

Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

**TSHWANE GROUP PROPERTY MANAGEMENT**

**TENDER REFERENCE: GPM 03 2022/23**



**TENDER TO APPOINT PROFESSIONAL SERVICE PROVIDERS TO SUPPLY, INSTALL, MAINTAIN, REPAIR AND UPGRADE OF EXISTING HEATING, VENTILATION, AIR CONDITIONING AND COOLING SYSTEMS CITY WIDE AS AND WHEN REQUIRED FOR A PERIOD OF 3 YEARS.**

**VOLUME 1**

**A Tender for Category 3ME or Higher, CIDB Registered Contractors**

<b>ISSUED BY:</b>	<b>PREPARED BY:</b>
<b>The Executive Director Group Property Management: Facility Management</b>	<b>The Divisional Head Supply Chain Management Unit</b> Tshwane House 320 Madiba Street Pretoria CBD

Registered Name of Tenderer:	
Trading Name of Tenderer:	
Registration No. of Entity:	
Contact Person:	CoT Vendor No:
Tel. No:	E-Mail Address:
Cell No:	Fax No:
CIDB CRS Number (s):	

Only bidders registered on the Central Supplier Database and with CSD Number will be considered for this tender as it is a requirement from National Treasury

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# **PORTION 1: TENDER**

## **PART T1: TENDER PROCEDURES**

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## T1.1 TENDER NOTICE AND INVITATION TO TENDER

**GPM 03 2022/23  
CITY OF TSHWANE  
GROUP PROPERTY DEPARTMENT**



**TENDER TO APPOINT PROFESSIONAL SERVICE PROVIDERS TO SUPPLY, INSTALL, MAINTAIN, REPAIR AND UPGRADE OF EXISTING HEATING, VENTILATION, AIR CONDITIONING AND COOLING SYSTEMS CITY WIDE AS AND WHEN REQUIRED FOR A PERIOD OF 3 YEARS.**

Tenders are hereby invited for the above services.

Tenderers should have a Construction Industry Development Board (CIDB) contractor grading designation as **3ME OR HIGHER**

Tenders will be evaluated on the basis of awarding points for B-BBEE Status of Contributor for the Construction Charter Scorecard and quality of the tenderer. **The 80/20** Preference Point System will be applied to all tenders.

### **NO COMPULSORY CLARIFICATION MEETING IS REQUIRED**

The lowest or any tender will not necessarily be accepted, and the Municipality reserves the right to accept any tender as a whole or in part or no tender.

Tenders must remain valid for a period of 90 days after the closing date for the submission of tenders, during which period a tender may not be amended or withdrawn and may be accepted at any time by the Municipality.

The closing time for receipt of tenders is **10h00 on the 28 July 2022** Tenders will be received on the closing date and time shown, must be enclosed in sealed envelopes bearing the applicable tender heading and reference number, as well as the closing time and due date, and must be addressed to

City of Tshwane Metropolitan Municipality  
Tshwane House  
320 Madiba Street  
Pretoria CBD  
0002

ENQUIRIES:      Representative:      Mr. Jan de Klerk  
                         Telephone:              012 358 9540  
                         E-mail:                  jandk@tshwane.gov.za

SUPPLY CHAIN ENQUIRIES:      Employer's Agent:      Relebogile Malatswane  
   Telephone:              012 358 2735  
   E mail:                  RelebogileM@tshwane.gov.za

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**Ms Mmaseabata Mutlaneng**  
**ACTING CITY MANAGER**

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

## T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in **Annexure C of Standard for Uniformity in Engineering and Construction Works Contracts (Board Notice 423 Government Gazette No 42622 of 8 August 2019)**, bound into Section T1.2

The Standard Conditions of Tender makes several references to the Tender Data. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender to which it mainly applies.

CLAUSE NUMBER	TENDER DATA
C.1.1 Actions	The Employer is <b>City of Tshwane Metropolitan Municipality</b>
C.1.2 Tender Documents	<p><u>Volume 1: Tender Document</u></p> <p><b>THE TENDER</b></p> <p><b>Part T1: Tendering Procedures</b></p> <p>T1.1 - Tender notice and invitation to tender</p> <p>T1.2 - Tender data</p> <p>T1.3 - Standard Conditions of Tender</p> <p><b>Part T2: Returnable documents</b></p> <p>T2.1 - List of returnable documents</p> <p>T2.2 - Returnable schedules</p> <p><b>THE CONTRACT</b></p> <p><b>Part C1: Agreements and contract data</b></p> <p>C1.1 – Form of offer and acceptance</p> <p>C1.2 – Contract data</p> <p><b>Part C2: Pricing Data</b></p> <p>C2.1 – Pricing instruction</p> <p>C2.2 – Pricing schedule</p> <p>C2.3 – Summary of pricing schedule</p> <p><b>Part C3: Scope of work</b></p>
C.1.3 Interpretation	<b>Add</b> the following new clause:
C.1.3.4	<i>The tender documents have been drafted in English. The contract arising from the invitation to tender shall be interpreted and construed in English</i>
C.1.4 Communication and Employer's Agent	<p>Agent: <b>Jan de Klerk</b></p> <p>Address: <b>PO Box 440 Pretoria 0001</b></p> <p>Tel: <b>012 358 9540</b></p> <p>E-Mail: <b>jandk@tshwane.gov.za</b></p> <p><b>Sammy Mark Square Cnr Madiba and Lilian Ngoyi 225 Madiba Street Pretoria</b></p>
C.2.1 Eligibility	<p>STAGES OF EVALUATION</p> <p>The following tender will be evaluated as follows:</p>

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CLAUSE NUMBER	TENDER DATA										
	<p><b>STAGE 1: ADMINISTRATIVE COMPLIANCE</b></p> <p><b>STAGE 2: LOCAL CONTENT AND PRODUCTION</b></p> <p><b>STAGE 3: MANDATORY REQUIREMENTS</b></p> <p><b>STAGE 4: FUNCTIONALITY CRITERIA</b></p> <p><b>STAGE 5: PREFERENTIAL PROCUREMENT POINT SYSTEM</b></p> <p>1.1 STAGE 1: ADMINISTRATIVE COMPLIANCE</p> <p>All the proposals will also be evaluated against the administrative responsiveness requirements as set out in the list of returnable documents.</p> <p>1.2 STAGE 2: Local content and Production</p> <p>: Local content and production</p> <p>i) In terms of the stipulated minimum threshold for local production and content for:</p> <ul style="list-style-type: none"> <li>• steel added value products is 100%</li> </ul> <p>the City shall only accept the specifications which meets minimum threshold percentage and requirements for local production and content as referred to in the Preferential Procurement Regulations on Local Content and the relevant National Treasury designated sectors' circulars.</p> <p>ii) The bidder must clearly indicate as part of the bid submission the quantities of material and products to be supplied and the level of local content for each product. Should the bidder not be able to comply with the prescribed minimum threshold, an exemption received from the Department of Trade and Industry needs to be submitted with the bid to be considered for further evaluation. Bidders that do not comply with the above-mentioned requirements will be automatically disqualified.</p> <p>The following items in this table have a minimum threshold of 100% local content</p> <table border="1" data-bbox="502 1774 1449 2067"> <thead> <tr> <th data-bbox="502 1774 976 1843">Product for designation</th> <th data-bbox="976 1774 1449 1843">Minimum Local Content</th> </tr> </thead> <tbody> <tr> <td data-bbox="502 1843 976 1899">Galvanised and Colour Coated Coils</td> <td data-bbox="976 1843 1449 1899">100%</td> </tr> <tr> <td data-bbox="502 1899 976 1955">Ducting and structural pipework</td> <td data-bbox="976 1899 1449 1955">100%</td> </tr> <tr> <td data-bbox="502 1955 976 2011">Plastic pipes (Pvc)</td> <td data-bbox="976 1955 1449 2011">100%</td> </tr> <tr> <td data-bbox="502 2011 976 2067">Electrical cable (low voltage)</td> <td data-bbox="976 2011 1449 2067">100%</td> </tr> </tbody> </table>	Product for designation	Minimum Local Content	Galvanised and Colour Coated Coils	100%	Ducting and structural pipework	100%	Plastic pipes (Pvc)	100%	Electrical cable (low voltage)	100%
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	<p data-bbox="501 405 1434 434"><a href="http://ocpo.treasury.gov.za/Buyers_Area/Legislation/Pages/Designated-Sectors.aspx">http://ocpo.treasury.gov.za/Buyers_Area/Legislation/Pages/Designated-Sectors.aspx</a></p> <p data-bbox="528 488 1002 517"><b>1.3 STAGE 3: MANDATORY REQUIREMENT</b></p> <p data-bbox="576 548 1307 577">Only tenderers with the following requirements will be considered.</p> <ul data-bbox="624 600 1437 1211" style="list-style-type: none"> <li data-bbox="624 600 1369 629">• The tenderer must have CIDB contractor grading 3 ME or higher</li> <li data-bbox="624 651 1430 775">• The tenderer must have a South African refrigeration gas practitioner’s certification as mandated by the Department of Labour (SAQCC)</li> <li data-bbox="624 797 1418 969">• SAQA NQF level 4-6 certification for refrigeration and electrical artisans / technicians Proof of technical Qualification in refrigeration and Air-conditioning must be supplied as part of the bid document. (Minimum requirement NQF level 4)</li> <li data-bbox="624 992 1362 1021">• Bidders must comply to SANS 10147- 2014, 10400, 10119-2017</li> <li data-bbox="624 1043 1437 1211">• A minimum of 3 years’ experience is required, bidders are required to submit a curriculum vitae stating the number of years of experience within the industry. Bids that do not meet these requirements will be disqualified.</li> </ul> <p data-bbox="528 1285 959 1314"><b>1.4 STAGE 3: FUNCTIONALITY CRITERIA</b></p> <p data-bbox="552 1337 1158 1366">The following functionality criteria will apply to this bid:</p> <p data-bbox="552 1388 1430 1512">Only bidders who score a minimum score of 70 points in respect of the following functionality criteria will be recommended for shortlisting. A total of 100 points are allocated for functionality.</p> <table border="1" data-bbox="552 1574 1449 2016"> <thead> <tr> <th data-bbox="552 1574 884 1720">CRITERIA</th> <th data-bbox="884 1574 1086 1720">SUB-CRITERIA</th> <th data-bbox="1086 1574 1203 1720">WEIGHT</th> <th data-bbox="1203 1574 1299 1720">SCALE</th> <th data-bbox="1299 1574 1449 1720">HIGHEST POSSIBLE SCORE</th> </tr> </thead> <tbody> <tr> <td data-bbox="552 1720 884 1865"></td> <td data-bbox="884 1720 1086 1865">Company Located within Tshwane</td> <td data-bbox="1086 1720 1203 1865">3</td> <td data-bbox="1203 1720 1299 1865"></td> <td data-bbox="1299 1720 1449 1865"></td> </tr> <tr> <td data-bbox="552 1865 884 2016"></td> <td data-bbox="884 1865 1086 2016">Company Located in Gauteng</td> <td data-bbox="1086 1865 1203 2016">2</td> <td data-bbox="1203 1865 1299 2016">5</td> <td data-bbox="1299 1865 1449 2016">15</td> </tr> </tbody> </table>	CRITERIA	SUB-CRITERIA	WEIGHT	SCALE	HIGHEST POSSIBLE SCORE		Company Located within Tshwane	3				Company Located in Gauteng	2	5	15
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	<p>3.1 Local Economic Participation, Local of Business (Attach rates and taxes statement not older than 3 months or lease agreement)</p>	<p>Company located outside Gauteng</p>	<p>1</p>		
<p>3.2 Number of years servicing  Bidders are requested to submit Curriculum Vieta indicating the number of years actively participating in the industry with no less than 3 years' experience required.</p>	<p>5 years and more</p>	<p>3</p>	<p>5</p>	<p>15</p>	
	<p>3 years up to 5 years</p>	<p>2</p>			
<p>3.3 Completion certificates  Completion certificates should be on a company letterhead and signed off for similar work done and completed by the service provider.</p>	<p>5 or more</p>	<p>5</p>	<p>4</p>	<p>20</p>	
	<p>3 to 4</p>	<p>4</p>			
	<p>1 to 2</p>	<p>3</p>			
<p>3.4 Proof of Company's employee appointed as competent person (Artisan) SAQA certified: Minimum NQF level 4 required</p>	<p>Refrigerant / Air conditioning Technician level 6</p>	<p>6</p>	<p>5</p>	<p>30</p>	
	<p>Refrigerant / Air conditioning Technician level 5</p>	<p>5</p>			

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CLAUSE NUMBER		TENDER DATA			
		Refrigerant / Air conditioning Technician level 4	4		
	3.5 Proof of company's employee appointed as competent person (Artisan) SAQA certified  Proof of qualifications must be provided certified by a commissioner of oaths.	Electrician level 5	4	5	20
	Minimum NQF level 4 required	Electrician level 4	3		
	Total				100
<p>STAGE 4: PREFERENTIAL POINT SYSTEM</p> <p>The preferential points to be used will be 80/20 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) Regulations 2017.</p> <p>The system comprises of the following two elements:</p> <p>a) Price 80 points</p> <p>b) B-BEE Contributor level 20 points</p>					
C.2.2	Cost of Tendering	The employer <b>will not</b> compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.			
C.2.5	Reference Documents	<b>Add the following:</b> NONE			
C.2.7	Clarification meeting	No clarification meeting is required.			
C.2.8	Seek clarification				

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA
	<i>Request clarification of the tender documents, if necessary, by notifying the employer at least <b>2 (two) working days</b> before the closing time stated in the tender data.</i>
C.2.12 Alternative offers	Alternative tender offers will <b>not</b> be considered.
C.2.13 Submitting a tender offer	<ul style="list-style-type: none"> <li>• The tender offer <b>shall be completed in non-erasable black ink</b></li> <li>• Any entry made by the tenderer in the document which the tenderer desires to change, <b>shall not be erased or painted out</b>. A line shall be drawn through the incorrect entry and the correct entry shall be written above in <b>non-erasable black ink</b> and the <b>full signature</b> of the tenderer shall be placed next to the correction.</li> </ul>
C.2.13.2	<p><b>Replace</b> the contents of the clause with the following:</p> <p><i>Return all volumes of the tender document to the Employer after completion of the relevant sections of each volume in their entirety, either electronically (if they were issued in electronic format) or by writing in black ink.</i></p> <p><i>All volumes are to be left intact in original format and no pages shall be removed or re-arranged</i></p>
C.2.13.3	<p>Parts of each tender offer communicated on paper shall be submitted as <b>an original, plus a scanned copy in PDF format on a compact disc.</b></p> <p><b>In addition to the hard copy submission, each tenderer is required to submit a scanned copy of the fully completed and signed tender submission document. This is to be on a Compact Disc (CD or DVD) attached to the original tender submission documents, adequately identifiable as belonging to the tenderer, be in PDF format scanned at 400 DPI, and be in full colour.</b></p>
C.2.13.4	<p><b>Add</b> the following to the clause</p> <p><i>Only authorised signatories may sign the original and all copies of the tender offer where required.</i></p> <p><i>In the case of a <b>ONE-PERSON CONCERN</b> submitting a tender, this shall be clearly stated.</i></p> <p><i>In the case of a <b>COMPANY</b> submitting a tender, include a copy of a <b>resolution by its board of directors</b> authorising a director or other official of the company to sign the documents on behalf of the company.</i></p> <p><i>In the case of a <b>CLOSE CORPORATION</b> submitting a tender, include a copy of a <b>resolution by its members</b> authorising a member or other official of the corporation to sign the documents on each member's behalf.</i></p> <p><i>In the case of a <b>PARTNERSHIP</b> submitting a tender, <b>all the partners</b> shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case <b>proof of such authorisation</b> shall be included in the Tender.</i></p> <p><i>In the case of a <b>JOINT VENTURE/CONSORTIUM</b> submitting a tender, include <b>a resolution of each company</b> of the joint venture together with a <b>resolution by its members</b> authorising a member of the joint venture to sign the documents on behalf of the joint venture.</i></p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA
	<p><b><u>Accept that failure to submit proof of authorisation to sign the tender shall result in the tender offer being regarded as non-responsive.</u></b></p>
C.2.13.5	<p>The identification details are:</p> <p>Tender Reference:                   <b>GPM 07- 2021/22</b></p> <p>Tender Description:                   GPM07-2021/22 Tender to appoint professional service providers for the maintenance, repair, upgrade, supply and installation of new and existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.</p>
C.2.13.9	<p>Telephonic, telegraphic, telex, facsimile or e-mailed offers will <b>not</b> be accepted</p>
C.2.13.10	<p><b>Add</b> the following sub- clause C.2.13.10:</p> <p><i>Accept that all conditions, which are printed or written upon any stationery used by the Tenderer for the purpose of or in connection with the submission of a tender offer for this Contract, which are in conflict with the conditions laid down in this document shall be waived, renounced and abandoned.</i></p>
C.2.14     Information and data to be completed in all respects	<p><b>Add</b> the following to the clause:</p> <p><i>The Tenderer is required to enter information in the following sections of the document:</i></p> <p><i>Section T2.2        :        Returnable Schedules</i></p> <p><i>Section C1.1       :        Form of Offer and Acceptance</i></p> <p><i>Section C1.2       :        Contract Data (Part 2)</i></p> <p><i>Section C2.2       :        Pricing Schedule</i></p> <p><i>The above sections shall be signed by the Tenderer (and witnesses where required). Individual pages should only be initialled by the successful Tenderer and by the witnesses after acceptance by the Employer of the Tender Offer.</i></p> <p><i>The Tenderer shall complete and sign the Form of Offer prior to the submission of a Tender Offer.</i></p> <p><i>The Schedule of Deviations (if applicable) shall be signed by the successful Tenderer after acceptance by the Employer of the Tender Offer.</i></p> <p><i>Accept that failure on the part of the Tenderer to submit any one of the Returnable Documents listed in Part T2 – Returnable Documents within the period stipulated, shall be just cause for the Employer to consider the tender offer as being regarded as non-responsive.</i></p> <p><i>Accept that the Employer shall in the evaluation of tender offers take due account of the Tenderer’s past performance in the execution of similar engineering works of comparable magnitude, and the degree to which he possesses the necessary technical, financial and other resources to enable him to complete the Works successfully within the contract period. Satisfy the Employer and the Engineer as to his ability to perform</i></p>

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CLAUSE NUMBER	TENDER DATA
	<i>and complete the Works timeously, safely and with satisfactory quality, and furnish details in Part T2 – Returnable Documents.</i>
C.2.15 Closing time	<p>The closing date and time is:</p> <p>Closing Time: <b>Time</b></p> <p>Closing Date: <b>Date</b></p> <p>Each tender shall be enclosed in a sealed envelope, bearing the correct identification details (Clause C.2.13.5) and shall be placed in the tender box located at:</p> <p style="text-align: center;"><b>PROCUREMENT ADVICE CENTRE (TENDER BOX AT THE ENTRANCE OF C DE WET CENTRE) C DE WET CENTRE 175 ES'KIA MPHABLELE DRIVE PRETORIA WEST</b></p> <p>This address is 24 hours available for delivery of tender offers.</p> <p>Please ensure that all required compliance documents are included upon submission as no additional documents will be requested from bidders after closing.</p>
C.2.16 Tender offer validity  C.2.16.5	<p>The tender offer validity period is <b>90 days</b>.</p> <p><b>Add</b> the following new clause</p> <p><i>If the tender validity period expires on a Saturday, Sunday or public holiday, the tender offer shall remain valid and open for acceptance until closure of business on the following working day.</i></p>
C.2.18 Provide other material	<p>The tenderer shall, when requested by the employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.</p>
C.2.19 Inspections, tests and analysis	<p><b>Add</b> the following at the end of the clause:</p> <p><i>.... or upon written request.</i></p>
C.2.20 Submit securities, bonds, policies, etc.	<p>The tenderer is required to submit with his tender proof of his Professional Indemnity Insurance.</p>
C.2.23 Certificates	<p>Refer to part T2 of this procurement document for a list of the documents that are to be returned with the tender.</p>
C.2.24 <i>Canvassing and obtaining of additional information by tenderers</i>	<p><b>Add</b> the following new clause</p> <p><i>The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon.</i></p> <p><i>The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.</i></p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA
<p>C.2.25 Prohibitions on awards to persons in service of the state</p>	<p><b>Add</b> the following new clause</p> <p><i>The Employer is prohibited to award a tender to a person -</i></p> <ol style="list-style-type: none"> <li><i>a) who is in the service of the state; or</i></li> <li><i>b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or</i></li> <li><i>c) a person who is an advisor or consultant contracted with the municipality or municipal entity.</i></li> </ol> <p><b>In the service of the state means to be -</b></p> <ol style="list-style-type: none"> <li><i>a) a member of:-</i> <ul style="list-style-type: none"> <li><i>• any municipal council;</i></li> <li><i>• any provincial legislature; or</i></li> <li><i>• the National Assembly or the National Council of Provinces;</i></li> </ul> </li> <li><i>b) a member of the board of directors of any municipal entity;</i></li> <li><i>c) an official of any municipality or municipal entity;</i></li> <li><i>d) an employee of any national or provincial department;</i></li> <li><i>e) provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);</i></li> <li><i>f) a member of the accounting authority of any national or provincial public entity; or</i></li> <li><i>g) an employee of Parliament or a provincial legislature.</i></li> </ol> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.</p>
<p>C.2.26 Awards to close family members of persons in the service of the state</p>	<p><b>Add</b> the following new clause</p> <p><i>Accept that the notes to the Employer’s annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause F2.25), or has been in the service of the state in the previous twelve months, including -</i></p> <ol style="list-style-type: none"> <li><i>a) the name of that person;</i></li> <li><i>b) the capacity in which that person is in the service of the state; and</i></li> <li><i>c) the amount of the award.</i></li> </ol> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.</p>
<p>C.2.27 Vendor registration</p>	<p><b>Add</b> the following new clause</p> <p><i>The contractor will be required registering as a supplier/ service provider on the City of Tshwane’s vendor register before any payment can be done.</i></p> <p><i>If the tenderer is already registered as a vendor, it is required to record the vendor number in space provided on the cover page of this Tender document.</i></p> <p><i>Vendor registration documents are available from the Procurement Advice Centre or can be downloaded from <a href="http://www.tshwane.gov.za/procurement.cfm">http://www.tshwane.gov.za/procurement.cfm</a></i></p> <p><i>All parties of a joint venture or consortium submitting a tender shall comply with the requirements of this clause.</i></p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA
<p>C.2.28 Tax</p>	<p><b>Add</b> the following new clause</p> <p><b>National Treasury SCM Instruction no. 7 of 2017/18 clause 4 application during SCM Processes state that:</b></p> <p><i>The designated official(s) must verify the tenderer’s tax compliance status prior to the finalisation of the award of the tender or price quotation.</i></p> <p><i>Where the recommended tenderer is not tax compliant, the tenderer should be notified of their non- compliant status and the tenderer must be requested to submit to the municipality or municipal entity, within 7 working days, written proof from South African Revenue Services of their tax compliance status or proof from SARS that they have made an arrangement to meet their outstanding tax obligations. The proof of tax compliance status submitted by the tenderer to the municipality or municipal entity must be verified via the Central Supplier Database or eFiling</i></p> <p><i>Accept that the tenderer will be rejected if such tenderer fails to provide proof of tax compliance status in terms of clause 4.2 of National Treasury SCM Instruction no. 7 of 2017/18</i></p>
<p>C.3.1 Respond to requests from the tenderer</p> <p>C.3.1.1</p>	<p>The employer will respond to requests for clarification up to <b>2 (two) working days</b> before the tender closing time.</p>
<p>C.3.4 Opening of tender submissions</p>	<p>Tenders will be opened immediately after the closing time for tenders</p>
<p>C.3.11 Evaluation of tender offers</p>	<p>Specify the stages if evaluation</p> <p><b>2. STAGES OF EVALUATION</b></p> <p><b>STAGE 1: ADMINISTRATIVE COMPLIANCE</b></p> <p><b>STAGE 2 LOCAL CONTENT AND PRODUCTION</b></p> <p><b>STAGE 3: SPECIAL DISQUALIFICATION CRITERIA</b></p> <p><b>STAGE 4: FUNCTIONALITY CRITERIA</b></p> <p><b>STAGE 5: PREFERENTIAL PROCUREMENT POINT SYSTEM</b></p> <p><b>2.1 STAGE 1: ADMINISTRATIVE COMPLIANCE</b></p> <p>All the proposals will also be evaluated against the administrative responsiveness requirements as set out in the <u>list of returnable documents</u>.</p> <p><b>2.2 STAGE 2: Local content and Production</b></p> <p>: Local content and production</p> <p>i) In terms of the stipulated minimum threshold for local production and content for:</p> <ul style="list-style-type: none"> <li>• steel added value products is 100%</li> </ul> <p>the City shall only accept the specifications which meets minimum threshold percentage and requirements for local production and content as referred to in the Preferential Procurement Regulations on Local Content and the relevant National Treasury designated sectors’ circulars.</p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA																															
	<p>ii) The bidder must clearly indicate as part of the bid submission the quantities of material and products to be supplied and the level of local content for each product. Should the bidder not be able to comply with the prescribed minimum threshold, an exemption received from the Department of Trade and Industry needs to be submitted with the bid to be considered for further evaluation. Bidders that do not comply with the above-mentioned requirements will be automatically disqualified.</p> <p>The following items in this table have a minimum threshold of 100% local content</p> <table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">Product for designation</th> <th style="text-align: center;">Minimum Local Content</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>Galvanised and Colour Coated Coils</b></td> <td style="text-align: center;">100%</td> </tr> </tbody> </table> <p><b>2.3 SPECIAL DISQUALIFICATION CRITERIA</b> Only tenderers with the following requirements will be considered.</p> <ul style="list-style-type: none"> <li>• The tenderer must have CIDB contractor grading 5 ME or higher and</li> <li>• The tenderer must have a South African refrigeration gas practitioner's certification as mandated by the Department of Labour (SAQCC)</li> <li>• SAQA NQF level 4-6 certification for refrigeration artisans / technicians Proof of technical Qualification in refrigeration and Air-conditioning must be supplied as part of the bid document.</li> <li>• Bidders are required to provide proof of registration for SANS 10147-2014, 10400, 10119-2017</li> </ul> <p>Bids that do not meet these requirements will be disqualified.</p> <p><b>2.4 STAGE 3: FUNCTIONALITY CRITERIA</b> The following functionality criteria will apply to this bid: Only bidders who score a minimum score of 70 points in respect of the following functionality criteria will be recommended for shortlisting. A total of 100 points are allocated for functionality.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #92d050;"> <th style="text-align: center;">CRITERIA</th> <th style="text-align: center;">SUB-CRITERIA</th> <th style="text-align: center;">SCALE</th> <th style="text-align: center;">WEIGHT</th> <th style="text-align: center;">HIGHEST POSSIBLE SCORE</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="vertical-align: top;">3.1 Local Economic Participation, Local of Business <i>(Attach rates and taxes statement not older than 3 months or lease agreement)</i></td> <td>Company Located within Tshwane</td> <td style="text-align: center;">5</td> <td style="text-align: center;">3</td> <td style="text-align: center;">15</td> </tr> <tr> <td>Company Located in Gauteng</td> <td style="text-align: center;">5</td> <td style="text-align: center;">2</td> <td style="text-align: center;">10</td> </tr> <tr> <td>Company located outside Gauteng</td> <td style="text-align: center;">5</td> <td style="text-align: center;">1</td> <td style="text-align: center;">5</td> </tr> <tr> <td rowspan="2" style="vertical-align: top;">3.2 Number of years servicing  Bidders are requested to</td> <td>5 years and more</td> <td style="text-align: center;">5</td> <td style="text-align: center;">3</td> <td style="text-align: center;">15</td> </tr> <tr> <td>3 years to 4 years</td> <td style="text-align: center;">5</td> <td style="text-align: center;">2</td> <td style="text-align: center;">10</td> </tr> </tbody> </table>	Product for designation	Minimum Local Content	<b>Galvanised and Colour Coated Coils</b>	100%	CRITERIA	SUB-CRITERIA	SCALE	WEIGHT	HIGHEST POSSIBLE SCORE	3.1 Local Economic Participation, Local of Business <i>(Attach rates and taxes statement not older than 3 months or lease agreement)</i>	Company Located within Tshwane	5	3	15	Company Located in Gauteng	5	2	10	Company located outside Gauteng	5	1	5	3.2 Number of years servicing  Bidders are requested to	5 years and more	5	3	15	3 years to 4 years	5	2	10
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GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA				
	submit Curriculum Vieta indicating the number of years actively participating in the industry with no less than 3 years' experience				5
	3.3 Completion certificates	5 or more	4	5	20
	Completion certificates should be on company letterhead and signed for similar work done and completed by the service provider	3 to 4	4	4	16
		1 to 2	4	3	12
	3.4 Proof of Company's employee appointed as competent person (Artisan)	Refrigerant / Air conditioning Technician level 6	5	6	30
	SAQA certified:	Refrigerant / Air conditioning Technician level 5	5	5	25
	Minimum requirement SAQA level 4 NQF	Refrigerant / Air conditioning Technician level 4	5	4	20
	3.5 Proof of company's employee appointed as competent person (Artisan) SAQA certified . Proof of qualifications	Electrician level 5	5	4	20

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA								
C.3.11.1 General	must be provided certified by a commissioner of oaths.								
	Minimum requirement SAQA level 4 NQF	Electrician level 4	5	3	15				
	<b>Total:</b>				<b>100</b>	<b>100</b>			
C.3.11.2 Method 1: Financial offer and preference	<p><b>2.5 STAGE 4: PREFERENTIAL POINT SYSTEM</b></p> <p>The preferential points to be used will be 80/20 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) Regulations 2017.</p> <p>The system comprises of the following two elements:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>c) Price</td> <td style="text-align: right;">80 points</td> </tr> <tr> <td>d) BEE Contributor level</td> <td style="text-align: right;">20 points</td> </tr> </table> <p><b>Method 1</b> will be used to evaluate all responsive tender offers in terms of new Clause C.3.11.2 of the Standard Conditions of Tender</p> <p><b>Add</b> the following new clause:</p> <p><i>The procedure for the evaluation of responsive tender is Method 1.</i></p> <p><i>The financial offer will be scored using Formula 2 (Option 1) in Table C.1 where the value of W1 is:</i></p> <ol style="list-style-type: none"> <li>1. 90 where the financial value of all responsive tender received have a value in excess of R50 million (all applicable taxes included).</li> <li>2. 80 where the financial value of all responsive tender has a value that equals or less than R50 million (all applicable taxes included).</li> </ol> <p><i>Up to 100 minus W1 tender evaluated points will be awarded to tenderers who completed the preferencing schedule and who are found to be eligible for the preference claimed.</i></p>					c) Price	80 points	d) BEE Contributor level	20 points
c) Price	80 points								
d) BEE Contributor level	20 points								
C.3.11.3 80/20 Preference Point System	<p><b>Add</b> the following new clause:</p> <p><b>The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million:</b></p> <p>(a) <i>The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a Rand value equal to, or above R 30 000 and up to Rand value of R50 000 000 (all applicable taxes included):</i></p> <p>(i) <math display="block">P_s = 80 \times \left[ 1 - \left( \frac{P_t - P_{min}}{P_{min}} \right) \right]</math></p> <p style="margin-left: 40px;"><i>Where</i></p>								

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA																				
	<p> <math>P_s</math> = Points scored for comparative price of tender or offer under consideration.  <math>P_t</math> = Comparative price of tender or offer under consideration; and  <math>P_{min}</math> = Comparative price of lowest acceptable tender or offer. </p> <p>(ii) An Employer of state may apply the formula in paragraph (i) for price quotations with a value less than R 30 000, if and when appropriate.</p> <p>(b) Subject to subparagraph (c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:</p> <table border="1" data-bbox="555 741 1190 1263"> <thead> <tr> <th>B-BBEE Status Level of Contributor</th> <th>Number of Points</th> </tr> </thead> <tbody> <tr><td>1</td><td>20</td></tr> <tr><td>2</td><td>18</td></tr> <tr><td>3</td><td>14</td></tr> <tr><td>4</td><td>12</td></tr> <tr><td>5</td><td>8</td></tr> <tr><td>6</td><td>6</td></tr> <tr><td>7</td><td>4</td></tr> <tr><td>8</td><td>2</td></tr> <tr><td>Non-compliant Contributor</td><td>0</td></tr> </tbody> </table> <p>(c) A maximum of 20 points may be allocated in accordance with subparagraph (b)</p> <p>(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (b) must be added to the points scored for price a calculated in accordance with subparagraph (a).</p> <p>(e) The contract must be awarded to the tender who scores the highest total number of points.</p>	B-BBEE Status Level of Contributor	Number of Points	1	20	2	18	3	14	4	12	5	8	6	6	7	4	8	2	Non-compliant Contributor	0
B-BBEE Status Level of Contributor	Number of Points																				
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<p>C.3.11.4 90/10 Preference Point System</p>	<p><b>Add</b> the following new clause:</p> <p><b>The 90/10 preference point system for acquisition of services, works or goods above a Rand value of R50 million:</b></p> <p>(a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a Rand value above R50 000 000 (all applicable taxes included):</p> <p>(i) <math display="block">P_s = 90 \times \left[ 1 - \left( \frac{P_t - P_{min}}{P_{min}} \right) \right]</math></p> <p>Where</p> <p><math>P_s</math> = Points scored for comparative price of tender or offer under consideration.</p>																				

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA																				
	<p><math>P_t</math> = Comparative price of tender of offer under consideration; and  <math>P_{min}</math> = Comparative price of lowest acceptable tender or offer.</p> <p>(ii) An Employer of state may apply the formula in paragraph (i) for price quotations with a value less than R 30 000, if and when appropriate.</p> <p>(b) Subject to subparagraph (c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:</p> <table border="1" data-bbox="555 707 1190 1232"> <thead> <tr> <th>B-BBEE Status Level of Contributor</th> <th>Number of Points</th> </tr> </thead> <tbody> <tr><td>1</td><td>10</td></tr> <tr><td>2</td><td>9</td></tr> <tr><td>3</td><td>6</td></tr> <tr><td>4</td><td>5</td></tr> <tr><td>5</td><td>4</td></tr> <tr><td>6</td><td>3</td></tr> <tr><td>7</td><td>2</td></tr> <tr><td>8</td><td>1</td></tr> <tr><td>Non-compliant Contributor</td><td>0</td></tr> </tbody> </table> <p>(c) A maximum of 10 points may be allocated in accordance with subparagraph (b)</p> <p>(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (b) must be added to the points scored for price a calculated in accordance with subparagraph (a).</p> <p>(e) The contract must be awarded to the tender who scores the highest total number of points.</p>	B-BBEE Status Level of Contributor	Number of Points	1	10	2	9	3	6	4	5	5	4	6	3	7	2	8	1	Non-compliant Contributor	0
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7	2																				
8	1																				
Non-compliant Contributor	0																				
C.3.11.5 Scoring financial offers	<p><b>Add</b> the following New Clause:</p> <p>Score the financial offers of remaining responsive tender offers using the following formula:</p> $N_{FO} = W_1 \times A$ <p>Where <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer.  <math>W_1</math> is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the tender data.  <math>A</math> is a number calculated using the formula and option described in Table F.1 as stated in the tender data.</p>																				

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

CLAUSE NUMBER	TENDER DATA																
	<p><b>Table C.1: Formulae for calculating the value of A</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Formula</th> <th style="text-align: center;">Comparison aimed at achieving</th> <th style="text-align: center;">Option 1<sup>a</sup></th> <th style="text-align: center;">Option 2<sup>a</sup></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Highest price or discount</td> <td style="text-align: center;"><math>A = \left( 1 + \frac{(P - P_m)}{P_m} \right)</math></td> <td style="text-align: center;"><math>A = P / P_m</math></td> </tr> <tr> <td style="text-align: center;">2</td> <td>Lowest price or percentage commission / fee</td> <td style="text-align: center;"><math>A = \left( 1 - \frac{(P - P_m)}{P_m} \right)</math></td> <td style="text-align: center;"><math>A = P_m / P</math></td> </tr> <tr> <td style="text-align: center;"><i>a</i></td> <td colspan="3"> <i>P<sub>m</sub></i> is the comparative offer of the most favourable comparative offer.  <i>P</i> is the comparative offer of the tender offer under consideration                 </td> </tr> </tbody> </table>	Formula	Comparison aimed at achieving	Option 1 <sup>a</sup>	Option 2 <sup>a</sup>	1	Highest price or discount	$A = \left( 1 + \frac{(P - P_m)}{P_m} \right)$	$A = P / P_m$	2	Lowest price or percentage commission / fee	$A = \left( 1 - \frac{(P - P_m)}{P_m} \right)$	$A = P_m / P$	<i>a</i>	<i>P<sub>m</sub></i> is the comparative offer of the most favourable comparative offer. <i>P</i> is the comparative offer of the tender offer under consideration		
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<i>a</i>	<i>P<sub>m</sub></i> is the comparative offer of the most favourable comparative offer. <i>P</i> is the comparative offer of the tender offer under consideration																
C.3.13      Acceptance of Tender Offer	<p>Tender offers will only be accepted if:</p> <ul style="list-style-type: none"> <li>(a) the tenderer complies with the eligibility criteria stated in clause C.2.1</li> <li>(b) the tenderer is able to provide proof of tax compliance status in terms of clause 4.2 of National Treasury SCM Instruction no. 7 of 2017/18;</li> <li>(c) the tenderer is not in arrears for more than 3 months with municipal rates and taxes and municipal service charges;</li> <li>(d) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;</li> <li>(e) the tenderer has not:                         <ul style="list-style-type: none"> <li>i) abused the Employer's Supply Chain Management System; or</li> <li>ii) failed to perform on any previous contract and has been given a written notice to this effect.</li> </ul> </li> <li>(f) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract;</li> <li>(g) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;</li> </ul>																
C.3.17      Copies of Contract	<p><b>One</b> signed copy of contract shall be provided by the Employer to the successful Tenderer.</p>																

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

## T1.3 STANDARD CONDITIONS OF TENDER

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**C.1 General**

**C.1.1 Actions**

**C.1.1.1** The Employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

**C.1.1.2** The Employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the Employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

**Note:** 1) *A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*

2) *Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.*

**C.1.1.3** The Employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

**C.1.2 Tender Documents**

The documents issued by the Employer for the purpose of a tender offer are listed in the tender data.

**C.1.3 Interpretation**

**C.1.3.1** The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

**C.1.3.2** These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

**C.1.3.3** For the purposes of these conditions of tender, the following definitions apply:

a) **conflict of interest** means any situation which:

- i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
- ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
- iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;



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- c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the Employer or his staff or agents in the tender process;
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the Employer, including collusive practices intended to establish prices at artificial levels;

#### **C.1.4 Communication and Employer's agent**

Each communication between the Employer and a tenderer shall be to or from the Employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The Employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the Employer's agent are stated in the tender data.

#### **C.1.5 Cancellation and re-invitation of tenders**

**C.1.5.1** An organ of state may, prior to the award of the tender, cancel the tender if-

- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure;
- (c) no acceptable tenders are received; or
- (d) there is a material irregularity in the tender process.

**C.1.5.2** The decision to cancel the tender must be published in the same manner in which the original tender invitation was advertised.

**C.1.5.3** An Employer may only with the prior approval of the relevant treasury cancel a tender invitation for a second time.

#### **C.1.6 Procurement procedures**

##### **C.1.6.1 General**

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

##### **C.1.6.2 Competitive negotiation procedure**

**C.1.6.2.1** Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the Employer shall announce only the names of the tenderers who make a submission. The requirements of C.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

**C.1.6.2.2** All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information.

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Notwithstanding the provisions of C.2.17, the Employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

**C.1.6.2.3** At the conclusion of each round of negotiations, tenderers shall be invited by the Employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

**C.1.6.2.4** The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.

### **C.1.6.3 Proposal procedure using the two stage-system**

#### **C.1.6.3.1 Option 1**

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The Employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

#### **C.1.6.3.2 Option 2**

**C.1.6.3.2.1** Tenderers shall submit in the first stage only technical proposals. The Employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

**C.1.6.3.2.2** The Employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

### **C.2 Tenderer's obligations**

#### **C.2.1 Eligibility**

**C.2.1.1** Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with Employer.

**C.2.1.2** Notify the Employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the Employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the Employer's written approval to do so prior to the closing time for tenders.

#### **C.2.2 Cost of tendering**

**C.2.2.1** Accept that, unless otherwise stated in the tender data, the Employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

**C.2.2.2** The cost of the tender documents charged by the Employer shall be limited to the actual cost incurred by the Employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

#### **C.2.3 Check documents**

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Check the tender documents on receipt for completeness and notify the Employer of any discrepancy or omission.

**C.2.4 Confidentiality and copyright of documents**

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the Employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

**C.2.5 Reference documents**

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

**C.2.6 Acknowledge addenda**

Acknowledge receipt of addenda to the tender documents, which the Employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

**C.2.7 Clarification meeting**

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

**C.2.8 Seek clarification**

Request clarification of the tender documents, if necessary, by notifying the Employer at least five (5) working days before the closing time stated in the tender data.

**C.2.9 Insurance**

Be aware that the extent of insurance to be provided by the Employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

**C.2.10 Pricing the tender offer**

**C.2.10.1** Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

**C.2.10.2** Show VAT payable by the Employer separately as an addition to the tendered total of the prices.

**C.2.10.3** Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

**C.2.10.4** State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

**C.2.11 Alterations to documents**

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Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the Employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

**C.2.12 Alternative tender offers**

**C.2.12.1** Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

**C.2.12.2** Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the Employer.

**C.2.12.3** An alternative tender offer may only be considered in the event that the main tender is the winning tender.

**C.2.13 Submitting a tender offer**

**C.2.13.1** Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

**C.2.13.2** Return all returnable documents to the Employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

**C.2.13.3** Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the Employer.

**C.2.13.4** Sign the original and all copies of the tender offer where required in terms of the tender data. The Employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the Employer shall hold liable for the purpose of the tender offer.

**C.2.13.5** Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the Employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

**C.2.13.6** Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the Employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

**C.2.13.7** Seal the original tender offer and copy packages together in an outer package that states on the outside only the Employer's address and identification details as stated in the tender data.

**C.2.13.8** Accept that the Employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

**C.2.13.9** Accept that tender offers submitted by facsimile or e-mail will be rejected by the Employer, unless stated otherwise in the tender data.

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**C.2.14 Information and data to be completed in all respects**

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the Employer as non-responsive.

**C.2.15 Closing time**

**C.2.15.1** Ensure that the Employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

**C.2.15.2** Accept that, if the Employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

**C.2.16 Tender offer validity**

**C.2.16.1** Hold the tender offer(s) valid for acceptance by the Employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

**C.2.16.2** If requested by the Employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

**C.2.16.3** Accept that a tender submission that has been submitted to the Employer may only be withdrawn or substituted by giving the Employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the Employer evaluating tender, the Contractor reserves the right to review the price based on Consumer Price Index (CPI).

**C.2.16.4** Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

**C.2.17 Clarification of tender offer after submission**

Provide clarification of a tender offer in response to a request to do so from the Employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

**Note:** *Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.*

**C.2.18 Provide other material**

**C.2.18.1** Provide, on request by the Employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the Employer's request, the Employer may regard the tender offer as non-responsive.

**C.2.18.2** Dispose of samples of materials provided for evaluation by the Employer, where required.

**C.2.19 Inspections, test and analysis**

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Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

**C.2.20 Submit securities, bonds and policies**

If requested, submit for the Employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

**C.2.21 Check final draft**

Check the final draft of the contract provided by the Employer within the time available for the Employer to issue the contract.

**C.2.22 Return of other tender documents**

If so instructed by the Employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

**C.2.23 Certificates**

Include in the tender submission or provide the Employer with any certificates as stated in the tender data.

**C.3 The Employer's undertakings**

**C.3.1 Respond to requests from the tenderer**

**C.3.1.1** Unless otherwise stated in the Tender Data respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

**C.3.1.2** Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

**C.3.2 Issue addenda**

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

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**C.3.3 Return late tender offers**

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

**C.3.4 Opening of tender submissions**

**C.3.4.1** Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

**C.3.4.2** Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.

**C.3.4.3** Make available the record outlined in C.3.4.2 to all interested persons upon request.

**C.3.5 Two-envelope system**

**C.3.5.1** Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

**C.3.5.2** Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality

**C.3.6 Non-disclosure**

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

**C.3.7 Grounds for rejection and disqualification**

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

**C.3.8 Test for responsiveness**

**C.3.8.1** Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

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**C.3.8.2** A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

**C.3.9 Arithmetic errors, omissions and discrepancies**

**C.3.9.1** Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

**C.3.9.2** Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
  - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
  - ii) the summation of the prices.

**C.3.9.3** Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

**C.3.9.4** Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

**C.3.10 Clarification of a tender offer**



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Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

**C.3.11 Evaluation of tender offers**

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer’s obligations in submitting a tender and the Employer’s undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require Employers to conduct the process of offer and acceptance in terms of a set of standard procedures

<b>The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:</b>	
<b>Requirement</b>	<b>Qualitative interpretation of goal</b>
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

**The activities associated with evaluating tender offers are as follows:**

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

**C.3.11.1 General**

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The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

**C.3.12 Insurance provided by the Employer**

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the Employer to provide.

**C.3.13 Acceptance of tender offer**

Accept the tender offer, if in the opinion of the Employer, it does not present any unacceptable commercial risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the Employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the Employer, to perform the contract free of conflicts of interest.

**C.3.14 Prepare contract documents**

**C.3.14.1** If necessary, revise documents that shall form part of the contract and that were issued by the Employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the Employer and the successful tenderer.

