - 300 kW (The actual rate should be : $1,032,092.00 for Item 38816A)	10,320.92	3,292.88	4,816.31	11,542.13	38816

PRESSURE VESSELS

Pressure vessel complete with all necessary accessories in accordance with the manufacturer's recommendations : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per Set					
38817	Pressure vessel, vertical type, of 10 bar working pressure and Up to 60 litres capacity	3,607.39	143.14	161.25	504.53	38817
38818	Ditto but 60 to 200 litres capacity	5,656.98	202.22	236.64	700.02	38818
38819	Ditto but 200 to 300 litres capacity	8,083.52	271.95	327.29	1,188.70	38819
38820	Ditto but 300 to 500 litres capacity	10,313.27	355.86	437.82	1,261.41	38820
38821	Ditto but 500 to 750 litres capacity	22,587.23	445.98	540.87	1,513.67	38821
38822	Ditto but 750 to 1,000 litres capacity	27,213.09	536.09	643.93	1,765.94	38822

SUNDRIES

Solar hot water storage tank c/w insulation complying BS5500 c/w all necessary accessories : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38823	Up to 100 litres	4,208.47	65.04	126.65	289.16	38823
38824	100 - 200 litres	4,589.89	69.45	130.70	303.56	38824
38825	200 - 300 litres	5,241.01	75.35	139.67	318.73	38825
38826	300 - 400 litres	9,703.75	79.01	146.55	334.49	38826
38827	400 - 500 litres	13,982.98	81.27	153.77	351.31	38827

Pyranometer : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38828	Pyranometer complying ISO 9060 c/w all functional accessories	2,995.15	65.13	123.77	249.85	38828

Stainless steel plate type heat exchanger of heat transfer capacity : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Each					
38829	Up to 25 kW	14,864.01	271.02	364.63	1,355.89	38829
38830	25 - 50 kW	43,770.32	296.65	371.24	1,491.46	38830
38831	50 - 100 kW	86,057.86	325.42	403.66	1,640.65	38831
38832	100 - 200 kW (The actual rate should be : $104,375.50 for Item 38832A)	10,437.55	362.40	444.89	1,804.84	38832
38833	200 - 300 kW (The actual rate should be : $134,588.90 for Item 38833A)	13,458.89	389.06	489.11	1,987.57	38833

SUNDRIES (CONT'D)

Solar collector panel complying BS EN 12975 with minimum efficiency 65% at 30K temperature difference between average fluid temperature and ambient air temperature with solar irradiation = 800W/ m2 : -

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per set					
38834	Up to 1 m²	4,988.08	176.98	256.76	700.49	38834
38835	1 m² - 2 m²	7,266.25	213.39	303.66	835.32	38835
38836	2 m² - 3 m²	11,691.19	237.29	345.17	935.29	38836
38837	3 m² - 4 m²	16,207.71	265.86	386.29	1,036.29	38837
38838	4 m² - 5 m²	20,478.20	294.67	435.23	1,166.66	38838
38839	5 m² - 6 m²	24,760.89	333.02	485.37	1,316.40	38839
38840	6 m² - 7 m²	29,255.32	369.46	539.56	1,472.49	38840

Labour to disconnect all existing air-conditioning and ventilation installation for an area inside a building, take down and clearing the entire air-conditioning and ventilation installation inside the area (area shall be measured net on the gross floor area of the building covered by the air-conditioning services installation)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per square metre					
38841	For area up to 100 m²	-	39.12	-	-	38841
38842	For area 100 - 500 m²	-	37.93	-	-	38842
38843	For area above 500 m²	-	35.41	-	-	38843

MISCELLANEOUS

Buildings Energy Efficiency Ordinance (BEEO) Submission

All heating, ventilation and air-conditioning installations, unless otherwise specified, in a prescribed building should be assessed in accordance with the energy efficient requirements, for the premises in accordance with the requirements as specified in the latest edition of Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code or BEC in abbreviation), preparation and completion of the installation summaries and worksheets including but not limited to Form EE-AC, AC-G1, AC-G2(1), AC-G2(2), AC-G3(1), AC-G3(2), AC-G3(3), AC-D1 and AC-EQ1 as required by the BEEO and to coordinate with the Registered Energy Assessor for submission.

Item		Rate A $	Item
	Each		
38844	Water cooled/ Air cooled chillers	6,179.74	38844
38845	Ventilation fans	308.99	38845
38846	Air handling units/ Computer room air conditioning units	926.97	38846
38847	Split type air conditioning units	185.39	38847
38848	Window-split type air conditioners	308.99	38848
38849	Packaged air conditioners	370.79	38849
38850	Reheat coil air conditioners	401.66	38850
38851	Variable refrigerant volume (VRV) system	617.97	38851
38852	Fan coil units	463.50	38852
38853	Room coolers	61.79	38853
38854	Cold room air conditioning unit	61.79	38854
38855	Air cooled roof top units	617.97	38855
38856	Fresh air pre-conditioners/ Fresh air pretreating units	370.79	38856
38857	Air purifier units/ sterilizers	61.79	38857
38858	Air pressure stabilizers	61.79	38858
38859	Variable air volume equipment (VAV/ CAV)	61.79	38859
38860	Dehumidifiers/ humidifiers	61.79	38860
38861	Electro-static precipitators	308.99	38861
38862	Thermo ventilators	154.50	38862
38863	Water pumps	154.50	38863
38864	Cooling towers	463.50	38864
38865	Grease filter type kitchen exhaust hood/ Water scrubbing type exhaust hood	617.97	38865

Section 39

HEATING, VENTILATION AND AIR-CONDITIONING - ELECTRICAL POWER SUPPLY, CONTROL AND MONITORING SYSTEM

CONTROL PANELS

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Lead-lag control/ control panel for pumps : -					
	Each					
39001	Lead-lag pump control c/w all necessary lead-lags relays, selectors, indicating lamps, wirings, including panel or in addition to the local control panels of the pumps (for control of 1 to 2 items)	2,954.57	106.66	185.48	424.16	39001
	Interlocking control/ control panel for air handling and treatment equipment : -					
	Each					
39002	Interlocking control between two equipment / groups of equipment, e.g. an AHU/ a group of up to 4 nos. of fans/ damper actuator (ON/ OFF function is treated as one item) c/w relay, timer, indicating lamps, wirings and all necessary accessories including panel or in addition to the control panels	2,872.19	103.71	180.12	409.59	39002
	Supervisory/control panel for Air-Conditioning system : -					
	Each					
39003	Supervisory panel of sheet metal box and stainless steel metal front plate c/w push buttons, indicating lamps, relays (or electrical control), selectors, electrical wiring and all necessary functional and operational component for the complete unit monitoring and controlling of 1 set of equipment.	4,537.31	187.33	325.51	736.65	39003
39004	Every additional set of equipment incorporating with supervisory panel as described in item 39003	3,779.56	20.44	21.20	150.99	39004
39005	Repeater/ Indicating panel of sheet metal box and stainless steel metal front plate c/w indicating lamps, relays, buzzer, mute button, lamp test button, electrical wiring and all necessary functional and operational component for the complete unit monitoring of a set of equipment/ a set of fan (up to 4 nos.)/ water detection system/ high or low temperature alarm system	3,543.45	187.33	325.51	736.65	39005
39006	Every additional set of equipment/ set of fan/ water detection system/ high or low temperature alarm system incorporating with repeater/ indicating panel as described in item 39005	1,476.45	20.44	21.20	150.99	39006
	Interface control for monitoring and/or controlling of equipment					
	Each					
39007	Interface control c/w control module, relay, cabling and all necessary accessories for monitoring and/or controlling of 1 set of equipment	2,295.55	19.50	20.91	103.09	39007
	Control panel for solar collector control system : -					
	Each					
39008	Solar collector control panel with solar hot water system controller, including the control of circulation pump, solar hot water storage tank, level switch, safety device & all necessary accessories	2,633.65	132.49	246.13	444.19	39008

SENSORS & METERS

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Meters : -					
	Each					
39009	Hour run meter (all rating)	916.04	6.95	11.80	28.14	39009
39010	Energy meter for chilled water	7,586.96	44.84	47.56	89.89	39010
39011	Sea water flow counter	4,686.64	28.84	32.30	72.96	39011
39012	Sea water direct reading flow meter (all size)	13,118.05	44.84	47.56	89.89	39012
39013	Thermometers for chilled water	451.06	11.24	17.64	42.99	39013
39014	Digital temperature indicator	454.26	12.97	19.38	50.62	39014
39015	Digital temperature meter c/w interfacing unit suitable for computer download in Excel or CSV format	10,148.58	13.63	15.82	31.99	39015
	Sensors & Detectors : -					
	Each					
39016	Movement detector, combined infrared and ultrasonic detection type c/w necessary accessories and connection to the alarm panel	864.38	44.08	45.78	106.05	39016
39017	High temperature detector c/w control panel, indicating lights, alarm / buzzer and served with automatic "duty / standby" changeover switch	11,437.58	13.63	15.82	31.99	39017
39018	Duct type carbon dioxide (CO_2) sensor c/w associated DDC controller, control wiring and associated accessories	6,328.64	15.44	17.33	36.04	39018
39019	Duct type carbon monoxide (CO) sensor c/w associated DDC controller, control wiring and associated accessories	6,328.64	15.44	17.33	36.04	39019
39020	Room type carbon dioxide (CO_2) sensor c/w DDC controller, LCD display, control wiring and associated accessories	6,328.64	15.44	17.33	36.04	39020
39021	Room type carbon monoxide (CO) sensor c/w DDC controller, LCD display, control wiring and associated accessories	6,328.64	15.44	17.33	36.04	39021
39022	Temperature sensors	774.82	9.81	12.20	65.96	39022
39023	Humidity sensors	2,256.99	9.81	12.20	65.96	39023
39024	Absolute humidity (dew point) sensors	2,310.27	9.81	12.20	65.96	39024
39025	Combined type humidity and temperature sensors	2,351.96	9.81	12.20	65.96	39025
39026	Differential pressure sensors	2,335.03	9.81	12.20	65.96	39026
39027	Probe type duct mounted smoke detector & indicator (tripping power supply is connected to F.S. panel), access panel, including modification of existing duct work and air-conditioner's control panel	1,998.39	83.98	87.96	310.23	39027
39028	Air velocity sensors	2,865.95	9.81	12.20	65.96	39028
39029	Contamination sensors	2,862.04	9.81	12.20	65.96	39029
39030	Flow sensors	709.63	9.81	12.20	65.96	39030
39031	Occupancy sensor	898.55	9.81	12.20	65.96	39031
39032	Carbon monoxide monitor/alarm sensors	577.96	9.64	12.15	61.40	39032
39033	Nitrogen dioxide sensors	1,716.13	9.64	12.15	61.40	39033
39034	Carbon dioxide (CO_2) sensor of non dispersive technology with sensing range of 0 to 2000 ppm, accuracy within 5%. Duct / wall mounted	2,420.85	9.64	12.15	61.40	39034

