



Date: 14 December 2025

Our Ref. No.: MES/QTN/2025-0199

To: M/s. Al HABARI ENGINEERING

Kind Attn: Eng. Rajanmurali Selvarasu
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Project: HVAC Works - Tender No. GT25111100 Construction of the Central Chemical Warehouse in MIC

Subject: Proposal for Supply, Installation, Completion, Testing, Commissioning & Maintenance of the HVAC Package

Dear Sir,

With reference to the above-mentioned project, please find our proposal for HVAC Works for **Construction of the Central Chemical Warehouse in MIC** as per terms and considerations attached herein.

We hope you will find our offer for the work as competitive and in line with your requirement. Should you require any further clarification, please do not hesitate to contact us.

Thanking you in advance and we look forward to receive your valued order.

Metri Engineering Services W.L.L

Engr. Fayed 55572793





1. Offer Details

Central Chemical Warehouse in MIC

Bill No.	Description	Procurement Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
Bill 1	Chemical Warehouse (B1)	17,159,327.40	3,351,321.00	<u>20,510,648.40</u>
Bill 2	Admin Building (B2)	336,653.50	168,326.75	<u>504,980.25</u>
Bill 4	Guard Room (B4)	69,571.00	34,785.00	<u>141,856.00</u>
Bill 5	Fire Pump, DG & ATS Room (B5)	73,000.00	36,500.00	<u>224,500.00</u>
		<u>Project Total</u>		<u>21,381,984.65</u>

2. Technical Offer

2.1 Offer is based on the BOQ/schedule of prices provided & specs. The offered price is applicable if all quoted items are awarded to MES. In case of partial scope award, the rates are subject to vary.

2.2 MES shall not be liable for any delays resulting from additional changes like additional quantities & variations.

2.3 Our prices are based on the attached BOQ; quantity to be remeasured as per site requirements.

3. Project Durations

3.1 We have considered a maximum of 24 Months duration for our scope detailed by this offer. Main contractor must provide the required continuous work fronts and fulfill his obligations towards HVAC subcontractor in a way not to delay works. In case of any delay caused by short fulfillment of main contractor then this delay shall be suitably compensated to HVAC contractor.

4. Exclusions

- Any VAT charges imposed by authorities on later stage.
- Any Utility/Authorities fees
- Any inspection, approval, fees and utilities
- Any Crane for loading/offloading at site
- Temporary Power Supply at site
- Lay-down area and storage cabins for supplied materials
- Temporary facilities for workmen including furniture, power, water, internet...etc.
- All civil works, electrical works, trenches, foundations.
- All MV, LV, Kahramaa works, Power/control cables, cable trays, MCC, UPS, BMS integration, isolators.
- All Spare parts & Anything not explicitly mentioned.

5. Payment Terms

To be discussed and agreed later

6. STANDARD WARRANTY COVERAGE:

1. The standard warranty terms are 400 days for the whole HVAC works. Compressors only will have 5 years warranty from the date of Testing & Commissioning.
2. Consumables – refrigerant, oil, filters, capacitors, fuses, contactors are excluded from warranty.
3. Warranty will not be valid for operational wear & tear of units, and it shall be null and void under circumstances of accidents, mishaps, hazards, intentional damages, failure to adhere to recommended operation and maintenance standards. Parts only warranty provided.
4. Warranty covers parts only (Labor excluded)

7. CANCELLATION TERMS:

25% of the material value will become payable in the event of cancellation, prior to the start of manufacturing. After manufacturing/fabrication has started 50% of the material value will become payable in the event cancellation.

8. Force Majeure:

Neither party will be liable for loss, damage, detention or delay resulting from causes beyond its reasonable control or caused by fire, act of god, strike, civil or military authority, priorities established by the Government in the country of source of equipment/product or any department or branch or representative thereof, insurrection, riot, embargo, transportation shortage or delays, wrecks, or inability to obtain necessary labor, materials or manufacturing facilities from usual sources including sources within MES itself.



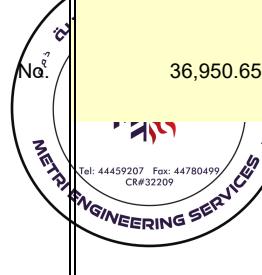
9. Validity

- This offer is valid for Ninety (90) Days from the date of this offer and subject to written confirmation thereafter
- This offer is valid for HVAC scope described in this submission without portioning

10. Attachment

7.1 Priced HVAC BOQ

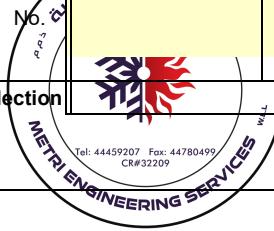
BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1)		
Item	Description	Quantity	Unit	UNIT PRICE	UNIT PRICE	MECHANICAL WORKS
				Procurement (Equipmt.& Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	FRESH AIR HANDLING UNIT Supply Installation, testing & Commissioning of Fresh Air handling Units consisting of low noise application of supply air plug fan, exhaust air plug fans, heat recovery wheel, cooling coils, mixing box, UV lamp, pre filter, bag filter, activated carbon filter, sloped top panel, insulated double wall, corrosive atmosphere paint/film treatment spring vibration isolators, control panel, all valves , fittings and accessories, R134a or RE407c refrigerant etc., and its corresponding items complete as per drawing, equipment schedules and technical specification of the following size.					
A	Fresh Air Handling Unit ; Unit tag HAH-001-003 ; 2 duty 1 standby ; total cooling 198.10 KW , total fresh air flow 4705 lps as per layout MICSC21-9-HF-0002 Rev B. (without Built-in Heater and Chemical Filter)	3	No.	345,000.00	150,000.00	1,485,000.00
New	Design, Engineering, Supply, Fabrication, modification and Installation of Central Duct mounted Heater, including but not limited to the Electrical (Cables & Control Panels) works, Mechanical works, Instrumention works or another work required to the approval of the QatarEnergy. Refer to Adendum Scope VE 10B	1	LS	128,800.00	56,000.00	184,800.00
New	Engineering, Supply, Fabrication, modification and Installation of central duct mounted chemical filter, including but not limited to the Electrical(Cables & Control Panels) , Mechanical, Instrumention or another work required to the approval of the QatarEnergy. Refer to Refer to Adendum Scope VE 11B	1	LS	646,300.00	281,000.00	927,300.00
	DX AIR HANDLING UNIT					
B	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-020 & HAH-020A ; 1 duty 1 standby ; total cooling 40.74 KW , supply air flow 2394 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	146,625.00	63,750.00	420,750.00
C	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-021 & HAH-021A ; 2 duty 1 standby ; total cooling 21.39 KW , supply air flow 838 lps as per layout MICSC21-9-HF-0002 Rev B.	3	No.	51,446.40	22,368.00	221,443.20
D	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-022 & HAH-022 A ; 3 duty 1 standby ; total cooling 30.74 KW , supply air flow 1592 lps as per layout MICSC21-9-HF-0002 Rev B.	4	No.	97,725.85	42,489.50	560,861.40
E	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-023 & HAH-023A ; 1 duty 1 standby ; total cooling 15.69 KW , supply air flow 445 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	27,318.25	11,877.50	78,391.50
F	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-024 & HAH-024A ; 2 duty 1 standby ; total cooling 24.18 KW , supply air flow 1068 lps as per layout MICSC21-9-HF-0002 Rev B.	3	No.	65,564.95	28,506.50	282,214.35
G	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-025 & HAH-025A ; 1 duty 1 standby ; total cooling 17.63 KW , supply air flow 604 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	36,950.65	16,065.50	106,032.30