**C.3.14.2** Complete the schedule of deviations attached to the form of offer and acceptance, if any.

**C.3.15 Complete adjudicator's contract**

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

**C.3.16 Registration of the award**

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An Employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

**C.3.16.2** After the successful tenderer has been notified of the Employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

**C.3.17 Provide copies of the contracts**

Provide to the successful tenderer the number of copies stated in the tender data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

**C.3.18 Provide written reasons for actions taken**

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

# PART T2: RETURNABLE DOCUMENTS

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## T2.1 LIST OF RETURNABLE DOCUMENTS

### RD.A RETURNABLE DOCUMENTS FOR TENDER EVALUATION PURPOSES

**Note:** *Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
MBD 4: Declaration of interest	Form RD.A.1	
MBD 8: Declaration of tenderer's past supply chain management practises	Form RD.A.2	

### RD.B RETURNABLE DOCUMENTS REQUIRED FOR PREFERENTIAL PROCUREMENT EVALUATION PURPOSES

**Note:** *Failure to submit the applicable documents will result in the tender offer being awarded 0 (zero) preference points*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
MBD 6.1: Preference points claim form in terms of the Preferential Procurement Regulations, 2017	Form RD.B.1	
B-BBEE Exempted Micro Enterprise – Sworn Affidavit	Form RD.B.2	

### RD.C ADDITIONAL RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

**Note:** *Failure to submit the applicable document will result in the Tenderer having to submit same upon request within 7 days and if not complied with, will result to the tender offer being disqualified from further consideration [See also clause 2.18 of the Standard Conditions of Tender]*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Form of offer and acceptance	Section C1.1	
MBD 2: Tax clearance certificate requirements	RD.C.1	
MBD 9: Certificate of independent tender determination	RD.C.2	
Proof of registration with the CIDB	RD.C.3	
Compliance with OHSA (Act 85 of 1993)	RD.C.4	
Record of services provided to organs of state	RD.C.5	
Schedule of plant and equipment	RD.C.6	

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Status of concern submitting tender	RD.C.7	
Classification of business	RD.C.8	
Certificate of authority of signatory	RD.C.9	
Certificate of authority of signatory for joint ventures and consortia	RD.C.10	

**RD.E OTHER DOCUMENTS THAT WILL FORM PART OF THE CONTRACT**

**Note:** *Failure to submit or fully complete the applicable documents will result in the tender offer being disqualified from further consideration*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Record of addenda to tender documents	RD.E.1	

## T2.2 RETURNABLE SCHEDULES

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**FORM RD.A.1 MBD 4: DECLARATION OF INTEREST**

1. No bid will be accepted from persons in the service of the state.
2. Any person, having kinship with persons in the service of the state<sup>1</sup>, including blood relationship, may make an offer in terms of this invitation to tender. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the tender.

3.1	Full name of tenderer or his/her representative:		
3.2	Identity number:		
3.3	Position occupied in the tendering company: (e.g. director, trustee, shareholder <sup>2</sup> )		
3.4	Company registration number:		
3.5	Tax reference number:		
3.6	VAT Registration number:		
3.7	The names of all directors / trustees / shareholder / members, their individual identity numbers and state employee numbers must be indicates in paragraph 4 below		
3.8	Are you presently in the service of the state?	YES	NO
	If YES, furnish particulars		
3.9	Have you been in the service of the state for the past twelve months?	YES	NO
	If YES, furnish particulars		
3.10	Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this tender?	YES	NO

<sup>1</sup> MSCM Regulations: "in the service of the state" means to be -

- (a) a member of –
  - i) any municipal council;
  - ii) any provincial legislature; or
  - iii) the national assembly of the national council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality of municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No 1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of parliament or provincial legislature.

<sup>2</sup> **Shareholder** means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company



	If YES, furnish particulars		
3.11	Are you aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?	<b>YES</b>	<b>NO</b>
	If YES, furnish particulars		
3.12	Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?	<b>YES</b>	<b>NO</b>
	If YES, furnish particulars		
3.13	Is any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state?	<b>YES</b>	<b>NO</b>
	If YES, furnish particulars		
3.14	Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are tendering for this contract?	<b>YES</b>	<b>NO</b>
	If YES, furnish particulars		

4. Full details of directors / trustees / members / shareholders.

FULL NAME	IDENTITY NUMBER	STATE EMPLOYEE NUMBER

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM RD.A.2 MBD 8: DECLARATION OF TENDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTISES**

1. This municipal tender document must form part of all tenders invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The tender of any tenderer may be rejected if that tenderer, or any of its directors have:
  - a. abused the municipality's/municipal entity's supply management system or committed any improper conduct in relation to such system.
  - b. been convicted for fraud or corruption during the past five years.
  - c. wilfully neglected, reneged on, or failed to comply with any government, Municipal or other public sector contract during the past five years; or
  - d. been listed in the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 12 of 2004).
4. In order to give effect to the above, the following questionnaire must be completed and submitted with the tender:

Item	Question	Response	
4.1	Is the tenderer, any of its directors listed on the National Treasurer's database as a company or persons prohibited from doing business with the public sector? <b>(Companies for persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied)</b>  If so, furnish particulars:	YES	NO
4.2	Is the tenderer or any of its directors listed on the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 12 of 2004)? <b>(To access this register enter the National Treasury's website, <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> , click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number 012-326-5445).</b>  If so, furnish particulars:	YES	NO
4.3	Was the tenderer or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?  If so, furnish particulars:	YES	NO

Item	Question	Response	
4.4	Does the tenderer or any of its directors owe any municipal rates and taxes or municipal charges to the municipality/municipal entity, or to any other municipality/municipal entity, that is in arrears for more than three months?	YES	NO
	If so, furnish particulars:		
4.5	Was any contract between the tenderer and the municipality/municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	YES	NO
	If so, furnish particulars:		

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM RD.B.1 MBD 6.1: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution.

**NB BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017**

**1. GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to all tenders:

- The 80/20 system for requirements with a Rand value of up to R50 000 000.00 (**all applicable taxes included**); and
- The 90/10 system for requirements with a Rand value above R50 000 000.00 (**all applicable taxes included**).

1.2 The value of this tender is estimated to **exceeding** R50 000 000.00 and therefore the **90/10** system shall be applicable.

1.3 Preference points for this tender shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution

1.3.1 The points for this tender are allocated as follows:

	<b>POINTS</b>
1.3.1.1 <b>PRICE</b>	80
1.3.1.2 <b>B-BBEE STATUS LEVEL OF CONTRIBUTION</b>	20
<b>Total points for Price, B-BBEE must not exceed</b>	<b>100</b>

1.4 Failure on the part of a tenderer to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the tender, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 Blank or incomplete particulars or insufficient documentary proof thereof, or failure to sign the declaration, will be construed to mean that the tenderer is not claiming preference points, in which case no points will be awarded for HDI.

**2. DEFINITIONS**

2.1 **all applicable taxes** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

2.2 **B-BBEE** means broad-based black economic empowerment as defined in Section 1 of the Broad-Based Black Economic Empowerment Act.

2.3 **B-BBEE Status Level of Contributor** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of Section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003).

2.4 **Broad-Based Black Economic Empowerment Act** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003).

- 2.5 **Comparative price** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration.
- 2.6 **Consortium or joint venture** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skills and knowledge in an activity for the execution of a contract.
- 2.7 **Contract** means the agreement that results from the acceptance of a tender by an organ of state.
- 2.8 **EME** means any enterprise with an annual total revenue of R5 million or less.
- 2.9 **Firm price** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract.
- 2.10 **Functionality** means the measurement according to predetermined norms, as set out in the tender documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder.
- 2.11 **Non-firm prices** means all prices other than **firm** prices.
- 2.12 **Person** includes a juristic person.
- 2.13 **Rand value** means that total estimated value of a contract in South African currency, calculated at the time of tender invitations and includes all applicable taxes and excise duties.
- 2.14 **Sub-contract** means the primary contractor's assigning or leasing or making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.
- 2.15 **Tender** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods, works or services works or goods, through price quotations, advertised competitive bidding processes or proposals.
- 2.16 **Total revenue** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007.
- 2.17 **Trust** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person.
- 2.18 **Trustee** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
- 3. ADJUDICATION USING A POINT SYSTEM**
- 3.1 The tenderer obtaining the highest number of total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
- 3.3 Points scored will be rounded off to 2 (two) decimal places.
- 3.4 In the event that two or more tenders have scored equal total points, the successful tender must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more tenders have scored equal points including equal preference points for B-BBEE, the successful tender must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

**4. POINTS AWARDED FOR PRICE**

**THE 80/20 OR 90/10 PREFERENCE POINT SYSTEM**

A maximum of 80 or 90 points is allocated for price on the following basis:

**80/20**

**90/10**

$$P_S = 80 \left( 1 - \frac{P_T - P_{MIN}}{P_{MIN}} \right)$$

$$P_S = 90 \left( 1 - \frac{P_T - P_{MIN}}{P_{MIN}} \right)$$

Where

$P_S$  = Points scored for price of tender under consideration

$P_T$  = Rand value of tender under consideration

$P_{MIN}$  = Rand value of lowest acceptable tender

**5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION**

5.1 In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<b>B-BBEE Status Level of Contributor</b>	<b>Number of points (80/20 system)</b>
1	10
2	9
3	6
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

5.2 Tenderers who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA’s approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.

5.3 Tenderers other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate tender.
- 5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than 30% of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 5.8 A person awarded a contract may not sub-contract more than 30% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

**6. TENDER DECLARATION**

Tenderers who claim points in respect B-BBEE Status Level of Contribution must complete the following

**7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1**

7.1 B-BBEE Status of Contribution:  =  (maximum of 10 or 20 points)

(Points claimed in respect of paragraph &.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA.

**8. SUB-CONTRACTING**

8.1 Will any portion of the contract be sub-contracted?  
(delete which is not applicable)

YES	NO
-----	----

8.1.1 If YES, indicate:

Name of subcontractor	% to be subcontracted	B-BBEE status level of sub-contractor	Is the sub-contractor an EME (delete which is not applicable)	
			YES	NO
			YES	NO
			YES	NO
			YES	NO

**9. DECLARATION WITH REGARD TO COMPANY/FIRM**

9.1 Name of FIRM: \_\_\_\_\_

9.2 VAT Registration number: \_\_\_\_\_



9.3 Company registration number: \_\_\_\_\_

9.4 Type of firm: \_\_\_\_\_

- Partnership
- One person business/sole trade
- Close corporation
- Company
- (Pty) Limited
- Small Medium Micro Enterprises

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

(Tick applicable box)

9.5 Describe principal business activities

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9.6 Company classification

- Manufacturer
- Supplier
- Professional service provider
- Other service providers, e.g. transporter etc.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

(Tick applicable box)

9.7 Municipal information

Municipality where business is situated: \_\_\_\_\_

Registered account number: \_\_\_\_\_

Stand number: \_\_\_\_\_

9.8 Total number of years the firm has been in business \_\_\_\_\_

9.9 I/we, the undersigned, who warrants that he/she is duly authorized to do so on behalf of the company/firm certify that points claimed, based on the B-BBEE status level of contribution, indicated in paragraph 7 of the foregoing certificate, qualifies the company/firm for the preference(s) shown and I/we acknowledge that:

- i) The information furnished is true and correct.
- ii) The preference claimed is in accordance with the General Conditions as indicated in paragraph 1 of this form.
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.
- iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have-

- a) disqualify the person. from the tender process;
- b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct; and
- c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
- d) restrict the tenderer or contractor, its shareholders and directors, or only the shareholders and directors WHO acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteran partem (hear the other side) rule have been applied; and
- e) forward the matter for criminal prosecution.

**NAME:**

(in BLOCK letters)

\_\_\_\_\_

**CAPACITY:**

(of authorized agent)

\_\_\_\_\_

**SIGNATURE:**

(of authorized agent)

\_\_\_\_\_

SIGNED at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_

**WITNESSES:**

(Full name in BLOCK letters and signature)

1.

\_\_\_\_\_

2.

\_\_\_\_\_

**FORM RD.B.2 B-BBEE EXEMPTED MICRO ENTERPRISE – SWORN AFFIDAVIT**

I, the undersigned

<b>Full Name &amp; Surname</b>	_____																				
<b>Identity Number</b>									-						-				-		

Hereby declare under oath as follow:

- 1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
- 2. I am a member / director / owner of the following enterprise and am duly authorised to act on its behalf.

<b>Enterprise Name</b>	_____
<b>Trading Name</b>	_____
<b>Registration Number</b>	_____
<b>Enterprise Address</b>	_____

3. I hereby declare under oath that:

- The enterprise is \_\_\_\_\_ % black owned;

- The enterprise is \_\_\_\_\_ % black woman owned;
- Based on the audited management accounts and other information available on the \_\_\_\_\_ financial year, the income did not exceed R 10,000,000 (ten million rands);
- Please confirm on the below the B-BBEE level contributor, by ticking the applicable box.

100% Black owned	<b>Level One</b> (135% B-BBEE procurement recognition)	
More than 51% Black owned	<b>Level Two</b> (125% B-BBEE procurement recognition)	
Less than 51% Black owned	<b>Level Four</b> (100% B-BBEE procurement recognition)	

4. The entity is an empowering supplier in terms of the DTI Codes of Good Practice
5. I know and understand the contents of the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
6. The sworn affidavit will be valid for a period of 12 (twelve) month from the date signed by the commissioner.

Deponent Signature:	Date:
Commissioner of oaths (Signature and stamp)	

**FORM RD.C.1 MBD 2: TAX CLEARANCE CERTIFICATE REQUIREMENTS**

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

1. In order to meet this requirement bidders are required to complete in full the form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate or SARS unique pin must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za)

Attach Tax Certificate/s to this page

## FORM RD.C.2 MBD 9: CERTIFICATION OF INDEPENDENT TENDER DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all tenders<sup>3</sup> invited.
2. Section 4 (1) (b) (iii) of the Competition Act Nol. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive tendering (or tender rigging)<sup>4</sup>. Collusive tendering is a *per se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
  - a. Take all reasonable steps to prevent such abuse;
  - b. Reject the tender of any tenderer if that tenderer or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
  - c. Cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the tendering process or the execution of the contract.
4. This will serve as a certificate of declaration that would be used by institutions to ensure that, when tenders are considered, reasonable steps are taken to prevent any form of tender-rigging.
5. In order to give effect to the above, the attached Certificate of Tender Determination must be completed and submitted with the tender.

---

<sup>3</sup> Includes price quotations, advertised competitive tenders, limited tenders and proposals.

<sup>4</sup> Tender rigging (or collusive tendering) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and/or services for purchasers who wish to acquire goods and/or services through a tender process. Tender rigging is, therefore, an agreement between competitors not to compete.

## CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying tender:

GPM -2021 Tender to appoint contractors for electrical maintenance and repairs of City of Tshwane buildings and facilities for a period of three (3) years as and when required.

PART T2: RETURNABLE DOCUMENTS

in response to the invitation for the tender made by

### **City of Tshwane Metropolitan Municipality**

do hereby make the following statement that I certify to be true and complete in every respect:

I certify, on behalf of \_\_\_\_\_  
that:

(Name of tenderer)

1. I have read and understand the contents of this certificate;
2. I understand that the accompanying tender will be disqualified if this certificate is found not to be true and complete in every aspect;
3. I am authorised by the tenderer to sign this certificate, and to submit the accompanying tender, on behalf of the tenderer;
4. Each person whose signature appears on the accompanying tender has been authorised by the tenderer to determine the terms of, and to sign, the tender, on behalf of the tenderer;
5. For the purposes of this Certificate and the accompanying tender, I understand that the word "competitor" shall include any individual or organization, other than the tenderer, whether or not affiliated with the tenderer who:
  - a. Has been requested to submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
  - b. Could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer.
6. The tenderer has arrived at the accompanying tender independently form, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>5</sup> will not be construed as collusive tendering.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - a. Prices;
  - b. Geographical area where product or services will be rendered (market allocation);
  - c. Methods, factors or formulas used to calculate prices;
  - d. The intention or decision to submit or not to submit, a tender;
  - e. The submission of a tender which does not meet the specifications and conditions of the tender; or
  - f. Tendering with the intention not to win the tender.

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<sup>5</sup> Joint venture or consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

8. In addition, there have been no consultations, communications, agreements or arrangement with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this tender invitation relates.
9. The terms of the accompanying tender have not been, and will not be, disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or to the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practises related to tenders and contracts, tenders that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted form conduction business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM RD.C.3 PROOF OF REGISTRATION WITH THE CIDB**

1. Attach original or certified copy of CIDB registration certificate to this page.
2. In the case of a joint venture / consortium (excluding consulting engineering partners) parties must each attach original or certified copy of their CIDB registration certificate.

<b>Firm</b>	<b>CRS Number</b>	<b>CIDB Grading</b>	<b>Lead Partner (Indicate with X)</b>
<b>Combined CIDB Grading for Joint Venture / Consortium:</b>			

(Calculator is available at <https://registers.cidb.org.za/common/ivcalc.asp> )

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM RD.C.4 COMPLIANCE WITH OHSA (ACT 85 OF 1993)**

Tenderers are required to satisfy the employer and the engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

(Tick applicable box)

1. Are your company familiar with the OHSA (ACT 85 of 1993) and its Regulations?	YES	NO
2. Who will prepare your company's Health and Safety Plan? Provide a copy of the person/s curriculum vitae/s or company profile.		
3. Do your company have a health and safety policy? If YES provide a copy.	YES	NO
4. How is this policy communicated to your employees? Provide supporting documentation.	YES	NO
5. Do your company keep record of safety aspects of each site where work is performed? If YES what records are kept?	YES	NO
6. Do your company conduct monthly safety meetings? If YES, who is the chairperson of the meeting, and attend these meetings?	YES	NO
7. Do your company have a safety officer in its employment, responsible for overall safety of your company? If YES, explain his duties and provide a copy of his CV	YES	NO
8. Do your company have trained first aid employees? If YES, indicate who.	YES	NO
9. Do your company have a safety induction training programme in place? If YES, provide a copy.	YES	NO
10. Do your company conduct medical surveillance for its employees?	YES	NO

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**FORM RD.C.5 RECORD OF SERVICES PROVIDED TO ORGANS OF STATE**

Tenderers are required to complete this record in terms of the Supply Chain Management Regulations issued in terms of the Municipal Finance Management Act of 2003.

Include only those contracts where the tenderer identified in the signature block below was directly contracted by the employer. Tenderers must not include services provided in terms of a sub-contract agreement.

Where contracts were awarded in the name of a joint venture and the tenderer formed part of that joint venture, indicate in the column entitled "Title of the contract for the service" that was in joint venture and provide the name of the joint venture that contracted with the employer. In the column for the value of the contract for the service, record the value of the portion of the contract performed (or to be performed) by the tenderer.

Complete the record or attach the required information in the prescribed tabulation

<b>ALL SERVICES COMMENCED OR COMPLETED TO AN ORGAN OF STATE IN THE LAST FIVE YEARS</b>				
	<b>Organ of state, i.e. national or provincial department, public entity, municipality or municipal entity.</b>	<b>Title of contract for the service</b>	<b>Value of contract for service incl. VAT (Rand)</b>	<b>Date completed (State current if not yet completed)</b>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

(Attach additional pages if more space is required.)

<p>The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.</p> <p><b>Person authorized to sign the tender:</b></p> <p>Full name (in BLOCK letters): _____</p> <p>Signature: _____</p> <p>Date: _____</p>
--

**FORM RD.C.6      SCHEDULE OF PLANT AND EQUIPMENT**

The following are lists of the major items of relevant equipment that I/we presently own/lease and will have available for this contract or will hire/acquire for this contract as proof of the requirements for Clause F.3.13 b) of the Conditions of Tender

<b>Major equipment owned/leased that is immediately available for the execution of the works</b>	
<b>Quantity</b>	<b>Description, size, capacity etc.</b>

(Attach additional pages if more space is required)

<b>Major equipment that will be hired or acquired for the execution of the works</b>	
<b>Quantity</b>	<b>Description, size, capacity etc.</b>

**FORM RD.C.7 STATUS OF CONCERN SUBMITTING TENDER**

1. General

State whether the tenderer is a company, a closed corporation, a partnership, a sole practitioner, a joint venture/consortium or a co-operative

Public Company	<input type="checkbox"/>
Private Company	<input type="checkbox"/>
Closed Corporation	<input type="checkbox"/>
Partnership	<input type="checkbox"/>
Sole Proprietary	<input type="checkbox"/>
Joint Venture / Consortium	<input type="checkbox"/>
Co-operative	<input type="checkbox"/>

(Mark the appropriate option)

2. Information to be provided

If the Tendering Entity is a:		Documentation to be submitted with the tender
1	<u>Closed Corporation</u> , incorporated under the Close Corporation Act, 1984, Act 69 of 1984	CIPRO CK1 or CK2 (Certified copies of the founding statement) and list of members
2	<u>Private Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 53 (b))	Certified copies of: a) CIPRO CM 1 - Certificate of Incorporation b) CIPRO CM 29 – Contents of Register of Directors, Auditors and Officers c) Shareholders Certificates of all Members of the Company, plus a signed statement of the Company's Auditor, certifying each Member's ownership/shareholding percentage relative to the total.
3	<u>Private Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 in which any, or all, <u>shares are held by another</u> Closed Corporation or company with, or without, share capital.	Certified copies of documents referred to in 1 and/or 2 above in respect of all such Closed Corporations and/or Companies
4	<u>Public Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 21)	A signed statement of the Company's Secretary confirming that the Company is a public Company.
5	<u>Sole Proprietary</u> or a <u>Partnership</u>	Certified copy of the Identity Document of: a) such Sole Proprietary, or b) Each of the Partners in the Partnership Certified copy of the Partnership agreement.
6	<u>Co-operative</u>	CIPRO CR2 - Certified copies of Company registration document.

If the Tendering Entity is a:		Documentation to be submitted with the tender
7	<u>Joint Venture / Consortium</u>	All the documents (as described above) as applicable to each partner in the joint venture / consortium as well as a certified copy of the joint venture / consortium agreement.

**Note:**

1. If the shares are held in trust provide a copy of the Deed of Trust (only the front page and pages listing the trustees and beneficiaries are required) as well as the Letter of Authority as issued by the Master of the Supreme Court wherein trustees have been duly appointed and authorised
2. Include a certified copy of the Certificate of Change of Name (CM9) if applicable.

3. Registered for VAT proposes in terms of the Value-Added Tax Act (89 of 1991)

Yes

No

(Make an X in the appropriate space)

REGISTRATION NO: \_\_\_\_\_

**FORM RD.C.8 CLASSIFICATION OF BUSINESS**

- 1. The Small Businesses are defined in the National Small Business Act, 1996 (Act 102 of 1996).
- 2. Information furnished with regard to the classification of Small businesses

(a.) Indicate whether the company/entity is defined as a small, medium or micro enterprise by the National Small Business Act.

YES	NO
-----	----

(Tick appropriate box)

(b.) If the response to 2.(a.) is **YES**, the following must be completed:

i. Sector/sub-sector in accordance with the Standard Industrial classification:

\_\_\_\_\_

ii. Size or class:

\_\_\_\_\_

iii. Total full-time equivalent of paid employees:

\_\_\_\_\_

iv. Total annual turnover:

\_\_\_\_\_

v. Total gross asset value (fixed property excluded):

\_\_\_\_\_

(A schedule indicating the different sectors is attached to this form.)

(c.) The tenderer should substantiate the information provided by submitting the following documentation:

- i. A letter from the tenderer's auditor or an affidavit from the South African Police Services confirming the correctness of the abovementioned information,
- ii. Company profile indicating the tenderer's staff compliment, and
- iii. 3 year financial statement or since their establishment if established during the past 3 years.

**SCHEDULE OF SECTORS**

SIZE OF CLASS	THE TOTAL FULL-TIME EQUIVALENT OF PAID EMPLOYEES	TOTAL TURNOVER	TOTAL GROSS ASSET VALUE (FIXED PROPERTY EXCLUDED)
<b>AGRICULTURE</b>			
Medium	100	R 5 mil	R 5 mil
Small	50	R 3 mil	R 3 mil
Very Small	10	R 500 000	R 500 000
Micro	5	R 200 000	R 100 000
<b>MINING AND QUARRYING</b>			
Medium	200	R 39 mil	R 23 mil
Small	50	R 10 mil	R 6 mil
Very Small	20	R 4 mil	R 2 mil
Micro	5	R 200 000	R 100 000
<b>MANUFACTURING</b>			
Medium	200	R 51 mil	R 19 mil
Small	50	R 13 mil	R 5 mil
Very Small	20	R 5 mil	R 2 mil
Micro	5	R 200 000	R 100 000
<b>ELECTRICITY, GAS &amp; WATER</b>			
Medium	200	R 51 mil	R 19 mil
Small	50	R 13 mil	R 5 mil
Very Small	20	R 5.1 mil	R 1.9 mil
Micro	5	R 200 000	R 100 000
<b>CONSTRUCTION</b>			
Medium	200	R 26 mil	R 5 mil
Small	50	R 6 mil	R 1 mil
Very Small	20	R 3	R 500 000
Micro	5	R 200 000	R 100 000
<b>RETAIL AND MOTOR TRADE &amp; REPAIR SERVICES</b>			
Medium	200	R 39 mil	R 6 mil
Small	50	R 19 mil	R 3 mil
Very Small	20	R 4 mil	R 600 000
Micro	5	R 200 000	R 100 000
<b>WHOLESALE TRADE, COMMERCIAL AGENTS AND ALLIED SERVICES</b>			
Medium	200	R 64 mil	R 10 mil
Small	50	R 32 mil	R 5 mil
Very Small	20	R 6 mil	R 600 000
Micro	5	R 200 000	R 100 000
<b>CATERING, ACCOMMODATION AND OTHER TRADE</b>			
Medium	200	R 13 mil	R 3 mil
Small	50	R 6 mil	R 1 mil
Very Small	20	R 5.1 mil	R 1.9 mil
Micro	5	R 200 000	R 100 000
<b>TRANSPORT, STORAGE &amp; COMMUNICATIONS</b>			
Medium	200	R 26 mil	R 6 mil
Small	50	R 13 mil	R 3 mil
Very Small	20	R 3 mil	R 600 000
Micro	5	R 200 000	R 100 000
<b>FINANCE &amp; BUSINESS SERVICES</b>			
Medium	200	R 26 mil	R 5 mil
Small	50	R 13 mil	R 3 mil
Very Small	20	R 3 mil	R 500 000
Micro	5	R 200 000	R 100 000
<b>COMMUNITY, SOCIAL AND PERSONAL SERVICES</b>			
Medium	200	R 13 mil	R 6 mil
Small	50	R 6 mil	R 3 mil
Very Small	20	R 1mil	R 600 000
Micro	5	R 200 000	R 100 000

**FORM RD.C.9 CERTIFICATE OF AUTHORITY OF SIGNATORY**

**RESOLUTION** of the a meeting of the \*Board of Directors/Members/Partners of

\_\_\_\_\_

(Legally correct full name and registration number, if applicable, of the enterprise)

Held at: \_\_\_\_\_ (place)

On: \_\_\_\_\_ (date)

**RESOLVED** that:

1. The enterprise submits a tender to the Tshwane Metro Municipality in respect of the following project:

Tender Number:	<b>GPM 07 -2021/22</b>
Tender Description:	GPM07-2021/22 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.  PART T2: RETURNABLE DOCUMENTS

2. \*Mr/Ms: \_\_\_\_\_  
in \*his/her capacity as \_\_\_\_\_

and who will sign as follow:

Proof signature	Proof signature
-----------------	-----------------

be, and is hereby authorised to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender for the enterprise mentioned above

NAME	CAPACITY	SIGNATURE

<p>Note:</p> <ol style="list-style-type: none"> <li>1. *Delete which is not applicable.</li> <li>2. IMPORTANT: This resolution <u>must</u> be signed by all the directors/members/ partners of the tendering enterprise.</li> <li>3. Should the number of directors/members/partners exceed the space available above, additional names and signatures must be supplied on a separate page.</li> </ol>	<p>Enterprise stamp</p>
--	-------------------------

**FORM RD.C.10 CERTIFICATE OF AUTHORITY OF SIGNATORY FOR JOINT VENTURES AND CONSORTIA**

\*Joint venture/consortium name: \_\_\_\_\_

We, the undersigned, are submitting this tender in a \*joint venture/consortium and hereby authorise \*Mr/Ms \_\_\_\_\_ authorised signatory of the enterprise \_\_\_\_\_ acting in the capacity of lead partner to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender for the \*joint venture/consortium mentioned above.

Registered name of enterprise	Registration number	% of contract value	Address	Duly authorised signatory	Mark with (x) for lead partner

**Note:**

1. \*Delete which is not applicable.
2. IMPORTANT: This resolution must be signed by all the parties of the joint venture/consortium and every duly authorised signatory for each party to the joint venture/consortium must complete a Form RD.C.15.
3. Should the number of directors/members/partners exceed the space available above, additional names and signatures must be supplied on a separate page.



**FORM RD.E.1 RECORD OF ADDENDA TO TENDER DOCUMENTS**

We confirm that the following communications received from the Employer before submission of this tender, amending or amplifying the tender documents, have been taken in account in this tender offer:

	DATE	REFERENCE	TITLE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**MBD 6.2**

**DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**

This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

**1. General Conditions**

- 1.1 Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2 Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286:2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) on the date of advertisement of the bid as indicated in paragraph 3.1 below.

**The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp) at no cost.**

- 1.6 A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;
- 2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Maintenance of balustrades, barriers, retaining walls, bollards and steel structures as well as updating the inventory on the street furniture management system as and when required on tendered rates and subject to available budget over a 3-year period	100%
Steel Value-added Products	100%

- 3. Does any portion of the goods or services offered have any imported content?

*(Tick applicable box)*

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

- 3.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency on the date of advertisement of the bid. The relevant rates of exchange information is accessible on [www.resbank.co.za](http://www.resbank.co.za) Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

<b>Currency</b>	<b>Rates of exchange</b>
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

4. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

**LOCAL CONTENT DECLARATION  
(REFER TO ANNEX B OF SATS 1286:2011)**

**LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)  
IN RESPECT OF BID NO. GPM 03 2022/23**

**ISSUED BY:** (Procurement Authority / Name of Institution): City of Tshwane

NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp). Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ..... (full names),  
do hereby declare, in my capacity as ..... of  
..... (name of bidder entity),  
the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
  - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

**If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E.**

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

**SIGNATURE:** \_\_\_\_\_

**WITNESS No. 1** \_\_\_\_\_

**WITNESS No. 2** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

Annex C

**Local Content Declaration - Summary Schedule**

(C1)	<b>Tender No.</b>	GPM 03 2022/23
(C2)	<b>Tender description:</b>	Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.
(C3)	<b>Designated product(s):</b>	
(C4)	<b>Tender Authority:</b>	
(C5)	<b>Tendering Entity name:</b>	
(C6)	<b>Tender Exchange Rate:</b>	Pula <input type="text"/> EU <input type="text"/> GBP <input type="text"/>
(C7)	<b>Specified local content %</b>	

**NOTE: VAT TO BE EXCLUDED FROM ALL CALCULATIONS**

Calculation of local content							
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value- net of exempted imported content	Imported value	Local value	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)

Tender summary			
Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C16)	(C17)	(C18)	(C19)



**(C20) Total tender value** R 0

**Signature of tenderer from Annex B**

**(C21) Total Exempt imported content** R 0

**(C22) Total Tender value net of exempt imported content** R 0

**(C23) Total Imported content** R 0

**(C24) Total local content** R 0

**(C25) Average local content % of tender**

\_\_\_\_\_  
Date: \_\_\_\_\_







(D19) Total exempt imported value R 0

**This total must correspond with Annex C - C 21**

B. Imported directly by the Tenderer				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)

				<b>(D32) Total imported value by tenderer</b>						R 0	
<b>C. Imported by a 3rd party and supplied to the Tenderer</b>				<b>Calculation of imported content</b>						<b>Summary</b>	
Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
<i>(D33)</i>	<i>(D34)</i>	<i>(D35)</i>	<i>(D36)</i>	<i>(D37)</i>	<i>(D38)</i>	<i>(D39)</i>	<i>(D40)</i>	<i>(D41)</i>	<i>(D42)</i>	<i>(D43)</i>	<i>(D44)</i>
<b>(D45) Total imported value by 3rd party</b>										R 0	

<b>D. Other foreign currency payments</b>			<b>Calculation of foreign currency payments</b>		<b>Summary of payments</b>	
Type of payment	Local supplier making	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Local value of payments	

	<b>the payment</b>			
<i>(D46)</i>	<i>(D47)</i>	<i>(D48)</i>	<i>(D49)</i>	<i>(D50)</i>

<i>(D51)</i>

**(D52) Total of foreign currency payments declared by tenderer and/or 3rd party**

**Signature of tenderer from Annex B**

**(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above**

R 0

\_\_\_\_\_  
Date:

**This total must correspond  
with Annex C - C 23**



<b>(E9) Total local products (Goods, Services and Works)</b>		R 0

(E10) **Manpower costs** (Tenderer's manpower cost)

R 0

(E11) **Factory overheads** (Rental, depreciation & amortisation, utility costs, consumables etc.)

R 0

(E12) **Administration overheads and mark-up** (Marketing, insurance, financing, interest etc.)

R 0

(E13) Total local content

R 0

**This total must correspond with Annex C - C24**

**Signature of tenderer from Annex B**

Date: \_\_\_\_\_

GPM07-2021/22 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

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GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

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## **PORTION 2: CONTRACT**

### **PART C1: AGREEMENTS AND CONTRACT DATA**

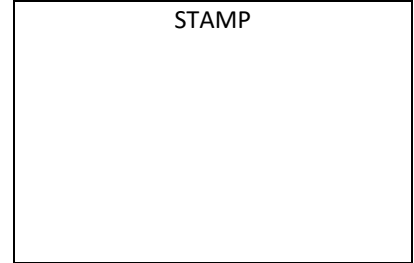
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Part C1: Agreement and Contract Data

### C1.1 FORM OF OFFER AND ACCEPTANCE



#### OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

**CONTRACT: NO.:** GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

#### THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS

.....  
.....  
..... Rand (in words) ;

R ..... (in figures) (or other suitable wording)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s).....

Name(s) .....

Capacity for the tenderer

.....  
.....

(Name and address of organization)



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

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Name and signature of witness.....Date.....

**Acceptance**

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer’s offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer’s offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part T1 Tendering procedures

Part T2 Returnable documents

Part C1 Agreements and contract data, (which includes this agreement)

Part C2 Pricing data (Bill of Quantity)

Part C3 Scope of work

Part C4 Bid Information Schedule

Drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer’s agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature(s).....

Name(s).....

Capacity for the Employer.....

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Part C1: Agreement and Contract Data

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.....  
(Name and address of organization)

Name and signature of witness.....

Date.....

1 As an alternative, the following wording may be used:  
Notwithstanding anything contained herein, this agreement comes into effect two working days after the submission by the employer of one fully completed original copy of this document including the schedule of deviations (if any), to a courier-to-counter delivery / counter-to-counter delivery / door-to-counter delivery /door-to-door delivery /courier service (delete that which is not applicable), provided that the employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now contractor) within seven working days of the date of such submission notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

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**SCHEDULE OF DEVIATIONS**

**Notes:**

- 1. The extent of deviations from the tender documents issued by the employer before the tender closing date is limited to those permitted in terms of the conditions of tender.*
- 2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.*
- 3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.*
- 4. Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.*

1 Subject \_\_\_\_\_

Details \_\_\_\_\_

2 Subject \_\_\_\_\_

Details \_\_\_\_\_

3 Subject \_\_\_\_\_

Details \_\_\_\_\_

4 Subject \_\_\_\_\_

Details \_\_\_\_\_

By the duly authorized representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

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Part C1: Agreement and Contract Data

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## **C1.2 CONTRACT DATA**

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Part C1: Agreement and Contract Data

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#### **C.1.2.1 GENERAL CONDITIONS OF CONTRACT**

**The general conditions of contract applicable to this contract shall be the General Conditions of Contract for Electrical Works, Third Edition (2015) of the South African Institution of Electrical Engineers (SAIEE), read together with the Variations and Additions to the Conditions of Contract as well as the Data provided by employer.**

**Tenderers, contractors, and subcontractors shall obtain their own copies of the document General Conditions of Contract for Electrical Works, Third Edition (2015) for tendering purposes and for use for the duration of the contract from the Secretary of the South African Institution of Electrical Engineers, 18A Gill St, Observatory, Johannesburg, 2198 and shall bear all expenses in this regard.**

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Part C1: Agreement and Contract Data

**C1.2.2 DATA PROVIDED BY THE EMPLOYER**

**C1.2.2.1 The Data which will apply to all work under the GCC Contract is**

CLAUSE/OPTION	DATA
10.1	<ul style="list-style-type: none"> <li>• The <i>Employer</i> is <b>City of Tshwane Metropolitan Municipality</b>.</li> <li>• The <i>Employer</i> has authorised the Group Head to act on his behalf in respect of this Contract, save for such duties or functions:               <ul style="list-style-type: none"> <li>– which other holders of office ex officio execute on behalf of the <i>Employer</i>; or</li> <li>– for which the Group head has no authority and the <i>Employer's</i> approval is required before execution thereof.</li> </ul> </li> <li>• The Group Head is:               <p style="margin-left: 20px;"><b>Ms Verusha Morgan (Group Head)</b> <b>Facilities Management: Group Property</b></p> </li> </ul>
20.1	<ul style="list-style-type: none"> <li>• The <i>scope</i> is in <b>Part C3: Scope of Work</b></li> <li>• The <i>selection procedure</i> is in <b>C3.3.1.1 Selection Procedure</b></li> </ul>
30.1	<ul style="list-style-type: none"> <li>• The <i>end date</i> will be <b>3 years after date of acceptance</b>.</li> </ul>

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Part C1: Agreement and Contract Data

**C1.2.2.2 The Data which will apply to all Package Orders is**

The Conditions of Contract for all Package Orders will be the **General Conditions of Contract for Construction Works, 3<sup>rd</sup> Edition (2015)**.

The following variations and additions to the General Conditions of Contract for Construction Works, 3<sup>rd</sup> Edition (2015), shall apply to all Package Orders:

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
1.2.1	Delivery of notices	<p><b>Add</b> the following to the clause:</p> <p>1.2.1.3 <i>Sent by facsimile, electronic or any like communication irrespective of it being during office hours or otherwise.</i></p>
1.2.3	Authority representatives of	<p><b>Add</b> the following to the clause:</p> <p>1.2.3.1 <i>The Employer has authorised the <b>Group Head: Group Property Facilities Management: Group Property</b> to act on his behalf in respect of this Contract, save for such duties or functions:</i></p> <p>1.2.3.1.1 <i>which other holders of office ex officio execute on behalf of the Employer; or</i></p> <p>1.2.3.1.2 <i>for which the <b>Group Head : Facilities Management: Group Property</b> has no authority and the Employer’s approval is required before execution thereof.</i></p>
3.2.7	Employer’s Agent’s Representative	<p><b>Add</b> the following new sub-clause:</p> <p>3.2.7 <i>The Employer may, in his sole discretion, provide technical support services to the Contractor. The technical team providing such support services will be appointed and remunerated by the Employer. In the case of EPWP Contractor Learnership Programmes, support services may be provided by the Department of Public Works. The technical team will consist of the Employer’s Agent and a person or persons acting as Training, Construction and Materials Managers or Construction Mentor, depending on the services to be provided and the scope of the functions to be executed</i></p> <p>3.2.7.1 <i>In addition to his duties and functions in terms of 2.1, the Employer’s Agent will coordinate the work of the technical team providing the support services.</i></p> <p>3.2.7.2 <i>The Construction Manager acts as mentor to the Contractor in respect of the following functions, which are described fully in the CESA document, Guideline Contract Specific Data C4- Construction Management Services of the Form of Agreement for Consulting Services for Labour Intensive Construction Projects:</i></p> <p>i. <i>Programming the execution of the works</i></p>

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CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<ul style="list-style-type: none"> <li>ii. <i>Interpretation of drawings, specifications and related contractual matters.</i></li> <li>iii. <i>Workforce structuring, employment and management.</i></li> <li>iv. <i>Guidance to expedite work progress/improve productivity.</i></li> <li>v. <i>Setting out of works.</i></li> <li>vi. <i>Safety measures and legislation requirements.</i></li> <li>vii. <i>Materials handling.</i></li> <li>viii. <i>Tools and equipment needs.</i></li> <li>ix. <i>Financial matters.</i></li> <li>x. <i>Training requirements.</i></li> <li>xi. <i>Security aspects.</i></li> <li>xii. <i>Quality control systems</i></li> </ul> <p>3.2.8 <i>The Materials Manager is responsible for the following functions which are described fully in the CESA document, Guideline Contract Specific Data C5 -Materials Procurement Services of the Form of Agreement for Consulting Services for Labour-Intensive Construction Projects on the Contract:</i></p> <ul style="list-style-type: none"> <li>i. <i>Establishment of stores.</i></li> <li>ii. <i>Determination of store administration procedures.</i></li> <li>iii. <i>Determination of requirements of store staff.</i></li> <li>iv. <i>Employment of store staff.</i></li> <li>v. <i>Staff guidance, supervision and training.</i></li> <li>vi. <i>Acquisition of materials.</i></li> <li>vii. <i>Issue of materials.</i></li> <li>viii. <i>Upholding of an assets register.</i></li> <li>ix. <i>Insurance of assets.</i></li> </ul> <p>3.2.9 <i>The main role of the Mentor is to support the Learner Contractor and to impart knowledge that will enable the Contractor to compete independently as soon as possible. The Mentor provides a wide range of support and advice functions, including but not limited to advice with regard to:</i></p> <ul style="list-style-type: none"> <li>i. <i>Finance and dealing with banks.</i></li> <li>ii. <i>Business management.</i></li> <li>iii. <i>Contract management.</i></li> <li>iv. <i>Procurement of materials and other required services.</i></li> <li>v. <i>Technical and engineering.</i></li> <li>vi. <i>Construction planning and management.</i></li> <li>vii. <i>Fulfilling of statutory and tax obligations.</i></li> <li>viii. <i>Labour and human resource guidance.</i></li> </ul>
4.3	Legal Provisions	<p><b>Add</b> the following new sub-clause:</p> <p>1.3.3 <i>Wages and conditions of work:</i></p>



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CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p>i. <i>For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the latest Sectoral Determination: Civil Engineering Sector published from time to time.</i></p> <p>ii. <i>Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) as per Government Notice R63 of 25 January 2002, shall apply to works described in the Scope of Work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.</i></p> <p><b>Add</b> the following new sub-clause:</p> <p>4.3.4 <i>Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2003, for which he is liable as mandatory. By entering into this Contract it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37(2) of the Act. The Contractor shall sign the Occupational Health and Safety Agreement for Contract Work in the City of Tshwane Metropolitan Municipality included in section C1.5.</i></p> <p><b>Add</b> the following new sub-clause:</p> <p>4.3.5 <i>The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub-Contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations.</i></p> <p><b>Add</b> the following new sub-clause:</p> <p>4.3.6 <i>Contractor's Designer</i></p> <p><i>The Contractor and his designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2003 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract</i></p>

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CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
5.12	Extension of time for Practical Completion	<p><b>Add</b> the following new sub-clause</p> <p>5.12.5 <i>Critical path provision</i></p> <p><i>A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer’s Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.</i></p> <hr/> <p><b>Add</b> the following new sub-clause</p> <p>5.12.6 <i>Extension of time due to abnormal rainfall</i></p> <p><i>Extension of time due to abnormal rainfall shall be determined by means of Method 1, if rainfall records and/or values derived from rainfall records are supplied in the Scope of Work, otherwise Method 2 shall apply.</i></p> <p><u><i>Method 1: Rainfall formula method</i></u></p> <p><i>The rainfall records and/or values derived from rainfall records from a suitable rainfall station near the Site, which are supplied in the Project Specifications, shall be considered suitable for the determination of extension of time due to abnormal rainfall in accordance with this method.</i></p> <p><i>Extension of time arising from abnormal rainfall, shall be calculated separately for each calendar month or part thereof for the full period of completion of the Contract, including any extension thereof, in accordance with the rainfall formula given below:</i></p> $V = (N_w - N_n) + \frac{(R_w - R_n)}{X}$ <p><i>If V is negative and its absolute value exceeds N<sub>n</sub>, then V shall be equal to minus N<sub>n</sub>.</i></p> <p><i>If V is positive and greater than the number of calendar days in the calendar month under consideration, V shall be taken as equal to the number of calendar days in the relevant calendar month.</i></p>

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CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p><i>The symbols shall have the following meaning:</i></p> <p><math>V</math> = <i>Extension of time in calendar days in respect of the calendar month under consideration</i></p> <p><math>N_w</math> = <i>Actual number of days during the calendar month on which a rainfall of <math>Y</math> mm or more has been recorded.</i></p> <p><math>R_w</math> = <i>Actual rainfall in mm for the calendar month under consideration.</i></p> <p><math>N_n</math> = <i>Average number of days as derived from existing rainfall records, on which a rainfall of <math>Y</math> mm or more has been recorded for the calendar month. Rainfall records and/or the derived values of <math>N_n</math> will be provided in the Specifications.</i></p> <p><math>R_n</math> = <i>Average rainfall in mm for the calendar month, as derived from existing rainfall records. Rainfall records and/or the derived values of <math>R_n</math> will be provided in the Project Specifications.</i></p> <p><math>X</math> = <i>20 unless otherwise provided in the Project Specifications</i></p> <p><math>Y</math> = <i>10 unless otherwise provided in the Project Specifications</i></p> <p><i>The total extension of time shall be the algebraic sum of the monthly totals for the period under consideration. However, if the grand total is negative the time for completion shall not be reduced on account of abnormal rainfall. Extension of time for parts of a month shall be calculated by pro rata values of <math>N_n</math> and <math>R_n</math> being used.</i></p> <p><i>The factor <math>(N_w - N_n)</math> shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds <math>Y</math> mm and wet conditions prevented or disrupted work.</i></p> <p><i>The factor <math>\frac{(R_w - R_n)}{X}</math> shall be considered to represent a fair allowance for variations from the allowance for variations from the average number of days when wet conditions further to that allowed for the factor <math>(N_w - N_n)</math>, prevented or disrupted work during the calendar month.</i></p> <p><i>Accurate rain gauging shall be taken at a suitable point on Site and the Contractor shall, at his own expense, take all necessary precautions to ensure that the rain gauges cannot be interfered with.</i></p> <p><i>This formula does not take into account further on concurrent delays which could be caused by other abnormal climatic conditions such as floods, which have to be determined separately in accordance with Sub-Clause (42.5 Critical Path Provision) hereof.</i></p>