CENTRAL CONTROL AND MONITORING SYSTEM (CCMS)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Each					
39035	CCMS operator workstation c/w mouse and keyboard, LCD monitor A3 ink/laser printer capable of handling continuous paper, UPS capable of backup for 1 hour of operation for the PC, monitor and printer and 16-bit/full duplex audio system c/w speakers and all necessary accessories	26,409.38	36.33	48.92	153.45	39035
39036	Uninterrupted power supply capable for 1 hour operation for the PC	13,183.98	18.25	24.53	77.18	39036
39037	Portable operator terminal hardware c/w weight of less than 2 kg, run on rechargeable battery, capable of retrieving and storing information to and from CCMS server and DDC controllers and Input method can be keyboard, touch screen, track point and/or mouse.	19,470.68	6.05	9.91	15.50	39037
39038	DDC controller hardware c/w RAM and the clock shall be provided with power backup of 72 hours instant recharged capacitor or 12-hour trickle recharged batteries, universal inputs and universal outputs.	5,152.82	36.33	48.92	153.45	39038
39039	Unitary controller hardware with processor speed at least 10 MHz and minimum of 512 Kbytes RAM	6,477.86	12.29	18.45	31.03	39039
39040	Gateway/interfacing hardware c/w processor speed at least 16.7 MHz and minimum of 2 Mbytes RAM. The gateway, which also acts as a general purpose controller, shall have the same analog/digital input and output points.	7,342.49	12.29	18.45	31.44	39040
39041	CCMS central database repository shall reside in the CCMS server. The database server shall use client/server technology and comply with Microsoft Open Database Connectivity (ODBC) latest version and support ISO/IEC 9075-9	1,290.16	-	-	31.03	39041
39042	ACMV sub-system controllers for temperature/humidity/pressure controllers with plug-in proportional type with integrated circuits controllers shall be available with either 0 to 20V DC / 4 to 20 mA proportional output, two-position output, or any combination.	11,721.10	18.25	24.53	77.18	39042
39043	Programmable DDC for VAV Box	1,320.28	7.22	8.87	59.33	39043

SUNDRIES

		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	
	IAQ testing/assessment and report as described in Part D of A/C G.S. : -					
	Per point					
39044	Carbon dioxide	368.30	-	-	-	39044
39045	Carbon monoxide	365.68	-	-	-	39045
39046	Respirable suspended particulate	543.34	-	-	-	39046
39047	Nitrogen dioxide	363.78	-	-	-	39047
39048	Ozone	1,846.98	-	-	-	39048
39049	Formaldehyde	365.92	-	-	-	39049
39050	Total volatile organic compound	550.48	-	-	-	39050
39051	Radon	360.07	-	-	-	39051
39052	Airborne bacteria	541.22	-	-	-	39052
39053	Room temperature	181.98	-	-	-	39053
39054	Relative humidity	181.50	-	-	-	39054
39055	Air movement	184.86	-	-	-	39055
39056	Mould	541.22	-	-	-	39056

SUNDRIES (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Cables : -					
	Per linear metre					
39057	Low capacitance cable	19.38	3.41	4.16	11.25	39057
39058	Shield twist pair cable	24.15	3.41	4.16	11.25	39058
39059	Multi-mode 62.5/125 fiber optic cable	73.84	3.41	4.16	11.25	39059

Section 40

FIRE SERVICES

SECTION 40

FIRE SERVICES

SPECIAL CONDITIONS

Measurement of power supply **SC40.01**

All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.

For the avoidance of doubt, all items for pump sets in this section shall only apply to the works executed for the Fire Services Installation by the Approved Suppliers of Materials and Specialist Contractors for Public Works : Fire Service Installation.

Measurement of excavations, ducts, chases, holes and other subsidiary work **SC40.02**

All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All pipe ducts, concrete thrust blocks and anchor blocks, chases in, and holes through existing walls, ceilings and similar for pipes, etc., (but not mortices or holes for brackets) except specifically stated, shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork, Section 12 - Roadwork and Cable Duct, Section 13 - Plumbing and Drainage or other applicable Work Sections of this Schedule.

Measurement of pipework **SC40.03**

Unless otherwise stated, pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.

Branch pipes of 32 mm diameter from tee-off for and including sprinkler points and dry pendant sprinkler points shall be grouped together and measured in numbers of sprinkler points. The rates for which shall include the associated pipework and sprinkler points and dry pendant sprinkler points.

Measurement of fire alarm indicating/ control panel **SC40.04**

The interconnecting cables and the cable containment for the fire alarm indicating/ control panel shall be measured separately.

Measurement of heat resistant cables and low smoke zero halogen cables **SC40.05**

Cables for the equipment, control/ indicating panels, fire alarm points, etc. have been allowed in the rates under this Section. No measurement shall be made for cables except for heat resistant cables where specifically ordered by the Maintenance Surveyor in writing.

Heat resistant cables and low smoke zero halogen cables shall be measured the net length as fixed in linear metres.

SPECIAL CONDITIONS (CONT'D)

Measurement of temporary supply **SC40.06**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

Rates generally **SC40.07**

The rates for all items shall generally include for : -

(a) Colour band and colour identification work.

(b) Lettering and engraving for identification, signs, labels in both English and Chinese.

(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.

(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.

(e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.

(f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, hangers, supports, brackets, spring compensated and seismic restraints and isolating components and the like.

(g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.

(h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.

(i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.

SPECIAL CONDITIONS (CONT'D)

Rates generally (Cont'd) **SC40.07 (Cont'd)**

(j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.

(k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.

(l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.

(m) Submitting all relevant documentation to Fire Services Department and obtaining necessary approval.

(n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.

(o) Provision of framed schematic diagrams c/w clear plastic front sheet and wooden back plate including fixing to wall.

(p) Provision of manufacturer's guarantee.

Rates for pipework **SC40.08**

The rates for pipework shall further include for : -

(a) All short lengths, cutting and waste, and joints in the running length.

(b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).

(c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.

(d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.

(e) Connections between pipework of different materials and differing grades of same material.

(f) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.

(g) All jointing including provision of flexible connections and/ or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.

(h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.

(i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.

(j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tapes where required.

SPECIAL CONDITIONS (CONT'D)

Rates for in-line pipework equipment **SC40.09** The rates for in-line pipework equipment (e.g. valves, mechanical flow meters, gauges, strainers and the like) shall further include for : -

(a) Cutting and jointing to pipes and fittings.

(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.

Rates for fire alarm call points, fire alarm bell points, visual fire alarm, smoke detector points, heat detector points, interface control points and interface monitor points **SC40.10** The rates for fire alarm call points, fire alarm bell points, visual fire alarm points, smoke detector points, heat detector points, interface control point and interface monitor point shall further include for fire alarm push buttons, fire alarm bells, visual fire alarm, smoke detectors, heat detectors, re-programming work (including modification of user interface) of existing addressable fire control/ indication panel and all necessary accessories for connection to the fire alarm control/ indication panel or the fire alarm system. The cables and cable containment shall be measured separately and paid for at appropriate rates under this Section and Sections 28 to 30.

Rates for sprinkler points and dry pendant sprinkler points **SC40.11** The rates for sprinkler points and dry pendant sprinkler points shall further include for sprinkler heads, arm pipes and all necessary accessories. The range pipes, distribution pipe, draining/ re-fill the sprinkler system and tee-off from existing sprinkler system shall be measured separately and paid for at appropriate rates under this Section.

Rates for control/ indicating panels **SC40.12** Control/ indicating panel shall be measured on the basis of complete unit monitoring and controlling the number of zones/ points as specified. The rates for control/ indicating panels shall further include for all necessary relays, indicating lamps, push button package and selector switches. The cables and cable containment to external equipment or existing panel shall be measured separately and paid for at appropriate rates under Sections 27 to 30.

Rates for equipment **SC40.13** The rates for equipment shall further include for : -

(a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.

(b) Supporting frames.

(c) Connections including flexible joints between pipework and equipment.

(d) Flexible connections and anti-vibration connections between pipework and equipment.

(e) All necessary operational and control accessories (e.g. valves, gauges, mechanical flow meters, indicating lamps and the like) forming part of the equipment, connection and termination.