		To Collection		4,266,792.75
Bill 1/43				



BILL OF QUANTITIES							BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equipt.& Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)			
A	DX AIR HANDLING UNIT (contd..) DX Air Handling Unit ceiling suspended type ; Unit tag HAH-026 ; 1 duty ; total cooling 20.31 KW , supply air flow 623 lps as per layout MICSC21-9-HF-0002 Rev B.	1	No.	38,247.85	16,629.50	54,877.35			
B	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-027 ; 1 duty ; total cooling 33.43 KW , supply air flow 1178 lps as per layout MICSC21-9-HF-0002 Rev B.	1	No.	72,323.50	31,445.00	103,768.50			
C	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-028 ; 1 duty ; total cooling 20.53 KW , supply air flow 630 lps as per layout MICSC21-9-HF-0002 Rev B.	1	No.	38,675.65	16,815.50	55,491.15			
D	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-029 ; 1 duty 1 standby ; total cooling 18.17 KW , supply air flow 583 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	35,791.45	15,561.50	102,705.90			
E	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-030 ; 1 duty 1 standby ; total cooling 17.31 KW , supply air flow 529 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	32,476.00	14,120.00	93,192.00			
F	DX Air Handling Unit ceiling suspended type ; Unit tag HAH-031 ; 1 duty 1 standby ; total cooling 16.66 KW , supply air flow 468 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	28,746.55	12,498.50	82,490.10			
CONDENSING UNIT									
<u>Air cooled Condensing Unit from an approved manufacturer, with thermal insulation suitable for outdoor installation, refrigeration circuit and condenser fan speed control including centrifugal fans, fan motors, cooling coils, filters, controls and other components as specified; include for anti vibration mountings, electrical connections to local isolators /control panels, connection to ductwork and condensate drainage; installed on prepared bases in accordance with the manufacturer's recommendations including all associated builder's works and as specified.</u>									
G	DX Air cooled Condensing unit ; 2 duty 1 standby ; Unit tag HAC-001-003 ; total cooling 198.10 KW as per layout MICSC21-9-HF-0002 Rev B.	3	No.	ALL BELOW ACS					
H	DX Air cooled Condensing unit ; 1 duty ; Unit tag HCN-026; total cooling 20.31 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	2,242,500.00	975,000.00	3,217,500.00			
J	DX Air cooled Condensing unit ; 1 duty ; Unit tag HCN-027; total cooling 33.43 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.						
K	DX Air cooled Condensing unit ; 1 duty ; Unit tag HCN-028; total cooling 20.53 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.						
To Collection							3,710,025.00		



BILL OF QUANTITIES					BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS	
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>VRV OUTDOOR UNITS FOR AHU</u>					
A	VRV outdoor unit ; 3 module (duty); Unit tag HCN-020 , HCN-020A & HCN-020 B ; total cooling 88 KW as per layout MICSC21-9-HF-0002 Rev B.	3	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
B	VRV outdoor unit ; 2 module (duty); Unit tag HCN-021 & HCN-021 A ; total cooling 43 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
C	VRV outdoor unit ; 2 module (duty) ; Unit tag HCN-022 & HCN-022 A ; total cooling 62 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
D	VRV outdoor unit ; 2 module (duty); Unit tag HCN-023 & HCN-023 A ; total cooling 32 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
E	VRV outdoor unit ; 2 module (duty) ; Unit tag HCN-024 & HCN-024 A ; total cooling 50 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
F	VRV outdoor unit ; 2 module (duty); Unit tag HCN-025 & HCN-025 A ; total cooling 36 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
G	VRV outdoor unit ; 2 module (duty); Unit tag HCN-029 & HCN-029 A ; total cooling 38 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
H	VRV outdoor unit ; 2 module (duty); Unit tag HCN-030 & HCN-030 A ; total cooling 36 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
J	VRV outdoor unit ; 2 module (duty); Unit tag HCN-031 & HCN-031 A ; total cooling 36 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED INCLUDED INCLUDED	INCLUDED INCLUDED INCLUDED	INCLUDED INCLUDED INCLUDED
	<u>SPLIT A/C UNITS</u>					
	<u>Split DX Air conditioning Unit with wall mounted decorative type indoor unit and air cooled remote out door unit. R410a refrigerant, refrigerant pipes, condensate drain pipe and electrical connections etc.</u>					
K	Wall mounted split AC unit ; Unit tag HAH-004 / HCN-004 ; Total air flow 182 lps ; total cooling load 3.44 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
L	Wall mounted split AC unit ; Unit tag HAH-005 / HCN-005 ; Total air flow 183 lps ; total cooling load 3.44 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equipt.& Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>SPLIT A/C UNITS (contd..)</u>					
A	Wall mounted split AC unit ; Unit tag HAH-006-007 / HCN-006-007 ; Total air flow 313 lps ; total cooling load 7.31 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED	INCLUDED	INCLUDED
B	Wall mounted split AC unit ; Unit tag HAH-008 / HCN-008 ; Total air flow 310 lps ; total cooling load 7.53 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
C	Wall mounted split AC unit ; Unit tag HAH-009 / HCN-009 ; Total air flow 352 lps ; total cooling load 7.31 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
D	Wall mounted split AC unit ; Unit tag HAH-010 / HCN-010 ; Total air flow 287 lps ; total cooling load 4.73 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
E	Wall mounted split AC unit ; Unit tag HAH-011 / HCN-011 ; Total air flow 176 lps ; total cooling load 2.69 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
F	Wall mounted split AC unit ; Unit tag HAH-012-013 / HCN-012-013 ; Total air flow 265 lps ; total cooling load 4.63 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED	INCLUDED	INCLUDED
G	Wall mounted split AC unit ; Unit tag HAH-014 / HCN-014 ; Total air flow 218 lps ; total cooling load 4.41 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
H	Wall mounted split AC unit ; Unit tag HAH-015-016 / HCN-015-016 ; Total air flow 344 lps ; total cooling load 8.66 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED	INCLUDED	INCLUDED
J	Wall mounted split AC unit ; Unit tag HAH-017 / HCN-017 ; Total air flow 226 lps ; total cooling load 4.30 KW as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
K	Wall mounted split AC unit ; Unit tag HAH-018-019 / HCN-018-019 ; Total air flow 326 lps ; total cooling load 6.56 KW as per layout MICSC21-9-HF-0002 Rev B.	2	No.	INCLUDED	INCLUDED	INCLUDED
	<u>AIR CURTAIN</u>					
L	Air curtain as per layout MICSC21-9-HC-0001 Rev B.	7	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES

BILL NO.1 - CHEMICAL WAREHOUSE (B1)
MECHANICAL WORKS

Bill 1/47

BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equip.t & Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	FRESH AIR INTAKE LOUVER <u>Motorized Fresh air intake louver connected with fire alarm panel as shown in the layout with GI Insect Mesh Screen.</u> <u>Weather Resistant Sand Trap Louver, 50mm thick Washable Metallic Filter, Motorized Fire & Gas Damper, Motorized gas tight damper and volume Control Damper</u>					
A	Fresh air intake louver ; Ref no HSL-001 ; air flow 4705 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
B	Fresh air intake louver ; Ref no HSL-002 ; air flow 4705 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
C	Fresh air intake louver ; Ref no HSL-003 ; air flow 4705 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
D	Fresh air intake louver ; Ref no HSL-004 ; air flow 177 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
E	Fresh air intake louver ; Ref no HSL-005 ; air flow 177 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
F	Fresh air intake louver ; Ref no HSL-006 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
G	Fresh air intake louver ; Ref no HSL-007 ; air flow 13750 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
H	Fresh air intake louver ; Ref no HSL-008 ; air flow 20250 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	989,000.00	430,000.00	1,419,000.00
J	Fresh air intake louver ; Ref no HSL-009 ; air flow 13750 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
K	Fresh air intake louver ; Ref no HSL-010 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
L	Fresh air intake louver ; Ref no HSL-011 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
M	Fresh air intake louver ; Ref no HSL-012 ; air flow 266 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
N	Fresh air intake louver ; Ref no HSL-013 ; air flow 177 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
P	Fresh air intake louver ; Ref no HSL-014 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.			
To Collection					430,000.00	1,419,000.00