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CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p><u>Method 2: Expected delay method</u></p> <p><i>The Contractor shall make provision in his programme for the execution of the Works, for an expected delay of "n" normal working days (based on a working week of five normal working days) due to normal rainfall, for which he will not receive any extension of time.</i></p> <p><i>Unless otherwise provided in the Project Specifications, the value of "n" shall be taken as equal to the tendered time for completion of the Works in months, rounded off to an integer.</i></p> <p><i>Extension of time during normal working days will be granted to the degree to which actual delays as determined in accordance with Sub-Clause (42.5 Critical Path Provision) hereof, exceed the number of "n" normal working days.</i></p> <p><i>The value of "n" does not take into account further or concurrent delays which are caused by other abnormal climatic conditions such as floods, which have to be determined separately in accordance with Sub-Clause (42.5 Critical Path Provision) hereof.</i></p>
6.1	Payment to Contractor	<p><b>Add</b> the following new sub-clause:</p> <p>6.1.2 <i>Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way of his obligations either in contract or in delict.</i></p> <p><b>Add</b> the following new sub-clause</p> <p>6.1.3 <i>The Contractor shall be paid at Pretoria in the currency of the Republic of South Africa only at the Office of the Chief Financial Officer of the CITY OF TSHWANE, unless otherwise stated in the Data provided by Employer.</i></p>
6.2	Security	<p><b>Add</b> the following new sub-clause:</p> <p>6.2.4 <i>As an alternative to a performance guarantee, the Contractor may deposit with the Employer a cash amount in a sum equal to the amount stated in the Data provided by Employer. All the provisions in respect of the guarantee apply mutatis mutandis to the cash deposit accept that the amount deposited will be repaid to the Contractor within 30 (thirty) days after the issue of the Certificate or</i></p>

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CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p><i>Certificates of Completion in respect of the whole of the permanent works.</i></p>
8.6	Insurances	<p><b>Replace</b> clause 8.6 with the following:</p> <p><b>8.6 Insurances</b></p> <p>8.6.1 <i>Without limiting the Contractor's/Sub-contractor's obligation in terms of the Contract, the Employer will effect and maintain for the duration of the Contract until the issuing of the Defects Certificate or the end of the Maintenance Period, the following insurances in the name of the Contractor (including all Subcontractors whether nominated or otherwise):</i></p> <p>8.6.2 <i>The Employer's insurer will indemnify the Contractor/Sub-contractor against physical loss of or damage to any part of the Property Insured not exceeding the maximum contract value or the final contract value estimated at inception including free issue materials were applicable as stated in the Contract Data:</i></p> <ul style="list-style-type: none"> <li>a. <i>Whilst in transit including loading and unloading whilst temporarily stored at any premises en route to or from the Contract Site within the Territorial Limits;</i></li> <li>b. <i>From the time of unloading, dismantling or preparation at the Contract Site and thereafter until the Property Insured has been officially accepted by the Employer and becomes his responsibility by means of a notice of completion certificate or similar evidence of legal transfer of risk;</i></li> <li>c. <i>During the contractual defects liability or Maintenance Period which shall not exceed the period reflected in the Schedule but only so far as the Contractors and/or Sub-Contractors may be liable for such loss or damage under the defects liability or maintenance condition/s of the Insured Contract;</i></li> <li>d. <i>Removal of debris;</i></li> <li>e. <i>Surrounding property</i></li> <li>f. <i>Work away;</i></li> <li>g. <i>Offsite storage</i></li> <li>h. <i>Temporary repairs;</i></li> <li>i. <i>Contribution clause – marine;</i></li> <li>j. <i>Escalation during Contract Period;</i></li> <li>k. <i>Post loss escalation;</i></li> <li>l. <i>Automatic reinstatement;</i></li> <li>m. <i>Principals maintenance;</i></li> <li>n. <i>Property taken over;</i></li> <li>o. <i>Beneficial occupation;</i></li> </ul>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p>p. Escalation due to currency fluctuation; q. Manufacturers guarantees</p> <p>8.6.3 The Employer's insurer will indemnify the Contractor/Sub-contractor against all sums for which the Contractor/Sub-contractor shall become legally liable towards third party claimants to pay for and in consequence of:</p> <p>a. Accidental death of or bodily injury to or illness or disease contracted by any person (excluding employees of the Contractor/Subcontractor); b. Accidental physical loss or damage to tangible property occurring during the Period of Insurance and arising out of or in connection with the performance of the Insured Contract at the Contract Site as defined in the Schedule. The minimum limit of indemnity for any one event is R10-million in respect of contracts with a contract value of up to R50-million (excluding VAT).</p> <p>8.7 Insurance premium payable</p> <p>The Employer will pay the insurance premium for the works damage and public liability insurance cover. The insurance premium will be calculated based on the approved Capital Budget per financial year and the insurance premium will be charged out to the relevant departments by the Section: Insurance and Risk Management.</p> <p>8.8 Additional insurance by the Employer</p> <p>The Employer shall be free to effect at his own cost any additional insurance, which he deems necessary in own interest to cover loss or damage not insured in terms of the insurance policies of Sub-Clause 35.1.1 of this Clause.</p> <p>8.9 Additional insurance by the Contractor / Subcontractor</p> <p>The Contractor and Sub-contractor shall be free to effect and maintain at their own cost any additional insurance which the Contractor/Subcontractor deem necessary to cover damage, loss or injury not insured in terms of the insurance effected by the Employer's insurer. The cost of the additional insurance will be for the account of the Contractor/Subcontractor.</p> <p>8.10 Contractor satisfied with insurance</p> <p>The submission of a tender shall be construed as acknowledgement by the Contractor that he is satisfied with the insurance cover affected by the Employer.</p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p>8.11 Contractor to observe conditions</p> <p><i>The Contractor shall give all notices and observe all conditions and requirements imposed by the relevant insurance policies, which shall be binding on the Contractor.</i></p> <p>8.12 Contractor to insure</p> <p><i>The Contractor/Sub-contractor must obtain for the duration of the contract until the issuing of the Defects Certificate or the end of the Maintenance Period, the following insurance policies at an insurance company within 14 (fourteen) days of the notification of acceptance of the tender and must pay all premiums and supply proof thereof to the relevant Project Manager, 30 (thirty) days before the inception of the contract, that the policies have been taken out and that all premiums have been paid:</i></p> <ul style="list-style-type: none"> <li>a. <i>All Risk Insurance cover with regard to all Plant and Materials and Equipment, owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.</i></li> <li>b. <i>Motor Vehicle and Liability Insurance cover indicating the registration numbers of the vehicles owned, leased or hired by the Contractor that are used in the execution of the contract to the amount of at least R10-million per claim with the number of claims unlimited.</i></li> <li>c. <i>SASRIA cover for motor vehicles and Plant and Materials and Equipment owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.</i></li> <li>d. <i>In respect of Plant and Materials and Equipment and Motor Vehicles brought onto the Site by or on behalf of Subcontractors, the Contractor shall be deemed to have complied with the provisions of this Sub-Clause by ensuring that such Subcontractors have similarly insured such Plant and Materials and Equipment and Motor Vehicles.</i></li> <li>e. <i>Proof must also be submitted that the Contractor complies with the conditions of the following legislation:</i> <ul style="list-style-type: none"> <li>- <i>Compensation for Occupational Injuries and disease, 1993</i></li> <li>- <i>Unemployment Insurance Act, 1996</i></li> <li>- <i>The Contractor shall in respect of the Site of the contract works appoint in writing a Section 16 appointee to meet the requirements of the Health and Safety Act, No 85 of 1993 as amended.</i></li> </ul> </li> </ul>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p>8.13 <i>The Project Manager involved must furnish the required insurance documentation 30 (thirty) days before the inception of the contract to the Section: Insurance and Risk Management.</i></p> <p>8.14 <i>Reporting of incidents</i></p> <p><i>In the event of an occurrence, which is likely to give rise to a claim under the insurance policy affected by the Employer, the Contractor / Subcontractors and Project Manager will adhere to the following procedures:</i></p> <p><i>a. In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Project Manager of every occurrence within 48 (forty-eight) hours giving the circumstances, nature and an estimate of the loss or damage.</i></p> <p><i>b. The Project Manager will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Project Manager more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Director motivating the reason(s) for the late reporting of the incident, but the Project Manager must take note the Insurer might repudiate the loss if it is found that the insurers rights have been compromised as a result of the late reporting.</i></p> <p><i>c. The following documentation must be included with the claim documentation:</i></p> <p style="padding-left: 40px;"><i>- Photos of damages caused or suffered as proof or substantiation of the claims.</i></p> <p><i>d. In the event of Insured Property being damaged during the Contract Works beyond economical repair, the property must be safeguarded and be handed over to the Employer's insurer for salvage.</i></p> <p><i>e. The Section: Insurance and Risk Management will inform the Employer's insurer of the incident. The Contractor/Subcontractor shall afford all reasonable access to the Site to the Employer, the Project Manager, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.</i></p>



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Part C1: Agreement and Contract Data

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p>8.15 <i>Reporting of catastrophic incidents</i></p> <p><i>In the event of an occurrence, which is likely to give rise to a claim, under the insurance policy effected by the Employer, with an estimated loss or damage of more than R250 000,00, the Contractor and the Project Manager will adhere to the following procedures:</i></p> <ul style="list-style-type: none"> <li><i>a. In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Project Manager of every occurrence within 24 (twenty-four) hours giving the circumstances, nature and an estimate of the loss or damage.</i></li> <li><i>b. The Project Manager must notify the Section: Insurance and Risk Management on the same day that the Contractor/Sub-contractor has notified the Project Manager of the incident.</i></li> <li><i>c. The Section: Insurance and Risk Management will notify the Employer's insurer of the incident. The Contractor/Sub-contractor shall afford all reasonable access to the Site to the Employer, the Project Manager, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.</i></li> <li><i>d. The Project Manager will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Project Manager more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Officer motivating the reason(s) for the late reporting of the incident. Should the relevant claim documentation not be submitted within 30 (thirty) days, the claim will be repudiated.</i></li> </ul> <p>8.16 <i>Reporting of crime related incidents</i></p> <p><i>All crime related incidents, losses or shortages irrespective of the value, must be reported within 24 (twenty-four) hours by the person who was involved or who has discovered the incident to the nearest South African Police Services (SAPS) station. The name of the Police Station, Investigation Officer and the Case number must be obtained and stated on the Contractor Claim Form. Should the incident not be reported to the SAPS, the claim will be repudiated.</i></p> <p>8.17 <i>Claim documentation</i></p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p><i>The Project Manager must obtain all relevant information from the Contractor/Sub-contractor and complete the Contractor Claim Form, included in this report as Annexure B that is available on the Intranet. The project number must be stated on the Contractor Claim Form.</i></p> <p><i>The Project Manager must submit with the Contractor Claim Form a detailed cost sheet indicating the estimate of the loss or damage.</i></p> <p><i>Any misrepresentation, misdescription or non-disclosure of material facts, at the option of the insurers, can result in claims submitted being declared null and void.</i></p> <p>8.18 <i>Authorization of claim forms</i></p> <p><i>It is imperative that a formally delegated official or his nominee of the Employer should authorize the Contractor Claim forms as proof of the appropriate authorization, verification and approval of claims submitted. The Strategic Executive Director must provide an authorization letter to the Section: Insurance and Risk Management stating the names and the specimen signatures of the delegated official or his nominee within 30 (thirty) days from approval of this report by Council. Should the delegated official or his nominee not sign the relevant claim form, the claim will be repudiated as this may lead to inappropriate independent verification of the validity of claims, thereby increasing the risk of insurance fraud and consequent reputation damage to the Employer.</i></p> <p>8.19 <i>Contractor to pay deductibles</i></p> <p><i>Any claim in terms of the insurance affected by the Employer shall be subject to the Contractor being responsible for the payment of the amount stated in the Annexure to the Policies as being the deductible (first amount payable or Excess) as defined in the Certificate of Insurance issued by the Employer's insurer in terms of the Policy.</i></p> <p>8.20 <i>Settlement of claims</i></p> <p><i>All incidents reported to the Section: Insurance and Risk Management in respect of an occurrence, which is likely to give rise to a claim will be forwarded to the Employer's insurer who will take the necessary actions for the settlement of any such claims.</i></p> <p><i>The Contractor shall negotiate for the settlement of claims with the Employer or the Employer's insurer through the Section: Insurance</i></p>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<p><i>and Risk Management. The Employer's Chief Financial Officer will authorize all settlements of claims.</i></p> <p><i>Should action for the settlement of any such claim to the satisfaction of the Project Manager not be taken by the Contractor/sub-contractor within 30 (thirty) days after receipt of such claim by the Contractor/sub-contractor, the Employer or the Employer's insurer may settle any such claim, after giving the Contractor notice of its intention to do so; provided that no such claim shall be settled by the Employer or the Employer's insurer without first consulting the Contractor/sub-contractor.</i></p> <p><i>The foregoing provisions of this Sub-Clause shall apply mutatis mutandis to any such claim received by the Contractor directly.</i></p>

CLAUSE/OPTION		DATA	
1.1.1.13	The Defects Liability period is:	<b>12 (twelve) months</b> from the date of the Certificate of Completion.	
1.1.1.15	The name of the Employer is:	<b>City of Tshwane Metropolitan Municipality.</b>	
1.1.1.26	The Pricing Strategy is:	<b>Re-measurement Contract</b>	
1.2.1.2	The address of the Employer is:	Physical Address:	<b>Number 175 E'skia Mphahlele Drive C de Wet Building Pretoria west 0183</b>
		E-Mail Address:	<b>jandk@tshwane.gov.za</b>
2	The documentation required before commencement with Works execution are:	<ul style="list-style-type: none"> <li>• Health and Safety</li> <li>• Proof that all contributions required in terms of the provisions of the Workman's Compensation Act (Act no 30 of 1941) as amended in 1993, 2002 have been paid (Refer to Cause 4.3.2)</li> <li>• A certified copy of Unemployment Insurance Certificate, Act of 1996 (Refer to Clause 4.3.2)</li> </ul>	
5.3.2	The time to submit the documentation required from the Commencement Date is:	<b>14 days</b>	
5.8.1	The non-working days are:	Sundays	
	The special non-working days are:	<ul style="list-style-type: none"> <li>• Statutory public holidays</li> </ul>	
5.16.3	The latent defect period is:	<b>10 (ten) Years</b>	
6.2.1	Type of security for due performance:	<ul style="list-style-type: none"> <li>• Guarantee from approved financial institution or cash deposit.</li> <li>• The Form of Guarantee is to contain the wording of the pro forma document included as C1.3 or C1.4 contained herein.</li> </ul>	

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

CLAUSE/OPTION		DATA
	Liability of performance guarantee/cash deposit	The liability of the guarantee shall be for <b>10 (ten) %</b> of the Contract Sum of the Work Package allocated, excluding contingencies and VAT.
6.2.2	Retention money guarantee	<b>Not permitted</b>
6.8.2	Adjustment in rates and/or prices	<ul style="list-style-type: none"> <li>• The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:</li> <li>• The urban area nearest the Site is <b>Tshwane</b>.</li> <li>• The base month is <b><u>the month prior to the closing of the procurement process required for a financial offer.</u></b></li> </ul>

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Part C1: Agreement and Contract Data

**C1.2.4 DATA PROVIDED BY THE CONTRACTOR**

CLAUSE/OPTION		DATA	
1.1.1.9	The name of the Contractor is:		
1.2.1.2	The address of the Contract is:	• Physical Address:	
		• Postal Address:	
		• Fax to E-Mail:	
		• E-Mail Address:	
6.2.1	The security to be provided by the Contractor shall be one of the following:	Type of Security	Contractor's choice (Indicate "Yes" or "No")
		Performance guarantee (10% (ten percent) of the Contract Sum of the project allocated, excluding contingencies and VAT)	
		Cash deposit (10% (ten percent) of the Contract Sum of the project allocated, excluding contingencies and VAT)	
6.5.1.2.3	The percentage allowance to cover profits and overhead charges for dayworks is:	_____ %. (Maximum of 15% will be allowed)	

### C1.3 HEALTH AND SAFETY AGREEMENT

**Article of Agreement in terms of Section 37(2) of the Occupational Safety Act, 1993 between**

**CITY OF TSHWANE**  
(Hereinafter referred to as the "EMPLOYER")

AND

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Herein represented by \_\_\_\_\_ in his/her capacity as \_\_\_\_\_ duly authorised by virtue of a resolution dated \_\_\_\_\_, attached hereto Annexure A, of the said \_\_\_\_\_ (herein after referred to as the "CONTRACTOR")

WHEREAS the CONTRACTOR is the mandatory of the EMPLOYER as contemplated in an agreement in respect of

**GPM07-2021/22 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.**

AND WHEREAS section 37 of the Occupational Health and Safety act, 1993 (Act 85 of 1993), hereinafter referred to as the "ACT"), imposes certain powers and duties upon the EMPLOYER.

AND WHEREAS the parties have agreed to enter into an agreement in terms of section 37(2) of the ACT.

NOW THEREFORE the parties agree as follows:

- (a) The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
- (b) The CONTRACTOR undertakes that all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations will be fully complied with. Provided that should the EMPLOYER prescribe certain arrangements and procedures, that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
- (c) The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedure, if any, imposed by the ACT and Regulations and the EMPLOYER expressly absolves the EMPLOYER from itself being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedure as the case may be.

Part C1: Agreement and Contract Data

- (d) The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with the undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to inspect any appropriate records held by the CONTRACTOR or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
- (e) The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigations, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such an investigation, complaint or criminal charge as the case may be

**FOR AND ON BEHALF OF THE CONTRACTOR:**

NAME:

(in BLOCK letters)

\_\_\_\_\_

CAPACITY:

(of authorized agent)

\_\_\_\_\_

SIGNATURE:

(of authorized agent)

\_\_\_\_\_

SIGNED at \_\_\_\_\_

on this \_\_\_\_\_

day of \_\_\_\_\_

WITNESSES:

(Full name in BLOCK letters and signature)

1. \_\_\_\_\_

2. \_\_\_\_\_

**FOR AND ON BEHALF OF THE EMPLOYER:**

NAME:

(in BLOCK letters)

\_\_\_\_\_

CAPACITY:

(of authorized agent)

\_\_\_\_\_

SIGNATURE:

(of authorized agent)

\_\_\_\_\_

SIGNED at \_\_\_\_\_

on this \_\_\_\_\_

day of \_\_\_\_\_

WITNESSES:

(Full name in BLOCK letters and signature)

1. \_\_\_\_\_

GPM -2021 TENDER TO APPOINT CONTRACTORS FOR CIVIL MAINTENANCE AND REPAIRS OF CITY OF TSHWANE BUILDINGS AND FACILITIES FOR A PERIOD OF THREE (3) YEARS AS AND WHEN REQUIRED.  
PART T2: RETURNABLE DOCUMENTS

Part C1: Agreement and Contract Data

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GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.



### 1. Purpose of the tender

Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

GPM Number	Work Description	Building location
GPM 03 2022/23	Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.	City Wide

### 2. Background

The Department is in the process of stabilizing the maintenance backlog for facilities across the city. It is within this context that Group Property requests tender to appoint a qualified HVAC service provider, however this appointment includes the BOQ items which Group Property provided. In an effort to reduce turnaround times we would like to have fixed prices for labour, travel, commonly used electrical, electro-mechanical and civil items which will make it possible for the service provider to attend to the repairs within a short period of time compared to a panel process.

### 3. Specification:

GPM 03 2022/23	Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning	City Wide
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GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

	and cooling systems city wide as and when required for a period of 3 years.	
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Abbreviation of Standard units

1. Per Hour = hr.
2. Per kilometer = km
3. Per meter = m
4. Per square meter = m<sup>2</sup>
5. Each = 1

**PRICING SCHEDULE (Bill of quantities):**

Section	Description	Unit of measurement	Quantity (estimated)	Amount (EXCL VAT)	
Item A1.1	Major service on mid and high wall split air conditioners as per specifications.	Each	500	R	.....
Item A1.2	Major service on ceiling cassette split air conditioners as per specifications.	each	500	R	.....
Item A1.3	Major service on under ceiling air conditioners as per specifications.	Each	500	R	.....
Item A1.4	Major service on down blow air conditioners as per specifications.	Each	500	R	.....
Item A1.5	Major service on floor standing air conditioners as per specifications.	Each	250	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item A1.6	Major service on cooling towers as per specifications.	Each	50	R	.....
Item A1.7	Major service on package plants as per specifications.	Each	50	R	.....
Item A1.8	Major service on evaporative coolers as per specifications.	Each	50	R	.....
Item A1.9	Major service on portable coolers as per specifications.	Each	50	R	.....
Item A1.10	Major service on domestic fridge freezer	Each	50	R	.....
Item A1.11	Major service of cold room	Each	20	R	.....
Item B1.1.1a	Supply of 9000btu/hr mid wall split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.1.2a	Supply of 12000btu/hr mid wall split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.1.3a	Supply of 18000btu/hr mid wall split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.1.4a	Supply of 24000btu/hr mid wall split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.1.5a	Supply of 30000btu/hr mid wall split air conditioner (Heating and cooling)	Each	100	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.2.1a	Supply of 12000btu/hr ceiling cassette split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.2.2a	Supply of 18000btu/hr ceiling cassette split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.2.3a	Supply of 36000btu/hr ceiling cassette split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.2.4a	Supply of 48000btu/hr ceiling cassette split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.2.5a	Supply of 60000btu/hr ceiling cassette split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.3.1a	Supply of 48000btu/hr under ceiling split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.3.2a	Supply of 60000btu/hr under ceiling split air conditioner (Heating and cooling)	Each	100	R	.....
Item B1.4.1	Supply and install 30kw down blow split air conditioner, inverter	Each	10	R	.....
Item B1.4.2	Supply and install 40kw down blow split air conditioner, inverter	Each	10	R	.....
Item 1.5	Supply and install 24000btu/hr floor standing split air conditioner, inverter	Each	10	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.6.1	Supply evaporative condenser VXC65 THR@383kw or similar	Each	10	R	.....
Item B1.6.2	Supply evaporative condenser VXC72 THR@470kw or similar	Each	10	R	.....
Item B1.6.3	Supply evaporative condenser VX125 THR@641kw or similar	Each	10	R	.....
Item B1.6.4	Supply evaporative condenser VFL483L THR@615kw or similar	Each	10	R	.....
Item B1.6.5	Supply evaporative condenser VFL483M THR@615kw or similar	Each	10	R	.....
Item B1.6.6	Supply evaporative condenser VXI95-2 THR@1280kw or similar	Each	10	R	.....
Item B1.6.7	Supply evaporative condenser VFL963-P THR@1203kw or similar	Each	10	R	.....
Item B1.6.8	Supply evaporative condenser VFL362-M THR@497kw or similar	Each	10	R	.....
Item B1.7	Supply R410a, 170000 btu/hr package air conditioning plant	Each	10	R	.....
Item B1.8	Supply and install evaporative coolers 18000 cub m/hr, 500 l/s	Each	100	R	.....
Item B1.9	Supply and install portable air conditioner 12000btu/hr	Each	100	R	.....
Item B1.10	Supply domestic fridge freezer 170L	Each	50	R	.....
Item B1.11.1	Supply and install SU34H Evaporator coil or similar			R	.....

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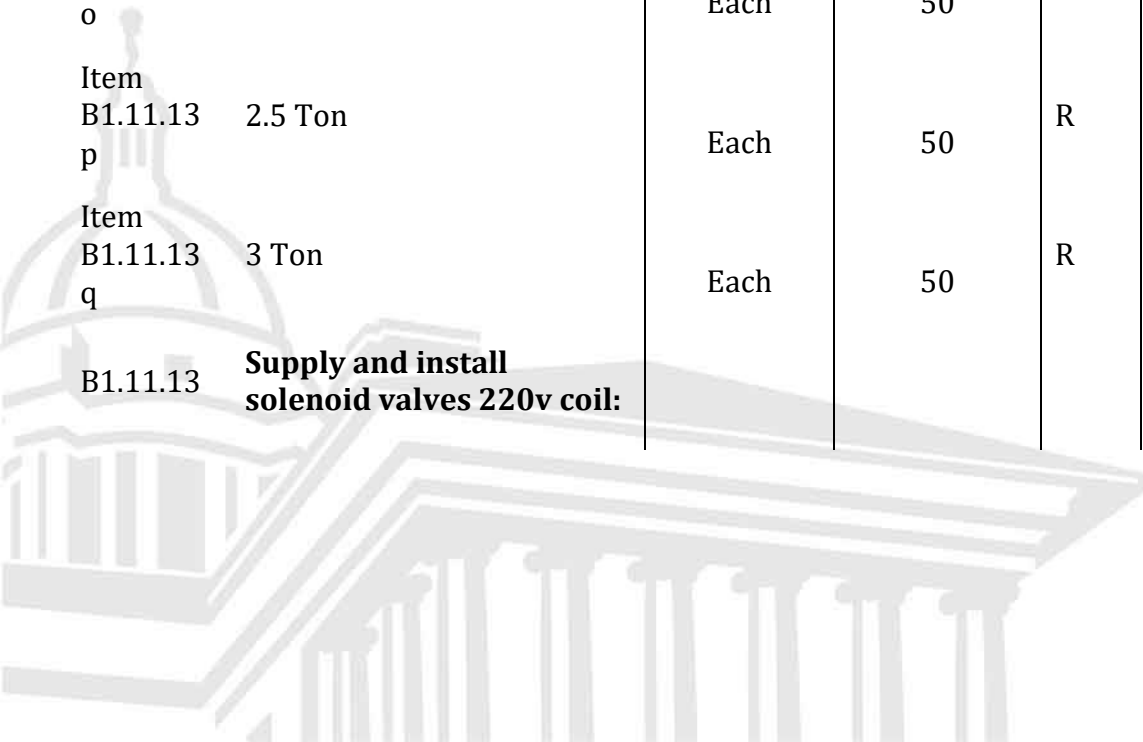
		Each	10		
Item B1.11.2	Supply and install SU51H evaporator coil or similar	Each	10	R	.....
Item B1.11.3	Supply and install SU81L evaporator coil or similar	Each	10	R	.....
Item B1.11.4	Supply and install SU72L evaporator coil or similar	Each	10	R	.....
B1.11.5	Supply and install SU101H evaporator coil or similar	Each	10	R	.....
Item B1.11.6	Supply and install horizontal air flow condenser R22, 1.32 kw @15TD	Each	10	R	.....
Item B1.11.7	Supply and install horizontal air flow condenser R22, 1.62 kw @ 15TD	Each	10	R	.....
Item B1.11.8	Supply and install horizontal air flow condenser R22, 4.79 kw @ 15TD	Each	10	R	.....
Item B1.11.9	Supply and install horizontal air flow condenser R22, 7.16 kw @ 15TD	Each	10	R	.....
Item B1.11.10	Supply and install horizontal air flow condenser R22, 19.42 kw @ 15TD	Each	10	R	.....
Item B1.11.11	Supply and install horizontal air flow condenser R22, 34.26 kw @ 15TD	Each	10	R	.....

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Item B1.11.12	Supply and install horizontal air flow condenser R22, 26.31 kw @ 15TD	Each	10	R	.....
Item B1.11.13	Supply and install cold room paneling, thickness 100mm door size 900mm x 2.1m for:				
Item B1.11.13 a	Length 2.4m, width 2.4m, height 2.4m, for 1.25HP capacity	Each	10	R	.....
Item B1.11.13 b	Length 3.6m, width 3.6m, height 2.4m, for 2HP capacity	Each	10	R	.....
Item B1.11.13c	Length 4.8m, width 3.6m, height 2.4m, for 3.5HP capacity	Each	10	R	.....
Item B1.11.13 d	Length 4.8m, width 3.6m, height 2.4m, for 3.5HP capacity	Each	10	R	.....
Item B1.11.13	Supply and install freezer room paneling, thickness 180mm, door 900mm x 2.1m for:				
Item B1.11.13 e	Length 2.4m, width 2.4m, height 2.4m, for 2HP capacity	Each	10	R	.....
Item B1.11.13f	Length 3.6m, width 3.6m, height 2.4m, for 2 x 3 HP capacity	Each	10	R	.....
Item B1.11.13 g	Length 4.8m, width 3.6m, height 2.4m, for 2 x 4 HP capacity	Each	10	R	.....
Item B1.11.13 h	Length 6m, width 6m, height 2.4m, for 2 x 4 HP capacity	Each	10	R	.....

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Item B1.11.13	Supply and install expansion valves for cold and freezer rooms for:				
Item B1.11.13i	R134 internal/external (Danfoss or similar)	Each	50	R	.....
Item B1.11.13j	R22 internal/external (Danfoss or similar)	Each	50	R	.....
Item B1.11.13k	R407 internal/external (Danfoss or similar)	Each	50	R	.....
Item B1.11.13L	R404 internal/external (Danfoss or similar)	Each	50	R	.....
Item B1.11.13m	R507 internal/external (Danfoss or similar)	Each	50	R	.....
Item B1.11.13	Supply and install big body expansion valves (Danfoss or similar)				
Item B1.11.13n	1.5 Ton	Each	50	R	.....
Item B1.11.13o	2 Ton	Each	50	R	.....
Item B1.11.13p	2.5 Ton	Each	50	R	.....
Item B1.11.13q	3 Ton	Each	50	R	.....
B1.11.13	<b>Supply and install solenoid valves 220v coil:</b>				





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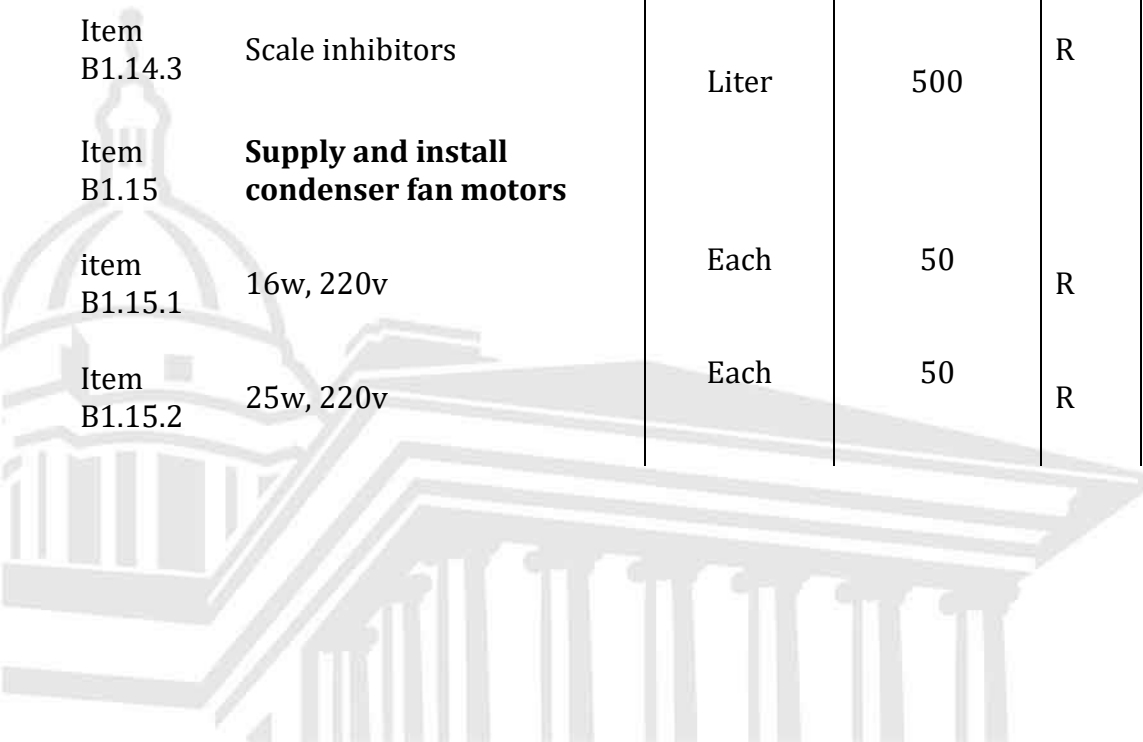
Item B1.11.13r	½ Inch	Each	50	R	.....
Item B1.11.13s	3/8 Inch	Each	50	R	.....
Item B1.11.13t	5/8 Inch	Each	50	R	.....
Item B1.11.13	<b>Supply and install air conditioning reverse valves 4 way</b>				
Item B1.11.13u	5/16 x 3/8 inch	Each	50	R	.....
Item B1.11.13v	3/8 x ½ inch	Each	50	R	.....
Item B1.11.13w	½ x 5/8 inch	Each	50	R	.....
Item B1.11.13x	½ x ¾ inch	Each	50	R	.....
Item B1.11.13	<b>Supply and install HVAC controllers</b>				
Item B1.11.13y	PC03	Each	100	R	.....
Item B1.11.13z	PC04	Each	100	R	.....
Item B1.11.13z 1	PC05	Each	100	R	.....
Item B1.11.13z 2	PC0X5 built in thermal	Each	100	R	.....

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Item B1.12	<b>Supply and install centrifugal pump single stage radial flow</b>				
Item B1.12.1	Pump assembly type NS2/50-250 c1/c1/m	Each	20	R	.....
Item B1.12.2	Centrifugal pump single stage radial flow 4540 cub. M/h	Each	20	R	.....
Item B1.12.3	Centrifugal pump single stage radial flow 455 cub. M/h	Each	20	R	.....
Item B1.12.4	Centrifugal pump single stage radial flow 1400 cub m/h	Each	20	R	.....
Item B1.13	<b>Electrical motors: Supply and install</b>				
Item B1.13.1	5.5kw frame size 132s, 1445 rpm,380v	Each	20	R	.....
Item B1.13.2	3kw frame size 100L, 1415 rpm, 380v	Each	20	R	.....
Item B1.13.3	4kw frame size 112B, 1420 rpm, 380v	Each	20	R	.....
Item B1.13	<b>Supply and install Contactors</b>				
Item B1.13.4	220v coil, 5amp, model LC1D5	Each	50	R	.....
Item B1.13.5	220v coil, 12amp, model LCD1D12	Each	50	R	.....
Item B1.13.6	220v coil, 18amp, model LCD1D18	Each	50	R	.....

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Item B1.13.7	220v coil, 25amp, model LCD1D25	Each	50	R	.....
Item B1.13.8	220v coil, 32amp, model LCD1D32	Each	50	R	.....
Item B1.13	<b>Supply and install capacitors</b>				
Item B1.13.9	35 MuF 450v	Each	50	R	.....
Item B1.13.10	40 MuF 450v	Each	50	R	.....
Item B1.13.11	50 MuF 450v	Each	50	R	.....
Item B1.13.12	30 MuF 450v	Each	50	R	.....
Item B1.14	<b>Supply water treatment for:</b>				
Item B1.14.1	Bio-dispersant	Liter	500	R	.....
Item B1.14.2	Cooling water corrosion inhibitors	Liter	500	R	.....
Item B1.14.3	Scale inhibitors	Liter	500	R	.....
Item B1.15	<b>Supply and install condenser fan motors</b>				
item B1.15.1	16w, 220v	Each	50	R	.....
Item B1.15.2	25w, 220v	Each	50	R	.....



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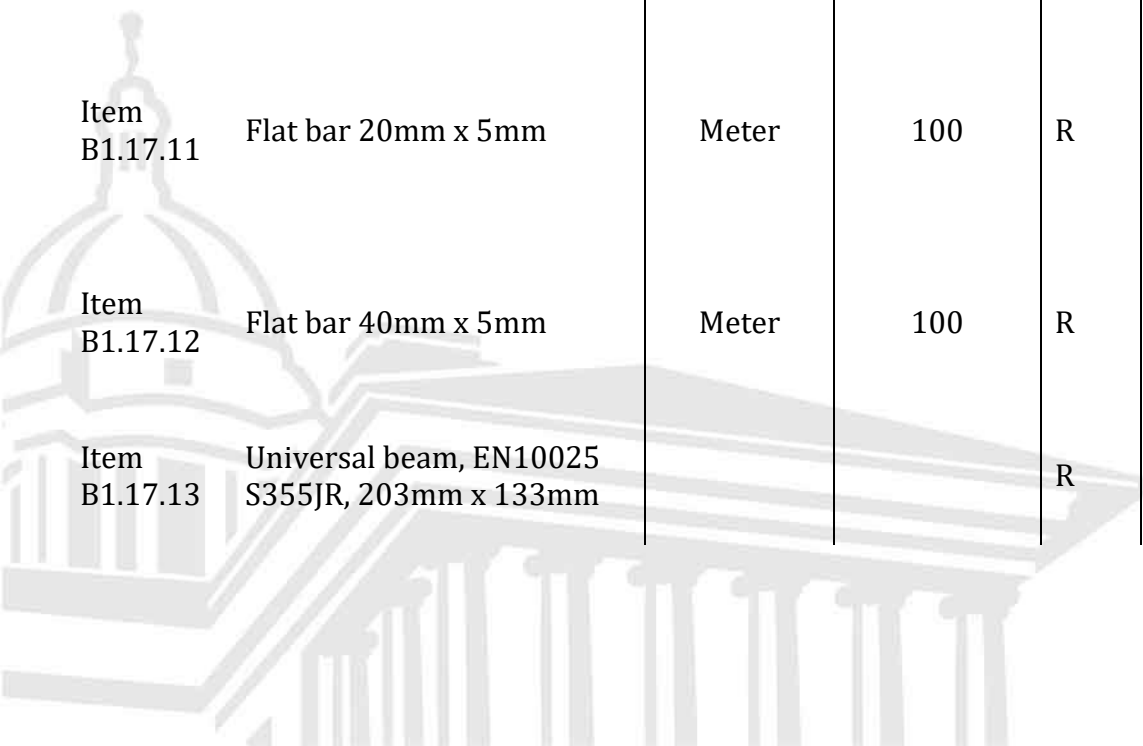
Item B1.15.3	36w, 220v	Each	50	R	.....
Item B1.15	<b>Supply and install commercial condenser fan assemblies (suction)</b>				
Item B1.15.4	Size 300mm, 220v, 780rpm	Each	50	R	.....
Item B1.15.5	Size 315mm, 220v, 780rpm	Each	50	R	.....
Item B1.15.6	Size 350mm, 220v, 800rpm	Each	50	R	.....
Item B1.15.7	Size 400mm, 220v, 800rpm	Each	50	R	.....
Item B1.15.8	Size 450mm, 220v, 800rpm	Each	50	R	.....
Item B1.15.9A	Size 500mm, 220v,880rpm	Each	50	R	.....
Item B1.15.9B	Size 500mm, 380v, 880rpm	Each	50	R	.....
Item B1.15.10 A	Size 550mm, 220v, 880rpm	Each	50	R	.....
Item B1.15.10 B	Size 550mm, 380v, 880rpm	Each	50	R	.....
Item B1.15.11 A	Size 630mm, 220v, 1310rpm	Each	50	R	.....
Item B1.15.11 B	Size 630mm, 220v, 1310rpm	Each	50	R	.....
Item B1.16	<b>Supply and install Access flooring / False flooring</b>				

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	<b>server rooms LF or similar</b>				
Item B1.16.1	Access flooring as per specification	Square M	500	R	.....
Item B1.16.2	Floor covering as per specification	Square M	500	R	.....
Item B1.16.3	Panel lifting device	Each	10	R	.....
Item B1.16.4	Access floor grommet	Each	20	R	.....
Item B1.16.5	Brush grommet	Each	20	R	.....
Item B1.16.6	Air diffuser	Each	50	R	.....
Item B1.16.7	Aluminum floor grill	Each	50	R	.....
Item B1.16.8	Floor surface outlet	Each	50	R	.....
Item B1.17	<b>Steel items and profiles as per specification</b>				
Item B1.17.1	Vastrap steel plate	Meter	100	R	.....
Item B1.17.2	Round bar 6mm	meter	100	R	.....
Item B1.17.3	Round bar 10mm	Meter	100	R	.....
Item B1.17.4	Round bar 16mm	Meter	100	R	.....

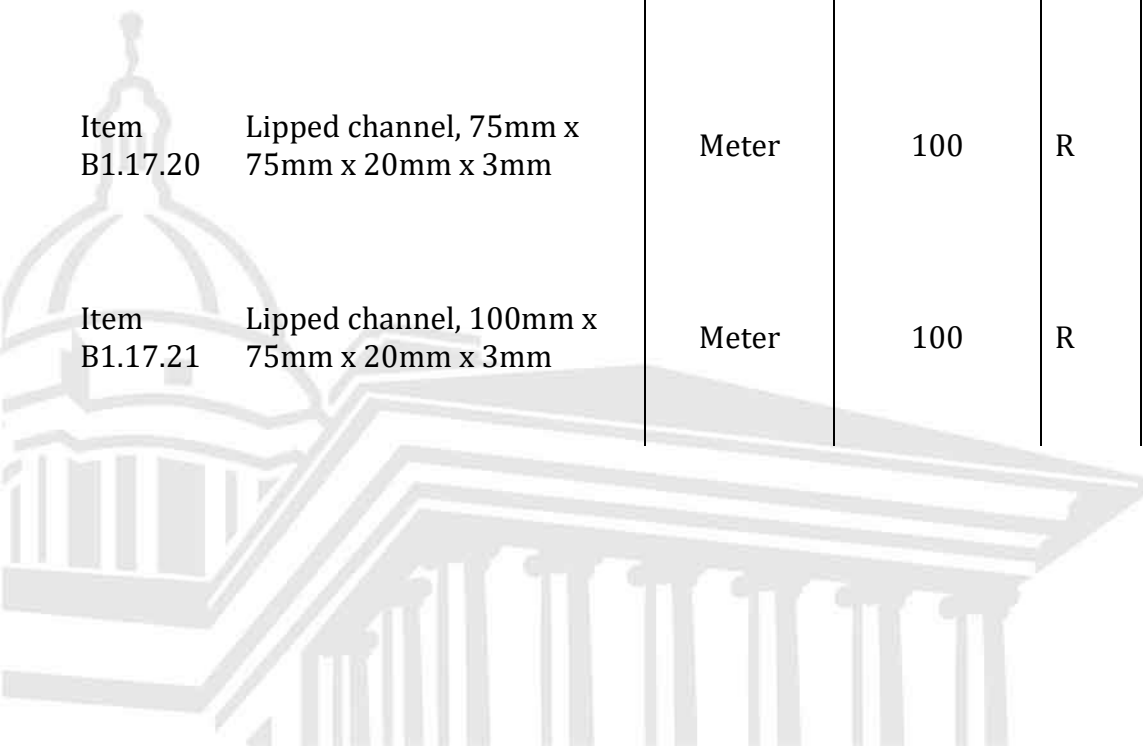
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Item B1.17.5	Round bar 25mm	Meter	100	R	.....
Item B1.17.6	Round bar 40mm	Meter	100	R	.....
Item B1.17.7	Square bar 6mm x 6mm	Meter	100	R	.....
Item B1.17.8	Square bar 10mm x 10mm	Meter	100	R	.....
Item B1.17.9	Square bar 16mm x 16mm	Meter	100	R	.....
Item B1.17.10	Square bar 30mm x 30mm	Meter	100	R	.....
Item B1.17.11	Flat bar 20mm x 5mm	Meter	100	R	.....
Item B1.17.12	Flat bar 40mm x 5mm	Meter	100	R	.....
Item B1.17.13	Universal beam, EN10025 S355JR, 203mm x 133mm			R	.....