SPECIAL CONDITIONS (CONT'D)

Rates for equipment (Cont'd)

SC40.13 (Cont'd)

(f) Final connection and terminations to electrical supply, fire alarm, control, monitoring, interfacing and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, short lengths of pipework and necessary accessories required for energizing the equipment to properly operate at specified duties.

(g) Anti-vibration mountings for machinery, equipment and apparatus of all kinds and the like to be supplied and installed by the Contractor.

(h) Anti-vibration materials and sound insulating materials in equipment, apparatus of all kinds and machinery bases.

(i) Motor starters (if motors in the equipment require motor starters).

(j) Earth/ equipotential bonding as specified.

Rates for heat resistant cables and low smoke zero halogen cables

SC40.14

The rates for heat resistant cables and low smoke zero halogen cables shall further include for : -

(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.

(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.

(c) Making cable-joints.

(d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like as required.

(e) All necessary fixings complete with accessories and fittings as required.

(f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.

Rates for "Take down and clear away" or "Take down and set aside for re-use"

SC40.15

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with fire services installation shall further include for : -

(a) All in-line fittings including brackets, supports, hangers and the like.

(b) Cutting into existing pipework and the like in position.

(c) Plugging off remaining ends with plugs or caps as required.

(d) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.

(e) In the case of equipment and the like, taking down all associated pipework and/ or building services works.

(f) Making good all works disturbed.

SPECIAL CONDITIONS (CONT'D)

Particular Specification	**SC40.16**	The Particular Specification for fire services installation can be found in the Contract.

AUTOMATIC/ MANUAL FIRE ALARM SYSTEM

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Automatic/ manual fire alarm points c/w re-programming work of existing addressable fire control panel, if necessary, and all necessary mounting accessories and connected to the fire alarm control panel					
	Each					
40001	Fire alarm call point with break glass type alarm push c/w metal hammer and chains	481.91	17.46	18.71	92.26	40001
40002	Weatherproof type fire alarm call point with break glass type alarm push c/w metal hammer and chains	650.60	17.46	18.71	92.26	40002
40003	Fire alarm call point with break glass type alarm push c/w metal hammer and chains, addressable type	999.98	28.06	50.74	128.45	40003
40004	Weatherproof type fire alarm call point with break glass type alarm push c/w metal hammer and chains, addressable type	1,093.74	28.06	50.74	128.45	40004
40005	Fire alarm bell point; 150 - 250 mm diameter	750.52	17.46	18.71	92.26	40005
40006	Weatherproof type fire alarm bell point; 150 - 250 mm diameter	1,010.83	17.46	18.71	92.26	40006
40007	Fire alarm call point with break glass type alarm push c/w protective cover, addressable type	3,606.17	28.06	50.74	128.45	40007
40008	Intrinsically safe alarm siren, all voltage, completed with necessary accessories	2,942.29	58.62	68.58	245.65	40008
40009	Smoke detector point, ionization type	682.23	24.94	27.43	92.26	40009
40010	Smoke detector point c/w remote indicator, ionization type	1,086.38	62.35	67.34	270.60	40010
40011	Smoke detector point; addressable type, ionization type	1,422.23	34.93	36.17	128.45	40011
40012	Smoke detector point, optical type	682.23	17.46	18.71	92.26	40012
40013	Smoke detector point c/w remote indicator, optical type	1,086.38	62.35	67.34	270.60	40013
40014	Smoke detector point; addressable type, optical type	1,447.49	28.06	50.74	128.45	40014
40015	Heat detector point; fixed temperature type, Class A2	642.47	17.46	18.71	92.26	40015
40016	Heat detector point; fixed temperature type, Class BR or CR	642.47	17.46	18.71	92.26	40016
40017	Heat detector point; fixed temperature type, Class CS, DS, ES, FS or GS	642.47	17.46	18.71	92.26	40017
40018	Heat detector point; fixed temperature type; addressable type, Class A2	1,412.01	28.06	50.74	128.45	40018
40019	Heat detector point: fixed temperature type, addressable type, Class BR or CR	1,412.01	28.06	50.74	128.45	40019
40020	Heat detector point; fixed temperature type; addressable type, Class CS, DS, ES, FS or GS	1,412.01	28.06	50.74	128.45	40020
40021	Heat detector point c/w remote indicator, Class A2	1,037.75	62.35	67.34	270.60	40021
40022	Heat detector point c/w remote indicator, Class BR or CR	1,037.75	62.35	67.34	270.60	40022
40023	Heat detector point c/w remote indicator, Class CS, DS, ES, FS or GS	1,037.75	62.35	67.34	270.60	40023
40024	Heat detector point; rate of rise temperature type, Class A2	690.85	17.46	18.71	92.26	40024
40025	Heat detector point; rate of rise temperature type, Class BR or CR	690.85	17.46	18.71	92.26	40025
40026	Heat detector point; rate of rise temperature type, CS, DS, ES, FS or GS	690.85	17.46	18.71	92.26	40026
40027	Heat detector point; rate of rise temperature type; addressable type, Class A2	1,412.01	28.06	50.74	128.45	40027
40028	Heat detector point; rate of rise temperature type; addressable type, Class BR or CR	1,412.01	28.06	50.74	128.45	40028
40029	Heat detector point; rate of rise temperature type; addressable type, CS, DS, ES, FS or GS	1,412.01	28.06	50.74	128.45	40029
40030	Heat detector point; combined rate of rise and fixed temperature type, Class A2	914.75	17.46	18.71	92.26	40030
40031	Heat detector point; combined rate of rise and fixed temperature type, Class BR or CR	914.75	17.46	18.71	92.26	40031
40032	Heat detector point; combined rate of rise and fixed temperature type, CS, DS, ES, FS or GS	914.75	17.46	18.71	92.26	40032

AUTOMATIC/ MANUAL FIRE ALARM SYSTEM (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Automatic/ manual fire alarm points c/w re-programming work of existing addressable fire control panel, if necessary, and all necessary mounting accessories and connected to the fire alarm control panel (cont'd)					
	Each					
40033	Heat detector point; combined rate of rise and temp. type; addressable type, Class A2	1,533.55	28.06	50.74	128.45	40033
40034	Heat detector point; combined rate of rise and temp. type; addressable type, Class BR or CR	1,533.55	28.06	50.74	128.45	40034
40035	Heat detector point; combined rate of rise and temp. type; addressable type, Class CS, DS, ES, FS, or GS	1,533.55	28.06	50.74	128.45	40035
40036	Intrinsically safe heat detector point, Class A2	1,796.79	24.94	27.43	137.18	40036
40037	Intrinsically safe heat detector point, Class BR or CR	1,876.25	24.94	27.43	137.18	40037
40038	Intrinsically safe heat detector point, Class CS, DS, ES, FS, or GS	1,876.25	24.94	27.43	137.18	40038
40039	Intrinsically safe smoke detector point	2,202.54	24.94	27.43	137.18	40039
40040	Multi-sensor detector with 2 sensing elements (i.e. optical + heat)	3,167.26	17.46	18.71	92.26	40040
40041	Multi-sensor detector with 2 sensing elements (i.e. optical + CO)	3,946.07	17.46	18.71	92.26	40041
40042	Multi-sensor detector with 3 sensing elements (optical + heat + CO)	4,214.28	17.46	18.71	92.26	40042
40043	Multi-sensor detector with 4 sensing elements (dual optical + heat + CO)	4,745.38	17.46	18.71	92.26	40043
40044	Probe unit	2,877.95	17.46	18.71	92.26	40044
40045	Interface control point c/w control module, relay and all necessary accessories	1,156.83	17.46	18.71	92.26	40045
40046	Remote indicator for smoke/ heat detector c/w interconnecting wiring and conduits	336.36	42.39	48.64	173.34	40046
40047	Weatherproof remote indicator for smoke/ heat detector c/w interconnecting wiring and conduits	597.17	42.39	48.64	173.34	40047
40048	End of line tester	234.00	22.42	24.94	102.27	40048
40049	Visual fire alarm point	1,034.00	58.62	68.58	245.65	40049
40050	Weatherproof type visual fire alarm point	1,249.99	58.62	68.58	245.65	40050
40051	Additional contactor/ relay/ electronic components in the fire alarm panel for shut down air-conditioning/ ventilation equipment	493.48	23.70	26.18	102.27	40051
40052	Intrinsically safe LED Beacon, all voltage, completed with necessary accessories	3,282.20	58.62	68.58	245.65	40052
40053	Safety barrier (limiting current supply to explosion proof smoke/heat detector)	5,815.55	42.39	48.64	173.34	40053
40054	Interface monitor/ control/ relay point c/w addressable monitor module and all necessary accessories	3,651.31	17.46	18.71	92.26	40054
	Per lot					
40055	Provide direct link to the Fire Control Centre of Fire Services Department including all terminating equipment at each end of the link and the first year rental charge	9,758.00	-	-	-	40055