Tel: 44459207 Fax: 44780499
CR#32209

BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equip.& Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	FRESH AIR INTAKE LOUVER (contd..)					
A	Fresh air intake louver ; Ref no HSL-015 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
B	Fresh air intake louver ; Ref no HSL-016 ; air flow 13000 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
C	Fresh air intake louver ; Ref no HSL-017 ; air flow 21060 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
D	Fresh air intake louver ; Ref no HSL-018 ; air flow 13000 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
E	Fresh air intake louver ; Ref no HSL-019 ; air flow 19500 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
F	Fresh air intake louver ; Ref no HSL-020 ; air flow 14300 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
G	Fresh air intake louver ; Ref no HSL-021 ; air flow 21060 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
H	Fresh air intake louver ; Ref no HSL-022 ; air flow 14300 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
J	Fresh air intake louver ; Ref no HSL-023 ; air flow 21060 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
K	Fresh air intake louver ; Ref no HSL-024 ; air flow 14300 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
L	Fresh air intake louver ; Ref no HSL-025 ; air flow 20280 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
M	Fresh air intake louver ; Ref no HSL-026 ; air flow 13000 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
N	Fresh air intake louver ; Ref no HSL-027 ; air flow 21060 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
P	Fresh air intake louver ; Ref no HSL-028 ; air flow 16500 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
Q	Fresh air intake louver ; Ref no HSL-029 ; air flow 21900 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
R	Fresh air intake louver ; Ref no HSL-030 ; air flow 16500 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
To Collection				 Tel: 44459207 Fax: 44780499 CR#32209		

BILL OF QUANTITIES					BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS	
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
A	FRESH AIR INTAKE LOUVER (contd..)					
A	Fresh air intake louver ; Ref no HSL-031 ; air flow 23700 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
B	Fresh air intake louver ; Ref no HSL-032 ; air flow 16500 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
C	Fresh air intake louver ; Ref no HSL-033 ; air flow 23700 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
D	Fresh air intake louver ; Ref no HSL-034 ; air flow 16500 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
E	Fresh air intake louver ; Ref no HSL-035 ; air flow 23700 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
F	Fresh air intake louver ; Ref no HSL-036 ; air flow 16500 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
G	Fresh air intake louver ; Ref no HSL-037 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
H	Fresh air intake louver ; Ref no HSL-038 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
J	Fresh air intake louver ; Ref no HSL-039 ; air flow 116 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
K	Fresh air intake louver ; Ref no HSL-040 ; air flow 3030 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
EXTERNAL WEATHER LOUVER						
	Supply, installation, testing and commissioning of Exhaust air louver with powder coated finish to approved color, including insect screen / bird guard, louver as per specification.					
K	Rectangular external weather louver ; ref no HWL-001 ; total Extract flow rate 4280 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
L	Rectangular external weather louver ; ref no HWL-002 ; total Extract flow rate 4280 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
M	Rectangular external weather louver ; ref no HWL-003 ; total Extract flow rate 4280 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
N	Rectangular external weather louver ; ref no HWL-004 ; total Extract flow rate 117.3 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
P	Rectangular external weather louver ; ref no HWL-005 ; total Extract flow rate 169 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES					BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)	
A	EXTERNAL WEATHER LOUVER (contd..) Rectangular external weather louver ; ref no HWL-006 ; total Extract flow rate 151 lps as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
	VOLUME CONTROL DAMPER <u>Volume Control Damper as specified and as shown including all accessories; fix in position with ductwork as per layout MICSC21-9-HC-0001 Rev B & MICSC21-9-HC-0002 Rev C</u>		INCLU	INCLUDED	INCLUDED	INCLUDED	
B	Allow for Volume Control Damper connecting to ductwork as specified in the layout and specifications.	39	No.	INCLUDED	INCLUDED	INCLUDED	
	MOTORIZED FIRE & GAS DAMPER <u>Motorized Fire damper, galvanized steel curtain type , fire rated including all accessories complete as specified and indicated on the drawings: jointing to ductwork</u>		INCLU	INCLUDED	INCLUDED	INCLUDED	
C	Motorized Fire Damper ; Ref no HFD-001 ; connecting to ductwork size 1400x600 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
D	Motorized Fire Damper ; Ref no HFD-002 ; connecting to ductwork size 600x500 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
E	Motorized Fire Damper ; Ref no HFD-003 ; connecting to ductwork size 600x500 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
F	Motorized Fire Damper ; Ref no HFD-004 ; connecting to ductwork size 600x500 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
G	Motorized Fire Damper ; Ref no HFD-005 ; connecting to ductwork size 600x500 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
H	Motorized Fire Damper ; Ref no HFD-006 ; connecting to ductwork size 600x500 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	
J	Motorized Fire Damper ; Ref no HFD-007 ; connecting to ductwork size 600x500 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED	

To Collection

W.L.



BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
A	MOTORIZED FIRE DAMPER (contd..) Motorized Fire Damper ; Ref no HFD-008 ; connecting to ductwork size 1400x600 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
B	Motorized Fire & Gas Damper ; Ref no HFD-009 ; connecting to ductwork size 300x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
C	Motorized Fire & Gas Damper ; Ref no HFD-010 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
D	Motorized Fire & Gas Damper ; Ref no HFD-011 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
E	Motorized Fire & Gas Damper ; Ref no HFD-012 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
F	Multiple Section Motorized Motorized Fire & Gas Damper actuators internally mounted ; Ref no HFD-013 ; connecting to ductwork size 5500x2000 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
G	Multiple Section Motorized Motorized Fire & Gas Damper actuators internally mounted ; Ref no HFD-014 ; connecting to ductwork size 8100x2000 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
H	Multiple Section Motorized Motorized Fire & Gas Damper actuators internally mounted ; Ref no HFD-015 ; connecting to ductwork size 5500x2000 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
J	Motorized Fire & Gas Damper ; Ref no HFD-016 ; connecting to ductwork size 400x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
K	Motorized Fire Damper ; Ref no HFD-017 ; connecting to ductwork size 400x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
L	Motorized Fire & Gas Damper ; Ref no HFD-018 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
M	Motorized Fire & Gas Damper ; Ref no HFD-019 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
	MOTORIZED FIRE DAMPER (contd..)					
A	Motorized Fire & Gas Damper ; Ref no HFD-020 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
B	Motorized Fire & Gas Damper ; Ref no HFD-021 ; connecting to ductwork size 250x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
C	Motorized Fire & Gas Damper ; Ref no HFD-022 ; connecting to ductwork size 300x200 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
D	Motorized Fire & Gas Damper ; Ref no HFD-023 ; connecting to ductwork size 300x250 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
E	Motorized Fire & Gas Damper ; Ref no HFD-024 ; connecting to ductwork size 300x250 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
F	Motorized Fire & Gas Damper ; Ref no HFD-025 ; connecting to ductwork size 300x250 mm as per layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
G	FIRE DAMPER <u>Fusible link Fire damper, galvanized steel curtain type including all accessories complete as specified and indicated on the drawings; jointing to ductwork.</u> <u>Allow for Fire damper connecting to ductwork as shown in the Layout.</u>		Item			
	MOTORIZED ISOLATION DAMPER					
	<u>Motorized Isolation Damper as specified and as shown including all accessories; fix in position with ductwork.</u>					
G	Motorized Isolation damper ; Ref no HID-001 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
H	Motorized Isolation damper ; Ref no HID-002 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
J	Motorized Isolation damper ; Ref no HID-003 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED
K	Motorized Isolation damper ; Ref no HID-004 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES

Item	Description	Quantity	Unit	Procurement (Equip.t & Material) (QAR)	Procurement (Equip.t & Material) (QAR)	Procurement (Equip.t & Material) (QAR)
	MOTORIZED ISOLATION DAMPER (contd..)					
A	Motorized Isolation damper ; Ref no HID-005 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
B	Motorized Isolation damper ; Ref no HID-006 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
C	Motorized Isolation damper ; Ref no HID-007 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
D	Motorized Isolation damper ; Ref no HID-008 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
E	Motorized Isolation damper ; Ref no HID-009 connecting to ductwork size 1000x800 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
F	Motorized Isolation damper ; Ref no HID-050 & HID-051 connecting to ductwork size 800x600 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
G	Motorized Isolation damper ; Ref no HID-052 & HID-053 connecting to ductwork size 700x600 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
H	Motorized Isolation damper ; Ref no HID-054 & HID-055 connecting to ductwork size 600x350 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
J	Motorized Isolation damper ; Ref no HID-056 & HID-057 connecting to ductwork size 600x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
K	Motorized Isolation damper ; Ref no HID-058 & HID-059 connecting to ductwork size 650x500 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
J	Motorized Isolation damper ; Ref no HID-060 & HID-061 connecting to ductwork size 650x450 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
M	Motorized Isolation damper ; Ref no HID-062 & HID-063 connecting to ductwork size 500x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No. INCL	INCLUDED INCLUDED	INCLUDED INCLUDED	INCLUDED INCLUDED
N	Motorized Isolation damper ; Ref no HID-064 & HID-065 connecting to ductwork size 400x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>MOTORIZED ISOLATION DAMPER (contd..)</u>					
A	Motorized Isolation damper ; Ref no HID-070 & HID-071 connecting to ductwork size 500x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
B	Motorized Isolation damper ; Ref no HID-072 & HID-073 connecting to ductwork size 400x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
C	Motorized Isolation damper ; Ref no HID-074 & HID-075 connecting to ductwork size 600x400 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
D	Motorized Isolation damper ; Ref no HID-076 & HID-077 connecting to ductwork size 600x350 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
E	Motorized Isolation damper ; Ref no HID-082 & HID-083 connecting to ductwork size 500x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
F	Motorized Isolation damper ; Ref no HID-084 & HID-085 connecting to ductwork size 400x350 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
G	Motorized Isolation damper ; Ref no HID-066 & HID-067 connecting to ductwork size 500x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
H	Motorized Isolation damper ; Ref no HID-068 & HID-069 connecting to ductwork size 400x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
J	Motorized Isolation damper ; Ref no HID-078 & HID-079 connecting to ductwork size 500x250 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
K	Motorized Isolation damper ; Ref no HID-080 & HID-081 connecting to ductwork size 400x250 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
L	Motorized Isolation damper ; Ref no HID-010 to HID-015 connecting to ductwork size 1100x1000 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	6	No.	INCLUDED	INCLUDED	INCLUDED
M	Motorized Isolation damper ; Ref no HID-016 to HID-035 connecting to ductwork size 1500x1000 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	20	No.	INCLUDED	INCLUDED	INCLUDED
N	Motorized Isolation damper ; Ref no HID-036 & HID-037 connecting to ductwork size 1100x1000 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED

To Collection

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CR#32209

BILL OF QUANTITIES						BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS	
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)	
A	MOTORIZED ISOLATION DAMPER (contd..) Motorized Isolation damper ; Ref no HID-038 & HID-049 connecting to ductwork size 1100x1000 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev E. <u>Motorized Fire Damper as specified and as shown including all accessories; fix in position with ductwork.</u>	12	No.	INCLUDED	INCLUDED	INCLUDED	
B	Allow for Motorized fire damper , UL 555 / UL555 S classified ,connecting to ductwork as per Layout and specification.	4	Item				
GAS TIGHT SHUT OFF DAMPER							
	<u>GAS Tight shut off Damper as specified and as shown including all accessories; fix in position with ductwork.</u>						
B	Gas tight shut off damper , ref no HGD-001 size 1000x800 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
C	Gas tight shut off damper , ref no HGD-002 size 1000x800 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
D	Gas tight shut off damper , ref no HGD-003 size 1000x800 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
E	Gas tight shut off damper , ref no HGD-004 size 1000x800 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
F	Gas tight shut off damper , ref no HGD-005 size 1000x800 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
G	Gas tight shut off damper , ref no HGD-006 size 1000x800 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
H	Gas tight shut off damper , ref no HGD-007 size 1000x1000 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
J	Gas tight shut off damper , ref no HGD-008 size 1000x1000 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
K	Gas tight shut off damper , ref no HGD-009 size 1000x1000 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	
L	Gas tight shut off damper , ref no HGD-010 size 1000x1000 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	

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BILL OF QUANTITIES						BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS	
Item	Description	Quantity	Unit			Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>GAS TIGHT SHUT OFF DAMPER (contd..)</u>						
A	Gas tight shut off damper , ref no HGD-011 size 1000x1000 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	INCLUDED
B	Gas tight shut off damper , ref no HGD-012 size 1000x1000 mm as per and layout no MICSC21-9-HF-0002-002 Rev E.	1	No	INCLUDED	INCLUDED	INCLUDED	INCLUDED
	<u>AIR INLETS AND OUTLETS</u>						
C	Supply, installation, balancing/testing of Supply, exhaust air grilles and diffusers along with insulated plenum boxes (as applicable) as specified in the technical specification, local codes and standards and drawings, extruded aluminium construction with powder coated finish to approved colour; complete with supports and flexible connections; fixing in position including connections to ductwork as per standards, equipment schedule, technical specifications and details in drawings of following sizes.	48	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
D	Jet Diffuser ; Ref no HGS-001 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	6	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
E	Return Air Register with 1/2" Spacing ; Ref no HGH-001 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
F	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-002 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
G	Return Air Register with 1/2" Spacing ; Ref no HGH-002 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
H	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-003 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
I	Return Air Register with 1/2" Spacing ; Ref no HGH-003 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
J	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-004 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
K	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-005 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED	INCLUDED
	To Collection						



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BILL OF QUANTITIES

**BILL NO.1 - CHEMICAL WAREHOUSE (B1)
MECHANICAL WORKS**

Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
	AIR INLETS AND OUTLETS (contd..)					
A	Return Air Register with 1/2" Spacing ; Ref no HGH-004 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
B	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-006 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
C	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-007 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
D	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-008 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
E	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-009 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
F	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-010 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
G	Return Air Register with 1/2" Spacing ; Ref no HGH-005 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
H	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-011 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
J	Return Air Register with 1/2" Spacing ; Ref no HGH-007 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
K	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-012 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
L	Return Air Register with 1/2" Spacing ; Ref no HGH-008 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
M	Double Deflection Supply Register with 1/2" Spacing ; Ref no HGS-013 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
N	Return Air Register with 1/2" Spacing ; Ref no HGH-009 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED

Bill 1/58



BILL OF QUANTITIES

BILL NO.1 - CHEMICAL WAREHOUSE (B1)
MECHANICAL WORKS

Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>AIR INLETS AND OUTLETS (contd..)</u>					
A	Return Air Register with 1/2" Spacing ; Ref no HGH-010 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
B	Return Air Register with 1/2" Spacing ; Ref no HGH-006 as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.	INCLUDED	INCLUDED	INCLUDED
	<u>SOUND ATTENUATOR</u>					
	<u>Sound attenuators to provide attenuation for air distribution system to achieve the specified noise criteria as per ASHRAE standard.</u>					
C	Sound Attenuator ref no HAS-001 ; size 1000x1000x800mm as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
D	Sound Attenuator ref no HAS-002 ; size 1000x1000x800mm as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
E	Sound Attenuator ref no HAS-003 ; size 1000x1000x800mm as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
F	Sound Attenuator ref no HAS-004 ; size 1000x1000x800mm as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
G	Sound Attenuator ref no HAS-005 ; size 1000x1000x800mm as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED
H	Sound Attenuator ref no HAS-006 ; size 1000x1000x800mm as per layout MICSC21-9-HF-0002 Rev B.	1	No.	INCLUDED	INCLUDED	INCLUDED