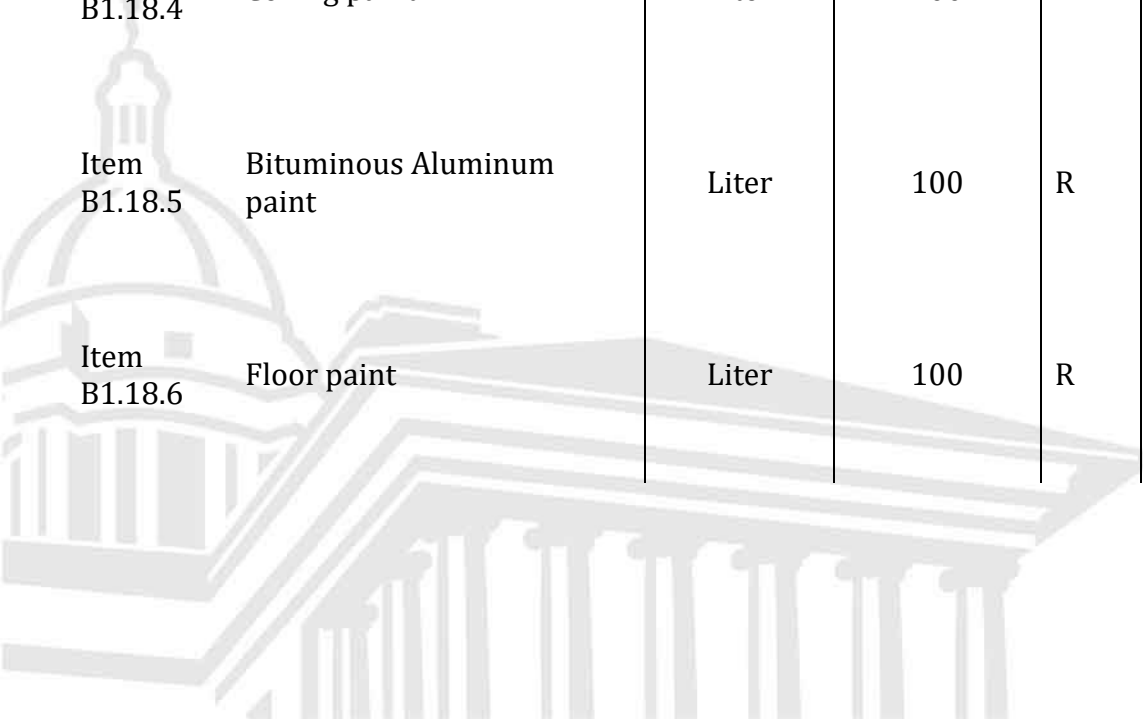
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		Meter	100		
Item B1.17.14	Universal beam, EN10025 S355JR, 406mm x 140mm	Meter	100	R	.....
Item B1.17.15	Parallel flange channel 200mm x 75mm	Meter	100	R	.....
Item B1.17.16	Equal angle mild steel, 25mm x 25mm x 3mm	Meter	100	R	.....
Item B1.17.17	Equal angle mild steel, 50mm x 50mm x 3mm	Meter	100	R	.....
Item B1.17.18	Equal angle mild steel, 100mm x 100mm x 8mm	Meter	100	R	.....
Item B1.17.19	Equal angle mild steel, 200mm x 200mm x 16mm	Meter	100	R	.....
Item B1.17.20	Lipped channel, 75mm x 75mm x 20mm x 3mm	Meter	100	R	.....
Item B1.17.21	Lipped channel, 100mm x 75mm x 20mm x 3mm	Meter	100	R	.....



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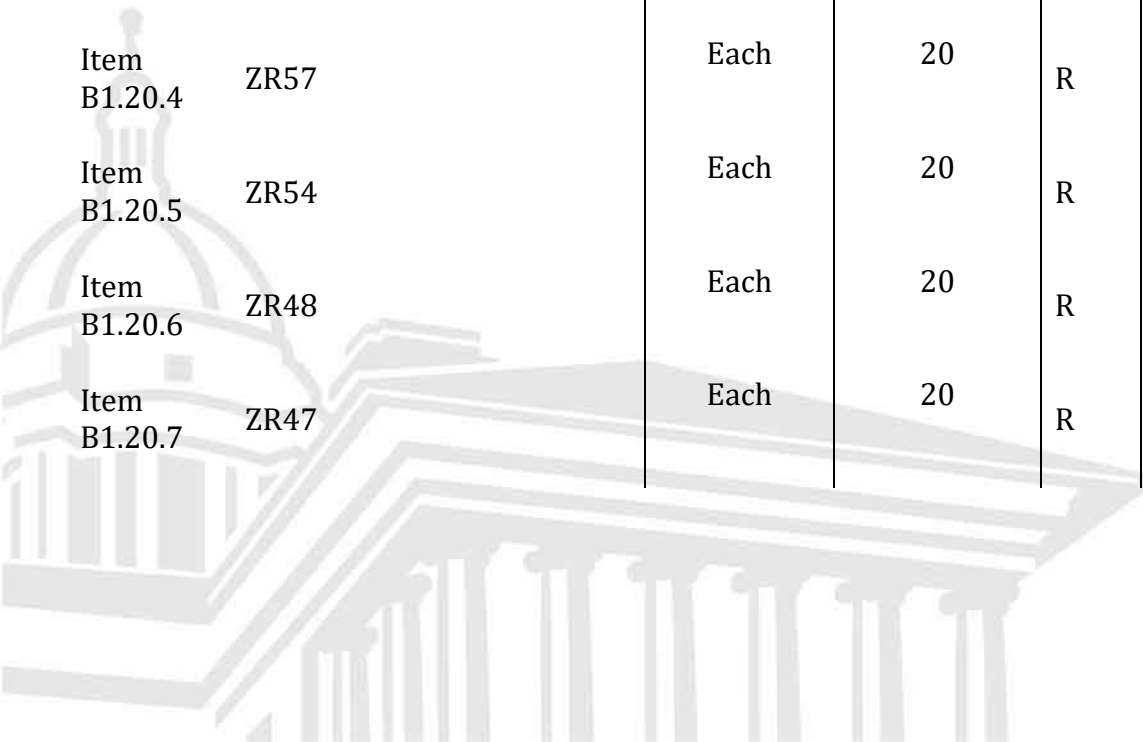
Item B1.17.22	Lipped channel, 150mm x 50mm x 20mm x 3mm	Meter	100	R	.....
Item B1.17.23	Lipped channel, 200mm x 50mm x 20mm x 3mm	Meter	100	R	.....
Item B1.17.24	Walkway grating, 2400mm x 1200mm	Meter	100	R	.....
Item B1.18.1	Metal Water Based primer	Liter	100	R	.....
Item B1.18.2	Water based enamel	Liter	100	R	.....
Item B1.18.3	Rust converter and primer	Liter	100	R	.....
Item B1.18.4	Ceiling paint	Liter	100	R	.....
Item B1.18.5	Bituminous Aluminum paint	Liter	100	R	.....
Item B1.18.6	Floor paint	Liter	100	R	.....





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Item B1.18.7	Concrete floor prep	Liter	100	R	.....
Item B1.18.8	Universal enamel	Liter	100	R	.....
Item B1.18.9	Wall and all	Liter	100	R	.....
Item B1.19	Supply and install shade netting as per specification	Square M	1000	R	.....
Item B1.20	<b>Supply Air conditioning / refrigeration compressors, hermetically sealed ZR range or similar</b>				
Item B1.20.1	ZR72	Each	20	R	.....
Item B1.20.2	ZR68	Each	20	R	.....
Item B1.20.3	ZR61	Each	20	R	.....
Item B1.20.4	ZR57	Each	20	R	.....
Item B1.20.5	ZR54	Each	20	R	.....
Item B1.20.6	ZR48	Each	20	R	.....
Item B1.20.7	ZR47	Each	20	R	.....



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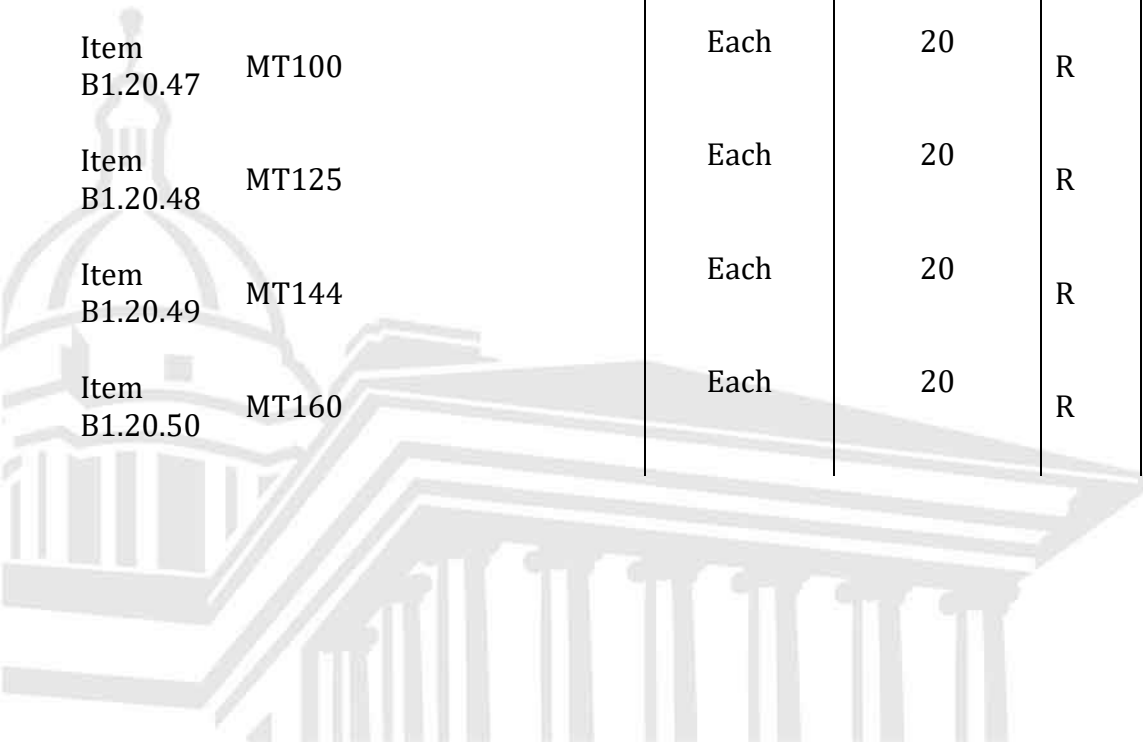
Item B1.20.8	ZR45	Each	20	R	.....
Item B1.20.9	ZR42	Each	20	R	.....
Item B1.20.10	ZR40	Each	20	R	.....
Item B1.20.11	ZR36	Each	20	R	.....
Item B1.20.12	ZR24	Each	20	R	.....
Item B1.20.13	ZR81	Each	20	R	.....
Item B1.20.14	ZR94	Each	20	R	.....
Item B1.20.15	ZR108	Each	20	R	.....
Item B1.20.16	ZR144	Each	20	R	.....
Item B1.20.17	ZR125	Each	20	R	.....
Item B1.20	<b>Supply air conditioning / refrigeration compressors, scroll</b>				
Item B1.20.18	SM100	Each	20	R	.....
Item B1.20.19	SH090	Each	20	R	.....
Item B1.20.20	SH105	Each	20	R	.....
Item B1.20.21	SH120	Each	20	R	.....

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Item B1.20.22	SH140	Each	20	R	.....
Item B1.20.23	SH161	Each	20	R	.....
Item B1.20.24	SH184	Each	20	R	.....
Item B1.20.25	SH180	Each	20	R	.....
Item B1.20.26	SJ240	Each	20	R	.....
Item B1.20.27	SH295	Each	20	R	.....
Item B1.20.28	SH300	Each	20	R	.....
Item B1.20	<b>Supply air conditioning / refrigeration compressors, MT range</b>				
Item B1.20.29	MT18	Each	20	R	.....
Item B1.20.30	MT022	Each	20	R	.....
Item B1.20.31	MT028	Each	20	R	.....
Item B1.20.32	MT032	Each	20	R	.....
Item B1.20.33	MT036	Each	20	R	.....
Item B1.20.34	MT040	Each	20	R	.....
Item B1.20.35	MT044	Each	20	R	.....

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Item B1.20.36	MT045	Each	20	R	.....
Item B1.20.37	MT050	Each	20	R	.....
Item B1.20.38	MT051	Each	20	R	.....
Item B1.20.39	MT056	Each	20	R	.....
Item B1.20.40	MT057	Each	20	R	.....
Item B1.20.41	MT064	Each	20	R	.....
Item B1.20.42	MT065	Each	20	R	.....
Item B1.20.43	MT072	Each	20	R	.....
Item B1.20.44	MT073	Each	20	R	.....
Item B1.20.45	MT080	Each	20	R	.....
Item B1.20.46	MT081	Each	20	R	.....
Item B1.20.47	MT100	Each	20	R	.....
Item B1.20.48	MT125	Each	20	R	.....
Item B1.20.49	MT144	Each	20	R	.....
Item B1.20.50	MT160	Each	20	R	.....

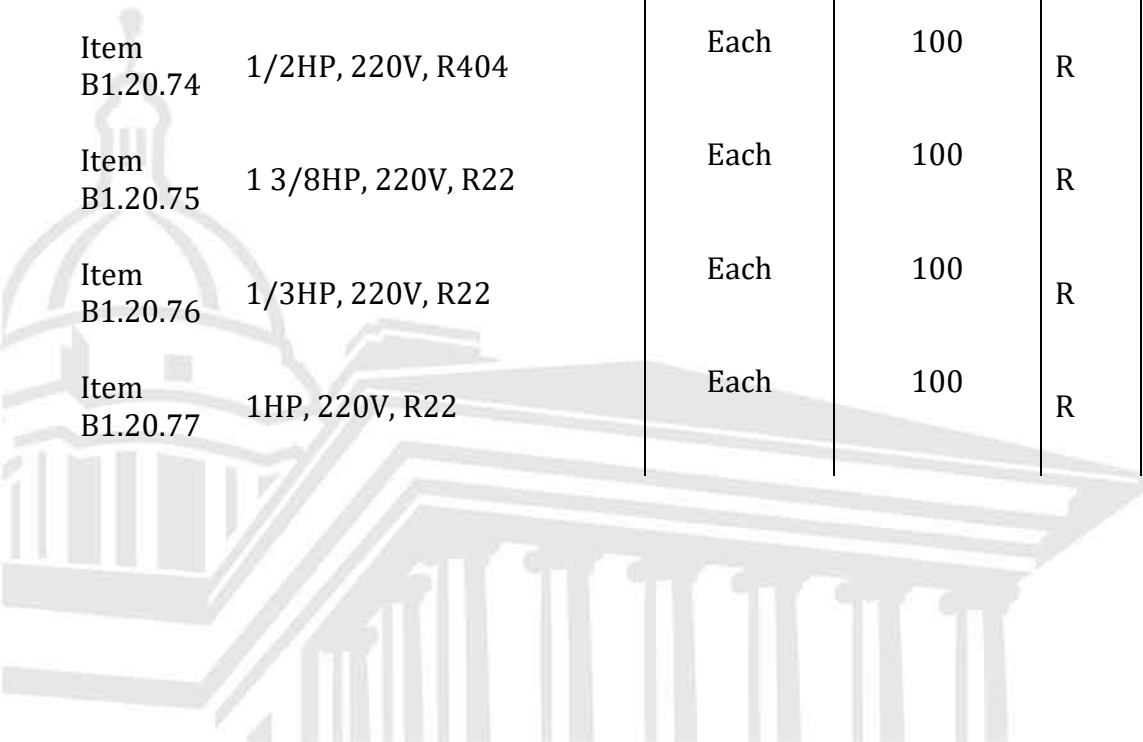


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Item B1.20	<b>Supply air conditioning compressors</b>				
Item B1.20.51	9000 btu/hr,220v R22	Each	100	R	.....
Item B1.20.52	12000 btu/hr, 220v R22	Each	100	R	.....
Item B1.20.53	18000 btu/hr, 220v R22	Each	100	R	.....
Item B1.20.54	24000 btu/hr, 220v R22	Each	100	R	.....
Item B1.20.55	9000 btu/hr, 220v R410a	Each	100	R	.....
Item B1.20.56	12000 btu/hr, 220v R410a	Each	100	R	.....
Item B1.20.57	18000 btu/hr, 220v R410a	Each	100	R	.....
Item B1.20.58	24000 btu/hr, 220v R410a	Each	100	R	.....
Item B1.20.59	30000 btu/hr, 220v R410a	Each	100	R	.....
Item B1.20.60	42000 btu/hr, 380v R410a	Each	100	R	.....
Item B1.20.61	48000 btu/hr, 380v R410a	Each	100	R	.....
Item B1.20.62	60000 btu/hr, 380v R410a	Each	100	R	.....
Item B1.20	<b>Supply Domestic Fridge compressors</b>				
Item B1.20.63	1/3hp	Each	100	R	.....

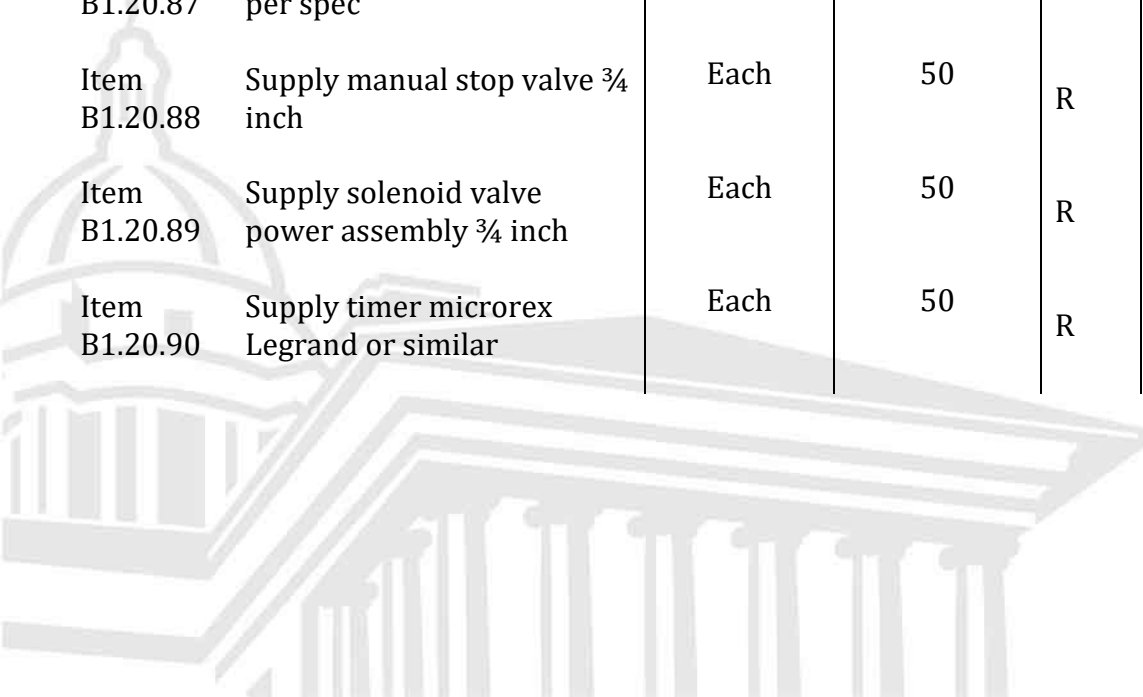
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Item B1.20.64	1/4hp	Each	100	R	.....
Item B1.20.65	1/5hp	Each	100	R	.....
Item B1.20.66	1/6hp	Each	100	R	.....
Item B1.20.67	1/7hp	Each	100	R	.....
Item B1.20.68	1/8hp	Each	100	R	.....
Item B1.20.69	1/9hp	Each	100	R	.....
Item B1.20	<b>Supply commercial fridge compressors</b>				
Item B1.20.70	1 1/2hp, 220v, R22	Each	100	R	.....
Item B1.20.71	1 1/4hp, 220v, R22	Each	100	R	.....
Item B1.20.72	1/2hp, 220V, R134A	Each	100	R	.....
Item B1.20.73	1/2HP, 220V, R22	Each	100	R	.....
Item B1.20.74	1/2HP, 220V, R404	Each	100	R	.....
Item B1.20.75	1 3/8HP, 220V, R22	Each	100	R	.....
Item B1.20.76	1/3HP, 220V, R22	Each	100	R	.....
Item B1.20.77	1HP, 220V, R22	Each	100	R	.....



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Item B1.20.78	2HP,220V, R22	Each	100	R	.....
Item B1.20.79	2 HP, 220V, R404	Each	100	R	.....
Item B1.20.80	3/4HP,220V, R134A	Each	100	R	.....
Item B1.20.81	3/4HP, 220V, R22	Each	100	R	.....
Item B1.20.82	3/8HP, 220V, R22	Each	100	R	.....
Item B1.20.83	3/8HP, 220V, R134A	Each	100	R	.....
Item B1.20	<b>Chiller compressors</b>				
Item B1.20.84	Supply Diakin model ZHAZMLFLYE 160kw compressor, single screw	Each	20	R	.....
Item B1.20.85	Supply Copeland model ZP235KCE-TWD scroll compressor	Each	20	R	.....
Item B1.20.86	Supply Fire stat Johnson controls or similar mod TZR6585/N 220v NC	Each	50	R	.....
Item B1.20.87	Supply water flow sensor as per spec	Each	50	R	.....
Item B1.20.88	Supply manual stop valve ¾ inch	Each	50	R	.....
Item B1.20.89	Supply solenoid valve power assembly ¾ inch	Each	50	R	.....
Item B1.20.90	Supply timer microrex Legrand or similar	Each	50	R	.....



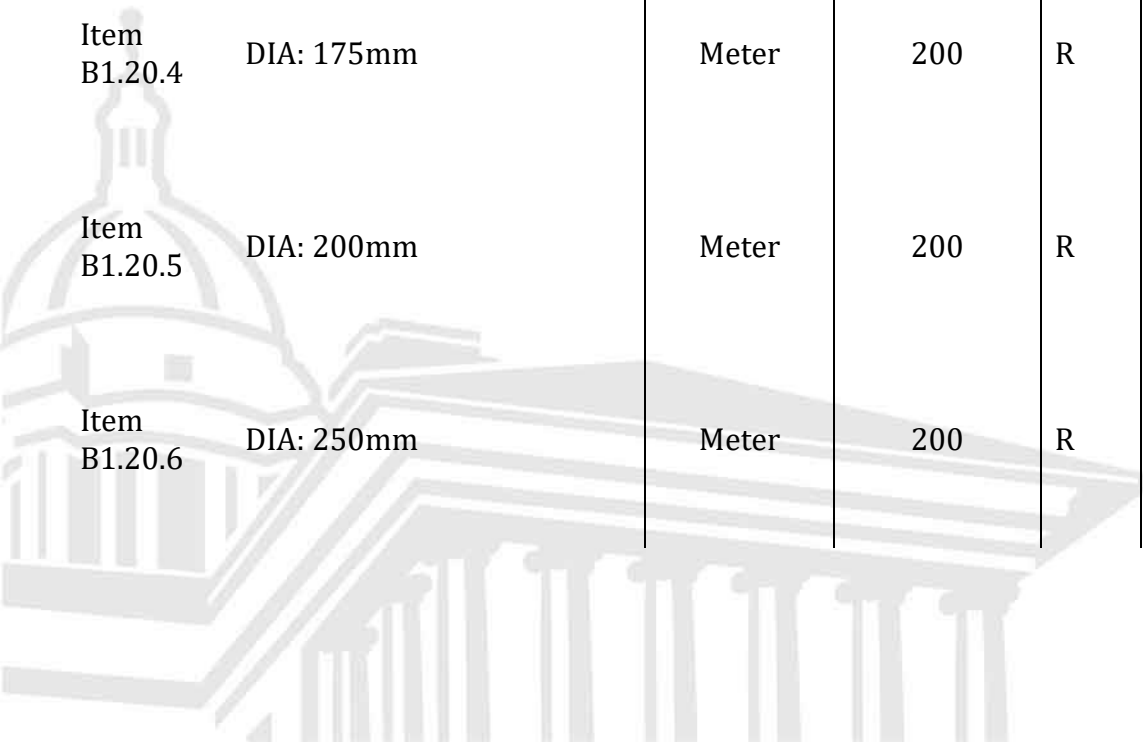
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Item B1.20.91	Supply ½ inch ball valve	Each	50	R	.....
Item B1.20.92	Supply heater bank in line ducted 4000w	Each	50	R	.....
Item B1.20.93	Supply core drier shell assembly	Each	50	R	.....
Item B1.20.94	<b>Liquid line driers</b>				
Item B1.20.94 a	1/4inch	Each	50	R	.....
Item B1.20.94 b	1/2inch	Each	50	R	.....
Item B1.20.94c	5/8inch	Each	50	R	.....
Item B1.20.94 d	3/4inch	Each	50	R	.....
Item B1.20.94 e	3/8inch	Each	50	R	.....
Item B1.20.94f	5/8inch	Each	50	R	.....
Item B1.20.94 g	1 1/8 inch	Each	50	R	.....
Item B1.20.95 a	Supply Air flow switch multi range as per spec	Each	50	R	.....
Item B1.20.95 b	Supply Diff. pressure switch as per spec.	Each	50	R	.....
Item B1.20.95c	Supply diff. pressure switch as per spec.	Each	50	R	.....



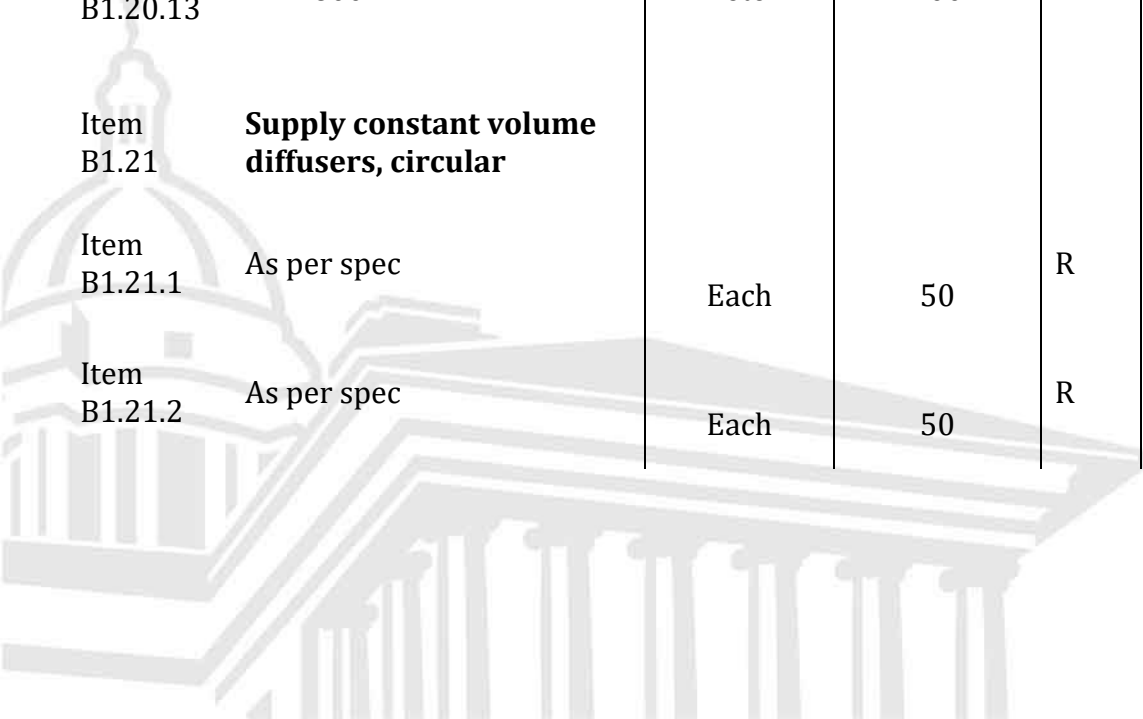
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.20.96	Supply Electric expansion valve as per spec.	Each	50	R	.....
Item B1.20.97 a	Supply Temperature probes NTC	Each	100	R	.....
Item B1.20.97 b	Supply Temperature probes PTC	Each	100	R	.....
Item B1.20.98	Supply Chilled water flow actuator as per spec.	Each	50	R	.....
Item B1.21	<b>Supply flex ducting as per spec.</b>				
Item B1.21.1	DIA: 100mm	Meter	200	R	.....
Item B1.20.2	DIA: 125mm	Meter	200	R	.....
Item B1.20.3	DIA: 150mm	Meter	200	R	.....
Item B1.20.4	DIA: 175mm	Meter	200	R	.....
Item B1.20.5	DIA: 200mm	Meter	200	R	.....
Item B1.20.6	DIA: 250mm	Meter	200	R	.....



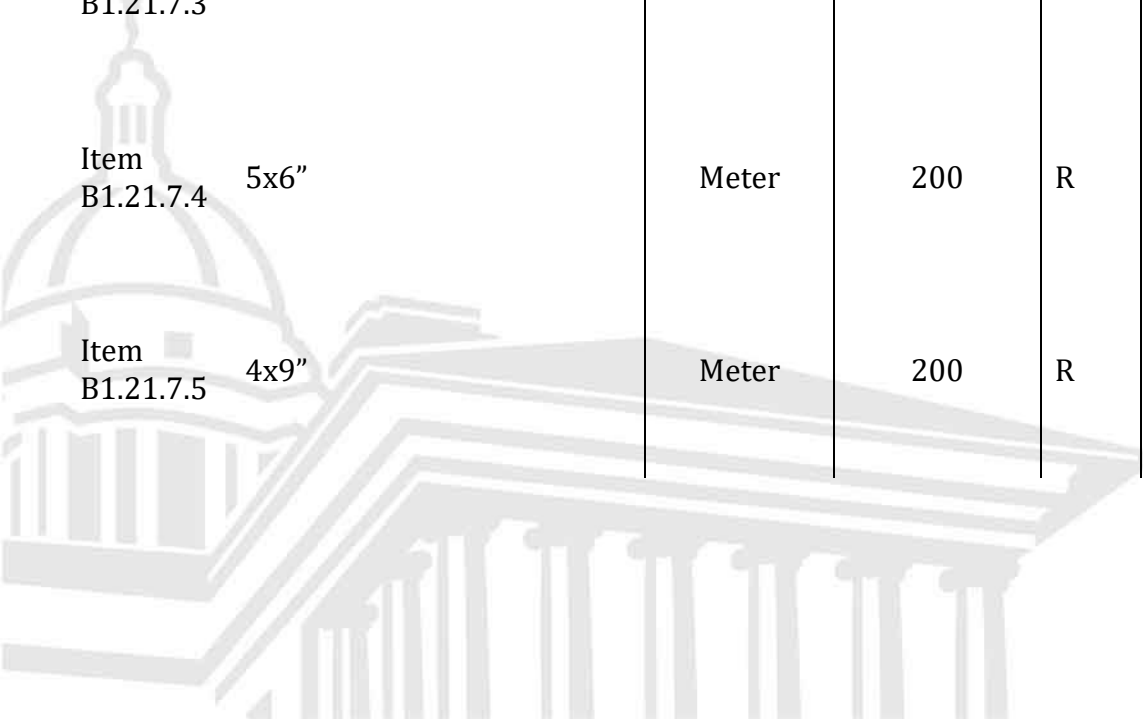
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.20.7	DIA: 300mm	Meter	200	R	.....
Item B1.20.8	DIA: 350mm	Meter	200	R	.....
Item B1.20.9	DIA: 400mm	Meter	200	R	.....
Item B1.20.10	DIA: 450mm	Meter	200	R	.....
Item B1.20.11	DIA: 500mm	Meter	200	R	.....
Item B1.20.12	DIA: 550mm	Meter	200	R	.....
Item B1.20.13	DIA: 600mm	Meter	200	R	.....
Item B1.21	<b>Supply constant volume diffusers, circular</b>				
Item B1.21.1	As per spec	Each	50	R	.....
Item B1.21.2	As per spec	Each	50	R	.....



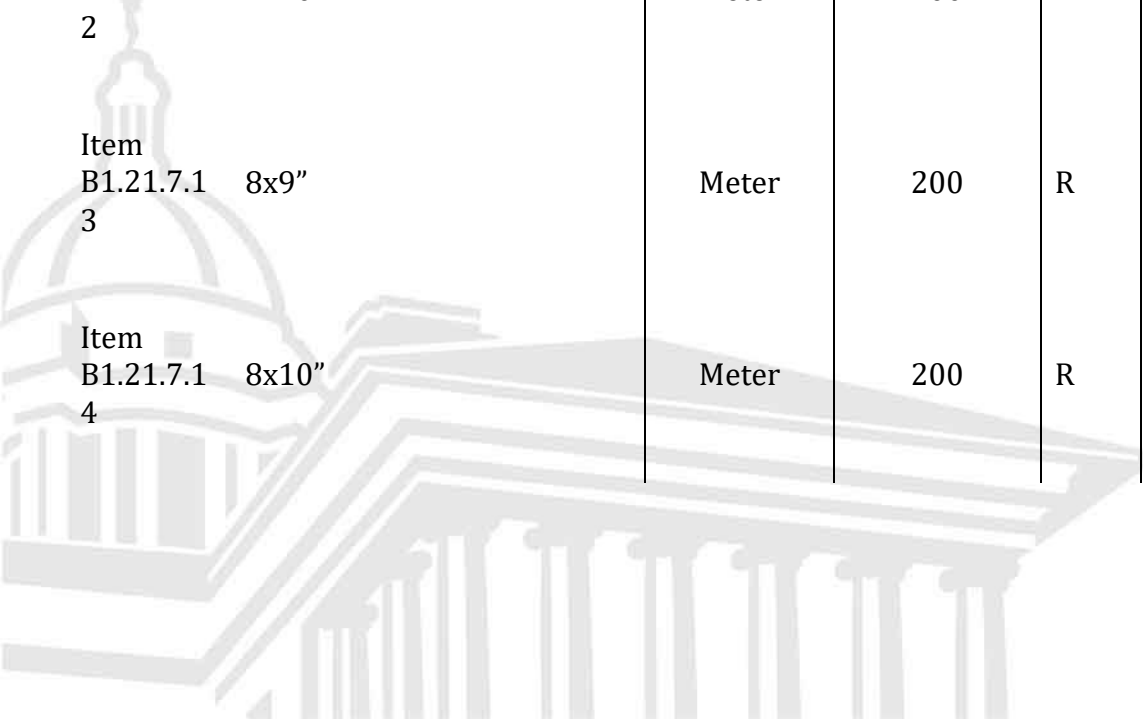
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.3	As per spec	Each	50	R	.....
Item B1.21.4	As per spec	Each	50	R	.....
Item B1.21.5	As per spec	Each	50	R	.....
Item B1.21.6	Supply door grilles 400mm x 400mm	Each	50	R	.....
Item B1.21.7	<b>Rectangular sheet metal ducting 2m sections length, min thickness 1mm, 25mm internal insulation incl. Dimensions in inches</b>				
Item B1.21.7.1	3x7"	Meter	200	R	.....
Item B1.21.7.2	4x5"	Meter	200	R	.....
Item B1.21.7.3	4x7"	Meter	200	R	.....
Item B1.21.7.4	5x6"	Meter	200	R	.....
Item B1.21.7.5	4x9"	Meter	200	R	.....



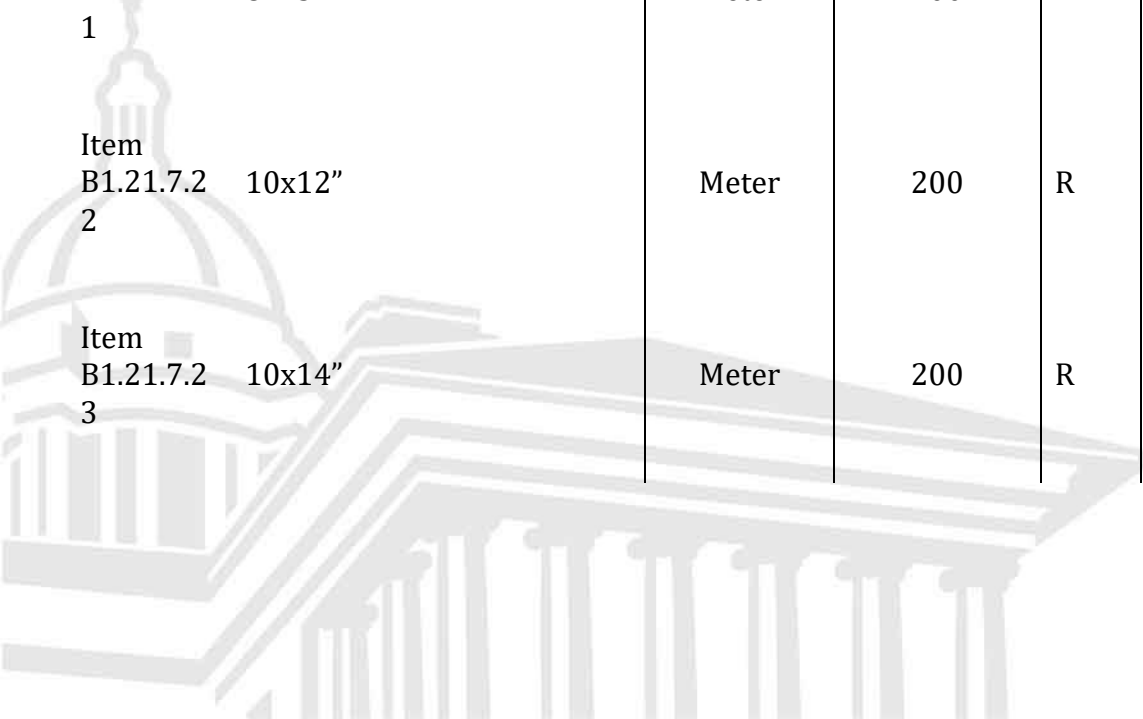
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.7.6	5x7"	Meter	200	R	.....
Item B1.21.7.7	6x6"	Meter	200	R	.....
Item B1.21.7.8	6x7"	Meter	200	R	.....
Item B1.21.7.9	5x 12"	Meter	200	R	.....
Item B1.21.7.1 0	6x10"	Meter	200	R	.....
Item B1.21.7.1 1	7x8"	Meter	200	R	.....
Item B1.21.7.1 2	7x10"	Meter	200	R	.....
Item B1.21.7.1 3	8x9"	Meter	200	R	.....
Item B1.21.7.1 4	8x10"	Meter	200	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.7.1 5	9x9"	Meter	200	R	.....
Item B1.21.7.1 6	8x12"	Meter	200	R	.....
Item B1.21.7.1 7	10x10"	Meter	200	R	.....
Item B1.21.7.1 8	8x14"	Meter	200	R	.....
Item B1.21.7.1 9	9x12"	Meter	200	R	.....
Item B1.21.7.2 0	10x11"	Meter	200	R	.....
Item B1.21.7.2 1	8x15"	Meter	200	R	.....
Item B1.21.7.2 2	10x12"	Meter	200	R	.....
Item B1.21.7.2 3	10x14"	Meter	200	R	.....

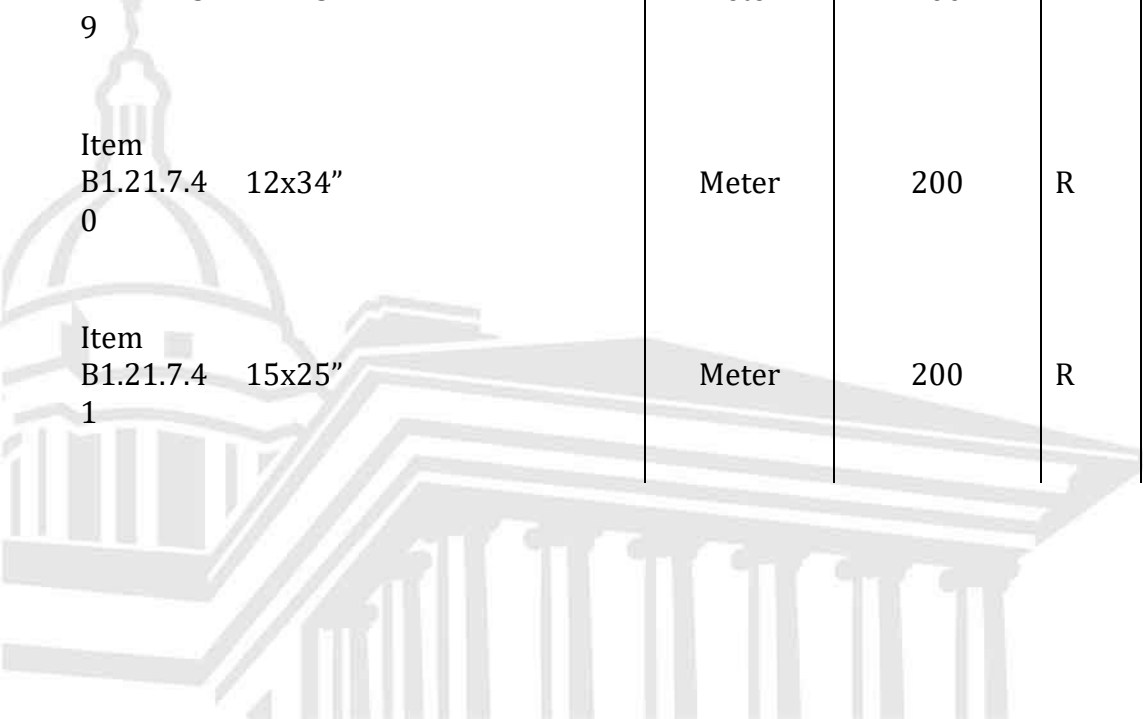


GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.7.2 4	12x12"	Meter	200	R	.....
Item B1.21.7.2 5	12x14"	Meter	200	R	.....
Item B1.21.7.2 6	12x15"	Meter	200	R	.....
Item B1.21.7.2 7	10x22"	Meter	200	R	.....
Item B1.21.7.2 8	14x15"	Meter	200	R	.....
Item B1.21.7.2 9	12x19"	Meter	200	R	.....
Item B1.21.7.3 0	14x16"	Meter	200	R	.....
Item B1.21.7.3 1	10x25"	Meter	200	R	.....
Item B1.21.7.3 2	12x20"	Meter	200	R	.....

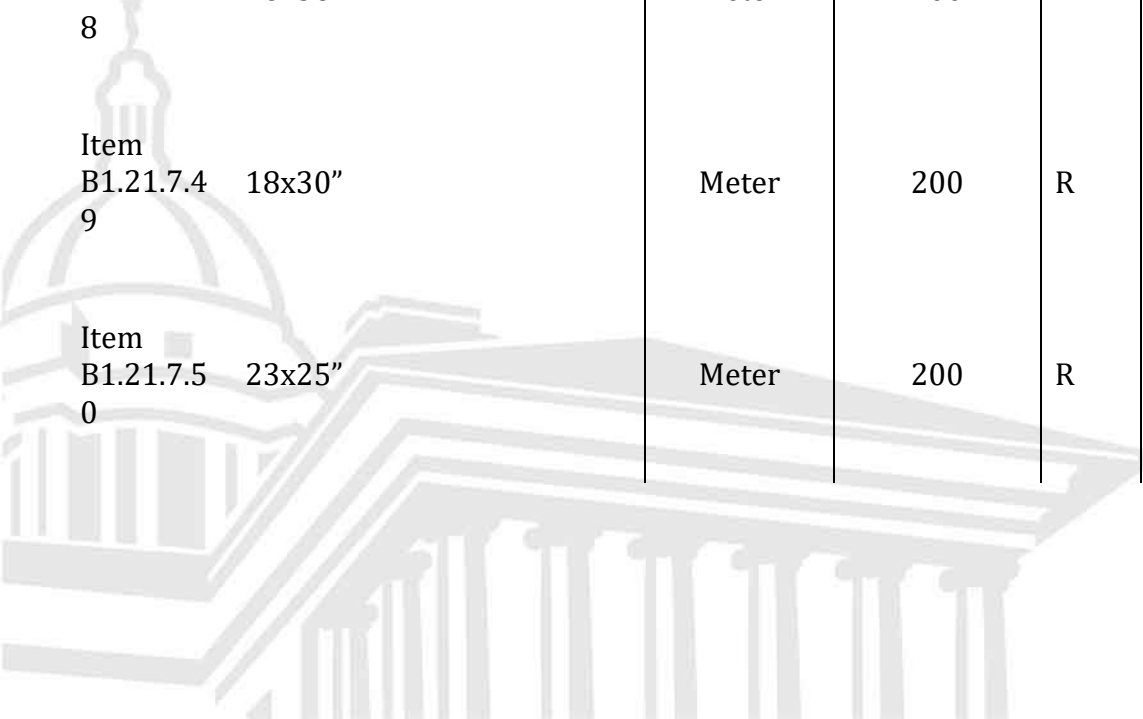
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.7.3 3	15x16"	Meter	200	R	.....
Item B1.21.7.3 4	14x20"	Meter	200	R	.....
Item B1.21.7.3 5	15x18"	Meter	200	R	.....
Item B1.21.7.3 6	12x26"	Meter	200	R	.....
Item B1.21.7.3 7	16x20"	Meter	200	R	.....
Item B1.21.7.3 8	12x30"	Meter	200	R	.....
Item B1.21.7.3 9	14x25"	Meter	200	R	.....
Item B1.21.7.4 0	12x34"	Meter	200	R	.....
Item B1.21.7.4 1	15x25"	Meter	200	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

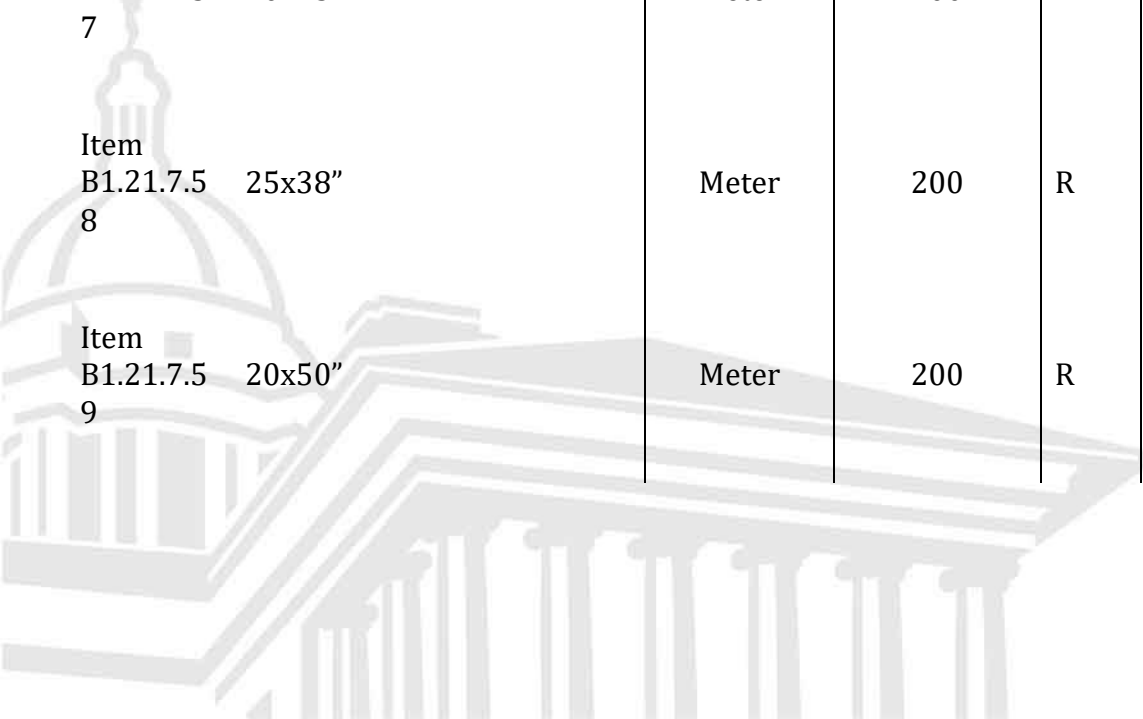
Item B1.21.7.4 2	12x26"	Meter	200	R	.....
Item B1.21.7.4 3	16x25"	Meter	200	R	.....
Item B1.21.7.4 4	20x20"	Meter	200	R	.....
Item B1.21.7.4 5	12x45"	Meter	200	R	.....
Item B1.21.7.4 6	16x30"	Meter	200	R	.....
Item B1.21.7.4 7	20x24"	Meter	200	R	.....
Item B1.21.7.4 8	16x36"	Meter	200	R	.....
Item B1.21.7.4 9	18x30"	Meter	200	R	.....
Item B1.21.7.5 0	23x25"	Meter	200	R	.....