AUTOMATIC/ MANUAL FIRE ALARM SYSTEM (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Nickel-metal hydride battery c/w charger and metal box housing of the following capacity : -					
	Each					
40056	n.e. 10 ampere hour	1,330.62	21.20	23.70	140.92	40056
40057	10 - 20 ampere hour	1,774.19	21.20	23.70	140.92	40057
40058	20 - 30 ampere hour	2,217.73	21.20	23.70	140.92	40058
40059	30 - 40 ampere hour	3,548.36	22.42	24.94	150.89	40059
40060	40 - 50 ampere hour	5,322.55	22.42	24.94	150.89	40060
40061	50 - 60 ampere hour	6,209.62	22.42	24.94	150.89	40061
40062	60 - 70 ampere hour	7,096.68	22.42	24.94	150.89	40062
40063	70 - 80 ampere hour	7,983.75	22.42	24.94	150.89	40063
40064	80 - 90 ampere hour	8,870.82	22.42	24.94	150.89	40064
40065	90 - 100 ampere hour	9,757.88	22.42	24.94	150.89	40065
	Nickel-metal hydride battery of the following capacity : -					
	Each					
40066	n.e. 10 ampere hour	405.48	21.20	23.70	140.92	40066
40067	10 - 20 ampere hour	657.10	21.20	23.70	140.92	40067
40068	20 - 30 ampere hour	908.71	21.20	23.70	140.92	40068
40069	30 - 40 ampere hour	1,171.10	22.42	24.94	150.89	40069
40070	40 - 50 ampere hour	1,422.72	22.42	24.94	150.89	40070
40071	50 - 60 ampere hour	1,674.33	22.42	24.94	150.89	40071
40072	60 - 70 ampere hour	1,925.94	22.42	24.94	150.89	40072
40073	70 - 80 ampere hour	2,177.56	22.42	24.94	150.89	40073
40074	80 - 90 ampere hour	2,429.16	22.42	24.94	150.89	40074
40075	90 - 100 ampere hour	2,680.78	22.42	24.94	150.89	40075
	Fire alarm control/ indicating panel c/w contacts/ auxiliary contacts for shut down of A/ C & ventilation equipment, connection of fire link/ lift homing and all necessary accessories (including design for the fire alarm control system, training & providing all passwords) : -					
	Each					
40076	Panel of 4 zones or less	6,653.18	58.62	62.35	334.21	40076
40077	Ditto 5 - 8 zones	8,870.91	62.35	66.07	351.67	40077
40078	Ditto 9 - 12 zones	11,913.61	66.07	69.83	374.11	40078
40079	Ditto 13 - 18 zones	22,177.24	69.83	73.57	390.32	40079
40080	Add to last item for each additional 4 zones or part thereof	2,644.49	3.98	7.10	17.46	40080

AUTOMATIC/ MANUAL FIRE ALARM SYSTEM (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Intelligent addressable type fire alarm control/ indicating panel c/w contacts/ auxiliary contacts for shut down of A/C & ventilation equipment, connection of fire link/ lift homing and all necessary accessories (including design for the fire alarm control system, training & providing all passwords) : -					
	Each					
40081	Panel of 50 points or less	22,177.24	56.10	59.88	329.21	40081
40082	Ditto 51 - 100 points	26,612.70	67.34	76.08	389.06	40082
40083	Ditto 101 - 150 points	31,048.14	89.78	98.51	495.06	40083
40084	Ditto 151 - 200 points	35,483.60	101.01	110.99	557.41	40084
40085	Add to last item for each additional 50 points or part thereof	9,670.65	7.48	8.72	38.65	40085
40086	System printer	2,674.77	6.24	7.48	56.10	40086
	Equipment/ components c/w all necessary accessories : -					
	Per set					
40087	Workstation of the intelligent addressable type automatic / manual fire alarm system designed for multi-user, multi-tasking point monitoring and control c/w CPU and mother board, disk drives/ streamer/ DVD writer drive, interface connection parts, keyboard, I/O card, mouse, cables, standard application software, software programmes for fire alarm system installation with unlimited usage licences (The actual rate should be : $116,197.90 for Item 40087A)	11,619.79	3,489.33	3,489.33	13,375.75	40087
	Each					
40088	LCD video display unit for the workstation of the intelligent addressable type automatic / manual fire alarm system, active screen size 350mm diagonally measured, colour display, minimum of 1024 x 768 pixels resolutions with tilt/ swivel base	2,213.99	11.21	13.22	30.54	40088
40089	Ditto active screen size 380 mm	2,315.82	11.21	13.22	30.54	40089
40090	Ditto active screen size 430 mm	2,751.54	11.21	13.22	30.54	40090
40091	Ditto active screen size 480 mm	3,102.00	11.21	13.22	30.54	40091

SPRINKLER SYSTEM

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Sprinkler Point : -					
	Each					
40092	Sprinkler head (quartzoid bulb type), 68°C / 93°C c/w cover plate/ protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	256.27	29.92	33.69	98.51	40092
40093	Sprinkler head (quartzoid bulb type), 68°C / 93°C for false ceiling, flush pattern, pendant type/ concealed pendant type c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	443.70	29.92	33.69	99.76	40093
40094	Sprinkler head (fast response type) c/w cover plate/ protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	297.28	29.92	33.69	98.51	40094
40095	Sprinkler head (fast response type) for false ceiling, flush pattern, pendant type/ concealed pendant type c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	493.09	29.92	33.69	99.76	40095
40096	Sprinkler head, dry pendent type (quartzoid bulb type) c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	894.15	28.67	31.18	92.26	40096
40097	Sprinkler head (quartzoid bulb type), quick response and vandal type suitable for cell of prison, c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe (where applicable) and all necessary accessories (the fusible element assembly consistently breaks away when connected to 18.15 kg weight dropped 0.153 m)	496.01	28.67	31.18	103.50	40097
40098	Institutional style quick response flush pendent sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	1,038.07	28.67	31.18	103.50	40098
40099	Institutional style quick response flush sidewall sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	1,152.52	28.67	31.18	103.50	40099
40100	Cabinet for spare sprinkler	1,334.48	7.48	8.72	13.72	40100
40101	Sprinkler head guard	266.90	8.72	9.98	14.97	40101
40102	Sprinkler cover plate	24.25	8.72	9.98	14.97	40102
	Draining and refilling the sprinkler system : -					
	Each sprinkler system					
40103	Drain and refill the sprinkler system with all necessary accessories for AA&I works controlled by the main control valve set. The formal process in suspension of the FS system shall be included	3,558.65	-	-	-	40103
40104	Drain and refill the sprinkler system with all necessary accessories for AA&I works controlled by the subsidiary control valve set. The formal process in suspension of the FS system shall be included.	3,558.65	-	-	-	40104

SPRINKLER SYSTEM (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Sprinkler Point c/w 32 mm diameter sprinkler pipe connected from branch tee to sprinkler head : -					
	Each					
40105	Sprinkler head (quartzoid bulb type), 68ºC / 93ºC c/w cover plate/ protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	812.31	43.09	46.57	240.37	40105
40106	Sprinkler head (quartzoid bulb type), 68ºC / 93ºC for false ceiling, flush pattern, pendant type/ concealed pendant type, c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	999.75	43.09	46.57	241.73	40106
40107	Sprinkler head (fast response type) c/w cover plate/ protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	853.32	43.09	46.57	240.37	40107
40108	Sprinkler head (fast response type) for false ceiling, flush pattern, pendant type/ concealed pendant type c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	1,049.12	43.09	46.57	241.73	40108
40109	Sprinkler head, dry pendent type (quartzoid bulb type) c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	1,450.21	40.50	44.76	233.18	40109
40110	Sprinkler head (quartzoid bulb type), quick response and vandal type suitable for cell of prison, c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe (where applicable) and all necessary accessories (the fusible element assembly consistently breaks away when connected to 18.15 kg weight dropped 0.153 m)	1,052.06	42.06	45.04	244.36	40110
40111	Institutional style quick response flush pendent sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	1,594.12	42.06	45.04	244.36	40111
40112	Institutional style quick response flush sidewall sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories	1,708.57	42.06	45.04	244.36	40112
	Sprinkler control valve set or subsidiary valve set c/w control wiring, all necessary accessories including valves, alarm valves, pressure gauges, pressure switch, water motor alarm gong retardation chamber, flow switch, security devices with warning labels and serial number, tamper-proof electric switch to indicate valve operational mode including remote indication valve operational on F.S. control panel, etc. : -					
	Per set					
40113	100 mm diameter	13,344.93	280.59	317.98	937.74	40113
40114	150 mm diameter	17,793.25	300.53	339.18	1,064.93	40114
40115	Subsidiary stop valve	4,448.32	39.92	46.15	76.08	40115
	Pre-action valve package c/w control wiring, swing check valve, gate valve, proper size drain top, flow control valve, pressure gauges, alarm gong, detection control panel with 72 hrs standby period, and all necessary accessories including remote indication on F.S. control panel : -					
	T1 type					
	Each					
40116	Valve package for pipe of 80 mm diameter	22,884.43	293.04	329.21	1,134.67	40116
40117	Ditto 100 mm diameter	25,912.03	314.25	350.41	1,302.30	40117
40118	Ditto 150 mm diameter	32,215.53	334.21	369.11	1,473.58	40118

SPRINKLER SYSTEM (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	T2 type					
	Each					
40119	Valve package for pipe of 80 mm diameter	22,460.63	293.04	329.21	1,134.67	40119
40120	Ditto 100 mm diameter	26,259.48	314.25	350.41	1,302.30	40120
40121	Ditto 150 mm diameter	31,922.89	334.21	369.11	1,473.58	40121
	Detection control for pre-action system : -					
	Each					
40122	Detection control panel for pre-action system c/w timer, valve trim box, solenoid valve, pressure switches, charger and nickel cadmium battery, alarm bell and all necessary accessories	7,117.29	63.60	68.58	389.06	40122
40123	Manual emergency push button station c/w cables, conduits (surface or concealed type) and all necessary accessories including connection to the detection control panel	739.45	63.60	68.58	389.06	40123
	Re-cycling pre-action valve package c/w control wiring, swing check valve, gate valve, proper size drain top flow control valve, pressure gauges, alarm gong and all necessary accessories including remote indication on F.S. control panel : -					
	Each					
40124	Valve package for pipe of 80 mm diameter	32,526.80	344.16	387.83	1,219.56	40124
40125	Ditto 100 mm diameter	37,863.95	370.36	412.76	1,359.23	40125
	Detection control for re-cycling pre-action system : -					
	Each					
40126	Detection control panel for re-cycling pre-action c/w timer, valve trim box, solenoid valve, pressure switches, charger and nickel cadmium battery for 72 hrs standby period, alarm bell and all necessary accessories	17,364.76	81.05	86.04	465.14	40126
40127	Heat detector for re-cycling pre-action system c/w low smoke fire resisting cables and all necessary accessories and connected to re-cycling pre-action detection panel	6,973.84	92.26	107.23	357.89	40127
40128	Manual emergency push button station c/w cables, conduits (surface or concealed type) and all necessary accessories including connection to the detection control panel	864.98	77.33	92.26	289.30	40128
	Dry pipe system c/w air compressor unit, air maintenance device, air supply copper pipes, pressure relief valve for air supply pipework, dryer or freezer for air supply system, restrictor for air supply system, alarm valve, shut off valves, clush valve mounting brackets, vibration eliminator to maintain system air pressure of 3.5 bar in 3 minutes, and testing facilities including quick-acting test valve : -					
	Each					
40129	System for protected area n.e. 50 m²	10,355.20	194.53	205.48	738.23	40129
40130	System for protected area 50 m² - 100 m²	16,655.89	198.26	209.51	744.44	40130