To Collection



BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equip.& Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>VENTILATION EQUIPMENT</u>					
A	Roof curb mounted General extract fan ; Unit Tag HEV-0001 - HEV-0006 ; Air flow 7940 lps as per layout MICSC21-9-HF-0002 Rev B.	6	No.	23,184.00	10,080.00	199,584.00
B	Reef curb mounted General extract fan ; Unit Tag HEV-0007 - HEV-0026 ; Air flow 13798 lps as per layout MICSC21-9-HF-0002 Rev B.	20	No.			
C	Reef curb mounted General extract fan ; Unit Tag HEV-0027-HEV-0038 ; Air flow 23929 lps as per layout MICSC21-9-HF-0002-Rev-B.	12	No.			
D	Roof curb mounted General extract fan ; Unit Tag HEV-0039 - HEV-0040; Air flow 3020 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.	16,555.40	7,198.00	47,506.80
	Exhaust fans switch operated, complete with motor, statically or dynamically balanced die-cast-in-aluminium impeller complete as specified and indicated on the drawings; connections to local power outlets; installed on as shown on the drawings.			all below		
E	Axial flow extract fan with explosion proof motor ; Unit tag HEF-007-008 ; Total air flow 117.3 lps as per layout MICSC21-9-HF-0002 Rev B.	2	No.			
F	Ceiling mounted Box Fan ; Unit tag HEF-003 ; Total air flow 169 lps as per layout MICSC21-9-HF-0002 Rev B.	1	No.			
G	Ceiling mounted Box Fan ; Unit tag HEF-004 ; Total air flow 151 lps as per layout MICSC21-9-HF-0002 Rev B.	1	No.	3,335,000.00	1,450,000.00	4,785,000.00
New	Design, Engineering, supply, installation, Functional Testing and commissioning of roof mounted Ventilation system for Zone 02 and 03 at Chemical ware house including but not limited to the Control Panels, Cabling, addressable Mointor Modules and addressable Relay Module and the approval of QatarEnergy. Refer to addendum scope of work, VE 1A	1	LS			
	To Collection				1,467,278.00	5,032,090.80
Bill 1/60						



Tel: 44459207 Fax: 44780499
GPO 22207

BILL OF QUANTITIES						BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS	
Item	Description	Quantity	Unit			Installation Cost (QAR)	Total Direct Cost (QAR)
A	NATURAL SMOKE AND HEAT EXHAUST VENTILATOR (NSHEV) Natural Smoke And Heat Exhaust Ventilator ; Unit Tag HSV-0001 / HSV-0006 ; Throat Size 3000x1000mm as per layout MICSC21-9-HF-0002 Rev B.	6	No.				
B	Natural Smoke And Heat Exhaust Ventilator ; Unit Tag HSV-0007 / HSV-0036 ; Throat Size 3000x1000mm as per layout MICSC21-9-HF-0002 Rev B.	32	No.	3,220,000.00	1,400,000.00	4,620,000.00	
C	Natural Smoke And Heat Exhaust Ventilator ; Unit Tag HSV-0037 / HSV-054 ; Throat Size 3000x1000mm as per layout MICSC21-9-HF-0002 Rev B.	18	No.				
VENTILATION DUCTWORKS							
D	Galvanized sheet metal fire rated ventilation ductwork and fittings conforming to the latest HVAC / ASHRAE / SMACNA duct construction standards complete as specified and indicated on the drawings; including test holes, turning vanes, splitters, stiffeners, transformation pieces, access, panels and doors etc. on and including supports.	20	m ²	172.50	75.00	4,950.00	
E	Not over 250mm wide ducts including fittings and accessories.	42	m ²	230.00	100.00	13,860.00	
	Over 250mm but not exceeding 750mm wide ducts including fittings and accessories.						
To Collection						1,400,175.00	4,638,810.00

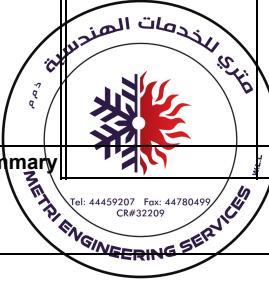


BILL OF QUANTITIES				BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS		
Item	Description	Quantity	Unit		Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>VENTILATION AIR INLETS AND OUTLETS</u> Exhaust air Diffuser as specified, extruded aluminium construction with powder coated finish to approved colour ; complete with supports, plenum boxes and flexible connections; fixing in position including connections to ductwork.					
A	4-way Return Square Diffuser ; Ref no HGH-006 , total air flow 85 lps as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	3	No.			
B	4-way Return Square Diffuser ; Ref no HGH-007 , total air flow 66 lps as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	1	No.	INCLUDED ALL	INCLUDED ALL	INCLUDED ALL
C	4-way Return Square Diffuser ; Ref no HGH-008 , total air flow 68 lps as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	2	No.			
D	4-way Return Square Diffuser ; Ref no HGH-009 , total air flow 101 lps as per HVAC equipment layout MICSC21-9-HF-0002 Rev E.	3	No.			

To Collection

Tel: 44459207 Fax: 44780499
CR#32209

BILL OF QUANTITIES		BILL NO.1 - CHEMICAL WAREHOUSE (B1) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Equipt.& Material) (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>MECHANICAL WORKS</u>					
	<u>Collection</u>					
	Bill 1/33				-	-
	Bill 1/34				-	-
	Bill 1/35				-	-
	Bill 1/36				-	-
	Bill 1/37				-	-
	Bill 1/38				-	-
	Bill 1/39				-	-
	Bill 1/40				-	-
	Bill 1/41				-	-
	Bill 1/42				-	-
	Bill 1/43				-	4,266,792.75
	Bill 1/44				-	3,710,025.00
	Bill 1/45				-	-
	Bill 1/46				-	-
	Bill 1/47				53,868.00	1,443,929.85
	Bill 1/48				430,000.00	1,419,000.00
	Bill 1/49				-	-
	Bill 1/50				-	-
	Bill 1/51				-	-
	Bill 1/52				-	-
	Bill 1/53				-	-
	Bill 1/54				-	-
	Bill 1/55				-	-
	Bill 1/56				-	-
	Bill 1/57				-	-
	Bill 1/58				-	-
	Bill 1/59				-	-
	Bill 1/60				1,467,278.00	5,032,090.80
	Bill 1/61				1,400,175.00	4,638,810.00
	Bill 1/62				-	-
To Bill No.1 Summary						20,510,648.40
Bill 1/63						



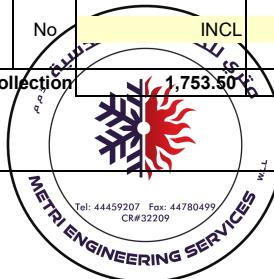
Tel: 44459207 Fax: 44780499
CR#32209

BILL OF QUANTITIES				BILL NO.2 - ADMIN BUILDING (B2) U.P U.P MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
AIR-CONDITIONING AND VENTILATION WORKS						
PACKAGED AIR CONDITIONING UNIT						
Supply, installation of Packaged Air Conditioning Unit from an approved manufacturer, with thermal insulation suitable for outdoor installation, refrigeration circuit and condenser fan speed control including centrifugal fans, fan motors, cooling coils, filters, controls and other components as specified; include for anti vibration mountings, operating at 415/3Ph/50Hz electrical connections to local isolators / control panels, connection to ductwork and condensate drainage pipes ; installed on prepared bases in accordance with the manufacturer's recommendations including all associated builder's works and as specified.						
A	Floor mounted Packaged Air Conditioning System; total cooling capacity: 141.04 KW, air flow 2878 lps. Ref. PACU01-01/02 , Ref layout no MICSC21-9-HF-0001 Rev C.	2	No	320,000.00	160,000.00	960,000.00
SPLIT A/C UNITS						
Supply, installation of Split Air conditioning Unit with wall mounted decorative type indoor unit and air cooled remote out door unit, thermostat, R407C refrigerant, refrigerant pipes, condensate drain pipe and electrical connections etc.: all as specified in specification/as per client requirement						
B	Wall mounted Split Ac unit, Ref; HAC-001-002-003, HCN-001-002-003; total cooling load; 7.85 KW, total air flow 636 lps , as per layout and specifications , Ref layout no MICSC21-9-HF-0001 Rev C.	3	No	4,900.00	2,450.00	22,050.00
C	Wall mounted Split Ac unit, Ref; HAC-004-005, HCN-004-005; total cooling load; 3.55 KW, total air flow 266 lps , as per layout and specifications , Ref layout no MICSC21-9-HF-0001 Rev C.	2	No	3,200.00	1,600.00	9,600.00
D	Wall mounted Split Ac unit, Ref; HAC-006-007-008-009, HCN-006-007-008-009; total cooling load; 5.59 KW, total air flow 457 lps , as per layout and specifications , Ref layout no MICSC21-9-HF-0001 Rev C.	4	No	3,900.00	1,950.00	23,400.00
E	Wall mounted Split Ac unit, Ref; HAC-010, HCN-010; total cooling load; 2.15 KW, total air flow 168 lps , as per layout and specifications , Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	2,900.00	1,450.00	4,350.00
To Collection				334,900.00	167,450.00	1,019,400.00
Bill 2/33						



				BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	AIRCONDITIONING DUCTWORKS Galvanized sheet metal air-conditioning ductwork and fittings conforming to the latest HVAC / ASHRAE / SMACNA duct construction standards complete as specified and indicated on the drawings; including test holes, turning vanes, splitters, dampers, stiffeners, transformation pieces, spigot box, access panels and doors, plenum chambers etc.; on and including supports. Ref layout no MICSC21-9-HC-0003-001-A & MICSC21-9-HC-0004-001-B.					
A	Not over 250mm wide ducts including fittings and accessories.	23	m ²	250.00	125.00	8,625.00
B	Over 250mm but not exceeding 750mm wide ducts including fittings and accessories.	195	m ²	250.00	125.00	73,125.00
C	Over 750mm but not exceeding 1100mm wide ducts including fittings and accessories. Rigid fibre glass insulation 96 kg / m ³ density and 50mm thick; wrapped with reinforced aluminium foil and covered with high quality canvass cloth 200 gm/m ³ soaked in weatherproofing compound and sealed with vapor barrier seal on roof top.	120	m ²	250.00	125.00	45,000.00
D	Insulation to air-conditioning ductwork outside building. Rigid fibre glass insulation 96 kg / m ³ density and 25mm.	100	m ²	200.00	100.00	30,000.00
E	Insulation to air-conditioning ductwork within the building. Anodized aluminium sheet cladding as specified	238	m ²	200.00	100.00	71,400.00
F	Aluminium cladding to air-conditioning ductworks outside the building FRESH AIR INTAKE LOUVER Supply, installation of Fresh air intake louver connected with fire alarm panel as shown in the layout with GI Insect Mesh Screen, Weather Resistant Sand Trap Louver, 50mm thick Washable Metallic Filter, Pre Filter, and volume Control Damper as per specification.	100	m ²	103.50	51.75	15,525.00
G	Fresh air intake with Sand Trap Louver, Size; 1300x800mm, Ref; HSL-01, as shown in the layout and specification. Ref layout no MICSC21-9-HF-0001 Rev C. EXHAUST AIR LOUVER Supply, installation, testing and commissioning of Exhaust air louver with powder coated finish to approved color, including insect screen / bird guard, louver as per specification. Ref layout no MICSC21-9-HC-0004-001-B	1	No	INCL	INCL	INCL
H	Allow for Exhaust Air Louver as shown in the layout.	3	No	INCL	INCL	INCL
To Collection				1,753.50	876.75	243,675.00

Bill 2/34



BILL OF QUANTITIES				BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
A	<p>VOLUME CONTROL DAMPER <u>Volume Control Damper as specified and as shown including all accessories; fix in position with ductwork.</u></p> <p>Allow for Volume Control Damper connecting to ductwork as specified in the layout and specifications.</p> <p>FIRE DAMPER <u>Supply, installation of Fusible link Fire damper with EN 1366-2 and EN 13501-3 standards and Class C, EN 1751, galvanized steel curtain type including all accessories complete as specified and indicated on the drawings; jointing to ductwork.</u></p> <p>B Fire damper, Size; 200x150mm, Ref; HFD-1, connecting to ductwork as shown in the layout and specification.</p> <p>MOTORIZED FIRE DAMPER <u>Supply, installation of Motorized Fire Damper shall be tested to the appropriate requirements of BS476 and UL 555 for fire rating of 3 hours , as specified and as shown including all accessories; fix in position with ductwork. Ref layout no MICSC21-9-HF-0001 Rev C.</u></p>		Item			
A	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 200x200mm, Ref; HMFD-01, connecting to ductwork as per layout and specification Rev C.	1	No	INCL	INCL	INCL
B	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 300x200mm, Ref; HMFD-02, connecting to ductwork as per layout and specification Rev Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
C	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 300x250mm, Ref; HMFD-03, connecting to ductwork as per layout and specification Rev Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
D	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 1000x500mm, Ref; HMFD-04, connecting to ductwork as per layout and specification Rev Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
E	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 1000x400mm, Ref; HMFD-05, connecting to ductwork as per layout and specification Rev Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
F	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 250x200mm, Ref; HMFD-06 , connecting to ductwork as per layout and specification Rev Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
G	Fire damper with Motorized Actuator, UL 555 / UL555 S classified, Size; 250x200mm, Ref; HMFD-07, connecting to ductwork as per layout and specification Rev Ref layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
To Collection				-	-	
Bill 2/35						



BILL OF QUANTITIES				BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
AIR INLETS AND OUTLETS						
	Supply, installation, balancing/testing of Supply, return and exhaust air grilles and diffusers along with insulated plenum boxes (as applicable) as specified in the technical specification, local codes and standards and drawings, extruded aluminium construction with powder coated finish to approved colour; complete with supports and flexible connections; fixing in position including connections to ductwork as per standards, equipment schedule, technical specifications and details in drawings of following sizes. Ref layout no MICSC21-9-HF-0001 Rev C.					
A	4 way Supply square diffuser with Opposed blade damper, ref no HGS-001 size 300x300 mm as per layout and specifications.	2	No	INCL	INCL	INCL
B	4 way Supply square diffuser with Opposed blade damper, ref no HGS-002 size 375x375 mm as per layout and specifications.	1	No	INCL	INCL	INCL
C	4 way Supply square diffuser with Opposed blade damper, ref no HGS-003 size 225x225 mm as per layout and specifications.	2	No	INCL	INCL	INCL
D	4 way Supply square diffuser with Opposed blade damper, ref no HGS-004 size 225x225 mm as per layout and specifications.	2	No	INCL	INCL	INCL
E	4 way Supply square diffuser with Opposed blade damper, ref no HGS-005 size 375x375 mm as per layout and specifications.	1	No	INCL	INCL	INCL
F	4 way Supply square diffuser with Opposed blade damper, ref no HGS-006 size 225x225 mm as per layout and specifications.	1	No	INCL	INCL	INCL
G	4 way Supply square diffuser with Opposed blade damper, ref no HGS-007 size 300x300 mm as per layout and specifications.	2	No	INCL	INCL	INCL
H	4 way Supply square diffuser with Opposed blade damper, ref no HGS-008 size 375x375 mm as per layout and specifications.	2	No	INCL	INCL	INCL
J	4 way Supply square diffuser with Opposed blade damper, ref no HGS-009 size 375x375 mm as per layout and specifications.	2	No	INCL	INCL	INCL
K	4 way Supply square diffuser with Opposed blade damper, ref no HGS-010 size 375x375 mm as per layout and specifications.	1	No	INCL	INCL	INCL
To Collection				-	-	
Bill 2/36						