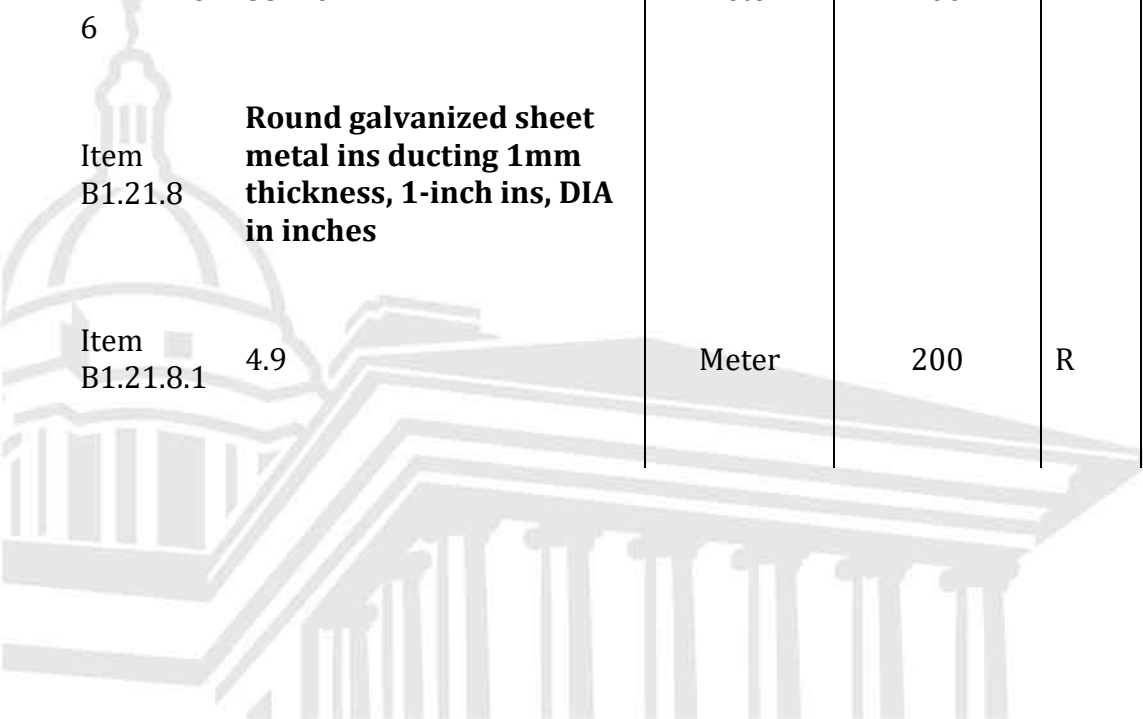
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.7.5 1	16x40"	Meter	200	R	.....
Item B1.21.7.5 2	20x32"	Meter	200	R	.....
Item B1.21.7.5 3	25x25"	Meter	200	R	.....
Item B1.21.7.5 4	20x35"	Meter	200	R	.....
Item B1.21.7.5 5	25x28"	Meter	200	R	.....
Item B1.21.7.5 6	16x55"	Meter	200	R	.....
Item B1.21.7.5 7	20x43"	Meter	200	R	.....
Item B1.21.7.5 8	25x38"	Meter	200	R	.....
Item B1.21.7.5 9	20x50"	Meter	200	R	.....



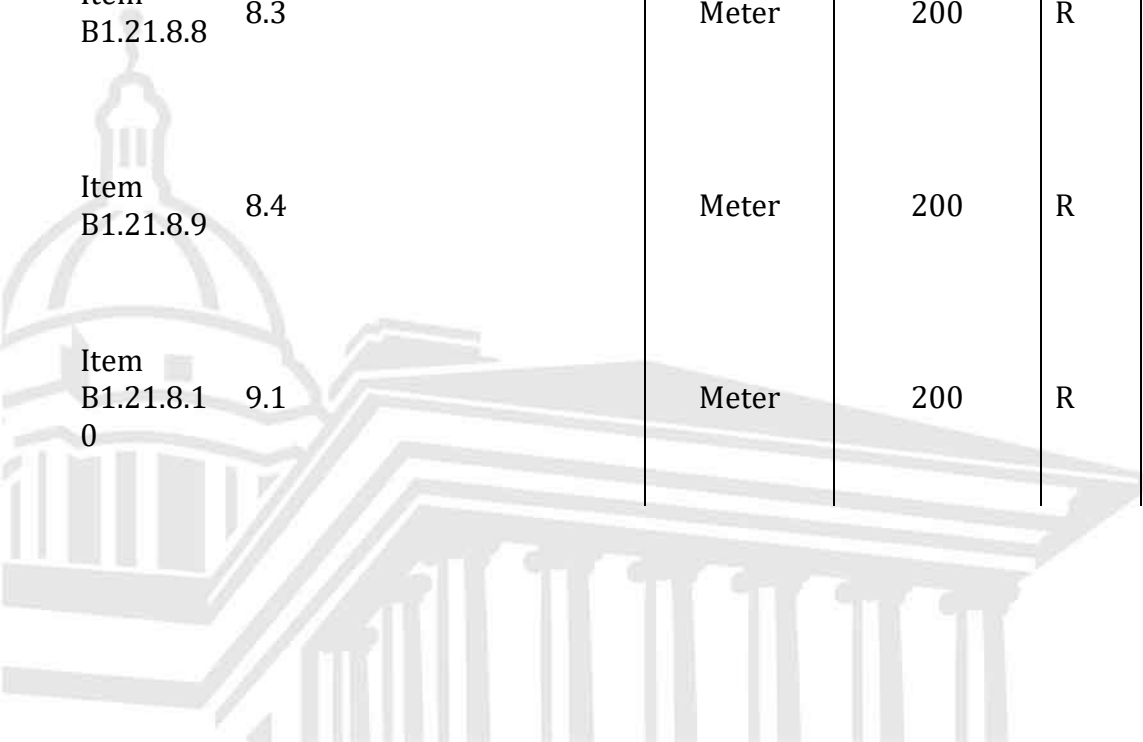
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.7.6 0	20x55"	Meter	200	R	.....
Item B1.21.7.6 1	30x35"	Meter	200	R	.....
Item B1.21.7.6 2	25x48"	Meter	200	R	.....
Item B1.21.7.6 3	30x40"	Meter	200	R	.....
Item B1.21.7.6 4	32x40"	Meter	200	R	.....
Item B1.21.7.6 5	32x45"	Meter	200	R	.....
Item B1.21.7.6 6	35x40"	Meter	200	R	.....
Item B1.21.8	<b>Round galvanized sheet metal ins ducting 1mm thickness, 1-inch ins, DIA in inches</b>				
Item B1.21.8.1	4.9	Meter	200	R	.....



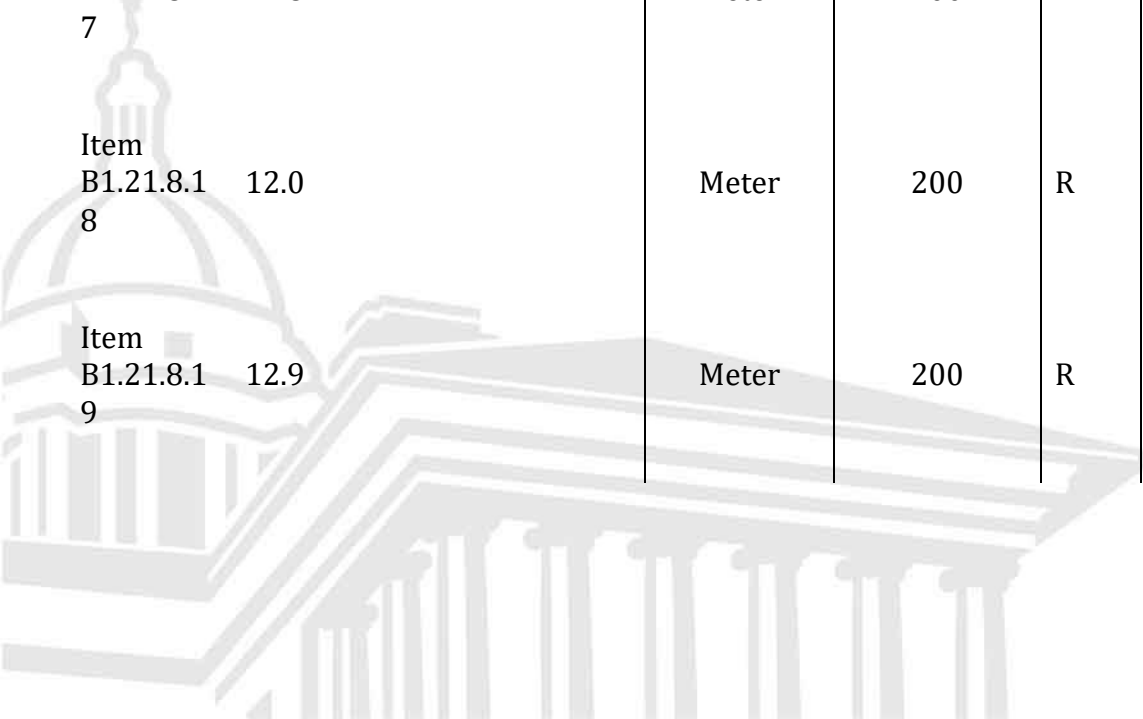
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.8.2	5.7	Meter	200	R	.....
Item B1.21.8.3	6.0	Meter	200	R	.....
Item B1.21.8.4	6.4	Meter	200	R	.....
Item B1.21.8.5	6.6	Meter	200	R	.....
Item B1.21.8.6	7.1	Meter	200	R	.....
Item B1.21.8.7	8.2	Meter	200	R	.....
Item B1.21.8.8	8.3	Meter	200	R	.....
Item B1.21.8.9	8.4	Meter	200	R	.....
Item B1.21.8.10	9.1	Meter	200	R	.....



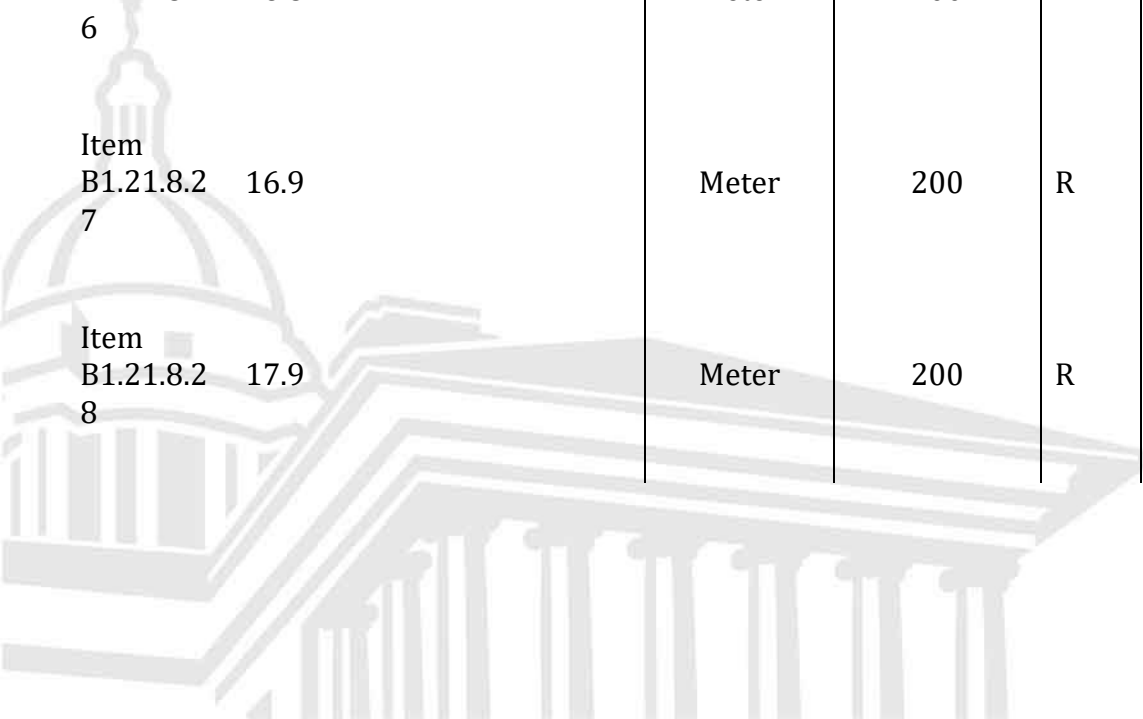
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.8.1 9.3 1	Meter	200	R	.....
Item B1.21.8.1 9.8 2	Meter	200	R	.....
Item B1.21.8.1 10.7 3	Meter	200	R	.....
Item B1.21.8.1 10.9 4	Meter	200	R	.....
Item B1.21.8.1 11.3 5	Meter	200	R	.....
Item B1.21.8.1 11.5 6	Meter	200	R	.....
Item B1.21.8.1 11.8 7	Meter	200	R	.....
Item B1.21.8.1 12.0 8	Meter	200	R	.....
Item B1.21.8.1 12.9 9	Meter	200	R	.....



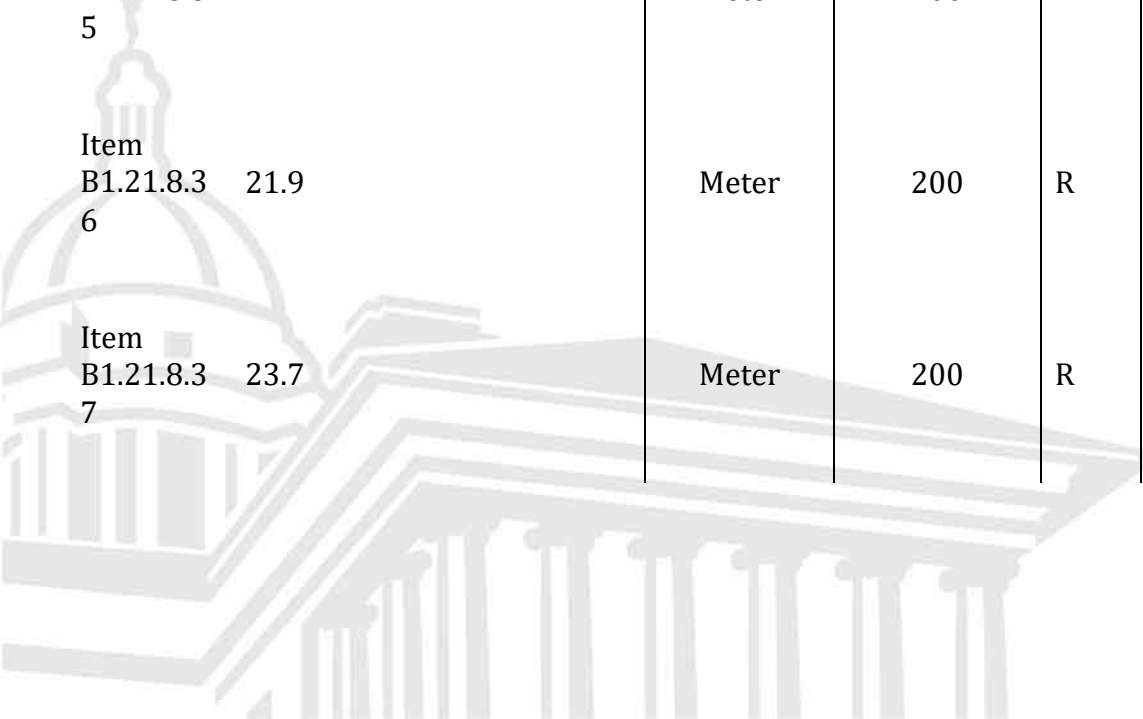
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.8.2 0	13.1	Meter	200	R	.....
Item B1.21.8.2 1	14.1	Meter	200	R	.....
Item B1.21.8.2 2	14.6	Meter	200	R	.....
Item B1.21.8.2 3	15.8	Meter	200	R	.....
Item B1.21.8.2 4	15.9	Meter	200	R	.....
Item B1.21.8.2 5	16.4	Meter	200	R	.....
Item B1.21.8.2 6	16.8	Meter	200	R	.....
Item B1.21.8.2 7	16.9	Meter	200	R	.....
Item B1.21.8.2 8	17.9	Meter	200	R	.....



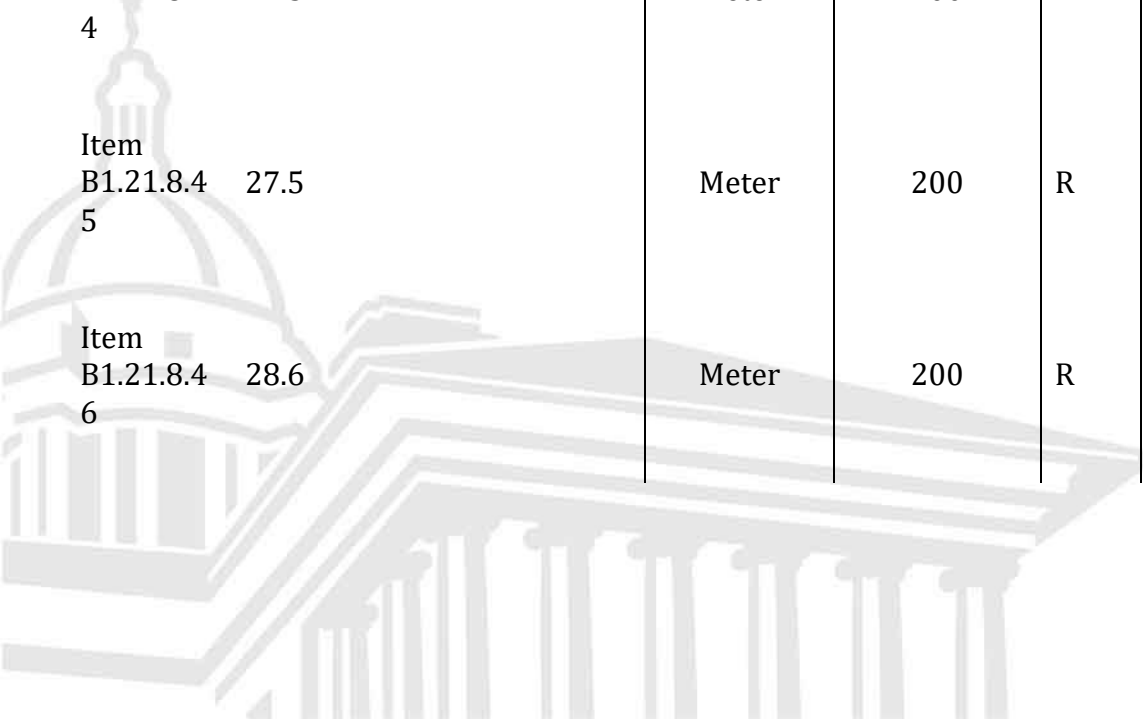
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.8.2 9	18.2	Meter	200	R	.....
Item B1.21.8.3 0	19.0	Meter	200	R	.....
Item B1.21.8.3 1	19.5	Meter	200	R	.....
Item B1.21.8.3 2	20.2	Meter	200	R	.....
Item B1.21.8.3 3	21.0	Meter	200	R	.....
Item B1.21.8.3 4	21.4	Meter	200	R	.....
Item B1.21.8.3 5	21.7	Meter	200	R	.....
Item B1.21.8.3 6	21.9	Meter	200	R	.....
Item B1.21.8.3 7	23.7	Meter	200	R	.....



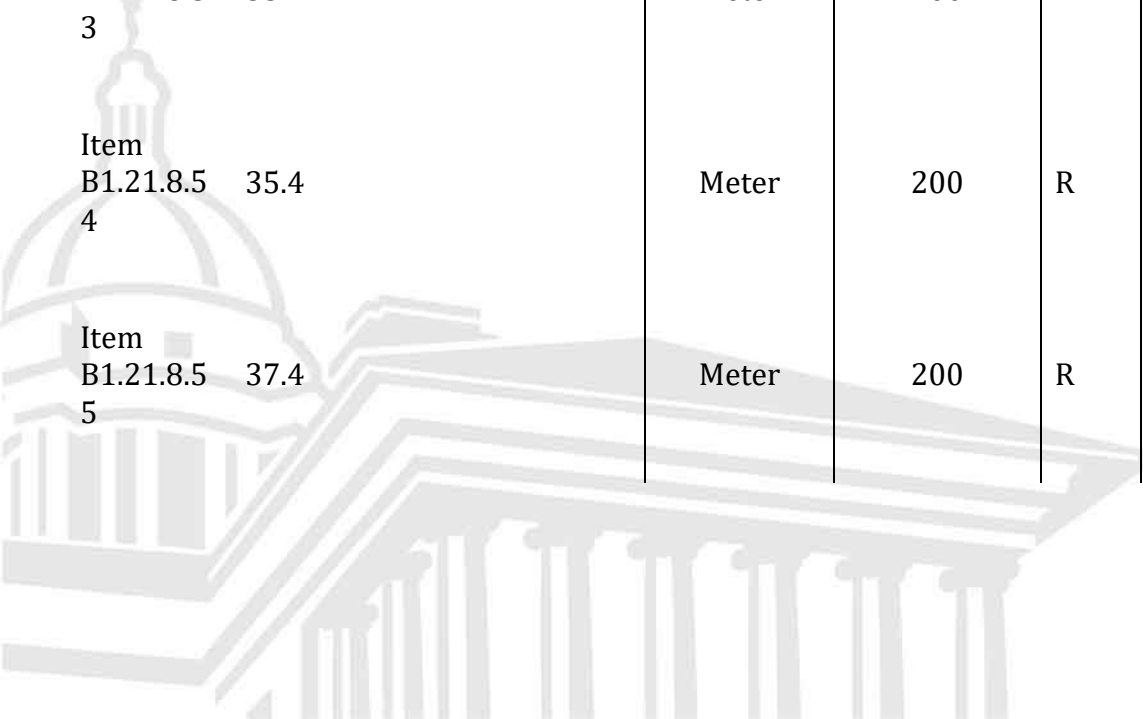
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.8.3 8	23.9	Meter	200	R	.....
Item B1.21.8.3 9	24.1	Meter	200	R	.....
Item B1.21.8.4 0	24.7	Meter	200	R	.....
Item B1.21.8.4 1	25.2	Meter	200	R	.....
Item B1.21.8.4 2	26.2	Meter	200	R	.....
Item B1.21.8.4 3	27.0	Meter	200	R	.....
Item B1.21.8.4 4	27.3	Meter	200	R	.....
Item B1.21.8.4 5	27.5	Meter	200	R	.....
Item B1.21.8.4 6	28.6	Meter	200	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

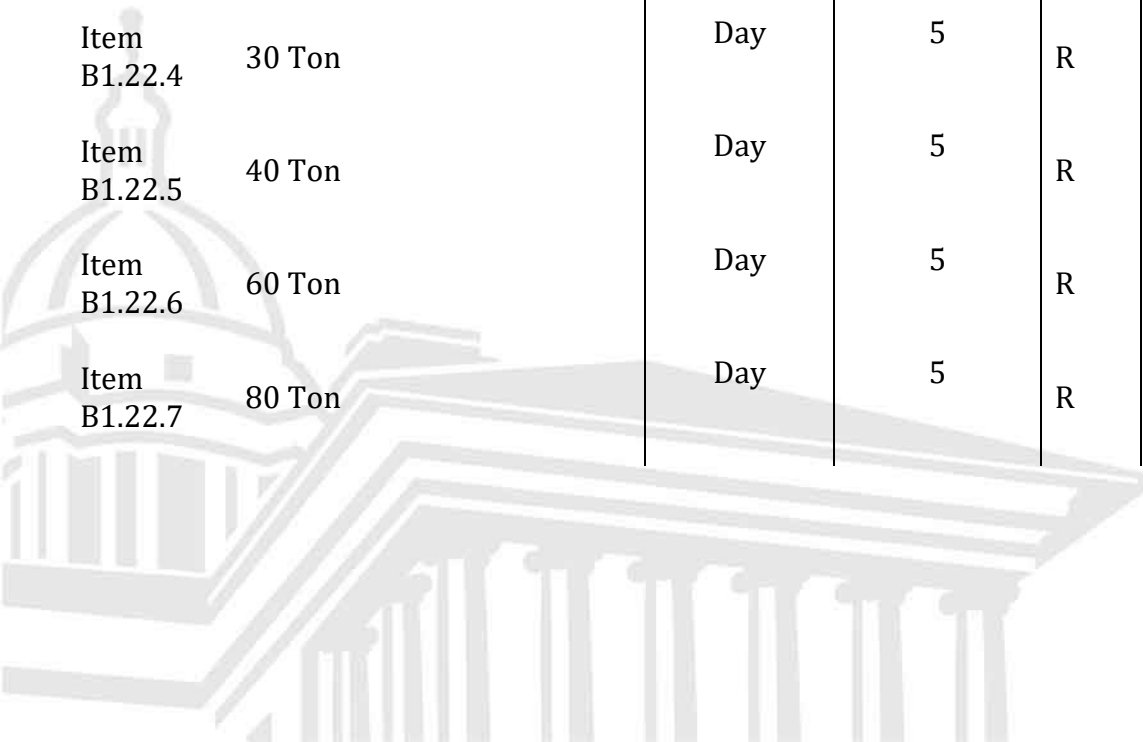
Item B1.21.8.4 7	28.9	Meter	200	R	.....
Item B1.21.8.4 8	31.0	Meter	200	R	.....
Item B1.21.8.4 9	31.5	Meter	200	R	.....
Item B1.21.8.5 0	33.5	Meter	200	R	.....
Item B1.21.8.5 1	33.7	Meter	200	R	.....
Item B1.21.8.5 2	33.9	Meter	200	R	.....
Item B1.21.8.5 3	35.2	Meter	200	R	.....
Item B1.21.8.5 4	35.4	Meter	200	R	.....
Item B1.21.8.5 5	37.4	Meter	200	R	.....





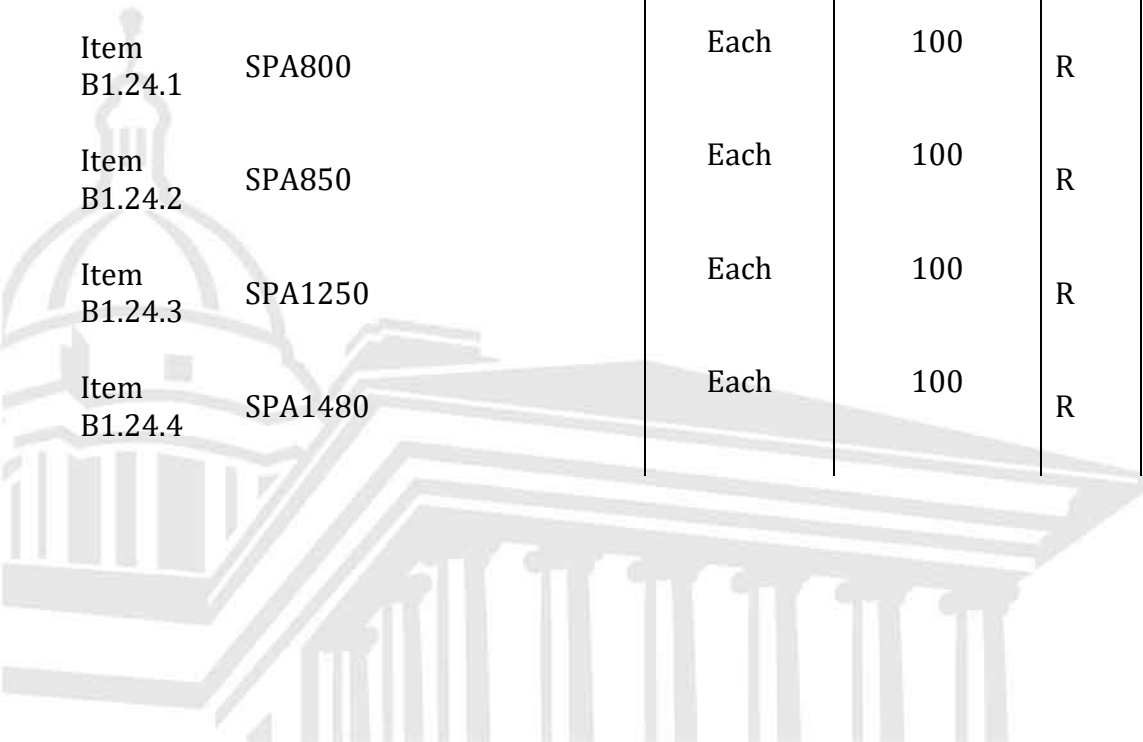
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.21.8.5 6	37.8	Meter	200	R	.....
Item B1.21.8.5 7	39.6	Meter	200	R	.....
Item B1.21.8.5 8	40.9	Meter	200	R	.....
Item B1.21.8.5 9	41.3	Meter	200	R	.....
Item B1.22	<b>Cranes hire</b>			R	.....
Item B1.22.1	18 Ton	Day	5	R	.....
Item B1.22.2	20 Ton	Day	5	R	.....
Item B1.22.3	25 Ton	Day	5	R	.....
Item B1.22.4	30 Ton	Day	5	R	.....
Item B1.22.5	40 Ton	Day	5	R	.....
Item B1.22.6	60 Ton	Day	5	R	.....
Item B1.22.7	80 Ton	Day	5	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.22.8	100 Ton	Day	5	R	.....
Item B1.22.9	150 Ton	Day	5	R	.....
Item B1.22.10	220 Ton	Day	5	R	.....
Item B1.22	<b>Scaffolding hire</b>				
Item B1.22.11	Scaffold up to 3 meters	Day	30	R	.....
Item B1.22.12	Scaffold up to 6 meters	Day	30	R	.....
Item B1.22.13	Scaffold up to 9 meters	Day	30	R	.....
Item B1.23	<b>Supply Universal remotes</b>				
Item B1.23.1	Universal infra-red air conditioner remote	Each	100	R	.....
Item B1.23.2	Universal wall mounted air conditioner controller	Each	100	R	.....
Item B1.24	<b>V-Belts</b>				
Item B1.24.1	SPA800	Each	100	R	.....
Item B1.24.2	SPA850	Each	100	R	.....
Item B1.24.3	SPA1250	Each	100	R	.....
Item B1.24.4	SPA1480	Each	100	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.24.5	SPA1550	Each	100	R	.....
Item B1.24.6	SPA1800	Each	100	R	.....
Item B1.24.7	SPA1950	Each	100	R	.....
Item B1.24.8	SPA2120	Each	100	R	.....
Item B1.24.9	13X780	Each	100	R	.....
Item B1.24.10	13X850	Each	100	R	.....
Item B1.24.11	13X1250	Each	100	R	.....
Item B1.25	<b>Supply lighting / power skirting</b>				
B1.25.1	Down light with led globe	Each	100	R	.....
B1.25.2	1200x600 light fitting complete with diffuser and tubes, recessed	Each	100	R	.....
B1.25.3	1200x600 light fitting complete with diffuser and tubes, surface mount	Each	100	R	.....
B1.25.4	1 light switch 15a	Each	100	R	.....
B1.25.5	2 light switch 15a	Each	100	R	.....
B1.25.6	3 light switch 15a	Each	100	R	.....
B1.25.7	P2000 covers	Each	100	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B1.25	<b>Power skirting's / poles</b>					
Item B1.25.8	Power pole complete with ceiling ross no plugs	Each	50	R	.....	
Item B1.25.9	2 compartments, 3 tier power skirting	Each	50	R	.....	
Item B1.25.10	2 compartments, 3 tier power skirting T	Each	50	R	.....	
Item B1.25.11	2 compartments, 3 tier power skirting 90-degree bend	Each	50	R	.....	
Item B1.25.12	2 compartments, 3 tier power skirting end caps	Each	50	R	.....	
Item B1.25.13	Power skirting plug cover	Each	50	R	.....	
Item B1.25.14	Single normal switched socket outlets in power skirting	Each	50	R	.....	
Item B1.25.15	Single dedicated switched socket outlet in power skirting	Each	50	R	.....	
Item B1.25.16	40A rotter lock isolator 3 phase	Each	50	R	.....	
Item B1.25.17	30A rotter lock isolator 2 pole	Each	50	R	.....	
Item B1.25.18	P9000 wiring channel complete with T-rods bolts	Each	200	R	.....	
Item B1.25.19	4 x 2 extension boxes	Each	100	R	.....	
Item B1.25.20	Single normal switched socket outlet on trunking	Each	100	R	.....	

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

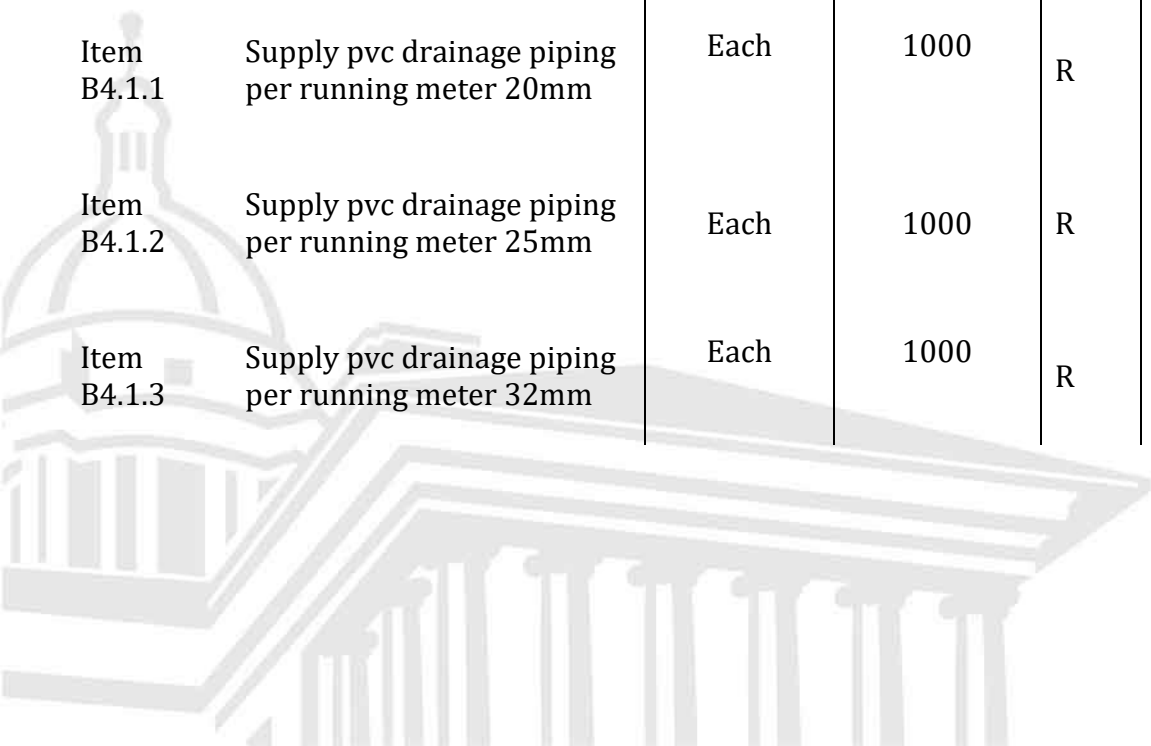
Item B1.25.21	Single dedicated switched socket outlet on trunking	Each	100	R	.....
Item B1.25.22	4 x 4 extension boxes	Each	100	R	.....
Item B1.25.23	Double normal switched socket outlet on trunking	Each	100	R	.....
Item B1.25.24	Double dedicated switched socket outlet on trunking	Each	100	R	.....
Item B1.25.25	40-way electrical DB	Each	50	R	.....
Item B1.25.26	20-way electrical DB	Each	50	R	.....
Item B2.1	Supply and installation of ¼ inch refrigerant piping, thermal insulation included price per running meter	Meter	1000	R	.....
Item B2.2	Supply and installation of 1/2 inch refrigerant piping, thermal insulation included price per running meter	Meter	1000	R	.....
Item B2.3	Supply and installation of ¾ inch refrigerant piping, thermal insulation included price per running meter	Meter	1000	R	.....
Item B2.4	Supply and installation of 3/8 inch refrigerant piping, thermal insulation included price per running meter	Meter	1000	R	.....
Item B2.5	Supply and installation of 5/8 inch refrigerant piping, thermal insulation included price per running meter	Meter	1000	R	.....
Item B3.1.1	Supply pvc conduit box 1-way side entry 20mm	Each	100	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B3.1.2	Supply pvc conduit box 1-way side entry 25mm	Each	100	R	.....
Item B3.2.1	Supply pvc conduit box 2 way through 20mm	Each	100	R	.....
Item B3.2.2	Supply pvc conduit box 2 way through 25mm	Each	100	R	.....
Item B3.3.1	Supply pvc conduit box 2-way angle 20mm	Each	100	R	.....
Item B3.3.2	Supply pvc conduit box 2 way through 25mm	Each	100	R	.....
Item B3.4.1	Supply pvc conduit box 3-way side entry 20mm	Each	100	R	.....
Item B3.4.2	Supply pvc conduit box 3-way side entry 25mm	Each	100	R	.....
Item B3.5.1	Supply pvc conduit box 4-way side entry 20mm	Each	100	R	.....
Item B3.5.2	Supply pvc conduit box 4-way side entry 25mm	Each	100	R	.....
Item B3.6.1	Supply 90-degree solid bends 20mm	Each	100	R	.....
Item B3.6.2	Supply 90-degree solid bends 25mm	Each	300	R	.....
Item B3.6.3	Supply 90-degree solid bends 32mm	Each	300	R	.....
Item B3.6.4	Supply 90-degree solid bends 40mm	Each	300	R	.....
Item B3.6.5	Supply 90-degree solid bends 50mm	Each	300	R	.....
Item B3.7.1	Supply solid pvc couplings 20mm	Each	300	R	.....

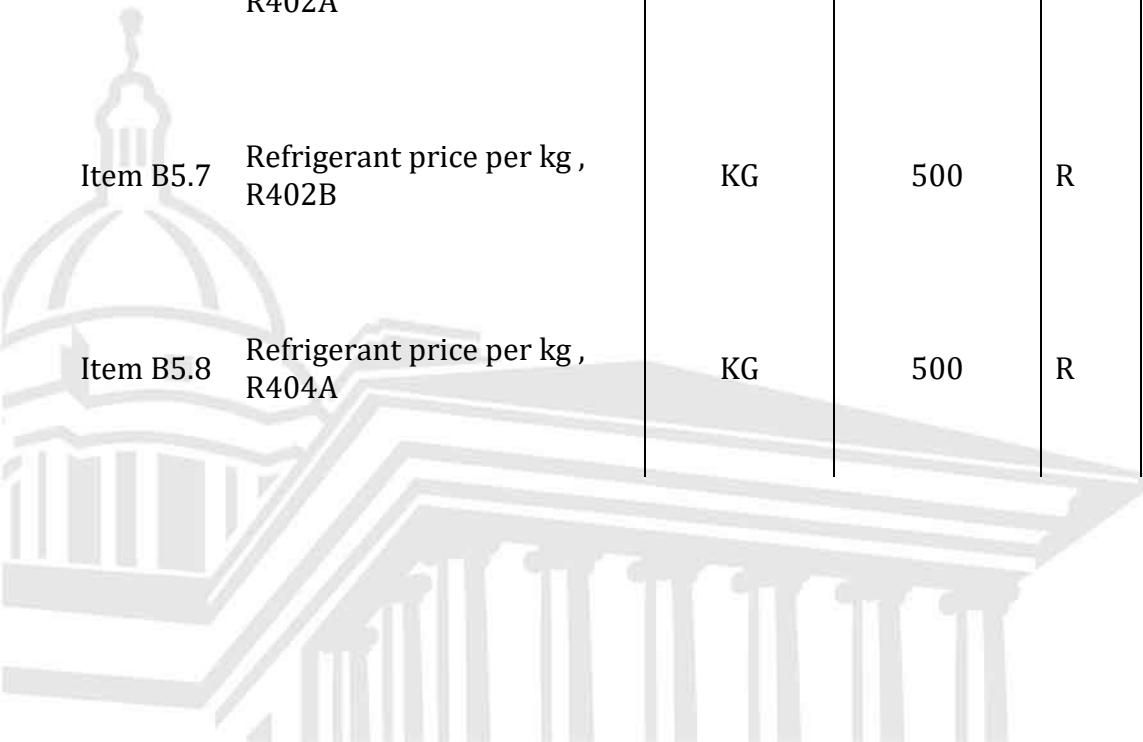
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B3.7.2	Supply solid pvc couplings 25mm	Each	300	R	.....
Item B3.7.3	Supply solid pvc couplings 32mm	Each	300	R	.....
Item B3.7.4	Supply solid pvc couplings 40mm	Each	300	R	.....
Item B3.7.5	Supply solid pvc couplings 50mm	Each	300	R	.....
Item B3.8.1	Supply spacer bar saddles 20mm	Each	300	R	.....
Item B3.8.2	Supply spacer bar saddles 25mm	Each	300	R	.....
Item B3.9.1	Supply strap saddles pvc 20mm	Each	500	R	.....
Item B3.9.2	Supply strap saddles pvc 25mm	Each	500	R	.....
Item B3.9.3	Supply strap saddles pvc 32mm	Each	500	R	.....
Item B3.9.4	Supply strap saddles pvc 40mm	Each	500	R	.....
Item B3.9.5	Supply strap saddles pvc 50mm	Each	500	R	.....
Item B4.1.1	Supply pvc drainage piping per running meter 20mm	Each	1000	R	.....
Item B4.1.2	Supply pvc drainage piping per running meter 25mm	Each	1000	R	.....
Item B4.1.3	Supply pvc drainage piping per running meter 32mm	Each	1000	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

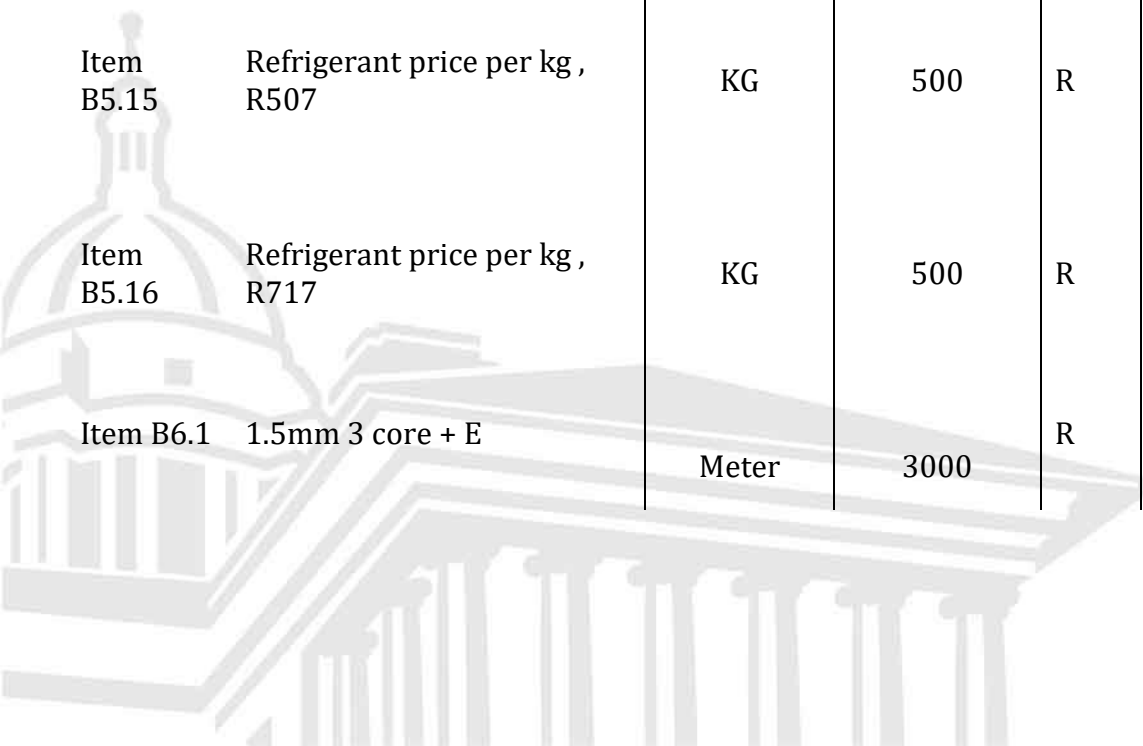
Item B4.1.4	Supply pvc drainage piping per running meter 40mm	Each	1000	R	.....
Item B4.1.5	Supply pvc drainage piping per running meter 50mm	Each	1000	R	.....
Item B5.1	Refrigerant price per kg , R22	KG	2000	R	.....
Item B5.2	Refrigerant price per kg , R410A	KG	3000	R	.....
Item B5.3	Refrigerant price per kg , R134A	KG	3000	R	.....
Item B5.4	Refrigerant price per kg , R401A	KG	500	R	.....
Item B5.5	Refrigerant price per kg , R4401C	KG	500	R	.....
Item B5.6	Refrigerant price per kg , R402A	KG	500	R	.....
Item B5.7	Refrigerant price per kg , R402B	KG	500	R	.....
Item B5.8	Refrigerant price per kg , R404A	KG	500	R	.....