SPRINKLER SYSTEM (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Sprinkler inlet : -					
	Each					
40131	Fire services sprinkler inlet	2,224.15	63.60	67.34	140.92	40131
	Warning sign : -					
	Each					
40132	Warning sign for subsidary stop valve (FS circular 4/2010)	580.90	8.72	9.98	14.97	40132

HYDRANT/ HOSE REEL SYSTEM

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Each					
40133	30 m long hose reel c/w all necessary pipework and fittings including connection to the existing hose reel system (pipe within 3 m from existing pipe and up to 32 mm diameter shall be included, extra length measured separately)	2,224.15	82.30	88.55	456.42	40133
40134	Metal box for hose reel nozzle c/w glass front panel	355.86	9.71	10.36	17.46	40134
40135	Drain and refill the hydrant/ hose reel system for execution of work for wet system	3,323.17	-	-	-	40135
40136	Hydrant outlet (single) c/w all necessary fitting including connection to the existing hydrant system (pipe work measured separately)	1,779.33	63.60	66.07	230.70	40136
40137	Pedestal type cast iron. round head external street hydrant outlet c/w all necessary fitting including connection to the existing hydrant system (pipe work measured separately)	415.38	132.19	164.61	518.76	40137
40138	Fire Services inlet twin type	2,076.99	63.60	66.07	139.68	40138
40139	Parity valve (all sizes)	2,492.38	43.64	51.13	81.05	40139
40140	Street hydrant outlet (single) c/w all necessary fitting including connection to existing hydrant system (pipework measured separately)	1,571.95	79.80	86.04	365.37	40140
40141	Ditto (twin outlet)	1,769.69	86.04	92.26	441.42	40141
40142	Metal identification plate for F.S. inlet leather & lock for F.S. inlet	92.66	8.72	9.98	17.46	40142
40143	Direct reading flowmeter	11,361.25	48.64	49.89	96.02	40143
40144	Pressure reducing valve set	1,439.36	43.64	51.13	81.05	40144
40145	Carry out test on water pressure and flow at pedestal street hydrant installed by others using calibrated equipment.	3,772.18	-	-	-	40145

PIPE WORK AND PUMPS

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Galvanized steel pipes c/w all necessary accessories for fire services system : -					
	Per linear metre					
40146	25 mm diameter	166.17	3.45	4.07	44.88	40146
40147	32 mm diameter	207.71	4.00	4.42	47.40	40147
40148	40 mm diameter	232.62	4.20	4.86	51.13	40148
40149	50 mm diameter	290.77	4.79	5.32	59.88	40149
40150	65 mm diameter	332.31	5.38	6.12	67.34	40150
40151	80 mm diameter	456.94	6.24	7.48	76.08	40151
40152	100 mm diameter	540.02	7.39	7.77	98.51	40152
40153	150 mm diameter	747.73	11.22	12.46	129.69	40153
40154	200 mm diameter	1,246.18	13.72	16.22	158.39	40154
	Ductile steel pipe c/w all necessary accessories for fire services system : -					
	Per linear metre					
40155	150 mm diameter	1,055.62	8.37	9.13	102.27	40155
40156	200 mm diameter	1,995.64	9.98	11.22	128.45	40156
40157	250 mm diameter	2,935.65	12.46	13.72	135.92	40157
	Underground ductile steel pipe c/w all necessary accessories for fire services system : -					
	Per linear metre					
40158	150 mm diameter	1,435.52	6.41	6.83	82.30	40158
40159	200 mm diameter	1,921.31	7.83	8.25	101.01	40159
40160	250 mm diameter	2,407.09	9.37	9.97	120.96	40160

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Tee off from Existing pipework : -					
	Each					
40161	32 mm diameter	222.93	-	-	123.46	40161
40162	40 mm diameter	245.83	-	-	138.44	40162
40163	50 mm diameter	298.20	-	-	150.89	40163
40164	65 mm diameter	371.58	-	-	200.79	40164
40165	80 mm diameter	430.02	-	-	241.92	40165
40166	100 mm diameter	590.98	-	-	340.44	40166
40167	150 mm diameter	947.82	-	-	446.43	40167
40168	200 mm diameter	1,465.35	-	-	779.41	40168
40169	250 mm diameter	2,147.34	-	-	963.92	40169
	Gate valve c/w padlock (where applicable) and all necessary accessories : -					
	Each					
40170	25 mm diameter	186.99	26.17	31.47	42.39	40170
40171	32 mm diameter	235.47	26.68	32.01	47.40	40171
40172	40 mm diameter	283.97	27.37	32.56	51.13	40172
40173	50 mm diameter	344.44	28.67	33.69	54.86	40173
40174	65 mm diameter	1,076.77	29.92	34.93	57.38	40174
40175	80 mm diameter	1,239.46	32.43	37.40	61.10	40175
40176	100 mm diameter	1,682.42	34.93	39.92	67.34	40176
40177	150 mm diameter	2,622.31	46.15	58.62	91.03	40177
40178	200 mm diameter	4,511.59	57.38	66.07	114.74	40178
40179	250 mm diameter	6,799.13	67.34	73.57	133.43	40179
40180	150 mm underground G.I. flange gate valve for street hydrant: -	7,188.95	46.15	58.62	91.03	40180

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Gate valve for sprinkler system c/w tamper-proof electric switch to indicate valve operational mode including remote indication on F.S. control panel : -					
	Each					
40181	32 mm diameter	926.57	43.58	49.84	142.17	40181
40182	40 mm diameter	985.68	44.23	50.35	144.65	40182
40183	50 mm diameter	1,076.42	45.31	51.47	149.63	40183
40184	65 mm diameter	2,054.91	47.40	53.63	153.39	40184
40185	80 mm diameter	2,381.83	48.64	54.86	155.88	40185
40186	100 mm diameter	2,795.70	51.13	57.38	160.86	40186
40187	150 mm diameter	4,297.24	62.35	69.83	185.79	40187
40188	200 mm diameter	6,012.50	73.57	82.30	208.25	40188
	Globe valve : -					
	Each					
40189	25 mm diameter	193.77	24.94	29.92	42.39	40189
40190	32 mm diameter	261.37	29.92	35.74	47.40	40190
40191	40 mm diameter	365.48	30.60	36.26	51.13	40191
40192	50 mm diameter	520.12	31.73	37.48	54.86	40192
40193	65 mm diameter	1,261.16	32.43	38.24	59.88	40193
40194	80 mm diameter	1,605.70	33.12	38.97	63.60	40194
40195	100 mm diameter	1,961.05	38.50	44.21	79.80	40195
40196	150 mm diameter	4,088.13	49.81	57.08	104.74	40196
40197	200 mm diameter	6,911.57	61.43	70.29	129.69	40197
40198	250 mm diameter	9,474.90	70.44	77.65	150.89	40198

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Globe valve for sprinkler system c/w tamper-proof electric switch to indicate valve operational mode including remote indication on F.S. control panel : -					
	Each					
40199	32 mm diameter	919.68	43.58	49.84	142.17	40199
40200	40 mm diameter	989.83	44.23	50.36	144.65	40200
40201	50 mm diameter	1,141.83	45.31	51.47	149.63	40201
40202	65 mm diameter	2,220.66	47.40	53.63	153.39	40202
40203	80 mm diameter	2,495.92	48.64	54.86	155.88	40203
40204	100 mm diameter	3,073.87	51.13	57.38	160.86	40204
40205	150 mm diameter	5,039.04	62.35	69.83	185.79	40205
40206	200 mm diameter	7,714.89	73.57	82.30	208.25	40206
40207	250 mm diameter	10,291.66	78.56	91.03	229.45	40207
	Non return valve : -					
	Each					
40208	32 mm diameter	289.01	26.68	32.01	47.40	40208
40209	40 mm diameter	357.63	27.37	32.54	51.13	40209
40210	50 mm diameter	500.47	28.67	33.69	54.86	40210
40211	65 mm diameter	892.41	29.92	34.93	57.38	40211
40212	80 mm diameter	1,435.04	32.43	37.40	61.10	40212
40213	100 mm diameter	1,682.42	34.93	39.92	67.34	40213
40214	150 mm diameter	2,888.89	46.15	52.38	91.03	40214
40215	200 mm diameter	4,882.59	58.62	66.07	114.74	40215
40216	250 mm diameter	7,380.82	67.34	73.57	133.43	40216