BILL OF QUANTITIES				BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
A	4 way Supply square diffuser with Opposed blade damper, ref no HGS-011 size 225x225 mm as per layout and specifications.	7	No	INCL	INCL	INCL
B	4 way Supply square diffuser with Opposed blade damper, ref no HGS-012 size 375x375 mm as per layout and specifications.	1	No	INCL	INCL	INCL
C	4 way Supply square diffuser with Opposed blade damper, ref no HGS-013 size 225x225 mm as per layout and specifications.	1	No	INCL	INCL	INCL
D	4 way Return square diffuser with Opposed blade damper, ref no HGH-001 size 300x300 mm as per layout and specifications.	2	No	INCL	INCL	INCL
E	4 way Return square diffuser with Opposed blade damper, ref no HGH-002 size 375x375 mm as per layout and specifications.	1	No	INCL	INCL	INCL
F	4 way Return square diffuser with Opposed blade damper, ref no HGH-003 size 225x225 mm as per layout and specifications.	2	No	INCL	INCL	INCL
G	4 way Return square diffuser with Opposed blade damper, ref no HGH-004 size 375x375 mm as per layout and specifications.	1	No	INCL	INCL	INCL
H	4 way Return square diffuser with Opposed blade damper, ref no HGH-005 size 300x300 mm as per layout and specifications.	2	No	INCL	INCL	INCL
J	4 way Return square diffuser with Opposed blade damper, ref no HGH-006 size 375x375 mm as per layout and specifications.	2	No	INCL	INCL	INCL
K	4 way Return square diffuser with Opposed blade damper, ref no HGH-007 size 375x375 mm as per layout and specifications.	2	No	INCL	INCL	INCL
L	4 way Return square diffuser with Opposed blade damper, ref no HGH-008 size 225x225 mm as per layout and specifications.	7	No	INCL	INCL	INCL
To Collection				-	-	
Bill 2/37						



BILL OF QUANTITIES				BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt. & Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	SOUND ATTENUATOR Supply, installation of Sound attenuators to provide attenuation for air distribution system to achieve the specified noise criteria as per ASHRAE standard.					
A	Sound attenuator, Size; 1000x1000x1500mm, Ref; HSA-01, as per layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
B	Sound attenuator, Size; 2000x2000x2500mm, Ref; HSA-02, as per the specification and layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
C	CrossTalk attenuator in Meeting Room Supply Ref; HAS-03, as per layout no MICSC21-9-HC-0003 Rev A.	4	No	INCL	INCL	INCL
D	CrossTalk attenuator in Meeting Room Return Ref; HAS-04, as per layout no MICSC21-9-HC-0003 Rev A.	4	No	INCL	INCL	INCL
	DUCT MOUNTED HEATER Supply, installation of Duct mounted heater as per the specification and drawing.					
E	Duct mounted heater, Size; 1000x400mm, supply air; 2849 lps ; Heater Load 18 KW Ref ; HEH-01 as per the specification and layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
	MOTORIZED ISOLATION DAMPER Supply, installation of Motorized isolation damper as per the specification and drawing.					
F	Motorized isolation damper , ref no HID-001 size 750x800mm as per layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
G	Motorized isolation damper , ref no HID-002 size 750x800mm as per layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
H	Motorized isolation damper , ref no HID-003 size 750x800mm as per layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
J	Motorized isolation damper , ref no HID-004 size 750x800mm as per layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
	GAS TIGHT SHUT OFF DAMPER Supply, installation of gas tight shut off damper as per the specification and drawing.					
K	Gas tight shut off damper , ref no HGD-001 size 500x450 mm as per and layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
L	Gas tight shut off damper , ref no HGD-002 size 300x250 mm as per and layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
M	Gas tight shut off damper , ref no HGD-003 size 300x200 mm as per and layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
N	Gas tight shut off damper , ref no HGD-004 size 300x200 mm as per and layout no MICSC21-9-HF-0001 Rev C.	1	No	INCL	INCL	INCL
To Collection				-	-	-
Bill 2/38						



BILL OF QUANTITIES				BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
A	VARIABLE AIR VOLUME Ref no VAV-01 , inlet size 400x400 mm as per the specification and layout no MICSC21-9-HF-0001 Rev C .	1	No	INCL	INCL	INCL
B	VENTILATION EQUIPMENT. Supply, installation of Ducted Exhaust fans switch operated, complete with motor, statically or dynamically balanced die-cast-in-aluminium impeller complete as specified and indicated on the drawings; connections to local power outlets; installed on as shown on the drawings; connections to ductwork	1	No	INCL	INCL	INCL
C	Roof mounted box type exhaust fan, Air flow; 100 lps @ 100pa, Ref; HEF-01 as per the specification and layout no MICSC21-9-HF-0001 Rev C .	1	No	INCL	INCL	INCL
D	Roof mounted box type exhaust fan, Air flow; 174 lps @ 100pa, Ref; HEF-02 as per the specification and layout no MICSC21-9-HF-0001 Rev C .	1	No	INCL	INCL	INCL
E	Roof mounted box type exhaust fan, Air flow; 224 lps @ 124pa, Ref; HEF-03 as per the specification and layout no MICSC21-9-HF-0001 Rev C .	1	No	INCL	INCL	INCL
F	VENTILATION DUCTWORKS Galvanized sheet metal fire rated ventilation ductwork and fittings conforming to the latest HVAC / ASHRAE / SMACNA duct construction standards complete as specified and indicated on the drawings; including test holes, turning vanes, splitters, stiffeners, transformation pieces, access, panels and doors etc. on and including supports. Ref layout no MICSC21-9-HC-0003-001-A.	18	m ²	INCL	INCL	INCL
G	Not over 250mm wide ducts including fittings and accessories.	15	m ²	INCL	INCL	INCL
	Over 250mm but not exceeding 750mm wide ducts including fittings and accessories.			INCL	INCL	INCL
	Supply, installation, testing and commissioning of Volume Control Damper as per technical specification and local standards and as shown in the drawings including all accessories; fix in position with ductwork of following sizes. Ref layout no MICSC21-9-HC-0003-001-A.			INCL	INCL	INCL
	Allow for Volume Control damper connecting to ductwork as shown in the layout.	51	No	INCL	INCL	INCL
To Collection				-	-	-
Bill 2/39						



BILL OF QUANTITIES		BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>VENTILATION AIR INLETS AND OUTLETS</u> <u>Exhaust air Diffuser as specified, extruded aluminium construction with powder coated finish to approved colour; complete with supports, plenum boxes and flexible connections; fixing in position including connections to ductwork.</u>					
A	4-way Exhaust Square Diffuser with neck size 375x375 mm , as per the specification and layout no MICSC21-9-HF-0001 Rev C .	1	No	INCL	INCL	INCL
B	4-way Exhaust Square Diffuser with neck size 150x150 mm , as per the specification and layout no MICSC21-9-HF-0001 Rev C .	6	No	INCL	INCL	INCL
C	4-way Exhaust Square Diffuser with neck size 225x225 mm , as per the specification and layout no MICSC21-9-HF-0001 Rev C .	1	No	INCL	INCL	INCL
D	<u>BELL MOUTH</u> <u>Return Air Bellmouth + size 1000x1400 mm as per drawings. Ref layout noMICSC21-9-HC-0003-001-A.</u>	1	No	INCL INCL INCL	INCL INCL INCL	INCL INCL INCL



BILL OF QUANTITIES			BILL NO.2 - ADMIN BUILDING (B2) MECHANICAL WORKS			
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
MECHANICAL WORKS						
Collection						
	Bill 2/28			-	-	-
	Bill 2/29			-	-	-
	Bill 2/30			-	-	-
	Bill 2/31			-	-	-
	Bill 2/32			-	-	-
	Bill 2/33			334,900.00	167,450.00	502,350.00
	Bill 2/34			1,753.50	876.75	2,630.25
	Bill 2/35			-	-	-
	Bill 2/36			-	-	-
	Bill 2/37			-	-	-
	Bill 2/38			-	-	-
	Bill 2/39			-	-	-
	Bill 2/40			-	-	-
Bill 2/41						
To Bill No.2 Summary				336,653.50	168,326.75	504,980.25