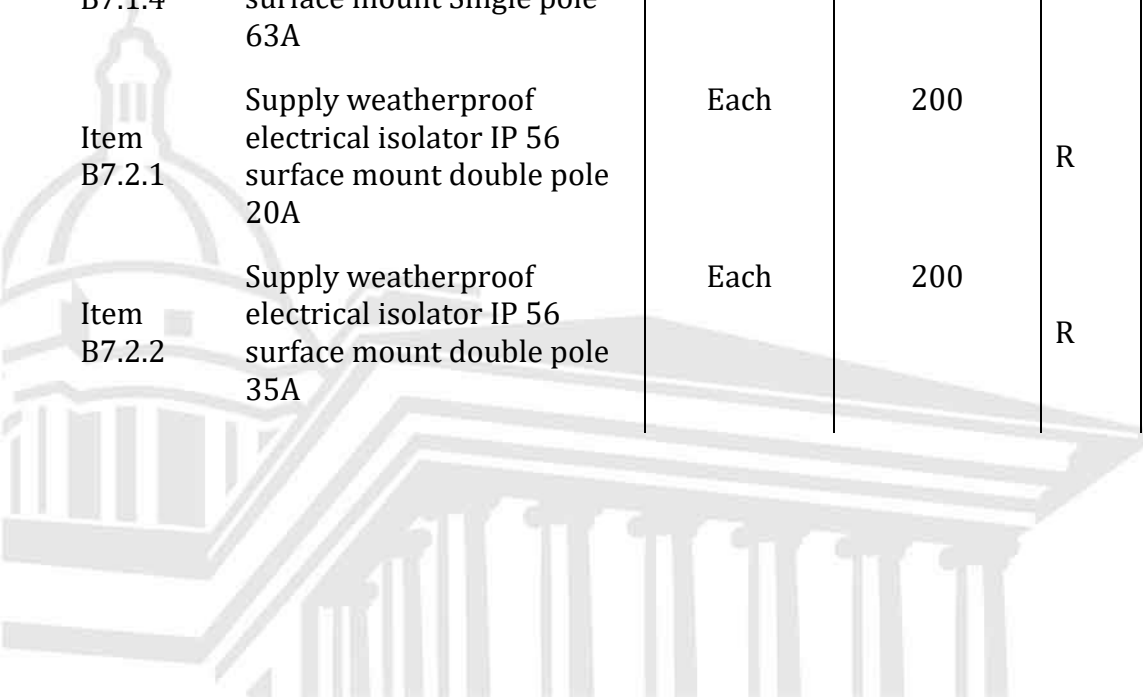
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B5.9	Refrigerant price per kg , R406A	KG	500	R	.....
Item B5.10	Refrigerant price per kg , R407A	KG	500	R	.....
Item B5.11	Refrigerant price per kg , R407C	KG	500	R	.....
Item B5.12	Refrigerant price per kg , R500	KG	500	R	.....
Item B5.13	Refrigerant price per kg , R502	KG	500	R	.....
Item B5.14	Refrigerant price per kg , R503	KG	500	R	.....
Item B5.15	Refrigerant price per kg , R507	KG	500	R	.....
Item B5.16	Refrigerant price per kg , R717	KG	500	R	.....
Item B6.1	1.5mm 3 core + E	Meter	3000	R	.....



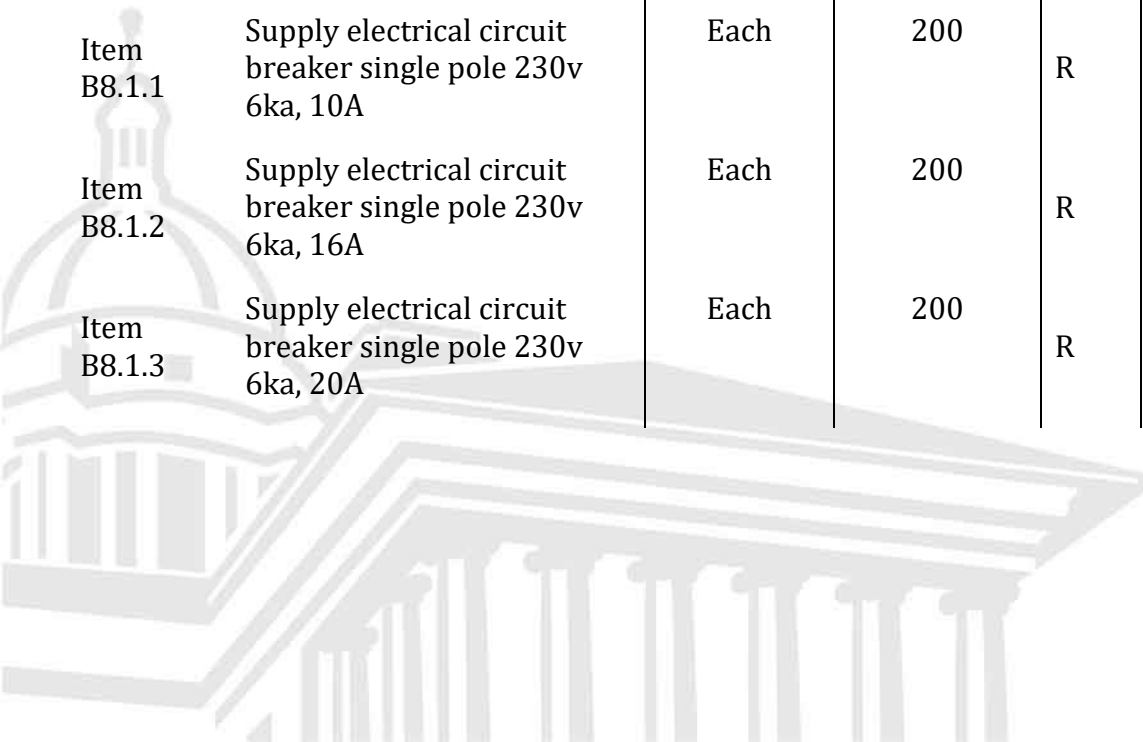
GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B6.2	1.5mm 4 core + E	Meter	3000	R	.....
Item B6.3	2.5mm 3 core + E	Meter	3000	R	.....
Item B6.4	Electrical supply cabling price per running meter 2.5mm 4 core + E surflex	Meter	3000	R	.....
Item B6.5	Electrical supply cabling price per running meter 4mm 3 cores + E surflex	Meter	3000	R	.....
Item B6.6	Electrical supply cabling price per running meter 4mm 4 cores + E surflex	Meter	3000	R	.....
Item B7.1.1	Supply weatherproof electrical isolator IP 56 surface mount Single pole 20A	Each	200	R	.....
Item B7.1.2	Supply weatherproof electrical isolator IP 56 surface mount Single pole 35A	Each	200	R	.....
Item B7.1.3	Supply weatherproof electrical isolator IP 56 surface mount Single pole 55A	Each	200	R	.....
Item B7.1.4	Supply weatherproof electrical isolator IP 56 surface mount Single pole 63A	Each	200	R	.....
Item B7.2.1	Supply weatherproof electrical isolator IP 56 surface mount double pole 20A	Each	200	R	.....
Item B7.2.2	Supply weatherproof electrical isolator IP 56 surface mount double pole 35A	Each	200	R	.....



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B7.2.3	Supply weatherproof electrical isolator IP 56 surface mount double pole 55A	Each	200	R	.....
Item B7.2.4	Supply weatherproof electrical isolator IP 56 surface mount double pole 63A	Each	200	R	.....
Item B7.3.1	Supply weatherproof electrical isolator IP 56 surface mount triple pole 20A	Each	200	R	.....
Item B7.3.2	Supply weatherproof electrical isolator IP 56 surface mount triple pole 35A	Each	200	R	.....
Item B7.3.3	Supply weatherproof electrical isolator IP 56 surface mount triple pole 55A	Each	200	R	.....
Item B7.3.4	Supply weatherproof electrical isolator IP 56 surface mount triple pole 63A	Each	200	R	.....
Item B7.3.5	Supply weatherproof electrical isolator IP 56 surface mount triple pole 80A	Each	200	R	.....
Item B8.1.1	Supply electrical circuit breaker single pole 230v 6ka, 10A	Each	200	R	.....
Item B8.1.2	Supply electrical circuit breaker single pole 230v 6ka, 16A	Each	200	R	.....
Item B8.1.3	Supply electrical circuit breaker single pole 230v 6ka, 20A	Each	200	R	.....

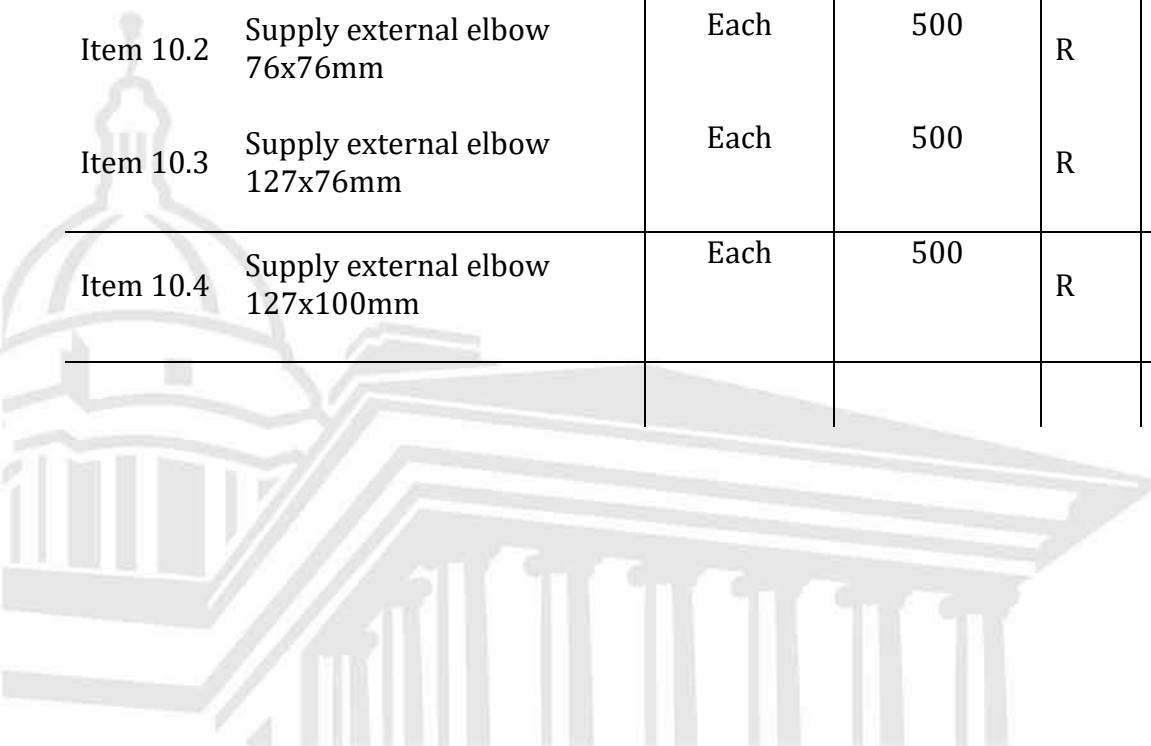


GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B8.1.4	Supply electrical circuit breaker single pole 230v 6ka, 25A	Each	200	R	.....
Item B8.1.5	Supply electrical circuit breaker single pole 230v 6ka, 32A	Each	200	R	.....
Item B8.1.6	Supply electrical circuit breaker single pole 230v 6ka, 63A(isolator)	Each	200	R	.....
Item B8.2.1	Supply electrical circuit breaker double pole 230v 6ka, 10A	Each	200	R	.....
Item B8.2.2	Supply electrical circuit breaker double pole 230v 6ka, 16A	Each	200	R	.....
Item B8.2.3	Supply electrical circuit breaker double pole 230v 6ka, 20A	Each	200	R	.....
Item B8.2.4	Supply electrical circuit breaker double pole 230v 6ka, 25A	Each	200	R	.....
Item B8.2.5	Supply electrical circuit breaker double pole 230v 6ka, 32A	Each	200	R	.....
Item B8.3.1	Supply electrical circuit breaker triple pole 400v 6ka, 10A	Each	200	R	.....
Item B8.3.2	Supply electrical circuit breaker triple pole 400v 6ka, 16A	Each	200	R	.....
Item B8.3.3	Supply electrical circuit breaker triple pole 400v 6ka, 20A	Each	200	R	.....
Item B8.3.4	Supply electrical circuit breaker triple pole 400v 6ka, 25A	Each	200	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B8.3.5	Supply electrical circuit breaker triple pole 400v 6ka, 32A	Each	200	R	.....	
Item B8.3.6	Supply electrical circuit breaker triple pole 400v 6ka, 63A(isolator)	Each	200	R	.....	
Item B9.1	Supply galvanized Unistrut 450mm wrap around arm P1000 2.5mm price per set	Each	500	R	.....	
Item B9.2	Supply galvanized Unistrut 600mm wrap around arm P1000 2.5mm price per set	Each	500	R	.....	
Item B10.1	Galvanized trunking price per running meter 41x41mm with cover	Meter	500	R	.....	
Item B10.2	Galvanized trunking price per running meter 76x76mm with cover	Meter	500	R	.....	
Item B10.3	Galvanized trunking price per running meter 127x76mm with cover	Meter	500	R	.....	
Item B10.4	Galvanized trunking price per running meter 127x100mm with cover	Meter	500	R	.....	
Item 10.1	Supply external elbow 41x41mm	Each	500	R	.....	
Item 10.2	Supply external elbow 76x76mm	Each	500	R	.....	
Item 10.3	Supply external elbow 127x76mm	Each	500	R	.....	
Item 10.4	Supply external elbow 127x100mm	Each	500	R	.....	



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

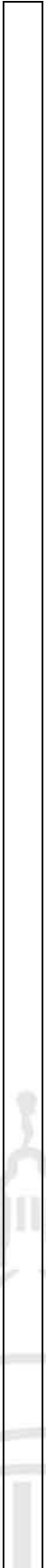
Item B11.1	Supply pvc trunking with cover price per running meter 25x16	Meter	500	R	.....
Item B11.2	Supply pvc trunking with cover price per running meter 40x16	Meter	500	R	.....
Item B11.3	Supply pvc trunking with cover price per running meter 40x25	Meter	500	R	.....
Item B11.4	Supply pvc trunking with cover price per running meter 40x40	Meter	500	R	.....
Item B11.5	Supply pvc trunking with cover price per running meter 100x40	Meter	500	R	.....
Item B12.1	Supply medium duty cable tray galvanized price per running meter 200mm wide	Meter	500	R	.....
Item B12.2	Supply medium duty cable tray galvanized price per running meter 300mm wide	Meter	500	R	.....
Item B12.3	Supply medium duty cable tray galvanized price per running meter 400mm wide	Meter	500	R	.....
Item B13.1	Labour price per hour qualified air conditioning / refrigeration technician	Hour	10000	R	.....
Item B13.2	Labour price per hour qualified electrician	Hour	10000	R	.....
Item B13.3	Labour price per hour skilled labour	Hour	10000	R	.....
Item B13.4	Labour price per hour unskilled labour	Hour	10000	R	.....

GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

Item B13.5	Labour price per hour qualified plumber	Hour	2000	R	.....
Item B13.6	Qualified Mechanical engineer, consulting service fee	Hour	400	R	.....
Item B13.7	Qualified Electrical engineer consulting service fee	Hour	400	R	.....
Item B14.1	Transport cost for the completion of work @ R/km	KM	100000	R	.....
SUBTOTAL A		R			
Add 15% VAT on subtotal A		R			
<b>CONTRACT PRICE CARRIED FORWARD TO FORM OF OFFER (IF APPLICABLE)</b>		R			



GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.





GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.

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GPM 03 2022/23 Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.





(GROUP PROPERTY DEPARTMENT)

**TENDER TO APPOINT PROFESSIONAL SERVICE PROVIDERS TO SUPPLY,  
INSTALL, MAINTAIN, REPAIR AND UPGRADE OF EXISTING HEATING,  
VENTILATION, AIR CONDITIONING AND COOLING SYSTEMS CITY WIDE AS AND  
WHEN REQUIRED FOR A PERIOD OF 3 YEARS.**

**BID NUMBER: GPM 03 2022/23**



**TENDER TO APPOINT PROFESSIONAL SERVICE PROVIDERS TO SUPPLY, INSTALL, MAINTAIN, REPAIR AND UPGRADE OF EXISTING HEATING, VENTILATION, AIR CONDITIONING AND COOLING SYSTEMS CITY WIDE AS AND WHEN REQUIRED FOR A PERIOD OF 3 YEARS.**

**1. INTRODUCTION AND PURPOSE**

The City of Tshwane Metropolitan Municipality (COT) hereby invites interested and suitably qualified service providers to submit bids to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required. The services be done throughout the COT especially in relation to COT owned and occupied properties. The services are intended to be provided through a corporate tender which be utilized COT wide to service all departments. The tender is for a period of 3 (three) years.

**Note:**

**COT hereby reserves the right to:**

- Appoint more than one bidder.
- Appoint this tender as it deems appropriate to provide adequate provision of services which may also include the award of this tender on a regional basis and/or rotational basis as and/or as and when required.
- To appoint an alternate service provider should the recommended service provider/s not be able to provide the required services and/or accept the appointment of the tender.

**2. BACKGROUND**

COT is required to ensure that its facilities are Occupational Health and Safety (OHS) compliant in line with the OHS Act, no 85 of 1993 (as amended). One of the requirements for OHS compliance is to ensure a consistent repairs and maintenance service in place immediately when needed

This bid is largely for all HVAC maintenance, repairs, installation, and upgrade as and when required City wide for a period of 3 (three) years. The purpose of the said repairs,

maintenance, installation, and upgrade is to keep, restore or improve every facility i.e., every part of the HVAC system, its services and surrounds to a currently acceptable standard and to sustain the utility and value of the facility. If the facility is not well maintained in proper working condition, then it renders the building unsuitable for use and due to this ultimately causes premature decay of the HVAC equipment and reduces its life span.

The aim of repairs, maintenance and upgrade is as follows.

- To preserve the operating condition of HVAC machinery and equipment services, structures, etc.
- To restore them back to their original standards.
- To improve the facilities depending upon the development that is taking place in the concerned or relevant engineering

So, all in all to increase the life of the HVAC system or any structure it must be maintained on a regular basis by both planned and unscheduled maintenance

Compliance is required in line with the National Building Regulations in relation to HVAC health and safety requirements in any building. The design, construction and equipment of buildings are required to comply with SANS 10400 Part T and must satisfy the local authority requirements.

There are several offences that owners of buildings need to avoid, including the need for HVAC equipment that comply with SANS 10147 and 10119.

Service providers working within this sector of the HVAC industry are required to have the appropriate competence through training, qualifications, and experience in compliance with:

- C3 The specifications laid out in SANS 10119, 10147, 10400.
- C4 The requirements of SAQCC in terms of refrigerant gas practitioner's certification mandated by the department of labour.
- C5 The requirements of SAQA NQF level 4-6 certification refrigeration artisans / technicians.
- C6 Applicable legislation and/or directives, as applicable, including those issued by the Department of Employment and Labour.

### **(a) DELIVERABLES**

Supply, fit and maintenance/servicing council owned HVAC as and when required and as detailed in the project scope.

The successful tenderer must provide the following:

- The service, repair, upgrade, supply and installation of Hvac equipment.
- Certain spare parts for Hvac equipment.
- Fit or install specified Hvac equipment.
- Maintenance of Hvac equipment.
- Certificate of compliance of maintenance or service of Hvac electrical equipment; and
- Risk Assessment and pro-active maintenance plans.

### **3. PROJECT SCOPE**

#### **Description of Scope of the service.**

Work to be performed by the appointed service provider shall consist of labour, materials, and tools of trade for the complete service, maintenance, repairs, installation, and upgrades of HVAC related works throughout the COT, as and when required for the continuous and efficient operation of council owned or occupied facilities for a three (3) year period in respect of the following:

#### **SECTION A: MAINTENANCE OF AIR CONDITIONERS**

##### **SCOPE:**

This tender must provide for the maintenance, repair and upgrade on air conditioning units, plant, and equipment as and when required throughout the City of Tshwane's buildings according to the given specifications and guidelines for a period of 3 years.

This contract will cover all buildings owned by the City of Tshwane incorporating all HVAC room air conditioners, plant, and equipment.

Replacement units: minimum – 100 Maximum - 400

Servicing of units: minimum – 1500 Maximum - 3500

#### Consumables: Baseline Indicators

- All supply and installation of air conditioning units must include for a complete installation, COMMISSIONING INCLUDED.
- Allowance must be given for 3m refrigerant pipe run.
- Allowance must be given for 3m drainage, condensate piping with fittings.
- Allowance must be given for 10m power supply cabling from nearest electrical distribution board.
- Allowance must be given for required circuit breaker in DB board.
- Allowance must be given for weatherproof isolator no further than 1m from condenser unit.
- For any additional distances on refrigerant piping, electrical cabling and drainage piping it must be stipulated on quotes as separate items.
- 

#### Travelling:

Travelling distance will be calculated from Tshwane House towards respective areas.

#### Labour Hours: Baseline Indicators

All installation hours for mid wall split air conditioners will be on a baseline of 3 hours per unit maximum on back-to-back installations.

Ceiling cassette / Under ceiling / console split units will be allowed 5 hours per unit on 5-meter run.

All additional distances / hours will be processed on their own merit.

#### **SPECIFICATIONS:**

**ITEM A1:** The air conditioning / refrigeration, plant and equipment will be of the following type:

(Inverter and non-inverter R410A), R134a, R401a-c, R402a-b,  
R404a, R406a, R407a-c, R500, 502, 503, 507, R717, R22

A1.1.1- B1.1.5 Mid / High wall split units non and inverter type R410A

A1.2.1 – B1.2.5 Ceiling cassette units non and inverter type R410A

A1.3.1 – B1.3.2 Under ceiling units non and inverter type R410A

A1.4.1 – B1.4.2 Down blow server room unit's inverter type R410A

A1.5 Floor standing unit inverter type R410A

A1.6.1-B1.6.11 Cooling towers / Evaporative condensers, refrigerant / water cooled systems (Supply only)

A1.7 Package plants

A1.8 Evaporator coolers

A1.9 Portable coolers

A1.10 Domestic fridge / Freezer

A1.11 Cold rooms

## A2. Appearance and conduct:

- All technicians must adhere to the occupational health and safety act thus always ensuring that protective clothing is worn.
- Technicians will at no time deviate from the explicit work order given by building maintenance division.
- At any given moment a qualified technician must be on site overseeing work to be done.
- Where electrical work (new circuit) has been drawn in, a certificate of compliance must accompany the invoice before payment will be issued.
- Each applicant will be required to have at least 1 team with transport available for work to be performed.
- Each team must have the appropriate equipment and tools to complete the work at hand.
- Technicians performing the work must be in the possession of a qualified artisan's certificate in the field of air conditioning, refrigeration, and ventilation, obtained in South Africa.



### A3. Liability

The successful bidders will be held liable for work not done in terms of the work specifications of the City Of Tshwane as well as applicable service standards.

The contractor shall take full risk of damage to or destruction of the works by whatever cause during construction of the works.

Price adjustment linked on Consumer Price Index per annum must be provided for.

### A4. Maintenance service:

#### 4.1.1 Service equipment:

The contractor shall always have the following equipment on the service vehicle:

- Vacuum pump, recovery / recycling unit.
- Combination soldering, brazing, and welding equipment
- Refrigerant, R 22, R134a, R410 etc.
- Fittings and controls.
- Leak detector (electronic)
- Electrical testers.
- Lead and light with flashlight.
- Various sizes refrigerant piping for small repairs.
- Flaring kit.
- Gauges for all types of refrigerants.

#### 4.1.2 Service on condenser units: (air cooled)

- Condenser coils must be cleaned by using high pressure jet of air, mechanical scrubbing, vacuum cleaner, or high-pressure water with non-corrosive detergent. (Do not expose electronic components to water)

- Condenser fan amperage must be checked, and worn-out bushes must be replaced where applicable.
- All electrical contact points must be checked and cleaned. (Loose connections must be rectified)
- Pc boards must be inspected for hot spots and bad connections.
- Check valves must be clean and dry.
- Check condition of refrigerant charge through site glass where possible or with pressure gauges.
- Check and verify operating pressures low and high side.
- Check condition of compressor and overload protection, high- and low-pressure safeties where applicable.
- Check condition of filter driers.
- Check condition of expansion devices or capillaries.
- Check condition of compressor.

#### 4.1.3 Service on evaporator units:

- Clean coil with high pressure jet of air, mechanical scrubbing, vacuum cleaning.
- Inspect fan and motor bearings / bushes.
- Check correct rotation of fan / electric motor 3 phase.
- Check fan belt tension and alignment where applicable.
- Clean filters
- Check electrical contacts and clean
- Clean drain pans and open drainage piping.

#### 4.1.4 Service of condenser units water cooled / cooling towers:

- High pressure wash units in and outside
- High pressure wash the coil bundle / fill pack in situ
- High pressure clean drift eliminators
- Check and adjust sump level
- Clean float valve plunger
- Clean sump strainer, spray orifices

- Check and adjust v-belt tension, vibration on tower, fan, bearings and motors for noise
- Check spray pump for water leaks on seal
- Flush sump and check for corrosion
- Fill sump and check float level
- Inspect general condition of condenser and report
- Clean any debris from unit and fans
- Check drive alignment and adjust, check v-belts, fan bearing locking collars
- Clean site after service.
- Detailed report after every service must be furnished with findings.

## **SECTION B: SUPPLY AND INSTALLATION OF AIR CONDITIONERS /PLANT AND EQUIPMENT**

B1.1.1- B1.1.5 Mid / High wall split units inverter type R410A

B1.2.1 – B1.2.5 Ceiling cassette unit's inverter type R410A

B1.3.1 – B1.3.2 Under ceiling unit's inverter type R410A

B1.4.1 – B1.4.2 Down blow server room unit's inverter type R410A

B1.5 Floor standing unit inverter type R410A

B1.6.1-B1.6.11 Cooling towers / Evaporative condensers, refrigerant / water cooled systems (Supply only)

B1.7 Package plants

B1.8 Evaporator coolers

B1.9 Portable coolers

B1.10 Domestic fridge / Freezer

B1.11 Cold rooms

### PLANT COMPONENTS:

B1.12 Centrifugal pumps

B1.13 Electrical Motors

B1.14 Water treatment

B1.15 Condenser fan motors

B1.16 Access flooring

- B1.17 Steel profiles and items
- B1.18 Paint, epoxy and surface coverings
- B1.19 Shade netting / bird proofing
- B1.20 Air conditioning / refrigeration compressors
- B1.21 Ducting, insulated square, round, flex
  
- B1.22 Crane and lifting equipment hiring
- B1.23 Universal remotes
- B1.24 V-belts
- B1.25 Lighting / power skirting's / misc.

### **SPECIFICATIONS:**

#### **ITEM B 1.1: (Inverter only) Low energy consumption**

##### **ITEM B1.1.1a: (9000 btu/hr mid wall split)**

- Supply and install 9000 btu/hr mid wall split unit.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.

- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit, and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Mid wall split unit must have a cooling / heating capacity of 9000 btu/hr.
- Rated current on running amps must be no more than 4.0 amps for heating and cooling.
- Moisture removal must be no less than 1.5 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: 500 cub m/hr max
- Noise levels indoor: low speed: 34db(A), high speed: 39db(A)
- Noise levels outdoor: no higher than 52db(A)
- Preferred compressor type: Rotary
- Indoor unit weight must not exceed 9kg and outdoor 30kg.
- Liquid line 1/4, Gas line 3/8

**ITEM B1.1.2a: (12000 btu/hr mid wall split)**

- Supply and install 12000 btu/hr mid wall split unit.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.

- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Mid wall split unit must have a cooling / heating capacity of 12000 btu/hr.
- Rated current on running amps must be no more than 4.5 amps for heating and cooling.
- Moisture removal must be no less than 1.5 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: 500 cub m/hr max
- Noise levels indoor: low speed: 34db(A), high speed: 39db(A)
- Noise levels outdoor: no higher than 52db(A)
- Preferred compressor type: Rotary
- Indoor unit weight must not exceed 9kg and outdoor 30kg.
- Liquid line 1/4, Gas line 3/8

**ITEM B1.1.3a: (18000 btu/hr mid wall split)**

- Supply and install 18000 btu/hr mid wall split unit.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.

- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Mid wall split unit must have a cooling / heating capacity of 18000 btu/hr.
- Rated current on running amps must be no more than 8 amps for heating and cooling.
- Moisture removal must be no less than 2 liters per hour.
- R410A must be used as refrigerant type.
- Indoor airflow: 900 cub m/hr max
- Noise levels indoor: low speed: 42db(A), high speed: 47db(A)
- Noise levels outdoor: no higher than 56db(A)
- Preferred compressor type: Rotary
- Indoor unit weight must not exceed 12kg and outdoor 49kg.
- Liquid line 1/4, Gas line 1/2

**ITEM B1.1.4a: (24000 btu/hr mid wall split)**

- Supply and install 24000 btu/hr mid wall split unit.
- All refrigerant piping must be enclosed in thermal insulation.

- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Mid wall split unit must have a cooling / heating capacity of 24000 btu/hr.
- Rated current on running amps must be no more than 10.5 amps for heating and cooling.
- Moisture removal must be no less than 2.4 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: 950 cub m/hr max
- Noise levels indoor: low speed: 43db(A), high speed: 48db(A)
- Noise levels outdoor: no higher than 58db(A)
- Preferred compressor type: Rotary
- Indoor unit weight must not exceed 13kg and outdoor 61kg.
- Liquid line 3/8, Gas line 5/8



### **ITEM B1.1.5a: (30000 btu/hr mid wall split)**

- Supply and install 30000 btu/hr mid wall split unit.
- Refrigerant and drainage piping must be suspended above ceiling with brackets.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit and all other accessories. Only pre-manufactured accessories will be accepted.

### ***Equipment specification:***

- Mid wall split unit must have a cooling / heating capacity of 30000 btu/hr.
- Rated current on running amps must be no more than 18 amps for heating and cooling.
- Moisture removal must be no less than 3.5 liters per hour.
- R410A must be used as refrigerant type.
- Indoor airflow: 1200 cub m/hr max

- Noise levels indoor: low speed: 44db(A), high speed: 48db(A)
- Noise levels outdoor: no higher than 54db(A)
- Preferred compressor type: Reciprocating
- Indoor unit weight must not exceed 16kg and outdoor 80 kg.
- Liquid line 3/8, Gas line 5/8

**ITEM B1.2.1a: (12000 btu/hr Ceiling cassettes)**

- Supply and install 12000 btu/hr ceiling cassette unit in suspended ceiling.
- Refrigerant and drainage piping must be suspended above ceiling with brackets.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Ceiling cassette unit must have a cooling / heating capacity of 12000 btu/hr.

- Rated current on running amps must be no more than 9.5 amps.
- Moisture removal must be no less than 2.5 liters per hour.
- R22 or R410 must be used as refrigerant type.
- Indoor airflow: no less than 700 CMH max
- Noise levels indoor: low speed: 44db(A), high speed: 47db(A)
- Noise levels outdoor: no higher than 62db(A)
- Preferred compressor type: Rotary
- Indoor unit weight must not exceed 25kg and outdoor 45kg.

**ITEM B1.2.2a: (18000 btu/hr ceiling cassettes)**

- Supply and install 18000 btu/hr ceiling cassette split unit.
- Refrigerant and drainage piping must be suspended above ceiling with brackets.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Ceiling cassette unit must have a cooling / heating capacity of 18000 btu/hr and 19000 btu/hr respectively.
- Rated current on running amps must be no more than 6.9 amps.
- R22 or R410A may be used as refrigerant type.
- Indoor airflow: 850 cub. m/hr
- Noise levels indoor: low speed: 43db(A), high speed: 48db(A)
- Preferred compressor type: Rotary

Indoor unit weight must not exceed 21kg and outdoor 36kg

**ITEM B1.2.3a: (36000 btu/hr ceiling cassettes)**

- Supply and install 36000 btu/hr ceiling cassette unit in suspended ceiling.
- Refrigerant and drainage piping must be suspended above ceiling with brackets.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms ( P1000 2.5mm ), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.

- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit, and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Ceiling cassette unit must have a cooling / heating capacity of 36000 btu/hr and 37000 btu/hr respectively.
- Rated current on running amps must be no more than 23 amps.
- Moisture removal must be no less than 3.6 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: low – 1600 cub. m/hr max
- Noise levels indoor: low speed: 40db(A), high speed: 45db(A)
- Noise levels outdoor: no higher than 55db(A)
- Preferred compressor type: scroll
- Unit must be able to handle maximum refrigerant pipe length of 25 meters with a maximum level difference of 10 meters.
- Indoor unit weight must not exceed 35kg and outdoor 100kg.

**ITEM B1.2.4a: (48000 btu/hr ceiling cassettes)**

- Supply and install 48000 btu/hr ceiling cassette unit in suspended ceiling.
- Refrigerant and drainage piping must be suspended above ceiling with brackets.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms (P1000 2.5mm), 2 x P1000 300mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.

- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit, and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Ceiling cassette unit must have a cooling / heating capacity of 48000 btu/hr and 51000 btu/hr respectively.
- Rated current on running amps must be no more than 11 amps per phase.
- Moisture removal must be no less than 5 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: low – 1600 cub. m/hr max
- Noise levels indoor: low speed: 44db(A), high speed: 47db(A)
- Noise levels outdoor: no higher than 62db(A)
- Preferred compressor type: scroll
- Unit must be able to handle maximum refrigerant pipe length of 30 meters with a maximum level difference of 15 meters.
- Indoor unit weight must not exceed 46kg and outdoor 110kg.
- 

**ITEM B1.2.5a: (60000 btu/hr ceiling cassettes)**

- Supply and install ceiling cassette in suspended ceiling.
- Refrigerant and drainage piping must be suspended above ceiling with brackets.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.

- Condenser units must be installed on canti-levers of appropriate size, mounted at pre-determined position.
- Canti-lever set must consist of 2 x wrap-around arms (P1000 2.5mm), 2 x P1000 450mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit, and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Ceiling cassette unit must have a cooling / heating capacity of 60000 btu/hr and 65000 btu/hr respectively.
- Rated current on running amps must be no more than 10.5 amps per phase. Maximum amps per phase no more than 13 amps, start-up amperage no more than 70A.
- Moisture removal must be no less than 6 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: low – 1600 cub. m/hr, high – 2200 cub. m/hr
- Outdoor airflow: 5000 cub. m/hr
- Noise levels indoor: low speed: 44db(A), high speed: 47db(A)
- Noise levels outdoor: no higher than 62db(A)
- Preferred compressor type: scroll

- Unit must be able to handle maximum refrigerant pipe length of 30 meters with a maximum level difference of 15 meters.
- Indoor unit weight must not exceed 60kg and outdoor 140kg.

**ITEM B1.3.1a: (48000 btu/hr under ceiling)**

- Supply and install 48000 btu/hr under ceiling unit.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canty-levers of appropriate size, mounted at pre-determined position.
- Canty-lever set must consist of 2 x wrap-around arms (P1000 2.5mm), 2 x P1000 450mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external angles, flat angles, couplings, t-unit, and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Ceiling cassette unit must have a cooling / heating capacity of 48000 btu/hr and 51000 btu/hr respectively.
- Rated current on running amps must be no more than 11 amps per phase.



- Moisture removal must be no less than 5 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: low – 1600 cub. m/hr max
- Noise levels indoor: low speed: 44db(A), high speed: 47db(A)
- Noise levels outdoor: no higher than 62db(A)
- Preferred compressor type: scroll
- Unit must be able to handle maximum refrigerant pipe length of 30 meters with a maximum level difference of 15 meters.
- Indoor unit weight must not exceed 46kg and outdoor 110kg.

**ITEM B1.3.2a: (60000 btu/hr under ceiling splits)**

- Supply and install 60000 btu/hr under ceiling split units.
- Evaporator may be suspended by threaded rod through ceiling or hang on canty levers at predetermined position.
- Canty-lever set must consist of 2 x wrap-around arms (P1000 2.5mm), 2 x P1000 450mm channels, 2 x 14mm holes, fastener set 4 x M10 x 30mm hex set screws, 4 x SN110 M10 Spring nuts.
- All refrigerant piping must be enclosed in thermal insulation.
- Refrigerant piping with a run of more than 2 meters exposed to the elements must be enclosed in galvanized trunking of appropriate size.
- Condenser units must be installed on canty-levers of appropriate size, mounted at pre-determined position.
- Drainage piping of appropriate size must be installed and neatly saddled onto the wall up to 300mm above ground level.
- Power supply, including cabling, circuit breaker, weatherproof isolator of appropriate size must be installed neatly and enclosed in galvanized trunking where exposed to the elements.
- Refrigeration piping, drainage, communication, and electrical supply may be enclosed in the same galvanized trunking where possible.
- Each unit will have a weatherproof isolator installed no further than 1 meter from condensing unit.
- Refrigerant and drainage piping must be enclosed in pvc or galvanized trunking, application depending, including covers, bends, stop ends, internal & external

angles, flat angles, couplings, t-unit, and all other accessories. Only pre-manufactured accessories will be accepted.

***Equipment specification:***

- Under ceiling split units must have a cooling / heating capacity of 60000 btu/hr.
- Rated current on running amps must be no more than 9.5 amps.
- Moisture removal must be no less than 2.5 liters per hour.
- R410A may be used as refrigerant type.
- Indoor airflow: no less than 700 CMH max
- Noise levels indoor: low speed: 44db(A), high speed: 47db(A)
- Noise levels outdoor: no higher than 62db(A)
- Preferred compressor type: Rotary
- Indoor unit weight must not exceed 25kg and outdoor 45kg.
- Equipment information brochures, operator's manual, leaflet must be supplied.

**ITEM B1.4: (DOWN BLOWERS)**

**STANDARD FEATURES**

**Inverter-driven compressor unit**

- o Continuous modulation of the Cooling Capacity
- o Ecological refrigerant R410A
- o Backward curved blades fans with EC motors
- o

**Air-flow configuration:**

- o **D** Down flow
- o **U** Up flow
- o **X** Displacement
- o Electronic expansion valve
- o Programmable microprocessor control with LCD display
- o Drain pan made of AISI 403 stainless steel

- Panels galvanized and powder coated RAL 7016 (anthracite grey) or RAL 9002 (grey, white) with rounded edges
- Hydrophilic treated evaporating coil
- Air-flow switch
- G4 filter
- Supply- and return-air T sensors
- Full front accessibility for maintenance/servicing even with running unit
- Compressor compartment separated from the airflow
- Automatic breakers
- Spot Cooling
- High pressure radial fans with backward curved blades
- High efficiency hydrophilic finned coil with aluminum structure
- Two drain pans made of AISI 430 stainless steel EDX
- Hydraulic connections from the top and from the bottom
- Powder-coated metal sheet structure
- Rapid electrical connections
- Footprint only 300 x 1200 mm or 600 x 1200 mm
- Fully insulated panels
- 2- or 3-way water valve, modulating by means of a 0-10 V signal
- Programmable control with LCD display
- Several different air-flow configurations
- Modulating Air Flow in accordance with the cooling capacity for a much higher energy saving

**Condensing controls:**

- Built-in control for air-cooled units (modulating fan-speed control) with dedicated automatic breaker
- LAN connection up to 8 units

**ITEM B1.4.1: (DOWN BLOW AIR CONDITIONER 30KW)**

Detailed specifications will be provided by CTMM on request.

**ITEM B1.4.2: (DOWN BLOW AIR CONDITIONER 40KW)**

Detailed specifications will be provided by CTMM on request

**ITEM B1.5: (Floor standing inverter type R410A, 25000 btu/hr)**

FLOOR STANDING INVERTER AIR CONDITIONER R410A, detailed specifications will be provided by CTMM on request.

**ITEM B1.6: (COOLING TOWERS / EVAPORATIVE CONDENSERS FOR REFRIGERANT AND WATER-COOLED SYSTEMS)**

**ITEM B1.6**

**COOLING TOWERS FOR REFRIGERANT AND WATER-COOLED CHILLED SYSTEMS**

**General notes**

1. Standard refrigerant connection sizes are ND 100 BSP MPT inlet and outlet (for model's refrigerant connection sizes are ND 80 BSP MPT). Refrigerant connections must be standard beveled for welding.
2. Make up, overflow, suction, drain connection and access door must be provided on side opposite if so required.
3. Coil, overflow, make-up, and spray water connections must always be located on the same end of the unit. For double pump units an additional overflow connection must be installed on the other end of the unit.
7. Access doors must be located at the opposite of the air inlet side, ensure sufficient space for entry when positioning these units.
8. For indoor applications of evaporative condensers, the room may be used as a plenum with ductwork attached to the discharge only. If inlet ductwork is required, an enclosed fan section must be specified.
9. Fan kW is at 0 Pa ESP. To operate against external static pressure up to 125 Pa, increase each fan motor one size.
10. Refrigerant charge listed is R717 operating charge. To determine operating charge of R 22 refrigerant, multiply by: 1,93. For R134A, multiply by: 1.98.

**ITEM B1.6.1:** Evaporative condenser VXC65 or similar, THR@383kw

**ITEM B1.6.2:** Evaporative condenser VX72 or similar, THR@470kw

**ITEM B1.6.3:** Evaporative condenser VX125 or similar, THR@641kw

**ITEM B1.6.4:** Evaporative condenser VFL483L or similar, THR@615kw

**ITEM B1.6.5:** Evaporative condenser VFL483M or similar, THR@615kw

**ITEM B1.6.6:** Evaporative condenser VXI95-2 or similar, THR@1280kw

**ITEM B1.6.7:** Evaporative condenser VFL963-P or similar, THR@1203kw

**ITEM B1.6.8:** Evaporative condenser VFL362-M or similar, THR@497kw

### **ITEM B1.7: PACKAGE PLANT (SUPPLY ONLY)**

The 15 Ton 3 phase, Package Air Conditioning Unit R-410A refrigerant.

#### **Scroll Compressor**

Scroll Compressor must be featured. These scroll compressors use a more advanced technology than traditional reciprocating compressors. Scroll compressors with internal line break overload and high-pressure protection. Two independent refrigerant circuits each with a scroll compressor must provide for two stage cooling operation.

#### **Durable Cabinet**

Cabinets must have a powder painted finish that protects them from the harshest weather extremes. There must be a one-piece top cover and one-piece base pan. Externally mounted refrigerant gauge ports for easy service diagnostics. Single point electrical connections. Easily removable filter, blower, and compressor/ control access panels permits prompt service. Foil faced insulation encapsulated throughout entire unit minimizes airborne fibers from the air stream.

#### **Motor/Fan Motor Mount**

Mount must help protect the fan motor from the elements for longer life. Permanently lubricated evaporator, condenser heat inducer motors. Condenser motors must be internally protected, totally enclosed with shaft down design.

#### **Matched Blower/Evaporator Coil Unit**

The blower is responsible for the flow of air into your duct work. There must be an Aluminum Micro Channel outdoor coil and other system components for maximum efficiency and quiet operation. In addition, the coil features rifled copper tubing and

enhanced fins for improved efficiency. Single slab, single pass designed evaporator coil facilitates easy cleaning for maintained high efficiencies.

### **Service Fittings**

Exterior service fittings enable a serviceman to quickly determine unit operating conditions.

### **Other Requirements**

- Rugged base rails must be included for improved installation and handling.
- 2-inch filter standard with slide out design.
- Colored and labelled wiring.
- Convertible airflow- vertical down flow or horizontal side flow.
- High Pressure and Low Pressure/Loss of charge protection standard on all models.
- Solid Core liquid line filter drier on each circuit.
- Complete factory charged, wired, and run tested.
- Cooling operation up to 125-degree F ambient.
- Internally sloped slide out condensate pan conforms to ASHRAE 62 standards.
- High performance belt drive motor with variable pitch pulleys and quick adjust belt system.
- 24-volt control system with resettable circuit breakers.

STANDARD FEATURES: • R-410A HFC refrigerant. • Complete factory charged, wired and run tested. • Scroll compressors with internal line break overload and high-pressure protection. • Two independent refrigerant circuits each with a scroll compressor provide two stage cooling operation. • Convertible airflow – vertical down flow or horizontal side flow. • Capillary tube metering system on each circuit. • High Pressure and Low Pressure/Loss of charge protection standard on all models. • Solid Core liquid line filter drier on each circuit. • Single slab, single pass designed evaporator and condenser coils facilitate easy cleaning for maintaining high efficiencies. • Cooling operation up to 125-degree F ambient. • Foil faced insulation encapsulated throughout entire unit minimizes airborne fibers from the air stream. • Hinged major access door with heavy-duty gasketing. • Slide Out Indoor fan assembly for added service convenience. • Powder Paint Finish meets ASTM B117 steel coated on each side for maximum protection. G90 galvanized. • Base pan with drawn supply and return opening for superior water management. •

Forkable base rails for easy handling and lifting. • Single point electrical connections. • Internally sloped slide out condensate pan conforms to ASHRAE 62 standards. • High performance belt drive motor with variable pitch pulleys and quick adjust belt system. • Permanently lubricated evaporator and condenser motors. • Condenser motors are internally protected, totally enclosed with shaft down design. • 2-inch filter standard with slide out design. • 24-volt control system with resettable circuit breakers. • Colored and labelled wiring. • Copper tube/Aluminum Fin indoor coil. • Aluminum Micro Channel outdoor coil(s). • Supplemental electric heat provides 100% efficient heating.