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Y-type strainer : -					
	Each					
40217	32 mm diameter	381.91	27.02	32.71	47.40	40217
40218	40 mm diameter	474.45	27.55	33.13	51.13	40218
40219	50 mm diameter	714.84	28.67	34.93	54.86	40219
40220	65 mm diameter	772.77	29.92	36.17	57.38	40220
40221	80 mm diameter	986.42	32.43	38.65	61.10	40221
40222	100 mm diameter	1,345.14	34.93	41.14	67.34	40222
40223	150 mm diameter	2,802.68	46.15	54.86	91.03	40223
40224	200 mm diameter	4,260.26	58.62	68.58	114.74	40224
40225	250 mm diameter	7,180.71	67.34	77.33	133.43	40225
	Sluice valve, wedge type c/w spindle cap : -					
	Each					
40226	150 mm diameter	2,947.77	47.40	54.86	93.52	40226
40227	200 mm diameter	4,635.14	58.62	68.58	117.21	40227
40228	250 mm diameter	7,169.84	68.58	77.33	134.67	40228
	Puddle flange tank connector : -					
	Each					
40229	100 mm diameter	940.57	38.65	44.88	72.33	40229
40230	150 mm diameter	1,080.54	51.13	58.62	98.51	40230
40231	200 mm diameter	1,416.66	63.60	73.57	124.71	40231
40232	250 mm diameter	1,906.04	73.57	82.30	144.65	40232

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Sundries : -					
	Each					
40233	Vortex inhibitor (all sizes)	5,862.87	38.65	44.88	72.33	40233
40234	Non-ferrous filter (all sizes)	2,426.43	36.17	42.39	63.60	40234
40235	Air relief valve (all sizes)	175.41	27.43	33.69	42.39	40235
40236	Anti-pollution valve (all sizes)	984.02	32.43	38.65	56.10	40236
40237	Pressure gauge (all sizes)	326.73	27.43	33.69	42.39	40237
40238	Oil dumped gauge for sprinkler system	551.11	28.67	34.93	46.15	40238
40239	Electric alarm pressure switch c/w conduits (surface or concealed type), trunkings, cables for connection to the fire alarm control/ indication panel and control equipment and all accessories	2,022.19	97.28	105.99	310.50	40239
40240	Water alarm flow switch c/w conduits (surface or concealed type), trunkings, cables for connection to the fire alarm control/ indication panel and control equipment and all accessories	1,014.01	103.50	114.74	350.41	40240
40241	Subsidiary monitor stop valve set per zone c/w limit switch, conduits (surface or concealed type), trunkings, cables for connection to the fire control indication panel and all accessories	3,386.39	110.99	119.72	339.18	40241
	Centrifugal pump, horizontal split case type c/w drain and vent, orifice plates, electrical wirings, connected to a power supply switch, control wirings & associated conduit/ trunking, connected to and including control panel in the same room and installed on a concrete plinth : -					
	Each					
40242	Up to 5 kW	77,740.24	167.09	192.04	920.31	40242
40243	5 - 10 kW (The actual rate should be : $112,291.50 for Item 40243A)	11,229.15	175.84	200.79	957.71	40243
40244	10 - 15 kW (The actual rate should be : $112,291.50 for Item 40244A)	11,229.15	184.56	209.51	991.35	40244
40245	15 - 20 kW (The actual rate should be : $123,143.60 for Item 40245A)	12,314.36	192.04	216.99	1,018.82	40245
40246	20 - 25 kW (The actual rate should be : $136,756.70 for Item 40246A)	13,675.67	200.79	225.71	1,057.48	40246
40247	25 - 30 kW (The actual rate should be : $170,716.10 for Item 40247A)	17,071.61	209.51	234.45	1,079.90	40247
40248	Add to last item for each additional 5 kW or part thereof	43,189.03	8.32	8.70	32.43	40248

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Centrifugal pump, end-suction type c/w drain and vent, orifice plates, electrical wirings, connected to a power supply switch, control wirings & associated conduit/ trunking, connected to and including control panel in the same room and installed on a concrete plinth : -					
	Each					
40249	Up to 5 kW	69,102.44	167.09	192.04	920.31	40249
40250	5 - 10 kW	95,015.87	175.84	200.79	957.71	40250
40251	10 - 15 kW (The actual rate should be : $103,653.70 for Item 40251A)	10,365.37	184.56	209.51	991.35	40251
40252	15 - 20 kW (The actual rate should be : $128,495.90 for Item 40252A)	12,849.59	192.04	216.99	1,018.82	40252
40253	20 - 25 kW (The actual rate should be : $143,724.00 for Item 40253A)	14,372.40	200.79	225.71	1,057.48	40253
40254	25 - 30 kW (The actual rate should be : $160,032.60 for Item 40254A)	16,003.26	209.51	234.45	1,079.90	40254
40255	Add to last item for each additional 5 kW or part thereof	35,483.60	8.32	8.70	32.43	40255
	Centrifugal Jockey Pump, c/w drain and vent, orifice plates, electrical wirings, connected to a power supply switch, control wirings & associated conduit/ trunking, connected to and including control panel in the same room and installed on a concrete plinth : -					
	Each					
40256	Up to 5 kW	77,740.24	167.09	192.04	920.31	40256
40257	5 - 10 kW	95,015.87	175.84	200.79	957.71	40257
40258	Add to last item for each additional 5 kW or part thereof	43,189.03	8.32	8.70	32.43	40258
	Sundries : -					
	Each					
40259	Remote supervisory/ start stop control panel for pump c/w all necessary accessories	16,615.89	58.62	62.35	356.65	40259
40260	High/ low level switch c/w conduits (surface or concealed type), trunking, sensing device, interconnection wiring and cables from water tank to indication and control panel for indication and control functions and all necessary for proper functioning of fire services system	4,984.77	67.34	77.33	290.56	40260
40261	Sprinkler proving pipe and all necessary accessories	7,061.74	36.17	39.92	67.34	40261
40262	Strap for valves, hydrants & FS / Sprinkler inlets	173.60	8.72	9.98	14.97	40262
40263	Pad lock	130.21	8.72	9.98	14.97	40263
40264	Electro thermal link	770.93	8.72	9.98	14.97	40264

PIPE WORK AND PUMPS (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Expansion joint c/w all necessary accessories for fire services system : -					
	Each					
40265	32 mm diameter	1,204.03	30.51	37.49	52.38	40265
40266	40 mm diameter	1,432.34	31.20	38.15	56.10	40266
40267	50 mm diameter	1,910.15	32.43	39.92	61.10	40267
40268	65 mm diameter	2,131.71	33.69	41.14	63.60	40268
40269	80 mm diameter	2,353.23	36.17	43.64	68.58	40269
40270	100 mm diameter	3,138.88	38.65	44.88	72.33	40270
40271	150 mm diameter	5,128.41	48.64	56.10	88.55	40271
40272	200 mm diameter	7,117.95	58.62	66.07	101.01	40272
	Foot valve, globe type : -					
	Each					
40273	50 mm diameter	1,672.37	52.30	235.32	156.88	40273
40274	65 mm diameter	2,787.27	65.37	392.20	261.47	40274
40275	80 mm diameter	3,344.72	78.44	392.20	261.47	40275
40276	100 mm diameter	3,921.33	91.52	522.93	366.05	40276
40277	125 mm diameter	5,327.36	104.58	588.30	418.35	40277
40278	150 mm diameter	6,733.38	130.73	653.67	522.93	40278
40279	200 mm diameter	11,380.23	183.03	784.40	653.67	40279
40280	250 mm diameter	17,203.07	261.47	915.13	784.40	40280
40281	300 mm diameter	23,025.92	392.20	1,045.87	915.13	40281
	Pump control and indication panel of FS System completed with motor starter for fire service / street hydrant / sprinkler pump motor completed with push buttons, relays, circuit protective and metering device, electrical wiring connected to supply point, etc for total : -					
	Each					
40282	up to 5kW	9,294.25	56.10	59.88	329.21	40282
40283	5 - 10kW	13,941.38	56.10	59.88	329.21	40283
40284	10 - 15kW	18,588.50	56.10	59.88	329.21	40284
40285	15 - 20kW	23,235.63	56.10	59.88	329.21	40285
40286	20 - 25kW	27,882.75	56.10	59.88	329.21	40286
40287	25 - 30kW	37,177.00	56.10	59.88	329.21	40287

FIRE RESISTANT CABLES

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	(Note : The following Items 40288 to 40305 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing)					
	BS 6387 Category B heat resistant cables c/w all necessary accessories : -					
	Per linear metre					
40288	1.5 mm² 1-core	25.54	1.29	1.67	4.97	40288
40289	2.5 mm² 1-core	29.13	1.29	1.67	4.97	40289
40290	1.5 mm² 7-core	169.35	6.24	7.48	23.70	40290
40291	2.5 mm² 7-core	198.85	7.48	8.72	27.43	40291
40292	1.5 mm² 12-core	225.95	6.24	7.48	23.70	40292
40293	2.5 mm² 12-core	262.46	7.48	8.72	27.43	40293
40294	1.5 mm² 19-core	308.43	7.14	7.41	26.18	40294
40295	2.5 mm² 19-core	411.67	7.48	8.72	29.92	40295
40296	1.5 mm² 27-core	424.16	7.48	8.72	29.92	40296
40297	2.5 mm² 27-core	500.86	8.72	9.98	32.43	40297
40298	1.5 mm² 7-core PVC/ SWA/ PVC	617.89	6.24	7.48	23.70	40298
40299	2.5 mm² 7-core PVC/ SWA/ PVC	703.79	7.48	8.72	27.43	40299
40300	1.5 mm² 12-core PVC/ SWA/ PVC	830.67	6.24	7.48	23.70	40300
40301	2.5 mm² 12-core PVC/ SWA/ PVC	863.94	7.48	8.72	28.67	40301
40302	1.5 mm² 19-core PVC/ SWA/ PVC	1,038.72	6.24	7.48	26.18	40302
40303	2.5 mm² 19-core PVC/ SWA/ PVC	1,143.37	7.48	8.72	29.92	40303
40304	1.5 mm² 27-core PVC/ SWA/ PVC	1,177.03	7.48	8.72	29.92	40304
40305	2.5 mm² 27-core PVC/ SWA/ PVC	1,279.06	8.72	9.98	32.43	40305

FIRE RESISTANT CABLES (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	(Note : The following Items 40306 to 40321 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing)					
	BS 6387 Category CWZ heat resistant cables c/w all necessary accessories : -					
	Per linear metre					
40306	10 mm² 1-core	80.80	1.97	2.36	6.24	40306
40307	16 mm² 1-core	106.77	1.97	2.36	6.24	40307
40308	25 mm² 1-core	133.46	2.49	3.01	8.72	40308
40309	35 mm² 1-core	308.75	2.49	3.01	9.98	40309
40310	50 mm² 1-core	357.65	3.03	3.67	11.22	40310
40311	70 mm² 1-core	428.01	3.30	3.94	11.22	40311
40312	95 mm² 1-core	510.90	3.73	4.97	14.97	40312
40313	120 mm² 1-core	603.54	4.97	6.24	17.46	40313
40314	10 mm² 4-core PVC/ SWA/ PVC	323.14	12.46	14.97	46.15	40314
40315	16 mm² 4-core PVC/ SWA/ PVC	361.17	12.46	14.97	47.40	40315
40316	25 mm² 4-core PVC/ SWA/ PVC	528.39	13.72	16.22	48.64	40316
40317	35 mm² 4-core PVC/ SWA/ PVC	593.00	13.72	16.22	49.89	40317
40318	50 mm² 4-core PVC/ SWA/ PVC	722.44	14.97	17.46	51.13	40318
40319	70 mm² 4-core PVC/ SWA/ PVC	916.15	14.97	17.46	54.86	40319
40320	95 mm² 4-core PVC/ SWA/ PVC	1,064.98	16.22	19.96	61.10	40320
40321	120 mm² 4-core PVC/ SWA/ PVC	1,259.33	17.46	21.20	68.58	40321

FIRE RESISTANT CABLES (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	(Note : The following Items 40322 to 40377 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing)					
	Low smoke zero halogen type fire resistant cable complying with BS6387 CWZ, BS EN 50200, BE EN 61034-1, BE EN 50267-2 and BS 7629-1/ BS 7846 c/w all necessary accessories : -					
	Per linear metre					
40322	10 mm² 1-core	81.55	1.97	2.36	6.24	40322
40323	16 mm² 1-core	107.21	1.97	2.36	6.24	40323
40324	25 mm² 1-core	134.33	2.49	3.01	8.72	40324
40325	35 mm² 1-core	311.21	2.49	3.01	9.98	40325
40326	50 mm² 1-core	359.49	3.03	3.67	11.22	40326
40327	70 mm² 1-core	430.09	3.30	3.94	11.22	40327
40328	95 mm² 1-core	514.24	3.73	4.97	14.97	40328
40329	120 mm² 1-core	608.00	4.97	6.24	17.46	40329
40330	10 mm² 4-core	326.57	12.46	14.97	46.15	40330
40331	16 mm² 4-core	365.20	12.46	14.97	47.40	40331
40332	25 mm² 4-core	535.33	13.72	16.22	48.64	40332
40333	35 mm² 4-core	599.25	13.72	16.22	49.89	40333
40334	50 mm² 4-core	728.30	14.97	17.46	51.13	40334
40335	70 mm² 4-core	926.23	14.97	17.46	54.86	40335
40336	95 mm² 4-core	1,076.98	16.22	19.96	61.10	40336
40337	120 mm² 4-core	1,273.18	17.46	21.20	68.58	40337

GAS TOTAL FLOODING SYSTEM

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	FM-200 gas cylinder c/w discharge valve with safety device, check valve, manifolds, pressure gauge, low pressure switch, dip tubes, liquid level indicator, mounting brackets, nameplate, signal wiring and all necessary accessories (including design and calculation for the gas total flooding system, include FM200 gas first charging) : -					
	Each					
40338	Up to 27 kg	24,800.57	116.45	131.45	826.12	40338
40339	27 - 40 kg	29,702.59	135.92	150.89	980.14	40339
40340	40 - 50 kg	35,007.24	150.89	165.85	1,098.62	40340
40341	50 - 70 kg	46,121.80	165.85	180.81	1,223.33	40341
40342	70 - 100 kg	61,769.42	180.81	195.78	1,343.03	40342
40343	100 - 140 kg	82,023.06	195.78	210.75	1,472.72	40343
40344	140 - 180 kg (The actual rate should be : $103,389.90 for Item 40344A)	10,338.99	210.75	225.71	1,593.68	40344
40345	Each additional 10 kg or part thereof 140-180kg	5,743.87	11.70	12.54	88.54	40345
40346	Discharge nozzle	532.77	15.61	16.39	36.17	40346
	FM-200 system control and indicating panel c/w control wiring, signal wiring with main fire alarm control panel, coincidence unit, electronic components, battery/ charger and all necessary accessories (including design and calculation for the gas total flooding system) : -					
	Each					
40347	Panel of 2 zones	8,497.72	54.86	57.38	326.72	40347
40348	Panel of 4 zones	14,237.01	56.10	58.62	337.94	40348
40349	Panel of 8 zones	19,252.35	58.62	62.35	354.14	40349
40350	System odoriser	1,852.00	24.94	31.18	104.74	40350
	Novec-1230 gas cylinder c/w discharge valve with safety device, check valve, manifolds, pressure gauge, low pressure switch, dip tubes, liquid level indicator, mounting brackets, nameplate, signal wiring and all necessary accessories (including design and calculation for the gas total flooding system,include Novec-1230 gas first charging) : -					
	Each					
40351	Up to 27 kg	21,470.00	107.48	121.32	762.48	40351
40352	27 - 40 kg	25,713.71	125.45	139.27	904.63	40352
40353	40 - 50 kg	30,305.97	139.27	153.07	1,013.97	40353
40354	50 - 70 kg	39,927.91	153.07	166.89	1,129.08	40354
40355	70 - 100 kg	53,474.14	166.89	180.70	1,239.56	40355
40356	100 - 140 kg	71,007.83	180.70	194.50	1,359.26	40356
40357	140 - 180 kg	89,505.22	194.50	208.32	1,470.89	40357
40358	Each additional 10 kg or part thereof 140-180kg	4,972.51	10.80	11.57	81.72	40358
40359	Discharge nozzle	461.23	14.40	15.12	33.38	40359

GAS TOTAL FLOODING SYSTEM (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Novec-1230 system control and indicating panel c/w control wiring, signal wiring with main fire alarm control panel, coincidence unit, electronic components, battery/ charger and all necessary accessories (including design and calculation for the gas total flooding system) : -					
	Each					
40360	Panel of 2 zones	7,356.52	50.64	52.95	301.55	40360
40361	Panel of 4 zones	12,325.05	51.78	54.10	311.90	40361
40362	Panel of 8 zones	16,666.87	54.10	57.55	326.86	40362
40363	System odoriser	1,603.30	23.02	28.77	96.67	40363
	Heavy galvanized steel pipework to BS EN 10255 but welded and fittings to BS EN 10241 c/w all necessary accessories (including design and calculation for the gas total flooding system) : -					
	Per linear metre					
40364	20 mm diameter	117.40	4.44	4.76	73.57	40364
40365	25 mm diameter	141.87	5.11	5.24	79.80	40365
40366	32 mm diameter	167.52	5.86	6.01	84.82	40366
40367	40 mm diameter	182.98	6.41	6.47	92.26	40367
	Mild steel pipework to BS EN 10216-1 and BS EN 10217-1 and fittings to BE EN 10241 c/w all necessary accessories (including design and calculation for the gas total flooding system) : -					
	Per linear metre					
40368	50 mm diameter	335.60	8.43	9.16	125.95	40368
40369	65 mm diameter	406.81	9.98	11.22	145.91	40369
40370	80 mm diameter	494.92	11.22	12.46	160.86	40370
40371	100 mm diameter	638.52	12.46	13.72	204.51	40371
	Mild steel pipework to BS EN 10216-1 and BS EN 10217-1 and fittings to BS EN 1759-1 c/w all necessary accessories (including design and calculation for the gas total flooding system) : -					
	Per linear metre					
40372	150 mm diameter	906.69	22.42	23.70	271.86	40372