**EQUIPMENT SPECIFICATION:**

Cooling Performance:

Gross cooling capacity Btu (kw)	174000 (50.98)
EER	11
Nominal CFM/AHRI rated CFM (L/s)	6000/5500 (2831/1595)
AHRI Net cooling capacity Btu (kw)	170000 (49.81)
Net Sensible capacity btu (kw)	125400 (36.74)
Net latent capacity Btu (kw)	44600 (13.07)
IEER	11.1
Net system power (kw)	15.45

Compressor:

No / type	2 / Scroll
Outdoor sound rating (db)	91
Outdoor Coil-Fin type	Louvered
Tube type	Micro channel
Micro channel depth In(mm)	1 (25.4)
Face area sq.ft (sq.m)	27.46 (2.55)

Rows / FPI (FPcm)	1 / 23 (9)
Indoor coil fin type	Louvered
Tube type	Rifled
Tube size in (mm)	0.375 (9.5)
Face area sq.ft (sq.m)	26.67 (2.48)
Rows / FPI (FPcm)	2 / 18 (7)
Refrigerant control	Capillary Tubes

Drain connection number/Size in (mm)	1/1 (25.4)
Outdoor fan type	Propeller
No. used/Día in.(mm)	3/24 (609.6)
Drive type/no. speeds	Direct/1
CFM(L/s)	10000 (4719)
No. motors /HP	3 at 1/2HP
Motor RPM	1075
Indoor fan type	FC Centrifugal
No. used/Dia in. (mm)	2/18x9 (457x229)
Drive type / no. speeds	Belt / Variable
No. Motors	1
Motor HP	3
Motor RPM	1725
Motor frame size	56
Filter type	Disposable
Furnished	Yes
No. Size recomb. In,	(8)2x25x20 (51x635x508)
Refrigerant Charge Oz.(g)	115/119 (3260/3374)
Net weight Lbs (kg)	1667 (756)

NOTES: 1. Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to 20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360. 2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures. 3. IEER is rated in accordance with AHRI Standard 340/360. 4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

**ITEM B1.8: (EVAPORATOR COOLERS)**

The evaporator system must be a full fresh air system where outside air is drawn through vertical, water saturated, honeycomb celdek pads.



Cool moist air is distributed throughout the space by means of ducting and diffusers. Unused water is collected in the sump and pumped to the top of cooler and must be distributed equally to 4 panels. The level of the water in the sump must be controlled by internal float ball valve.

**EQUIPMENT SPECIFICATION:**

Rated capacity	18000 cub m / hr 500 l/s
Variable speed fan motor	6 speeds
Digital wall mounted control	with 30m cable
Airflow variable capacity	900-18000 cub m/hr 25-500 L/s
Power supply	220v/1ph/50hz
Motor power	550-1100 watts
Fan Motor	enclosed / maintenance free
Power cable connected	3 meters
Fan type	Axial
Fan size	590 mm dia.
Pump type	Submersible
Water supply	½" connection
Water consumption	20-30 l/hr
Thickness celdek panels	100mm
Air discharge size	670x670mm
Casing material	UV treated polypropylene
Unit dimensions	H1090mm, W1070mm, D1070mm
Unit weight	Net. 60kg or less / Gross. 70kg

**ITEM B1.9: PORTABLE AIR CONDITIONER (12000 BTU/HR)**

The unit must offer plug & play cooling. Must feature double condenser technology that has refrigerant that is free of CFC's.

The unit must have fogging technology that requires no water drainage system, must have 4-way air-blow swing.

The unit must have rolling castors to position portable air conditioner. The unit must have purifying pan and de-humidifier.

## **Features**

- Rapid cooling and Heating
- Smart Mode
- R410A Eco-Friendly Refrigerant. No CFC
- 3-speed cooling fan
- Self-evaporating system
- Temperature display (range 18~32°C(64~90°F)
- 24 Hour timer (real timer of 1mins to 24hours)
- Independent dehumidifier
- Low Noise
- Rolling Casters for easy movement
- Suitable for commercial and residential use (including HDB)
- 12,000 BTU Heating and Cooling Unit

## Supplied Accessories

- 1.5m exhaust hose
- window slider
- slider cover
- exhaust hose window adapter
- remote control

## Unit Dimensions

- Width: 440mm (44cm)
- Depth: 360mm (36cm)
- Height: 754mm (75cm)

## **EQUIPMENT SPECIFICATION:**

Capacity cooling: 3480w

Capacity heating: 2000w

Current cooling: 6.5A

Current heating: 9.2A

Input power: 1330w  
Airflow volume: 380cub m

Rated volt: 220-240v  
Rated frequency: 50hz  
LRA compressor: 24.5A  
Noise: 53db(a)  
Weight: 34kg  
Refrigerant / Charge: R410A / 590 (-A)

**ITEM B1.10: DOMESTIC FRIDGE / FREEZER (Supply only)**

Gross Capacity (liters)*	170L
Net Capacity (liters)*	170L
Removable Door Balconies	3
Toughened Glass Shelves (incl. Crisper)	2
Direct Cooling 4-Star Rating	Yes
Roller Wheels	Yes
Adjustable Feet	Yes
Unpacked Dimensions (HxWxD) mm	1420x500,538
Gross Weight (kg)	36
Net Weight (kg)	35
Voltage	220-230
100% CFC-Free R600a	Yes
Energy Rating kWh/annum	B / 375 kw/hr
Climate Class	ST

**B1.11: COLD ROOM EQUIPMENT**

**ITEM B1.11.1: (SU34H EVAPORATOR COIL) or SIMILAR**

Power supply fans:	220v
Fan assembly diameter	280mm
Fan quantity	1

Fan speed (rpm)	1300
Air volume	1659 cub m/hr
Air throw	9m
Dimensions L/W/H	765/450/345
Suction connection	5/8"
Liquid connection	1/2"
Fin spacing	6 FPI

**ITEM B1.11.2: (SU51H EVAPORATOR COIL) or SIMILAR**

Power supply fans:	220v
Fan assembly diameter	280mm
Fan quantity	1
Fan speed (rpm)	1300
Air volume	1583 cub m/hr
Air throw	9m
Dimensions L/W/H	765/450/345
Suction connection	5/8"
Liquid connection	1/2"
Fin spacing	6 FPI

**ITEM B1.11.3: (SU81L EVAPORATOR COIL) or SIMILAR**

Power supply fans:	220v
Fan assembly diameter	280mm
Fan quantity	1
Fan speed (rpm)	1300
Air volume	1477 cub m/hr
Air throw	9m
Dimensions L/W/H	765/450/345
Suction connection	5/8"
Liquid connection	1/2"
Fin spacing	6 FPI

Electric defrost power supply	220v
Electric defrost total	1.6kw

**ITEM B1.11.4: (SU72L EVAPORATOR COIL) or SIMILAR**

Power supply fans:	220v
Fan assembly diameter	280mm
Fan quantity	2
Fan speed (rpm)	1300
Air volume	3629 cub m/hr
Air throw	9m
Dimensions L/W/H	1215/450/345
Suction connection	5/8"
Liquid connection	1/2"
Fin spacing	6 FPI
Electric defrost power supply	220v
Electric defrost total	1.6kw

**ITEM B1.11.5: (SU101H EVAPORATOR COIL) or SIMILAR**

Power supply fans:	220v
Fan assembly diameter	280mm
Fan quantity	2
Fan speed (rpm)	1300
Air volume	3421 cub m/hr
Air throw	9m
Dimensions L/W/H	1215/450/345
Suction connection	5/8"
Liquid connection	1/2"
Fin spacing	6 FPI

**ITEM B1.11: (CONDENSER BASIS) HORIZONTAL AIR FLOW CONDENSERS**

**ITEM B1.11.6: (HORIZONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	1.32
Fan assembly diameter	200mm
Fan QTY	1
Fan speed	1300
Air volume	0.153 cub m /s
Dimensions L/W/H	390/570/340
Liquid connection	½"
Fin spacing	12FPI

**ITEM B1.11.7: (HORIZONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	1.62
Fan assembly diameter	200mm
Fan QTY	1
Fan speed	1300
Air volume	0.153 cub m /s
Dimensions L/W/H	390/570/340
Liquid connection	½"
Fin spacing	12FPI

**ITEM B1.11.8: (HORIZONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	4.79
Fan assembly diameter	300mm
Fan QTY	1
Fan speed	1300
Air volume	0.384 cub m /s
Dimensions L/W/H	490/570/440
Liquid connection	½"
Fin spacing	12FPI

**ITEM B1.11.9: (HORISONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	7.16
Fan assembly diameter	350mm
Fan QTY	1
Fan speed	1410
Air volume	0.825 cub m /s
Dimensions L/W/H	610/900/590
Liquid connection	½”
Fin spacing	12FPI

**ITEM B1.11.10: (HORISONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	19.42
Fan assembly diameter	350mm
Fan QTY	2
Fan speed	1410
Air volume	1.5 cub m /s
Dimensions L/W/H	1110/900/590
Liquid connection	5/8”
Fin spacing	12FPI

**ITEM B1.11.11: (HORISONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	34.26
Fan assembly diameter	400mm
Fan QTY	3
Fan speed	1410
Air volume	3.564 cub m /s
Dimensions L/W/H	1910/1060/695
Liquid connection	7/8”

Fin spacing 12FPI

**ITEM B1.11.12: (HORIZONTAL AIR FLOW CONDENSER)**

Nominal capacity R22 kw@15TD	26.31
Fan assembly diameter	400mm
Fan QTY	3
Fan speed	1410
Air volume	3.78 cub m /s
Dimensions L/W/H	1910/1060/695
Liquid connection	7/8"
Fin spacing	12FPI

**ITEM B1.11: (COLD ROOM) SUPPLY**

Supply and install cold room paneling, panel thickness of no less than 100mm and door size 900mm x 2.1 for:

**ITEM B1.11.13A:** Length: 2.4m, width: 2.4m, Height: 2.4m, capacity required: 1.25 HP

**ITEM B1.11.13B:** Length: 3.6m, width: 3.6m, Height: 2.4m, capacity required: 2 HP

**ITEM B1.11.13C:** Length: 4.8m, width: 3.6m, Height: 2.4m, capacity required: 3.5 HP

**ITEM B1.11.13D:** Length: 6m, width: 6m, Height: 2.4m, capacity required: 4 HP

**ITEM B1.11: (FREEZER ROOM) SUPPLY**

Supply and install freezer room paneling, panel thickness of no less than 180mm and door size 900mm x 2,1 for:

**ITEM B1.11.13E:** Length: 2.4m, width: 2.4m, Height: 2.4m, capacity required: 2 HP

**ITEM B1.11.13F:** Length: 3.6m, width: 3.6m, Height: 2.4m, capacity required: 2x3 HP

**ITEM B1.11.13G:** Length: 4.8m, width: 3.6m, Height: 2.4m, capacity required: 2x4 HP

**ITEM B1.11.13H:** Length: 6m, width: 6m, Height: 2.4m, capacity required: 2x4 HP

**ITEM B1.11.13: (EXPANSION VALVES FOR COLD AND FREEZER ROOMS)**



**ITEM B1.11.13.I:** R134 INTERNAL / EXTERNAL

**ITEM B1.11.13.J:** R22 INTERNAL / EXTERNAL

**ITEM B1.11.13.K:** R407 INTERNAL / EXTERNAL

**ITEM B1.11.13.L:** R404 INTERNAL / EXTERNAL

**ITEM B1.11.13.M:** R507 INTERNAL / EXTERNAL

**ITEM B1.11.13: (BIG BODY EXPANSION VALVES)**

**ITEM B1.11.13.N:** 1.5 TON

**ITEM B1.11.13.O:** 2 TON

**ITEM B1.11.13.P:** 2.5 TON

**ITEM B1.11.13.Q:** 3 TON

**ITEM B1.11.13: (SOLENOID VALVES 220V COIL)**

**ITEM B1.11.13.R:** ½ INCH

**ITEM B1.11.13.S:** 3/8 INCH

**ITEM B1.11.13.T:** 5/8 INCH

**ITEM B1.11.13: (AIR CONDITIONING REVERSE VALVES 4 WAY)**

**ITEM B1.11.13.U:** 5/16 X 3/8

**ITEM B1.11.13.V:** 3/8 X ½

**ITEM B1.11.13.W:** ½ X 5/8

**ITEM B1.11.13.X:** ½ X ¾

**ITEM B1.11.13: (CONTROLLERS ON AIR HANDLERS/CHILLER/PACKAGES)**

**ITEM B1.11.13.Y:** PC03

**ITEM B1.11.13.Z:** PC04

**ITEM B1.11.13.Z1:** PC05

**ITEM B1.11.13.Z2: PC0X5 BUILT IN THERMAL**

**PLANT COMPONENTS:**

**ITEM B1.12: CENTRIFUGAL PUMPS (SINGLE STAGE RADIAL FLOW)**

**ITEM B1.12.1: CENTRIFUGAL PUMP ASSEMBLY TYPE NS2/50-250 C1/C1/M**

**ITEM B1.12.2: (SINGLE STAGE RADIAL FLOW CENTRIFUGAL PUMP)**

Operating Parameters • Flows to 4540 m<sup>3</sup> /h (20 000 gpm)

- Heads to 215 m (700 ft)
- Pressures to 27 bar (400 psi)
- Temperatures from -73°C (-100°F) to 370°C (700°F) Features
  
- Exclusive reverse vane impeller
- Standard Mark 3A power end – External micrometer impeller adjustment mechanism – Heavy-duty radial and thrust bearings – Double lip oil seals – Constant level oiler – Large, reflective sight glass
- Choice of lubrication systems
- Optional ANSI 3A power end with lifetime warranty – Certified clean room assembly – Inpro/Seal® VBXX isolators – Magnetic drain plug
  
- Seal Sentry™ seal chambers
- Largest shaft and bearing components in ANSI standard pumps
- IPS Beacon™ electronic vibration and temperature condition monitor Related Configurations
- Mark 3 Lo-Flo • Mark 3 Unitized Self-Primer
- Mark 3 Recessed Impeller
- Mark 3 Sealmatic dynamically sealed

**ITEM B1.12.3: (SINGLE STAGE RADIAL FLOW CENTRIFUGAL PUMP)**

Operating Parameters

- Flows to 455 m<sup>3</sup> /h (2000 gpm)
- Heads to 120 m (400 ft)
- Pressures to 20 bar (285 psi)
- Temperatures from -73°C (-100°F) to 370°C (700°F) Features
- Low shear vortex pumping action
- Fractional media contact with the impeller
- Standard CD4MCuN impeller
- Thick-wall wet end components suitable for light slurries
- Standard Mark 3A power end – External micrometer impeller adjustment mechanism – Heavy-duty radial and thrust bearings – Double lip oil seals – Constant level oiler – Large, reflective sight glass
- Optional ANSI 3A power end with lifetime warranty – Certified clean room assembly – Inpro/Seal VBXX isolators – Magnetic drain plug
- Seal Sentry seal chambers
  - Oversized shaft and bearings
- IPS Beacon electronic vibration and temperature condition monitor Related Configurations
- Mark 3 ASME Standard
- Mark 3 Sealmatic, recessed impeller

#### **ITEM B 1.12.4: (SINGLE STAGE RADIAL FLOW CENTRIFUGAL PUMP)**

##### Operating Parameters

- Flows to 1400 m<sup>3</sup> /h (6160 gpm)
- Heads to 220 m (720 ft)
- Pressures to 25 bar (365 psi)
- Temperatures from -80°C (-110°F) to 400°C (752°F) Features
- Heavy-duty casing with integral foot and multi-ribbed discharge flange
- Reverse vane impeller standard; open impeller available
- Seal Sentry seal chambers
- Accepts multiple seal arrangements
- External micrometer impeller adjustment mechanism
- Standard non-contacting labyrinth seal

- Heavy-duty radial and thrust bearings
- Two-piece bearing housing
- Back pull-out design
- IPS Beacon electronic vibration and temperature condition monitor
- Optional ISO 3A power end with lifetime warranty
- CE marked; ATEX compliant; GOST certificate available Related Configurations
- Mark 3 ISO Self-Priming
- Mark 3 ISO Recessed Impeller
- Mark 3 ISO Close Coupled
- CPXV Chemical Sump
- Mark 3 ISO centerline mounted

### **ITEM B1.13: ELECTRICAL MOTORS**

SPECIFICATION TABLE IE2 IE2 EFFICIENCY 3-PHASE INDUCTION MOTORS TYPE:  
AESV2E, AESU2E STANDARD SPECIFICATION RATING

Kind of Motors Squirrel - Cage Induction Motors (SCIM).

Design Standards IEC 60034, IEC 60072.

Voltages 380V. Frequency 50Hz

Output Range 0.37 kW ~ 315 kW (50Hz).

R.P.M. (Syn.) 3000 ~ 750 R.P.M. (2 ~ 8 Poles).

Time Duty Continuous. S1, S.F. : 1.0.

Protection Enclosure Totally Enclosed (IP 55).

Cooling Method Self External Fan, Surface Cooling (IC 411).

Mounting Horizontal Foot Mounted B3 (IM 1001).

Horizontal Flange Mounted B5 (IM 3001).

Horizontal Foot and Flange Mounted B35 (IM 2001).

Vertical Flange Mounted, Shaft Down V1 (IM 3011).

APPLICATION Environment Conditions Place: Shadow, Non-Hazardous. Ambient

Temperature : -20 ~ 40°C. Relative Humidity Less Than 90%RH (Non-Condensation) .

Power Source Conditions Voltage :  $\pm 10\%$ , Frequency :  $\pm 5\%$ , and 10% Max. of Combined Voltage and Frequency.

But Frequency Variation Does Not Exceed  $\pm 5\%$ .

Method of Starting Full Voltage Direct Online or Y -  $\Delta$  Starting.

Drive Method Coupling or Belt Served.

Bearing Capacity Refers to Radial Bearing Load.

Direction of Rotation CW According to IEC Definition, Suitable for Bi - Directional Operation.

APPLICATION Bearing Bracket Mounting, Vacuum De - Gassed High Quality Open Bearings for Frame Nos. 180M ~ 315D, Grease Pre - Packed Shielded Rolling Bearings for the Others.

Lead Terminal Solderless Lug Terminals.

Terminal Box Cast iron can be Rotated Each  $90^\circ$  With Conduit Hole for Cable Entrance.

The Terminal Box is Usually Placed on The Top of The Frame and The Cables Could be Connected from Four Possible Directions.

Stator Insulation Class F Insulation System.

Painting Phenolic Rust Proof Base Plus Lacquer Surface Finished Painting in Pebble - Gray Color (Munsell 5Y 7.5/1) (RAL 7032).

Bolt Thread ISO Metric System (Strength Category 8.8T).

Grounding Terminal Two Terminals.

One inside The Terminal Box, Another One on The Outside of The Frame.

PERFORMANCE Test Procedure IEC 60034-2-1:2007 And Full Voltage Measuring Starting Performance.

Winding Temperature Rise Not to Exceed  $80^\circ\text{C}$  Rise by Resistance Method at S.F 1.0 Operation.

Over Speed 120% Syn. R.P.M. for 2 Min.

Over Torque 160% Rated Torque for 15 Sec.

**ITEM B1.13.1:** 5.5KW FRAME SIZE: 132S, 1445 RPM, 380V

**ITEM B1.13.2:** 3 KW FRAME SIZE: 100L, 1415 RPM, 380V

**ITEM B1.13.3:** 4 KW FRAME SIZE: 112B, 1420 RPM, 380V

### **ITEM B1.13: (CONTACTORS)**

**ITEM B1.13.4:** 220V COIL, 5 AMP, LC1D5

**ITEM B1.13.5:** 220V COIL, 12 AMP, LCD1D12

**ITEM B1.13.6:** 220V COIL, 18 AMP, LCD1D18

**ITEM B1.13.7:** 220V COIL, 25 AMP, LCD1D25

**ITEM B1.13.8:** 220V COIL, 32 AMP, LCD1D32

### **ITEM B1.13: (CAPACITORS)**

**ITEM B1.13.9:** 35 MuF 450V

**ITEM B1.13.10:** 40 MuF 450V

**ITEM B1.13.11:** 50 MuF 450V

**ITEM B1.13.12:** 30 MuF 450V

### **ITEM B1.14: WATER TREATMENT**

Cooling water treatment chemicals must be scientifically formulated to deliver significant operational benefits and performance improvements to cooling towers, and open and closed cooling systems that use water as a primary coolant.

The formulated chemicals for cooling water treatment applications must be highly effective bio dispersants, corrosion inhibitors for both hard and soft water, and advanced multi-functional scale and corrosion inhibitor formulations. It must also offer a full range of high-performance oxidizing and non-oxidizing biocides for microbiological control activities in cooling towers and other cooling systems.

The accumulation of microbiological slimes, biofilm and general biofouling in cooling water systems reduces system efficiency, increases operating and maintenance costs, and raises risks to safety and health.

To ensure that such cooling systems are safe, well maintained and operate at optimum

efficiency it is essential that the correct water conditions are always maintained. This can be achieved using carefully selected bio dispersants for cooling water systems.

High performance bio dispersants are ideal for use in a range of cooling systems including cooling towers, re-circulating and once through cooling water systems. They are scientifically formulated to efficiently remove and disperse unwanted microbiological fouling, slimes, and biofilm from cooling water systems.

The cooling water bio dispersants must help the system efficiency, optimize operating costs, reduce maintenance and system shut-down periods, and aid safety management.

The detrimental impact of metallic corrosion can be a significant issue that affects the operation and maintenance of open and closed cooling water systems.

To ensure that such closed cooling systems are well maintained and operate at optimum efficiency it is essential that the correct water conditions are always maintained. This can be achieved using carefully selected corrosion inhibitors designed specifically for closed cooling systems.

The cooling water corrosion inhibitors must be scientifically formulated to protect cooling systems from the effects of metallic corrosion.

The high-performance corrosion inhibitors deliver improved system performance, helping to reduce maintenance costs, improve reliability and optimize operational efficiency.

The unwanted accumulation of scale and detrimental impact of metallic corrosion can be significant issues that affect the operation and maintenance of open and closed cooling water systems.

To ensure that such open and closed cooling systems are well maintained and operate at optimum efficiency it is essential that the correct water conditions are always maintained. This can be achieved using carefully selected scale and corrosion inhibitors designed specifically for such cooling systems.

The advanced technology cooling water scale and corrosion inhibitor must have been scientifically formulated to protect cooling systems from the effects of both scale build-up and metallic corrosion in a single product.

The scale and corrosion inhibitors deliver improved performance, helping to reduce maintenance costs, improve reliability and optimize operational efficiency.

**B1.14.1:** Bio-dispersant per liter

**B1.14.2:** Cooling water corrosion inhibitors per liter

**B1.14.2:** Scale inhibitors per liter

### **ITEM B1.15: CONDENSER FAN MOTORS**

**ITEM B1.15.1:** 16W, 220V

**ITEM B1.15.2:** 25W, 220V

**ITEM B1.15.3:** 36W, 220V

### **ITEM B1.15: COMMERCIAL CONDENSER FAN ASSEMBLIES SUCTION**

**ITEM B1.15.4:** SIZE 300MM, 220V, 780 RPM

**ITEM B1.15.5:** SIZE 315MM, 220V, 780 RPM

**ITEM B1.15.6:** SIZE 350MM, 220V, 800 RPM

**ITEM B1.15.7:** SIZE 400MM, 220V, 800 RPM

**ITEM B1.15.8:** SIZE 450MM, 220V, 800 RPM

**ITEM B1.15.9A:** SIZE 500MM, 220V, 880 RPM

**ITEM B1.15.9B:** SIZE 500MM, 380V, 880 RPM

**ITEM B1.15.10A:** SIZE 550MM, 220V, 880 RPM

**ITEM B1.15.10B:** SIZE 550MM, 380V, 880 RPM

**ITEM B1.15.11A:** SIZE 630MM, 220V, 1310 RPM

**ITEM B1.15.11B:** SIZE 630MM, 380V, 1310 RPM

### **ITEM B1.16: ACCESS FLOORING / FALSE FLOORING SERVER ROOMS**



The raised access floor installation shall consist of a 600mm x 600mm modular and interchangeable steel panels, supported by under structure in accordance with specification. The finished raised access floor surface shall be free of exposed metal edges and shall be sturdy, rigid and free of vibration, rocking panels and noise.

The raised access floor shall be finished in accordance with SABS 1549:93 edition 1.1. The raised access floor will be manufactured under the integrated quality assurance requirements of ISO 9001-2008

The access floor panel shall be a structurally rigid isotropic or linear assembly fabricated entirely from non-combustible components and shall consist of a flat full-hard steel top sheet; resistance welded to the steel bottom section of irregular domed formation. The exterior and interior surfaces of the access floor shall be protected from corrosion by a process of cleaning and dip phosphating. The core interior of the panel shall be filled with a non-combustible cementitious compound which will support no less than 90% of the top surface of the panel. The exterior service of the panel shall be coated with a conductive baked paint finish.

For freestanding and screw down systems the access floor panels shall provide for positive engagement with the pedestal at all four corners.

The under-structure shall consist of a steel or aluminum factory assembled pedestal head and base which shall be surface treated and have a corrosion-resistant finish. This assembly shall be capable of supporting a minimum axle load of 22,7KN and a maximum axle load of 35KN.

The maximum depth of the access floor panel and the pedestal assembly shall not exceed 40mm. A corrosion resistant nut shall be provided which shall allow for adjustment of the pedestal assembly over a range of 50mm without rotating of the pedestal head. The nut shall have an anti-rotation and vibration proof feature.

For freestanding and screw down systems the pedestal head shall have locating studs on which the access floor panels positively locate tabs and ridges which positively position

and self-align the pedestal head with the access floor panel. For a screw down system the pedestal head shall have four threaded holes to accept the panel fasteners.

Stringers shall be manufactured from a minimum of 20-gauge steel channel section with a snap on attachment to the pedestal. Each stringer shall be surface treated and have corrosion resistant finish and be provided with a factory applied and conductive bonded gasket to the surface.

The design of the under-structure system and their interfaces with the panel shall be such that the floor shall remain sturdy and firm no matter how many panels are removed for work to be carried out under the access floor.

#### **ITEM B1.16.1: (ACCESS FLOORING)**

LF or similar type 3 with a concentrated load on 25mm x 25mm area of 5.5KN. Uniformly distributed load per square meter of 16.5KN. Impact load on a 25mm x 25mm area of 0.43KN. Must have a safety factor of 3. Axial load pedestal assembly of 22.5KN. Must have a bolt on stringer system with 500mm finish floor height.

#### **ITEM B1.16.2: (FLOOR COVERING)**

LF or similar, anti-static flexible vinyl with a beveled edge 3mm anti-static high pressure laminate factory bonded to the surface of the access floor panel with integrated trim edge.

**ITEM B1.16.3:** Panel lifting device LF or similar

**ITEM B1.16.4:** Access floor grommet LF or similar

**ITEM B1.16.5:** Brush grommet LF or similar

**ITEM B1.16.6:** Air diffuser LF or similar

**ITEM B1.16.7:** Aluminum floor grill LF or similar

**ITEM B1.16.8:** Floor surface outlet LF or similar

#### **ITEM B1.17: STEEL ITEMS AND PROFILES**

**ITEM B1.17.1:** Vastrap steel plate nominal 3.0 - 4.6mm, size 2500mm x 1200mm, mass per kg. 78

**ITEM B1.17.2:** Round bar 6mm OD, grade CQ, class L

**ITEM B1.17.3:** Round bar 10mm OD, grade CQ, class L

**ITEM B1.17.4:** Round bar 16mm OD, grade CQ, class L

**ITEM B1.17.5:** Round bar 25mm OD, grade CQ, class L

**ITEM B1.17.6:** Round bar 40mm OD, grade CQ, class L

**ITEM B1.17.7:** Square bar 6mm x 6mm, grade CQ, class L

**ITEM B1.17.8:** Square bar 10mm x 10mm, grade CQ, class L

**ITEM B1.17.9:** Square bar 16mm x 16mm, grade CQ, class L

**ITEM B1.17.10:** Square bar 30mm x 30mm, grade CQ, class L

**ITEM B1.17.11:** Flat bar commercial quality, 20mm x 5mm, class L

**ITEM B1.17.12:** Flat bar commercial quality, 40mm x 5mm, class L

**ITEM B1.17.13:** Universal beam EN10025 S355JR, 203mm x 133mm, class H

**ITEM B1.17.14:** Universal beam EN10025 S355JR, 406mm x 140mm, class H

**ITEM B1.17.13:** Universal columns EN10025 S355JR, 203mm x 203mm, class H

**ITEM B1.17.14:** Parallel flange channel EN10025 S355JR, 100mm x 50mm, class L

**ITEM B1.17.15:** Parallel flange channel EN10025 S355JR, 200mm x 75mm, class M

**ITEM B1.17.16:** Equal angle mild steel, 25mm x 25mm, 3mm wall thickness, class L

**ITEM B1.17.17:** Equal angle mild steel, 50mm x 50mm, 3mm wall thickness, class L

**ITEM B1.17.18:** Equal angle mild steel, 100mm x 100mm, 8mm wall thickness, class L

**ITEM B1.17.19:** Equal angle mild steel, 200mm x 200mm, 16mm wall thickness, class M

**ITEM B1.17.20:** Standard lipped channel, 75mm x 50mm x 20mm, 3mm wall thickness

**ITEM B1.17.21:** Standard lipped channel, 100mm x 75mm x 20mm, 3mm wall thickness

**ITEM B1.17.22:** Standard lipped channel, 150mm x 50mm x 20mm, 3mm wall thickness

**ITEM B1.17.23:** Standard lipped channel, 200mm x 50mm x 20mm, 3mm wall thickness

**ITEM B1.17.24:** Walkway grating, 2400mm x 1200mm, Vamatex or similar VEM 481/11m

## **ITEM B1.18: PAINT, EPOXY AND SURFACE COVERINGS**

**ITEM B1.18.1:**

## **Metal WB Primer**

The Metal WB Primer must be a quality primer for all mild steel and galvanized iron surfaces.

**Appearance:** Matt

**Application:** Interior and Exterior

**Spread Rate:** 7 m<sup>2</sup>/ℓ

**Packaging:** 5ℓ

**Colors:** Red Oxide

### **Uses required**

As a primer for all mild steel and galvanized iron surfaces.

Apply to metal surfaces to prevent rust from forming, particularly in humid and polluted areas.

### **Features required**

The red oxide formulation must give protection against metal corrosion and degradation.

Water-based formula.

Easy to use and clean up.

## **ITEM B1.18.2:**

### **WB ENAMEL**

WB Enamel must be a durable, water-based enamel for protecting and enhancing the appearance of metal.

**Appearance:** Semi-gloss

**Application:** Interior and Exterior

**Packaging:** 5ℓ

### **Uses required**

Ideal for protecting and decorating metal surfaces.

**Features: Required**

Water-based technology.

Solvent-based durability.

Excellent exterior durability.

Easy to use and clean up.

**ITEM B1.18.3:**

**RUST CONVERTER & PRIMER**

The Rust Converter & Primer must be a high-quality, polymer-based, water-base rust converter for use on rusted mild steel.

**Appearance:** Glossy

**Application:** Interior and exterior

**Spread Rate:** 7 m<sup>2</sup>/ℓ

**Packaging:** 5ℓ

**Uses required:**

For interior and exterior use.

Apply directly to rusted mild steel as a two-in-one, direct-to-rust primer.

It neutralizes the rust, eliminating the need to remove the rust or use a primer before over coating.

## **Features required**

It must react chemically with rust and effectively stops further corrosion.

On drying, the creamy white coating is converted to a firmly adherent, bluish-black film.

Water-insoluble after curing.

Can be over coated with most types of solvent borne and waterborne emulsion paints, such as alkyds, acrylics, epoxies, polyurethanes, and vinyl.

Water-based formula.

Easy to use and clean up.

## **ITEM 1.18.4:**

### **CEILING PAINT**

The Ceiling Paint must be a quality, low-odor coating for all interior ceilings, with a durable ultra-matt finish. Specially formulated to cover in one coat for most applications.

**Appearance:** Ultra Matt finish

**Application:** Interior

**Spread Rate:** 5 m<sup>2</sup>/ℓ

**Packaging:** 5 ℓ

### **Uses required**

Suitable for all interior ceilings.

Apply as a new coating, or when repainting.

### **Features required**

Excellent hiding power.

Minimal spatter.

Matt finish.

Low odor.

Water-based

**ITEM B1.18.5:**

Bituminous Aluminum Paint

The Bituminous Aluminum Paint must be a ready-to-use protective coating for new or previously painted bitumen-type roofing materials such as malthoid and general steelworks.

**Appearance:** Silver luster

**Application:** Exterior

**Spread Rate:** 12 m<sup>2</sup>/ℓ

**Packaging:** 20 ℓ

**Colors:** Silver

**Uses required**

Apply as a decorative and protective coating over tar- and bitumen-based finishes to protect them against ultraviolet degradation.

Protective finish for bitumen-type roofing materials such as malthoid.

It may also be used for general steelwork and sewer pipes.

### **Features required**

Exceptionally flexible.

Durability.

Weather-resistant.

Brilliant silver finish.

Heat and UV-resistant.

### **ITEM B1.18.6:**

#### **FLOOR PAINT**

The Floor Paint must be durable, high-quality, water-based floor paint for interior and exterior concrete surfaces such as floors, patios, and driveways.

**Appearance:** Sheen

**Application:** Interior and Exterior

**Spread Rate:** 11 m<sup>2</sup>/ℓ

**Packaging:** 5ℓ

#### **Uses required**

For interior and exterior use.

For concrete surfaces such as floors, patios, driveways, pathways, and garages

#### **Features required**

A durable, hardwearing, and fashionable coating.

Dries to a tough, abrasion-resistant, satin finish.



Water-based.

Quick drying.

Excellent durability.

Resistant to water, oil, household acids, chemicals, and detergents.

**ITEM B1.18.7:**

**CONCRETE FLOOR PREP**

Concrete Floor Prep must be a matt, water-based ultra-durable preparation coat

**Appearance:** Matt

**Application:** Interior and Exterior

**Spread Rate:** 10 m<sup>2</sup>/ℓ

**Packaging:** 5ℓ

**Uses required**

An adhesion promoter for cementitious floor surfaces.

**Features required**

High strength bonding between cementitious substrate and Floor Paint.

Good water resistance after complete curing.

Excellent solvent resistance.

V.O.C. free.

Odorless.

**ITEM B1.18.8:**

**UNIVERSAL ENAMEL**

The Universal Enamel must be a superior-quality enamel for interior and exterior surfaces.

**Appearance:** High-gloss finish  
**Application:** Interior and exterior  
**Spread Rate:** 10 m<sup>2</sup>/ℓ  
**Packaging:** 20 ℓ (white only).

### **Uses required**

Suitable for inland and coastal environments.

Must be used as a decorative and protective finish on interior and exterior mild steel, galvanized steel, timber and masonry.

### **Features required**

Must dry to a tough, durable finish with good weather-resistance.

Provides a smooth, high-gloss finish.

### **ITEM B1.18.9:**

#### **WALL & ALL**

The Wall & All must be formulated with a unique blend of hard and soft 100% acrylic polymers and a fungicide to ensure enhanced performance in dirt resistance, water vapor permeability and film elasticity.

**Appearance:** Suede sheen finish  
**Application:** Exterior  
**Spread Rate:** 13 m<sup>2</sup>/ℓ  
**Packaging:** 20 ℓ

### **Uses required**

Apply directly to new and previously painted plaster and concrete, wood, and various building boards.

It may also be applied to suitably primed mild steel, galvanized steel, and gypsum plaster.

## **Features required**

No primer required for most surfaces.

Early water-resistance.

Water-beading.

Multi-surface adhesion.

Superior durability.

Superior dirt-resistance.

Inhibits growth of mold and fungus protection.

## **ITEM B1.19: SHADE NETTING / BIRD PROOFING (80%)**

The shade netting must be made of a UV stabilized high density polyethylene using a Rachel knitting process.

### Fire Rating

Shade netting meets the following fire resistance tests:

- ASTM E84
- NFPA 701-97
- CA Fire Marshal Rating Title 19. Section 1237

### Stitching and Thread

#### Shade Netting (80%)

The shade netting must be sewn with double stitching using GORE Tenara Sewing Thread manufactured from 100% expanded PTFE: mildew resistant exterior approved thread. The sewing thread must meet or exceed the following:

- a. Extremely high strength, durable in outdoor climates
- b. Treated for prolonged exposure to the sun
- c. Flexible temperature range
- d. Very low shrinkage factor
- e. Resists flex and abrasion of netting

f. Unaffected by cleaning agents

Shade and UV Factors

## **ITEM B1.20: AIR CONDITIONING / REFRIGERATION COMPRESSORS**

### **COMPRESSORS: (HERMETICALLY SEALED)**

**ITEM B1.20.1:** ZR72 - 71500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.2:** ZR68 - 68000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.3:** ZR61 - 55500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.4:** ZR57 - 52000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.5:** ZR54 - 48700 BTU/HR, 3 PHASE, R22

**ITEM B1.20.6:** ZR48 - 47800 BTU/HR, 3 PHASE, R22

**ITEM B1.20.7:** ZR47 - 46300 BTU/HR, 3 PHASE, R22

**ITEM B1.20.8:** ZR45 - 44500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.9:** ZR42 - 41500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.10:** ZR40 - 39400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.11:** ZR36 - 36000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.12:** ZR24 - 24200 BTU/HR, 3 PHASE, R22

**ITEM B1.20.13:** ZR81 - 79500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.14:** ZR94 - 94000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.15:** ZR108 - 106000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.16:** ZR144 - 140000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.17:** ZR125 - 124000 BTU/HR, 3 PHASE, R22

### **ITEM B1.20: (SCROLL COMPRESSORS)**

**ITEM B1.20.18:** SM100 - 84000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.19:** SH090 - 76100 BTU/HR, 3 PHASE, R22

**ITEM B1.20.20:** SH105 - 91500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.21:** SH120 - 102400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.22:** SH140 - 118400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.23:** SH161 - 132400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.24:** SH184 - 152600 BTU/HR, 3 PHASE, R22

**ITEM B1.20.25:** SH180 - 151900 BTU/HR, 3 PHASE, R22

**ITEM B1.20.26:** SJ240 - 203800 BTU/HR, 3 PHASE, R22

**ITEM B1.20.27:** SH295 - 249800 BTU/HR, 3 PHASE, R22

**ITEM B1.20.28:** SH300 - 256700 BTU/HR, 3 PHASE, R22

**ITEM B1.20: (MT RANGE)**

**ITEM B1.20.29:** MT018 - 15900 BTU/HR, 3 PHASE, R22

**ITEM B1.20.30:** MT022 - 22000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.31:** MT028 - 30200 BTU/HR, 3 PHASE, R22

**ITEM B1.20.32:** MT032 - 33000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.33:** MT036 - 38000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.34:** MT040 - 42900 BTU/HR, 3 PHASE, R22

**ITEM B1.20.35:** MT044 - 25200 BTU/HR, 3 PHASE, R22

**ITEM B1.20.36:** MT045 - 44000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.37:** MT050 - 50500 BTU/HR, 3 PHASE, R22

**ITEM B1.20.38:** MT051 - 50200 BTU/HR, 3 PHASE, R22

**ITEM B1.20.39:** MT056 - 56400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.40:** MT057 - 56400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.41:** MT064 - 64800 BTU/HR, 3 PHASE, R22

**ITEM B1.20.42:** MT065 - 64400 BTU/HR, 3 PHASE, R22

**ITEM B1.20.43:** MT072 - 70200 BTU/HR, 3 PHASE, R22

**ITEM B1.20.44:** MT073 - 74600 BTU/HR, 3 PHASE, R22

**ITEM B1.20.45:** MT080 - 80000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.46:** MT081 - 85000 BTU/HR, 3 PHASE, R22

**ITEM B1.20.47:** MT100 - 95900 BTU/HR, 3 PHASE, R22

**ITEM B1.20.48:** MT125 - 124700 BTU/HR, 3 PHASE, R22

**ITEM B1.20.49:** MT144 - 140700 BTU/HR, 3 PHASE, R22

**ITEM B1.20.50:** MT160 - 156900 BTU/HR, 3 PHASE, R22

**ITEM B1.20: (AIR CONDITIONING COMPRESSORS)**

**ITEM B1.20.51:** 9000 BTU/HR, 220V, R22

**ITEM B1.20.52:** 12000 BTU/HR, 220V, R22

**ITEM B1.20.53:** 18000 BTU/HR, 220V, R22

**ITEM B1.20.54:** 24000 BTU/HR, 220V, R22

**ITEM B1.20.55:** 9000 BTU/HR, 220V, R410a

**ITEM B1.20.56:** 12000 BTU/HR, 220V, R410a

**ITEM B1.20.57:** 18000 BTU/HR, 220V, R410a

**ITEM B1.20.58:** 24000 BTU/HR, 220V, R410a

**ITEM B1.20.59:** 30000 BTU/HR, 220V, R410a

**ITEM B1.20.60:** 42000 BTU/HR, 380V, R410a

**ITEM B1.20.61:** 48000 BTU/HR, 380V, R410a

**ITEM B1.20.62:** 60000 BTU/HR, 380V, R410a

**ITEM B1.20: (DOMESTIC FRIDGE COMPRESSORS)**

**ITEM B1.20.63:** 1/3 HP, 220V, R134A

**ITEM B1.20.64:** 1/4 HP, 220V, R134A

**ITEM B1.20.65:** 1/5 HP, 220V, R134A

**ITEM B1.20.66:** 1/6 HP, 220V, R134A

**ITEM B1.20.67:** 1/7 HP, 220V, R134A

**ITEM B1.20.68:** 1/8 HP, 220V, R134A

**ITEM B1.20.69:** 1/9 HP, 220V, R134A

**B1.20: (COMMERCIAL FRIDGE COMPRESSORS)**

**ITEM B1.20.70:** 1 / ½ HP, 220V, R22

**ITEM B1.20.71:** 1 / 1/4 HP, 220V, R22

**ITEM B1.20.72:** ½ HP, 220V, R134A

**ITEM B1.20.73:** ½ HP, 220V, R22

**ITEM B1.20.74:** ½ HP, 220V, R404

**ITEM B1.20.75:** 1 / 3/8 HP, 220V, R22

**ITEM B1.20.76:** 1/3 HP, 220V, R22

**ITEM B1.20.77:** 1 HP, 220V, R22

**ITEM B1.20.78:** 2 HP, 220V, R22

**ITEM B1.20.79:** 2 HP, 220V, R404

**ITEM B1.20.80:** 3/4 HP, 220V, R134A

**ITEM B1.20.81:** ¾ HP, 220V, R22

**ITEM B1.20.82:** 3/8 HP, 220V, R22

**ITEM B1.20.83:** 3/8 HP, 220V, R134A

### **B1.20: (CHILLER COMPRESSORS)**

**ITEM B1.20.84:** DIAKIN, MODEL: ZHAZMLFLYE, 160KW, 545942 BTU/HR, R134A,  
SINGLE SCREW

**ITEM B1.20.85:** COPELAND MODEL: ZP235KCE-TWD, 50.6KW, 172654 BTU/HR, R410,  
SCROLL COMPRESSOR

**ITEM B1.20.86:** FIRE STAT JOHNSON CONTROL OR SIMILAR MOD: TZR6585/N 220V  
N/C

**ITEM B1.20.87:** WATERFLOW SENSOR JOHNSON CONTROL OR SIMILAR MOD:  
DBSF-1KPH 24V

**ITEM B1.20.88:** MANUAL STOP VALVE ¾ INCH, CASTEL OR SIMILAR

**ITEM B1.20.89:** SOLENOID VALVE POWER ASSEMBLY ¾ INCH, CASTEL OR SIMILAR

**ITEM B1.20.90:** TIMERS MICROREX LEGRAND OR SIMILAR

**ITEM B1.20.91:** ½ BALL VALVE

**ITEM B1.20.92:** HEATER BANK INLINE DUCTED 4000W

**ITEM B1.20.93:** CORE DRIER SHELL ASSEMBLY

### **ITEM B1.20.94:(LIQUID LINE DRIERS)**

**ITEM B1.20.94A:** ¼ INCH

**ITEM B1.20.94B:** 1/2 INCH

**ITEM B1.20.94C:** 5/8 INCH

**ITEM B1.20.94D:** 3/4 INCH

**ITEM B1.20.94E:** 3/8 INCH

**ITEM B1.20.94F:** 5/8 INCH

**ITEM B1.20.94G:** 1 1/8 INCH SUCTION LINE BURNOUT DRIER

**ITEM B1.20.95A:** AIRFLOW SWITCH MULTI RANGE SWITCHING CAREL OR SIMILAR  
MODEL: DCFL000100

**ITEM B1.20.95B:** DIFFERENTIAL PRESSURE SWITCH CAREL OR SIMILAR MODEL:  
SPKD 0.2 MBAR TO 2.0 MBAR

**ITEM B1.20.95C:** DIFFERENTIAL PRESSURE SWITCH CAREL OR SIMILAR MODEL:  
DCPD 0.5 MBAR TO 5 MBAR

**ITEM B1.20.96:** ELECTRIC EXPANSION VALVE DANFOSS OR SIMILAR TYPE:  
ETS50B

**ITEM B1.20.97A:** TEMPERATURE PROBES NTC

**ITEM B1.20.97B:** TEMPERATURE PROBES PTC

**ITEM B1.20.98:** CHILLED WATERFLOW ACTUATORS TACO OR SIMILAR MODEL:  
MVB56P556

## **ITEM B1.21: DUCTING INSULATED / PLENUMS**

### **ITEM B1.21: (FLEX DUCTING)**

Must be supplied in 10-meter lengths.