GAS TOTAL FLOODING SYSTEM (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Equipment/ components for FM-200 system c/w all necessary accessories and connected to control/ indication panel : -					
	Each					
40373	Gas release actuator	2,044.24	89.78	108.49	375.35	40373
40374	Lock off/ indication panel	3,078.94	53.63	57.38	213.25	40374
40375	Gas discharge flashing light	482.92	43.64	48.64	178.33	40375
40376	Manual release pull unit	649.83	58.62	68.58	253.14	40376
40377	Yodalarm	1,098.04	58.62	68.58	253.14	40377
40378	Abort unit	930.37	58.62	68.58	253.14	40378
40379	Compartment protected by FM-200 system warning notice	203.95	3.56	4.23	22.42	40379
40380	Smoke detector point compatible with panel	796.24	58.62	68.58	253.14	40380
40381	Auto/ manual key switch unit with housing	1,212.96	58.62	68.58	263.11	40381
40382	Warning light for evacuation and gas discharge	681.55	58.62	68.58	253.14	40382
40383	Agent release module for parallel wiring of agent initiators c/w all necessary accessories	664.49	58.62	68.58	253.14	40383
	Equipment/ components for Novec-1230 system c/w all necessary accessories and connected to control/ indication panel : -					
	Each					
40384	Gas release actuator	3,706.98	141.28	170.73	590.63	40384
40385	Lock off/ indication panel	4,520.80	84.39	90.28	335.56	40385
40386	Gas discharge flashing light	1,018.21	68.67	76.53	280.61	40386
40387	Manual release pull unit	914.51	92.24	107.92	398.33	40387
40388	Yodalarm	1,545.30	92.24	107.92	398.33	40388
40389	Abort unit	1,309.32	92.24	107.92	398.33	40389
40390	Compartment protected by Novec-1230 system warning notice	287.03	5.60	6.69	35.29	40390
40391	Smoke detector point compatible with panel	1,120.56	92.24	107.92	398.33	40391
40392	Auto/ manual key switch unit with housing	2,945.49	92.24	107.92	414.10	40392
40393	Warning light for evacuation and gas discharge	1,425.62	92.24	107.92	398.33	40393
40394	Agent release module for parallel wiring of agent initiators c/w all necessary accessories	1,831.35	92.24	107.92	398.33	40394
	Sundries : -					
	Per kg					
40395	Charge/ recharge/ refilling FM-200 gas into cylinder including all necessary works and delivery	577.36	-	-	-	40395
40396	Charge/ recharge/ refilling Novec-1230 gas into cylinder including all necessary works and delivery	759.97	-	-	-	40396

ASPIRATING SMOKE DETECTION SYSTEM

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Aspirating smoke detection system c/w sensor, air filter, sampling, fan(s), controls, wiring, control panel and all necessary accessories for a fully functional aspirating smoke detection system : -					
	Each					
40397	For up to 50m sampling pipework	37,891.57	651.66	688.34	2,473.02	40397
40398	For 50m - 100m sampling pipework	49,195.67	846.06	893.69	3,210.77	40398
40399	For 100m - 200m sampling pipework	74,007.40	1,272.76	1,344.43	4,830.14	40399
	Each					
40400	Remote display c/w wall mounting enclosure	13,758.15	11.21	13.22	30.54	40400

PORTABLE EQUIPMENT

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	Portable equipment c/w mounting framework, bracket and all necessary accessories : -					
	Each					
40401	2 kg or below dry powder fire extinguisher	452.28	13.72	14.97	81.05	40401
40402	2 - 4 kg dry powder fire extinguisher	528.51	13.72	14.97	81.05	40402
40403	4 - 5 kg dry powder fire extinguisher	661.89	13.72	14.97	81.05	40403
40404	5 - 9 kg dry powder fire extinguisher	757.16	13.72	14.97	84.82	40404
40405	4.5 litres water type fire extinguisher	372.48	13.72	14.97	81.05	40405
40406	9 litres water type fire extinguisher	415.38	13.72	14.97	84.82	40406
40407	2 kg or below CO_2 type fire extinguisher	265.71	13.72	14.97	81.05	40407
40408	2 - 4 kg CO_2 type fire extinguisher	399.21	13.72	14.97	81.05	40408
40409	4 - 5 kg CO_2 type fire extinguisher	599.48	13.72	14.97	81.05	40409
40410	5 - 9 kg CO_2 type fire extinguisher	1,200.25	13.72	14.97	84.82	40410
40411	4.5 litres foam type fire extinguisher	404.18	13.72	14.97	81.05	40411
40412	9 litres foam type fire extinguisher	413.05	13.72	14.97	84.82	40412
40413	9 litres CO_2 type water fire extinguisher	767.47	13.72	14.97	84.82	40413
	Refilling of portable fire extinguisher : -					
	Per kg					
40414	CO_2 refill	57.44	-	-	-	40414

PORTABLE EQUIPMENT (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Per litres					
40415	Water refill	41.17	-	-	-	40415
40416	Foam refill	41.17	-	-	-	40416
	Sundries : -					
	Each					
40417	Sand bucket	242.39	3.45	3.51	4.97	40417
40418	Fire blanket, heavy type	382.63	6.24	7.48	16.22	40418

AUTOMATIC FIXED SPRAYER UNITS

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	HCFC-124 automatic type fixed sprayer unit and all necessary accessories : -					
	Each					
40419	Up to 5.7 kg	-	107.23	119.72	473.87	40419
40420	5.7 - 7.2 kg	-	110.99	122.20	492.57	40420
40421	7.2 - 10.7 kg	-	114.74	125.95	516.27	40421
40422	10.7 - 13.8 kg	-	117.21	129.69	536.21	40422
40423	13.8 - 15.3 kg	-	120.96	132.19	558.67	40423
40424	15.3 - 19.5 kg	-	124.71	135.92	578.61	40424
	NAFS-III automatic type fixed sprayer unit and all necessary accessories : -					
	Each					
40425	Up to 4 kg	-	108.49	123.46	483.84	40425
40426	4 - 9 kg	-	115.98	130.93	539.95	40426
40427	9 - 16 kg	-	164.61	188.28	749.45	40427

AUTOMATIC FIXED SPRAYER UNITS (CONT'D)

Item		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	Item
	FM-200 automatic/ manual discharge fire extinguisher, wall/ ceiling mounted type c/w FM-200 warning plate and all necessary accessories : -					
	Each					
40428	Up to 3 kg	12,536.09	287.62	321.09	522.93	40428
40429	3 - 6 kg	14,625.44	313.76	345.45	588.30	40429
40430	6 - 9 kg	18,804.12	339.90	373.15	627.52	40430
40431	9 - 12 kg	22,982.82	366.05	404.99	679.82	40431
40432	12 - 15 kg	27,161.51	392.20	428.60	732.10	40432
40433	15 - 18 kg	31,340.21	418.35	455.97	784.40	40433
40434	18 - 21 kg	35,518.91	444.50	483.33	836.70	40434
40435	21 - 24 kg	39,697.60	470.65	510.71	888.98	40435
40436	24 - 27 kg	43,876.30	496.78	538.07	941.28	40436
40437	27 - 30 kg	48,054.99	522.93	565.45	993.58	40437
	Novec-1230 automatic/ manual discharge fire extinguisher, wall/ ceiling mounted type c/w Novec-1230 warning plate and all necessary accessories : -					
	Each					
40438	Up to 10 kg	27,736.09	593.23	637.48	1,109.92	40438
40439	10 - 20 kg	38,764.56	631.50	687.46	1,186.47	40439
40440	20 - 30 kg	49,793.04	669.77	727.53	1,263.00	40440
40441	30 - 40 kg	51,980.19	708.06	767.59	1,339.56	40441
40442	40 - 50 kg	58,669.07	746.33	807.67	1,416.10	40442

AUDIO/ VISUAL ADVISORY SYSTEM

		Supply and fix A $	Take down and clear away B $	Take down and set aside for re-use C $	Fix only D $	
	Design, supply and install audio/ visual fire alarm equipment; electrical and control points c/w cables, conduit (surface or concealed in partitions and ceiling) and all necessary accessories and connected to the audio/ visual fire alarm control panel : -					
	Each					
40443	Loudspeakers; surface/ concealed mounted c/w metal enclosure	1,002.94	63.60	74.84	273.10	40443
40444	Flashing light directional sign boxes; single side; overall size up to 500 mm x 150 mm x 200 mm (H); comprising metal sign box, perspex backing and front sheeting, flashing unit, battery and charger, electrical gear and all necessary accessories; ceiling mounted	1,691.49	63.60	74.84	273.10	40444
40445	Ditto but double side	2,003.34	63.60	74.84	273.10	40445

AUDIO/ VISUAL ADVISORY SYSTEM (CONT'D)

Item		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	Item
		A $	B $	C $	D $	
	Audio-visual fire alarm control/ indicating panel c/w pre-amplifier and amplifier, automatic long play recorder, cassette tape, repeater, random access message module, master controller, multiplex alarm system, system/ auxiliary power supply, connection of fire link and all necessary accessories : -					
	Each					
40446	Panel of 4 zones or less	38,972.53	56.10	59.88	435.21	40446
40447	Ditto 5 - 8 zones	52,978.67	63.60	69.83	473.87	40447
40448	Ditto 9 - 12 zones	63,420.58	69.83	76.08	511.28	40448
40449	Ditto 13 - 18 zones	71,762.51	76.08	83.55	541.17	40449
40450	Add to last item for each additional 4 zones or part thereof	4,944.35	6.24	6.24	32.43	40450

DISCONNECTION OF EXISTING FIRE SERVICES INSTALLATION

		Supply and fix	Take down and clear away	Take down and set aside for re-use	Fix only	
		A $	B $	C $	D $	
	Supply labour to disconnect all existing fire services installation for an area, take down and clear away entire fire services installation inside the area (area shall be measured net on the gross floor area of the building covered by the fire services installation) : -					
	Per square metre					
40451	Area with sprinkler (up to 100 m^2)	-	19.96	-	-	40451
40452	Area with sprinkler (100 - 500 m^2)	-	18.71	-	-	40452
40453	Area with sprinkler (above 500 m^2)	-	17.46	-	-	40453
40454	Area without sprinkler (up to 100 m^2)	-	8.72	-	-	40454
40455	Area without sprinkler (100 - 500 m^2)	-	7.48	-	-	40455
40456	Area without sprinkler (above 500 m^2)	-	6.99	-	-	40456
	Supply labour to disconnect the existing fire services installation, take down and clear away entire fire services installation					
	Each					
40457	9 kg NAFS III type fire extinguisher	-	13.72	-	-	40457