The core must be constructed from 12-micron clear polyester film bonded to 12 microns clear

Polyester film with water-based fire retardant glue approximately 18 grams per m<sup>2</sup> encapsulating a helically wound spring steel wire.

#### **Insulation**

Thick polyester blanket 100mm in thickness.



## **Jacket**

Must be an inner surface 12-micron clear polyester film bonded to 12 microns labelled metallized

polyester film with water-based fire retardant glue approximately 18 grams per m2.

### **Operating range**

- Between -10°C and +80 °C
- Between -200Pa and +1000Pa internal pressure
- Maximum velocity 20 m/s

**ITEM B1.21.1:** DIAMETER: 100MM

**ITEM B1.21.2:** DIAMETER: 125MM

**ITEM B1.21.3:** DIAMETER: 150MM

**ITEM B1.21.4:** DIAMETER: 175MM

**ITEM B1.21.5:** DIAMETER: 200MM

**ITEM B1.21.6:** DIAMETER: 250MM

**ITEM B1.21.7:** DIAMETER: 300MM

**ITEM B1.21.8:** DIAMETER: 350MM

**ITEM B1.21.9:** DIAMETER: 400MM

**ITEM B1.21.10:** DIAMETER: 450MM

**ITEM B1.21.11:** DIAMETER: 500MM

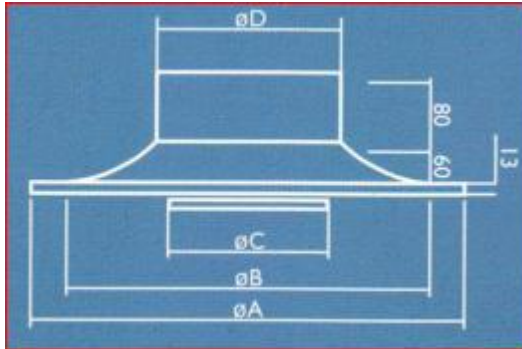
**ITEM B1.21.12:** DIAMETER: 550MM

**ITEM B1.21.13:** DIAMETER: 600MM

### **ITEM B1.21: (CONSTANT VOLUME DIFFUSERS, CIRCULAR)**

The steel constant volume diffuser must be easy to install and must be aesthetically pleasing. It must have an efficient radial air distribution.

The units must be manufactured from steel and powder coated to ensure a finish of the highest quality.



(Image from applied Hvac fundamentals 1995)

**ITEM B1.21.1:**

D150mm, A530mm, B460mm, C345mm, Hole diameter 510mm, Flex duct 150mm

**ITEM B1.21.2:**

D200mm, A530mm, B460mm, C345mm, Hole diameter 510mm, Flex duct 200mm

**ITEM B1.21.3:**

D250mm, A530mm, B460mm, C345mm, Hole diameter 510mm, Flex duct 250mm

**ITEM B1.21.4:**

D300mm, A530mm, B460mm, C345mm, Hole diameter 510mm, Flex duct 300mm

**ITEM B1.21.5:**

D350mm, A530mm, B460mm, C345mm, Hole diameter 510mm, Flex duct 350mm

**ITEM B1.21.6: (DOOR GRILLES 400mm x 400mm)**

Door Grille must be complete with telescopic back Frame manufactured of extruded Type 50S anodizing grade aluminum. These grilles have fixed horizontal Chevron Louvres.

Frame Options: Telescopic Back Frame = **22mm**

Finish Options **NA** = Natural Anodized

Blade Spacing **13mm Standard**

**B1.21.7: (GALVANIZED SHEET METAL DUCTING / REQ TANGULAR AND ROUND)**

**Galvanized steel**

Galvanized mild steel must be used in fabricating ductwork because the zinc coating of this metal prevents rusting and avoids cost of painting. For insulation purposes, metal

ducts must be lined with faced fiberglass blankets (duct liner) or wrapped externally with fiberglass blankets (duct wrap). When called for, a double walled duct is used. This must have an inner perforated liner, then a 1–2" layer of fiberglass insulation contained inside an outer solid pipe.

For ease of handling, it must be supplied in 4' sections (or joints). Round duct stock sizes range evenly from 4" to 24" with 6"-12" being most used. Stock pipe must be supplied in 10' joints.

### **Polyurethane and phenolic insulation panels (pre-insulated air ducts)**

Fabricate the galvanized steel duct and insulate with duct wrap prior to installation.

Both polyurethane and phenolic foam panels must be manufactured with factory applied aluminum facings on both sides. The thickness of the aluminum foil must cater for 25 micrometers for indoor use to 200 micrometers for external use or for higher mechanical characteristics. There are various types of rigid polyurethane foam panels available. The rigid polyurethane or phenolic foam panels must use pentane as foaming agent.

#### **Waterproofing**

The finish for external ductwork exposed to the weather can be sheet steel coated with aluminum or an aluminum/zinc alloy, a multilayer laminate, a fiber reinforced polymer or other waterproof coating.

### **Duct cleaning**

#### **Signs and indicators**

Cleaning of the duct system may be necessary if:

After cleaning, there is still left-over visible dust floating around.

Occupants experience headaches, nasal congestion, or other sinus problems.

Offices have little or no air flow coming from the vents.

Occupants are constantly getting sick or are experiencing more allergies than usual.

There is a musty or stale odor when turning on the air conditioner.

Occupants are experiencing signs of sickness, e.g., fatigue, headache, sneezing, stuffy or running nose, irritability, nausea, dry or burning sensation in eyes, nose, and throat.

### Commercial inspection

In commercial settings, regular inspection of ductwork is recommended by several standards. One standard recommends inspecting supply ducts every 1–2 years, return ducts every 1–2 years, and air handling units annually. Another recommends visual inspection of internally lined ducts annually. Duct cleaning should be based on the results of those inspections.

Inspections are typically visual, looking for water damage or biological growth. When visual inspection needs to be validated numerically, a *vacuum test* (VT) or *deposit thickness test* (DTT) can be performed. A duct with less than 0.75 mg/100m<sup>2</sup> is clean. Surface deposit limits of 1g/m<sup>2</sup> for supply and return ducts and 6g/m<sup>2</sup> for exhaust ducts, or a maximum deposit thickness of 60 µm in supply and return ducts, and 180 µm for exhaust ducts. Duct cleaning if measured bacterial content is more than 29 colony forming units (CFU) per 10 cm<sup>2</sup>; contamination is classified as "low" below 10 CFU/cm<sup>2</sup>, "medium" at up to 20 CFU/cm<sup>2</sup>, and "high" when measured above 20 CFU/cm<sup>2</sup>.

### DUCT SEALING

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Air pressure combined with air duct leakage can lead to a loss of energy in a HVAC system. Sealing leaks in air ducts reduces air leakage, optimizes energy efficiency, and controls the entry of pollutants into the building. Before sealing ducts, it is imperative to ensure the total external static pressure of the duct work, and if equipment will fall within the equipment manufacturer's specifications. If not, higher energy usage and reduced equipment performance may result.

Commonly available duct tape should not be used on air ducts (metal, fiberglass, or otherwise) that are intended for long-term use. The adhesive on so called duct tape dries and releases with time. A more common type of duct sealant is a water-based paste that is

brushed or sometimes sprayed on the seams when the duct is built. Special fire-resistant tapes, often with foil backings and long-lasting adhesives must be utilized.

Signs of leaks

Signs of leaky or poorly performing air ducts include:

Utility bills in winter and summer months above average relative to rate fluctuation

Spaces or rooms that are difficult to heat or cool

Duct location in an attic, attached garage, leaky floor cavity, crawl space or unheated basement.

**ITEM B1.21.7: (CONTINUED all measurements in inches)**

**RECTANGULAR SHEET METAL DUCTING: (h x b) 2m section minimum thickness 1mm, 25mm internal insulation included.**

ITEM B1.21.7.1: 3x7"

ITEM B1.21.7.2: 4x5"

ITEM B1.21.7.3: 4x7"

ITEM B1.21.7.4: 5x6"

ITEM B1.21.7.5: 4x9"

ITEM B1.21.7.6: 5x7"

ITEM B1.21.7.7: 6x6"

ITEM B1.21.7.8: 6x7"

ITEM B1.21.7.9: 5x12"

ITEM B1.21.7.10: 6x10"

ITEM B1.21.7.11: 7x8"

ITEM B1.21.7.12: 7x10"

ITEM B1.21.7.13: 8x9"

ITEM B1.21.7.14: 8x10"

ITEM B1.21.7.15: 9x9"

ITEM B1.21.7.16: 8x12"

ITEM B1.21.7.17: 10x10"  
ITEM B1.21.7.18: 8x14"  
ITEM B1.21.7.19: 9x12"  
ITEM B1.21.7.20: 10x11"  
ITEM B1.21.7.21: 8x15"  
ITEM B1.21.7.22: 10x12"  
ITEM B1.21.7.23: 10x14"

ITEM B1.21.7.24: 12x12"  
ITEM B1.21.7.25: 12x14"  
ITEM B1.21.7.26: 12x15"  
ITEM B1.21.7.27: 10x22"  
ITEM B1.21.7.28: 14x15"  
ITEM B1.21.7.29: 12x19"  
ITEM B1.21.7.30: 14x16"  
ITEM B1.21.7.31: 10x25"  
ITEM B1.21.7.32: 12x20"  
ITEM B1.21.7.33: 15x16"  
ITEM B1.21.7.34: 14x20"  
ITEM B1.21.7.35: 15x18"  
ITEM B1.21.7.36: 12x26"  
ITEM B1.21.7.37: 16x20"  
ITEM B1.21.7.38: 12x30"  
ITEM B1.21.7.39: 14x25"  
ITEM B1.21.7.40: 12x34"  
ITEM B1.21.7.41: 15x25"  
ITEM B1.21.7.42: 12x36"  
ITEM B1.21.7.43: 16x25"  
ITEM B1.21.7.44: 20x20"  
ITEM B1.21.7.45: 12x45"  
ITEM B1.21.7.46: 16x30"  
ITEM B1.21.7.47: 20x24"  
ITEM B1.21.7.48: 16x36"  
ITEM B1.21.7.49: 18x30"

ITEM B1.21.7.50: 23x25"

ITEM B1.21.7.51: 16x40"

ITEM B1.21.7.52: 20x32"

ITEM B1.21.7.53: 25x25"

ITEM B1.21.7.54: 20x35"

ITEM B1.21.7.55: 25x28"

ITEM B1.21.7.56: 16x55"

ITEM B1.21.7.57: 20x43"

ITEM B1.21.7.58: 25x38"

ITEM B1.21.7.59: 20x50"

ITEM B1.21.7.60: 20x55"

ITEM B1.21.7.61: 30x35"

ITEM B1.21.7.62: 25x48"

ITEM B1.21.7.63: 30x40"

ITEM B1.21.7.64: 32x40"

ITEM B1.21.7.65: 32x45"

ITEM B1.21.7.66: 35x40"

**ITEM B1.21.8: (Round galvanized sheet metal insulated ducting) 1mm thickness, (Diameter in inches) ,1 inch insulation.**

ITEM B1.21.8.1: 4.9

ITEM B1.21.8.2: 5.7

ITEM B1.21.8.3: 6.0

ITEM B1.21.8.4: 6.4

ITEM B1.21.8.5: 6.6

ITEM B1.21.8.6: 7.1

ITEM B1.21.8.7: 8.2

ITEM B1.21.8.8: 8.3

ITEM B1.21.8.9: 8.4

ITEM B1.21.8.10: 9.1

ITEM B1.21.8.11: 9.3

ITEM B1.21.8.12: 9.8  
ITEM B1.21.8.13: 10.7  
ITEM B1.21.8.14: 10.9  
ITEM B1.21.8.15: 11.3  
ITEM B1.21.8.16: 11.5  
ITEM B1.21.8.17: 11.8  
ITEM B1.21.8.18: 12.0  
ITEM B1.21.8.19: 12.9  
ITEM B1.21.8.20: 13.1  
ITEM B1.21.8.21: 14.1  
ITEM B1.21.8.22: 14.6  
ITEM B1.21.8.23: 15.8  
ITEM B1.21.8.24: 15.9  
ITEM B1.21.8.25: 16.4  
ITEM B1.21.8.26: 16.8  
ITEM B1.21.8.27: 16.9  
ITEM B1.21.8.28: 17.9  
ITEM B1.21.8.29: 18.2  
ITEM B1.21.8.30: 19.0  
ITEM B1.21.8.31: 19.5  
ITEM B1.21.8.32: 20.2  
ITEM B1.21.8.33: 21.0  
ITEM B1.21.8.34: 21.4  
ITEM B1.21.8.35: 21.7

ITEM B1.21.8.36: 21.9  
ITEM B1.21.8.37: 23.7  
ITEM B1.21.8.38: 23.9  
ITEM B1.21.8.39: 24.1  
ITEM B1.21.8.40: 24.7  
ITEM B1.21.8.41: 25.2

ITEM B1.21.8.42: 26.2  
ITEM B1.21.8.43: 27.0



ITEM B1.21.8.44: 27.3  
ITEM B1.21.8.45: 27.5  
ITEM B1.21.8.46: 28.6  
ITEM B1.21.8.47: 28.9  
ITEM B1.21.8.48: 31.0  
ITEM B1.21.8.49: 31.5  
ITEM B1.21.8.50: 33.5  
ITEM B1.21.8.51: 33.7  
ITEM B1.21.8.52: 33.9  
ITEM B1.21.8.53: 35.2  
ITEM B1.21.8.54: 35.4  
ITEM B1.21.8.55: 37.4  
ITEM B1.21.8.56: 37.8  
ITEM B1.21.8.57: 39.6  
ITEM B1.21.8.58: 40.9  
ITEM B1.21.8.59: 41.3

**ITEM B1.22: CRANES (HIRE)**

*Pricing must include for travelling and site establishment, pricing per hour required. All cranes and equipment to be insured on site by service provider.*

**ITEM B1.22.1:** 18 TON  
**ITEM B1.22.2:** 20 TON  
**ITEM B1.22.3:** 25 TON  
**ITEM B1.22.4:** 30 TON  
**ITEM B1.22.5:** 40 TON  
**ITEM B1.22.6:** 60 TON  
**ITEM B1.22.7:** 80 TON  
**ITEM B1.22.8:** 100 TON  
**ITEM B1.22.9:** 150 TON  
**ITEM B1.22.10:** 220 TON

**ITEM B1.22: SCAFFOLDING (HIRE)**

Pricing per day required.

**System Features** - Uncomplicated modular design.

- Easy to erect, use and dismantle.
- Versatile height and width configurations.
- Safe working platforms with trapdoors.
- Staircases provide easy access.
- Components are easy to palletize and transport.

**ITEM B1.22.11:** Scaffold up to 3 meters one day hire, complete system

**ITEM B1.22.12:** Scaffold up to 6 meters one day hire, complete system

**ITEM B1.22.13:** Scaffold up to 9 meters one day hire, complete system

**ITEM B1.23: (UNIVERSAL REMOTES)**

**ITEM B1.23.1: (UNIVERSAL INFRA RED AIR CONDITIONER REMOTE)**

Supply generic infra-red air conditioner remote control with 4000 channels must be easily programmed to work on most air conditioner units without losing the original functions of the unit. KT 9018E OR SIMILAR

**ITEM B1.23.2: (UNIVERSAL WALL MOUNTED AIR CONDITIONER CONTROLLER)**

Supply a universal wall mounted air conditioner controller with digital display, for console units with heater elements. Et35

**Features:**

Digital Temp Display

Heat/Cool

On/Off

Fan Speeds: High, Medium, Low

Temp Selector Knob

Neat Appearance

Temp Sensor built into housing

#### **ITEM B1.24: (V-BELTS)**

**ITEM B1.24.1:** SPA 800

**ITEM B1.24.2:** SPA 850

**ITEM B1.24.3:** SPA 1250

**ITEM B1.24.4:** SPA 1480

**ITEM B1.24.5:** SPA 1550

**ITEM B1.24.6:** SPA 1800

**ITEM B1.24.7:** SPA 1950

**ITEM B1.24.8:** SPA 2120

**ITEM B1.24.9:** 13X780

**ITEM B1.24.10:** 13X850

**ITEM B1.24.11:** 13X1250

#### **B1.25: (LIGHTING / POWER SCIRTING AND MISC)**

**B1.25.1:** Down lights with LED globe

**B1.25.2:** 1200 x 600 light fittings complete with defuser and tubes, recessed

**B1.25.3:** 1200 x 600 light fittings complete with defuser and tubes, surface mount

**B1.25.4:** 1 light switch 15A

**B1.25.5:** 2 light switch 15A

**B1.25.6:** 3 light switch 15A

**B1.25.7:** P2000 covers

#### **B 1.25: POWER SKIRTINGS / POLES**

**B1.25.8:** Power poles complete with ceiling ross no plugs

- B1.25.9:** 2 compartment, 3 tier power skirting
- B1.25.10:** 2 compartment, 3 tier power skirting t's
- B1.25.11:** 2 compartment, 3 tier power skirting 90-degree bend
- B1.25.12:** 2 compartment, 3 tier power skirting end caps
- B1.25.13:** power skirting plug cover
- B1.25.14:** Single normal switched socket outlets in power skirting
- B1.25.15:** Single dedicated switched socket outlet in power skirting
- B1.25.16:** 40A rotter lock isolator 3 phase
- B1.25.17:** 30A rotter lock isolator 2 pole
- B1.25.18:** P9000 wiring channel complete with t/rods bolts etc.
- B1.25.19:** 4 x 2 extension boxes
- B1.25.20:** Single normal switched socket outlet on trunking
- B1.25.21:** Single dedicated switched socket outlet on trunking
- B1.25.22:** 4 x 4 extension boxes
- B1.25.23:** Double normal switched socket outlet on trunking
- B1.25.24:** Double dedicated switched socket outlet on trunking
- B1.25.25:** 40-way electrical DB
- B1.25.26:** 20-way electrical DB

## **ITEM B2: (Refrigerant piping)**

### 2.1 GENERAL REQUIREMENTS

- A. Fittings and flanged unions shall be cast brass or wrought copper refrigeration type fittings. Cast fittings shall be internally tinned before use.
- B. Vibration eliminators shall be in the piping. Sizes above 3" shall be the stainless-steel type designed to restrict freedom of movement in three dimensions.
- C. With multiple evaporators and/or compressor units, piping connections shall be arranged to prevent gravity flow of oil or liquid refrigerant into the compressor.

- D. Hot gas and suction velocities shall be not less than 500 fpm in horizontal lines and 1000 fpm in vertical lines. Where capacity control is used, double pipe risers and oil traps should be used to avoid dropping below 1000 fpm in vertical lines. In sizing suction lines, it is generally desirable to limit the pressure drop to one (1) psi.

## 2.2 REFRIGERANT PIPING

- A. All refrigerant piping shall be Type "L" ACR hard copper with long radius fittings.

The

composition of the solder depends on the location in the system:

1. For pipe runs and joints (copper to copper), Staz-Silv or Silfos, a solder composition with 15% silver (BCUP-S) shall be used.
  2. Where dissimilar metals are joined, such as copper to brass or copper to steel, Staz-Silv or "easy-flow", a solder composition with 45% silver (BAg-1) shall be used.
  3. Where auxiliary components, such as expansion valves are involved, Staz-brite (soft solder) with tin and 4% silver shall be used so parts can be readily changed as needed.
- B. When soldering, a nitrogen bleed shall be used to keep pipe and fitting from being oxidized.

## 2.3 DEHYDRATION AND AIR REMOVAL

- A. Refrigeration systems shall be thoroughly dehydrated and evacuated before charging with refrigerant. Systems shall be evacuated with a vacuum pump to an absolute pressure of not less than 500 microns mercury. Dryer cartridges shall be replaced until all water has been removed.

**Item B2.1: ¼ inch copper piping**

**Item B2.2: ½ inch copper piping**

**Item B2.3: ¾ inch copper piping**

**Item B2.4: 3/8-inch copper piping**

**Item B2.5: 5/8-inch copper piping**

**Item B3: (PVC conduit boxes and fittings)**

**Item B3.1: (1 way side entry)**

**Item B3.1.1 - 20mm**

**Item B3.1.2 - 25mm**

**Item B3.2: (2 way through)**

**Item B3.2.1 - 20mm**

**Item B3.2.2 - 25mm**

**Item B3.3: (2-way angle)**

**Item B3.3.1 - 20mm**

**Item B3.3.2 - 25mm**

**Item B3.4: (3-way side entry)**

**Item B3.4.1 - 20mm**

**Item B3.4.2 - 25mm**

**Item B3.5: (4-way side entry)**

**Item B3.5.1 - 20mm**

**Item B3.5.2 - 25mm**

**Item B3.6: (90-degree solid bends)**

**Item B3.6.1 - 20mm**

**Item B3.6.2 - 25mm**

**Item B3.6.3 - 32mm**

**Item B3.6.4 - 40mm**

**Item B3.6.5 - 50mm**

**Item B3.7: (Solid couplings)**

**Item B3.7.1 - 20mm**

**Item B3.7.2 - 25mm**

**Item B3.7.3 - 32mm**

**Item B3.7.4 - 40mm**

**Item B3.7.5 - 50mm**

**Item B3.8: (Spacer bar saddles)**

**Item B3.8.1 - 20mm**

**Item B3.8.2 - 25mm**

**Item B3.9: (Strap saddles)**

**Item B3.9.1 - 20mm**

**Item B3.9.2 - 25mm**

**Item B3.9.3 - 32mm**

**Item B3.9.4 - 40mm**

**Item B3.9.5 - 45mm**

**Item B4: (PVC electrical / drainage conduit)**

**Item B4.1.1 - 20mm**

**Item B4.1.2 - 25mm**

**Item B4.1.3 - 32mm**

**Item B4.1.4 - 40mm**

**Item B4.1.5 - 50mm**

**Item B5: (Refrigerant)**

**Item B5.1 - R22**

**Item B5.2 - R410A**

**Item B5.3 - R134a**

**Item B5.4 - R401a**

**Item B5.5 - R401c**

**Item B5.6 - R402a**

**Item B5.7 - R402b**

**Item B5.8 - R404a**

**Item B5.9 - R406a**

**Item B5.10 - R407a**

**Item B5.11 - R407c**

**Item B5.12 - R500**

**Item B5.13 - R502**

**Item B5.14 - R503**

**Item B5.15 - R507**

**Item B5.16 - R717**

**Item B6: (Electrical supply cabling)**

Electrical supply cabling shall be off surflex type

**Item B6.1 - 1.5mm 3 core + E**

**Item B6.2 - 1.5mm 4 core + E**

**Item B6.3 - 2.5mm 3 core + E**

**Item B6.4 - 2.5mm 4 core + E**

**Item B6.5 - 4 mm 3 core + E**



**Item B6.6 - 4 mm 4 core + E**

**Item B7: (Weatherproof Isolator)**

Weatherproof isolators shall be of the surface mount type IP 56

**Item B7.1: (Single pole)**

**Item B7.1.1 - 20 Amp**

**Item B7.1.2 - 35 Amp**

**Item B7.1.3 - 55 Amp**

**Item B7.1.4 - 63Amp**

**Item B7.2: (Double pole)**

**Item B7.2.1 - 20 Amp**

**Item B7.2.2 - 35 Amp**

**Item B7.2.3 - 55 Amp**

**Item B7.2.4 - 63 Amp**

**Item B7.3: (Triple pole)**

**Item B7.3.1 - 20 Amp**

**Item B7.3.2 - 35 Amp**

**Item B7.3.3 - 55 Amp**

**Item B7.3.4 - 63 Amp**

**Item B7.3.5 - 80 Amp**

**Item B8: (Electrical circuit breaker)**

**Item B8.1 (Single pole 230V 6ka)**

**Item B8.1.1 - 10 Amp**

**Item B8.1.2 - 16 Amp**

**Item B8.1.3 - 20 Amp**

**Item B8.1.4 - 25 Amp**

**Item B8.1.5 - 32 Amp**

**Item B8.1.6 - 63 Amp (Isolator)**

**Item B8.2 (Double pole 230V 6Ka)**

**Item B8.2.1 - 10 Amp**

**Item B8.2.2 - 16 Amp**

**Item B8.2.3 - 20 Amp**

**Item B8.2.4 - 25 Amp**

**Item B8.2.5 - 32 Amp**

**Item B8.3 (Triple pole 400V 6 Ka)**

**Item B8.3.1 - 10 Amp**

**Item B8.3.2 - 16 Amp**

**Item B8.3.3 - 20 Amp**

**Item B8.3.4 - 25 Amp**

**Item B8.3.5 - 32 Amp**

**Item B8.3.6 - 63 Amp (Isolator)**

**Item B9: (Canti – lever)**

Canti-levers must be of a galvanized Unistrut type (HDG)

**Item B9.1 - 450mm wrap around arm (P1000 2.5mm)**

**Item B9.2 - 600mm wrap around arm (P1000 2.5mm)**

**Item B10: (Galvanized trunking)**

Includes for trunking with cover

**Item B10.1 - 41x41mm**

**Item B10.2 - 76x76mm**

**Item B10.3 - 127x76mm**

**Item B10.4 - 127x100mm**

**Item B10.5 - External elbow 90 degrees**

**Item B11: (PVC trunking)**

Includes for trunking with cover

**Item B11.1 - 25x16mm**

**Item B11.2 - 40x16mm**

**Item B11.3 - 40x25mm**

**Item B11.4 - 40x40mm**

**Item B11.5 - 100x40mm**

**Item B12: (Medium duty cable tray)**

Material must be of hot dipped galvanizing type (HDG)

**Item B12.1 - 200mm wide**

**Item B12.2 - 300mm wide**

**Item B12.3 - 400mm wide**

**Item B13: (Labour)**

**Labour rates for:**

**Item B13.1 - Qualified air conditioning / refrigeration technician level 4 to 6**

**Item B13.2 - Qualified electrician**

**Item B13.3 - Skilled labour**

**Item B13.4 - Unskilled labour**

**Item B13.5 - Qualified plumber**

**Item B13.6 - Qualified Mechanical engineer, consulting services (registered at ECSA as professional)**

**Item B13.7 - Qualified Electrical engineer, consulting services (registered at ECSA as professional)**

**Item B14: (Transport)**

**Item B14.1 - Transport cost for the completion of work starting point from Tshwane House CBD.**

**Additional requirements:**

- Units must have anti-rust cabinets
- Auto restart function required
- Intelligent defrosting capabilities
- 24hr timer
- Self-diagnosis and auto protection function

**BIDDERS MUST NOTE THAT INSTALLATION OF ALL ITEMS WILL BE TSHWANE WIDE.**

1. All builders' work including ceiling repair, painting, closing of holes and making good must be included for in this quote.
2. A CERTIFICATE OF COMPLIANCE FOR ALL ELECTRICAL WORK MUST BE ISSUED WITH EACH AND EVERY INSTALLATION.
3. ALL ITEMS ON OFFER MUST BE ACCOMPANIED BY A FULL COLOUR BROCHURE WITH THE SUPPLIERS CONTACT DETAILS.
4. All work performed must be in accordance with SANS 10147 and SANS 10142 specifications.
5. This contract will be managed by Group Property Management department, facility maintenance, Air conditioning section.
6. Failure to comply with these stipulations will disqualify the tenderer's bid as a whole.

7. All items in the BOQ must be completed, failure to comply will disqualify tenderer.
8. **All newly installed equipment must have a 1-year warranty on equipment and installation.**
9. **All service providers shall comply to the Occupational health and safety act 85 of 1993, paragraph 7.1-7.3 whereby the service provider must have a designated safety officer as well as an updated safety file on the work site.**
10. **Contract participation goal (CPG): In terms of section 5(2) of the construction Industry Development Board Act, 2000 (Act no.38 of 2000) (the act), the Construction Industry Development Board is empowered to promote best practice standards. This best practice Standard for Indirect Targeting for Enterprises Development through Construction Works Contracts establishes a key performance indicator in the form of a contract participation goal (CPG) relating to the engagement of targeted enterprises on a contract for the provision of construction works coupled to the enterprise development.**

a. Terms of appointment

The city will assess applicants following the stages as listed below under 5 (Stage 1 to Stage 4). The city intends to appoint a maximum of seven (7) service provider for each region. Service provider is expected to complete Pricing Schedule and should more than seven (7) qualifies as per stages below, prices will be the determining factor with seven cheapest among all be appointed. Allocation method of service providers to various region will be based on the pricing with the lowest aggregate price to be placed at the region with the highest work demand and the 7<sup>th</sup> lowest aggregate price to be allocated to region with the least amount of work. Should fewer than seven (7) service providers qualify or appointed, regions will be clustered to match the number of service providers. The city will further reserve the right to use the service of the service provider in another region should a service provider of that region is unable to cope with work demand or is not capable or not willing to do that work. The process to appoint SP to from another region will be guided by the price with the cheapest (from other region) given the first right to refusal.

## STAGES OF EVALUATION

The following tender will be evaluated as follows:

**STAGE 1: ADMINISTRATIVE COMPLIANCE**

**STAGE 2: LOCAL CONTENT AND PRODUCTION**

**STAGE 3: MANDATORY REQUIREMENTS**

**STAGE 4: FUNCTIONALITY CRITERIA**

**STAGE 5: PREFERENTIAL PROCUREMENT POINT SYSTEM**

### 1.1 STAGE 1: ADMINISTRATIVE COMPLIANCE

All the proposals will also be evaluated against the administrative responsiveness requirements as set out in the list of returnable documents.

### 1.2 STAGE 2: Local content and Production

: Local content and production

i) In terms of the stipulated minimum threshold for local production and content for:

- steel added value products is 100%

the City shall only accept the specifications which meets minimum threshold percentage and requirements for local production and content as referred to in the Preferential

Procurement Regulations on Local Content and the relevant National Treasury designated sectors' circulars.

ii) The bidder must clearly indicate as part of the bid submission the quantities of material and products to be supplied and the level of local content for each product. Should the bidder not be able to comply with the prescribed minimum threshold, an exemption received from the Department of Trade and Industry needs to be submitted with the bid to be considered for further evaluation. Bidders that do not comply with the above-mentioned requirements will be automatically disqualified.

The following items in this table have a minimum threshold of 100% local content

Product for designation	Minimum Local Content
Galvanised and Colour Coated Coils	100%

Ducting and structural pipework	100%
Plastic pipes (Pvc)	100%
Electrical cable (low voltage)	100%

[http://ocpo.treasury.gov.za/Buyers\\_Area/Legislation/Pages/Designated-Sectors.aspx](http://ocpo.treasury.gov.za/Buyers_Area/Legislation/Pages/Designated-Sectors.aspx)

### 1.3 STAGE 3: MANDATORY REQUIREMENT

Only tenderers with the following requirements will be considered.

- The tenderer must have CIDB contractor grading 3 ME or higher
- The tenderer must have a South African refrigeration gas practitioner's certification as mandated by the Department of Labour (SAQCC)
- SAQA NQF level 4-6 certification for refrigeration and electrical artisans / technicians Proof of technical Qualification in refrigeration and Air-conditioning must be supplied as part of the bid document. (**Minimum requirement NQF level 4**)
- Bidders must comply to SANS 10147- 2014, 10400, 10119-2017
- A minimum of 3 years' experience is required, bidders are required to submit a curriculum vitae stating the number of years of experience within the industry. Bids that do not meet these requirements will be disqualified.

### 1.4 STAGE 3: FUNCTIONALITY CRITERIA

The following functionality criteria will apply to this bid:

Only bidders who score a minimum score of 70 points in respect of the following functionality criteria will be recommended for shortlisting. A total of 100 points are allocated for functionality.

CRITERIA	SUB-CRITERIA	WEIGHT	SCALE	HIGHEST POSSIBLE SCORE
3.1 Local Economic Participation, Local of Business <i>(Attach rates and taxes statement not older than 3 months or lease agreement)</i>	Company Located within Tshwane	3	5	15
	Company Located in Gauteng	2		
	Company located outside Gauteng	1		



3.2 Number of years servicing  Bidders are requested to submit Curriculum Vieta indicating the number of years actively participating in the industry with no less than 3 years' experience required.	<b>5 years and more</b>	3	5	15
	3 years up to 5 years	2		
3.3 Completion certificates  Completion certificates should be on a company letterhead and signed off for similar work done and completed by the service provider.	5 or more	5	4	20
	3 to 4	4		
	1 to 2	3		
3.4 Proof of Company's employee appointed as competent person (Artisan) SAQA certified:	Refrigerant / Air conditioning Technician level 6	6		30

Minimum NQF level 4 required	Refrigerant / Air conditioning Technician level 5	5	5	
	Refrigerant / Air conditioning Technician level 4	4		
3.5 Proof of company's employee appointed as competent person (Artisan) SAQA certified  Proof of qualifications must be provided certified by a commissioner of oaths.	Electrician level 5	4	5	20
Minimum NQF level 4 required	Electrician level 4	3		
<b>Total</b>				<b>100</b>

#### **STAGE 4: PREFERENTIAL POINT SYSTEM**

The preferential points to be used will be 80/20 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) Regulations 2017.

The system comprises of the following two elements:

- a) Price 80 points
- b) B-BEE Contributor level 20 points

Pricing will be evaluated based on the pricing schedule.

## **2. PRICING SCHEDULE**

### **PART 1: PRICING INSTRUCTIONS (Price schedule attached)**

#### **2.1 General**

2.1.1 Nature of award: one bidder as a whole

2.1.2 This section provides the tenderer with guidelines and requirements with regard to the completion of the Price Schedule. The Schedule must be completed in black ink and the tenderer is referred to the Tender Specifications in regard to the correction of errors.

2.1.3 The Price Schedule shall be read with all the documents which form part of this tender.

2.1.4 The following words shall have the meanings hereby assigned to them:

Unit: The unit of measurement for each item of work in terms of the Specifications and the Project Specifications.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work at which the tenderer tenders to do the work.

Amount: The product of the quantity and the rate tendered for an item.

2.1.5 Descriptions in the Price Schedule are abbreviated and comply generally with those in the Standard Specifications and are in line with industry practices.

2.1.6 The item numbers appearing in the Price Schedule refer to the corresponding item.

2.1.7 The pricing is required for single unit quantities set out in the Price Schedule are the estimated quantities of the Works, but the Service Provider will be required to undertake whatever quantities may be directed by the COT from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

2.1.8 The units of measurement described in the Price Schedule are metric units. Abbreviations used in the Price Schedule are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
Km	=	kilometre	t	=	ton (1000kg)
m <sup>2</sup>	=	square metre	no.	=	number
l	=	litre	Prov. sum	=	Provisional sum
kl	=	kilolitre	%	=	Per cent

## 2.2 Prices

2.2.1 The prices to be inserted in the Price Schedule are to be full inclusive prices for the work described under the items. Such prices shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

**2.2.2 The bidder must complete all sub-items in the pricing schedule to be evaluated for the item.**

- 2.2.3 All items quoted are for a single unit or as specified in the price schedule.
- 2.2.4 An item against which no price is entered will be disqualified under the item unless the Tenderers clearly indicate if the price is “included under item number....” or “provided elsewhere under item number...” will be accepted as a price of nil (R0,00) having been entered against such items and covered by the other prices in the Price Schedule only if clearly indicated under which item number it has been covered under.
- 2.2.5 Any work executed to which such a price applies, shall be measured under the appropriate items in the Price Schedule and valued at a price of nil (R0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract/service level agreement.
- 2.2.6 The Tenderer shall fill in a unit price in rand against all items for each of the three (3) years in the respective item row and column. The intention is that the price shall apply should work under this item be required.
- 2.2.7 The tenderer shall not group together several items and tender one price for such group of items.
- 2.2.8 All prices and sums of money quoted in the Price Schedule shall be in rands and whole cents. Fractions of a cent shall be discarded.
- 2.2.9 All prices entered in the Price Schedule must exclude VAT as indicated. VAT will be added last on the summary row of the Price Schedule as indicated.
- 2.2.10 Should excessively high unit prices be tendered, such prices may be of sufficient importance to warrant rejection of a tender by the COT.



**CORRECTION OF ENTRIES MADE BY TENDERER**

*Any entry made by the Tenderer in the Price Schedule, forms, etc, which the tenderer desires to change, shall not be erased or painted out. A line shall be drawn through the incorrect entry and the correct entry shall be written above in black ink and the full signature of the Tenderer shall be placed next to the correction.*

**APPROVALS TO BE COMPLETED BY THE DEPARTMENT**

**Compiled by:**

Jan De Klerk .....

Signature:

.....

Date:

**Reviewed by:**

Sifiso Ndaba.....

Signature

.....

Date:

**Approved by:**

Verusha Morgan.....

Signature

(Signed as per initial request memorandum submitted.....)

Date:

**PRE-SPECIFICATION CONDUCTED BY DEMAND MANAGEMENT OFFICIAL WITH THE RELEVANT DEPARTMENT**

**Date for Pre-Spec:**

Demand Official

.....

Signature

.....

Department official

.....

Signature

.....

**Comments if any on the specification**

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**APPROVALS BY BID SPECIFICATION COMMITTEE**

Date:

Chairperson

.....

Signature

.....

**Approval status**



Approved

Approved with amendments

Proposed amendments

.....

.....

.....

.....

.....

Rejected

Reasons for rejection:

.....

.....

.....

.....

.....

**CITY OF TSHWANE  
FINANCIAL SERVICES: SUPPLY CHAIN MANAGEMENT  
BID DOCUMENT INFORMATION SCHEDULE**

**Note:** Table 1 must be completed in full and is applicable to all tenders. The compiler of the bid document must than select the applicable tender and complete the specific table in full.

**Table 1: Information for all tenders- this table must be completed for all tenders**

	<b>Details to be furnished by Project Manager</b>
Department	Group Property Management
Division	Facilities Management
Tender Reference Number	GPM03 2022/23
Tender heading	Tender to appoint professional service providers to supply, install, maintain, repair and upgrade of existing heating, ventilation, air conditioning and cooling systems city wide as and when required for a period of 3 years.
Tel of Project Manager (COT Department)	012 358 9540, Jan de klerk
Physical Address of Employer (CoT Department)	Sammy Mark Square, cnr Madiba and Lilian Ngoyii
Postal address of Employer (CoT Department)	Box 890 Pretoria, 0001
Fax Number of Employer (CoT Department)	012 358 4863
E-mail address of Employer (CoT Department)	jandk@Tshwane.gov.za

**Table 2: Supply of goods tenders only**

		<b>Details to be furnished by Project Manager</b>
Delivery and Documents (Clause 10 of GCC)	Delivery address	Facilities Maintenance, 1 <sup>st</sup> Fir Sammy Mark Square
	Delivery period after receipt of purchaser's order	2 days preferably but depend on score of work

**Table 3: Supply of services tenders only**

		<b>Details to be furnished by Project Manager</b>
Delivery and Documents	Delivery address/es	Facilities Maintenance, 1 <sup>st</sup> Fir Sammy Mark Square (maintenance of City of Tshwane Facilities city wide)
	Delivery period after receipt of purchaser's order	3-year contract
Time schedule	Starting date of the service	01 March 2022 or nearest date
	The term service period	2022 to 2025

**Table 4: CIDB - GCC 2004 tenders only**

	<b>Details to be furnished by Project Manager</b>
CIDB Category <b>(CIDB bids only)</b>	3ME or higher only
Name and Postal address of Consultant <b>(CIDB bids only)</b>	Departmental no Consultation
Agent / Consultant Telephone number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	N/A in house Project Manager x 9540
Agent / Consultant Fax number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	n/a
Agent / Consultant email address as per clause F1.4 in tender data <b>(CIDB bids only)</b>	n/a
The following matters will be included in the Risk Register. State	
Name of the Engineer <b>(CIDB bids only)</b>	Jan de Klerk
Address of the Engineer <b>(CIDB bids only)</b>	In-house engineer, Sammy Marks Old chief Whips office 6
State the starting date	1 March or nearest
State the possession date/s	
State the date the site to be complete	As and when maintenance
Option X13 State the performance bond	R..... )
<b>Option X1</b>  The proportions used to calculate the Price Adjustment Factor are:0.85 linked to the index for ..... Consumer Price for Pretoria PO142.1 .....	.....
Option X16 State the retention free amount	<i>(Example only)</i>
Option X7 State the delay damages for the whole works.	R..... per day <i>(Example only)</i>

**Table 5: CIDB – JBCC tenders only**

	<b>Details to be furnished by Project Manager</b>
CIDB Category <b>(CIDB bids only)</b>	
Name and Postal address of Consultant <b>(CIDB bids only)</b>	
Agent / Consultant Telephone number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	
Agent / Consultant Fax number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	
Agent / Consultant email address as per clause F1.4 in tender data <b>(CIDB bids only)</b>	j
State the practical completion of the works	
State the penalty per calendar day	R.....calendar day
State the support insurance to be effected by the employer for the sum of	R.....

**Table 6: CIDB – Fidic tenders only**

	<b>Details to be furnished by Project Manager</b>
CIDB Category <b>(CIDB bids only)</b>	
Name and Postal address of Consultant <b>(CIDB bids only)</b>	
Agent / Consultant Telephone number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	
Agent / Consultant Fax number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	
Agent / Consultant email address as per clause F1.4 in tender data <b>(CIDB bids only)</b>	i
Name of the Engineer <b>(CIDB bids only)</b>	
Address of the Engineer <b>(CIDB bids only)</b>	

**Table 7: CIDB – EPWP tenders only**

		<b>Details to be furnished by Project Manager</b>
<b>CIDB Category (CIDB bids only)</b>		
<b>Name and Postal address of Consultant (CIDB bids only)</b>		
<b>Agent / Consultant Telephone number as per clause F1.4 in tender data (CIDB bids only)</b>		(
<b>Agent / Consultant Fax number as per clause F1.4 in tender data (CIDB bids only)</b>		
<b>Agent / Consultant email address as per clause F1.4 in tender data (CIDB bids only)</b>		
<b>Name of the Engineer (CIDB bids only)</b>		
<b>Address of the Engineer (CIDB bids only)</b>		
<b>Guarantee (percentage/amount) (CIDB bids or where applicable only)</b>		.....% or R..... <i>10% or R100 000 (whichever is applicable) (Example only)</i>
<b>Penalty for delays (Rand per day)</b>		R.....per day <i>R1000,00 per day (Example only)</i>
<b>Adjustment in Prices (CIDB bids only)</b>		The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:
		<i>If the value of x is not 0.1 then:</i>
		The value of “x” ..... <i>the portion expressed as a decimal of unity, not subject to adjustment.</i>
		The values of the coefficients are:
		A = ..... <i>Labour</i>
		B = ..... <i>Contractors equipment</i>
		C = ..... <i>Material</i>
<b>Are there any Interim Payments going to be applied? (CIDB bids only)</b>	Indicate Yes or No	(YES / NO) Indicate: .....
	State the percentage thereof.	.....% <i>80% (Example only)</i>
	Limit of Retention money	R.....(excl VAT) <i>R10 000 (Example only)</i>
<b>Defects: State the Defects liability period (in months) (CIDB bids only)</b>		.....months <i>6 months (Example only)</i>

**Table 8: CIDB Professional Services tenders only**

<b>Details to be furnished by Project Manager</b>	
State the period of performance (in years)	.....years 3 years <i>(Example only)</i>

**Table 9: Generic Non professional services tenders only**

<b>Details to be furnished by Project Manager</b>	
State the starting date	1 October 2010 <i>(Example only)</i>
State the completion date for the whole of the services	15 October 2010 <i>(Example only)</i>
State the delay damages for completion of the whole of the services	R

**Table 10: CIDB – NEC tenders only**

	<b>Details to be furnished by Project Manager</b>
CIDB Category <b>(CIDB bids only)</b>	5ME <i>(Example only)</i>
Name and Postal address of Consultant <b>(CIDB bids only)</b>	IGO Consulting Engineers, PO Box 215, GIEN ACRES, 0012 <i>(Example only)</i>
Agent / Consultant Telephone number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	(012) 302 4576 <i>(Example only)</i>
Agent / Consultant Fax number as per clause F1.4 in tender data <b>(CIDB bids only)</b>	086 576 8700 <i>(Example only)</i>
Agent / Consultant email address as per clause F1.4 in tender data <b>(CIDB bids only)</b>	<a href="mailto:ioebarber@cbri.co.za">ioebarber@cbri.co.za</a> <i>(Example only)</i>
State the matters to be included in the Risk Register	
State the starting date	1 October 2010 <i>(Example only)</i>
State the possession dates	15 October 2010 <i>(Example only)</i>
State the completion site date	30 September 2011 <i>(Example only)</i>
<b>Option X1</b> The proportions used to calculate the Price Adjustment Factor are: • 0.85 linked to the index for ..... Consumer Price for Pretoria PO142.1 .....	The proportions used to calculate the Price Adjustment Factor are: • 0.85 linked to the index for ..... Consumer Price for Pretoria PO142.1 .....
Option X16 State the retention free amount	R.....
Option X7 State the delay damages for the whole works	R.....
Guarantee (percentage/amount) <b>(CIDB bids or where applicable only)</b>	.....% or R..... 10% or R100 000 <i>(whichever is applicable)</i> <i>(Example only)</i>