BILL OF QUANTITIES				BILL NO.4 - GUARD ROOM (B4) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
A	AIR-CONDITIONING AND VENTILATION WORKS DX AIR HANDLING UNT DX Air Handling Unit ceiling suspended type ; Unit tag HAC-01 ; 1 duty ; total cooling 14.62 KW , supply air flow 411 lps as per layout MICSC21-9-HF-0001 Rev C.	1	No			
B	DX Air Handling Unit ceiling suspended type ; Unit tag HAC-02 ; 1 duty ; total cooling 11.50 KW , supply air flow 326 lps as per layout MICSC21-9-HF-0001 Rev C.	1	No			
C	DX Air Handling Unit ceiling suspended type ; Unit tag HAC-03 & 04 ; 1 duty 1 standby ; total cooling 13.87 KW , supply air flow 507 lps as per layout MICSC21-9-HF-0001 Rev C. CONDENSING UNIT Air cooled Condensing Unit from an approved manufacturer, with thermal insulation suitable for outdoor installation, refrigeration circuit and condenser fan speed control including centrifugal fans, fan motors, cooling coils, filters, controls and other components as specified; include for anti vibration mountings, electrical connections to local isolators /control panels, connection to ductwork and condensate drainage; installed on prepared bases in accordance with the manufacturer's recommendations including all associated builder's works and as specified.	2	No	69,571.00	34,785.00	104,356.00
D	DX Air Cooled Condensing unit ; 1 duty ; Unit tag HCN-001 ; total cooling 14.62 KW as per layout MICSC21-9-HF-0001 Rev C.	1	No			
E	DX Air Cooled Condensing unit ; 1 duty ; Unit tag HCN-002 ; total cooling 11.5 KW as per layout MICSC21-9-HF-0001 Rev C.	1	No			
F	DX Air Cooled Condensing unit ; 1 duty 1 standby ; Unit tag HCN-003 & 004 ; total cooling 13.87 KW as per layout MICSC21-9-HF-0001 Rev C.	2	No			
To Collection				69,571.00	34,785.00	104,356.00
Bill 4/22						



BILL OF QUANTITIES				BILL NO.4 - GUARD ROOM (B4) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	AIRCONDITIONING DUCTWORKS <u>GRP and Galvanised Steel ventilation ductwork and fittings conforming to the latest HVAC /ASHRAE /SMACNA duct construction standards complete as specified and indicated on the drawings; including test holes, turning vanes, splitters, stiffeners, transformation pieces, access, panels and doors etc. on and including supports. Ref layout no MICSC21-9-HC-0005-001-B</u>					
A	Not over 250mm wide ducts including fittings and accessories.	3	m ²			-
B	Over 750mm but not exceeding 1100mm wide ducts including fittings and accessories. <u>Rigid fibre glass insulation 96 kg / m³ density and 25mm thick; wrapped with reinforced aluminium foil and covered with high quality canvass cloth 200 gm/m³ soaked in weatherproofing compound and sealed with vapor barrier seal within the building. Ref layout no MICSC21-9-HC-0005-001-B</u>	32	m ²			-
C	Insulation to air-conditioning ductwork within the building.	35	m ²			-
	MOTORIZED FIRE & GAS TIGHT DAMPER <u>Supply, installation of motorized fire & gas tight damper as per the specification and drawing.</u>					
D	Gas tight shut off damper , ref no HFD-001 size 700x700 mm as per and layout no MICSC21-9-HF-0001-0002 Rev B.	1	No			-
E	Gas tight shut off damper , ref no HFD-002 size 700x700 mm as per and layout no MICSC21-9-HF-0001-0002 Rev B.	1	No			-
F	Gas tight shut off damper , ref no HFD-003 size 700x650 mm as per and layout no MICSC21-9-HF-0001-0002 Rev B.	1	No			-
G	Gas tight shut off damper , ref no HFD-004 size 700x650 mm as per and layout no MICSC21-9-HF-0001-0002 Rev B.	1	No			-
To Collection						25,000.00
Bill 4/23						



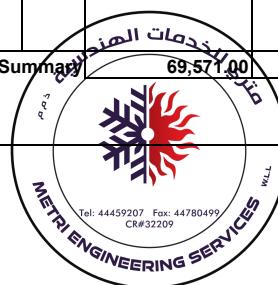
BILL OF QUANTITIES				BILL NO.4 - GUARD ROOM (B4) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
AIR INLETS AND OUTLETS						
	Supply, installation, balancing/testing of Supply, exhaust air grilles and diffusers along with insulated plenum boxes (as applicable) as specified in the technical specification, local codes and standards and drawings, extruded aluminium construction with powder coated finish to approved colour, complete with supports and flexible connections; fixing in position including connections to ductwork as per standards, equipment schedule, technical specifications and details in drawings of following sizes.					
A	4-way Supply Square Diffuser with opposed Blade Damper size 375x375 mm; Ref no HGS-001 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	2	No			-
B	4-way Return Square Diffuser with opposed Blade Damper size 375x375 mm ; Ref no HGH-001 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	2	No			-
C	4-way Supply Square Diffuser with opposed Blade Damper size 150x150 mm; Ref no HGS-002 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	1	No			-
D	4-way Supply Square Diffuser with opposed Blade Damper size 225x225 mm; Ref no HGS-003 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	1	No			-
E	4-way Supply Square Diffuser with opposed Blade Damper size 375x375 mm; Ref no HGS-004 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	2	No			-
F	4-way Return Square Diffuser with opposed Blade Damper size 375x375 mm ; Ref no HGS-003 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	2	No			-
G	Double deflection supply registers with 1/2' spacing size 500x300 mm ; Ref no HGS-005 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	2	No			-
H	Return air registers with 1/2' spacing size 600x400 mm ; Ref no HGH-006 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	2	No			-
MOTORIZED ISOLATION DAMPER						
	Motorized Isolation Damper as specified and as shown including all accessories; fix in position with ductwork.					
J	Motorized Isolation damper ; Ref no HID-001 connecting to ductwork size 400x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev B.	1	No			-
K	Motorized Isolation damper ; Ref no HID-002 connecting to ductwork size 400x300 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev B.	1	No			-
To Collection						5,000.00
Bill 4/24						



BILL OF QUANTITIES					BILL NO.4 - GUARD ROOM (B4) MECHANICAL WORKS		
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)	
A	MOTORIZED ISOLATION DAMPER(contd..) Motorized Isolation damper ; Ref no HID-003 connecting to ductwork size 400x350 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev B.	1	No			-	
B	Motorized Isolation damper ; Ref no HID-004 connecting to ductwork size 400x350 mm as per HVAC equipment layout MICSC21-9-HF-0002 Rev B.	1	No			-	
C	VENTILATION EQUIPMENT. Supply, installation of Wall mounted extract fans with gravity dampers as mentioned in the drawings:switch operated; complete with weather hood and insect screen, anti vibration mount etc. complete as specified and indicated on the drawings connections to local power outlets. Installed on as shown on the drawings. Ref layout number MICSC21-9-HF-0001-002-C	1	No			-	
D	Wall mounted axial exhaust fan, Fan size; 350mm dia, Air flow; 22 lps, Ref; HEF-01.	1	No			-	
	Wall mounted axial exhaust fan, Fan size; 350mm dia, Air flow; 78 lps, Ref; HEF-02.	1	No			-	
To Collection					-	7,500.00	
Bill 4/25							



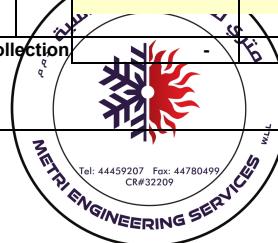
BILL OF QUANTITIES			BILL NO.4 - GUARD ROOM (B4) MECHANICAL WORKS			
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
MECHANICAL WORKS						
Collection						
	Bill 4/17					
	Bill 4/18					
	Bill 4/19					
	Bill 4/20					
	Bill 4/21					
	Bill 4/22			69,571.00	34,785.00	104,356.00
	Bill 4/23					25,000.00
	Bill 4/24					5,000.00
	Bill 4/25					7,500.00
To Bill No.4 Summary						
Bill 4/26				69,571.00	34,785.00	141,856.00



BILL OF QUANTITIES			BILL NO.5 - FIRE PUMP, DG & ATS ROOM (B5) MECHANICAL WORKS			
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
A	AIR-CONDITIONING AND VENTILATION WORKS DX AIR HANDLING UNIT DX Air Handling Unit ceiling suspended type ; Unit tag HAC-05 & 06 ; 1 duty 1 standby ; total cooling 28.38 KW , supply air flow 1489 lps as per layout MICSC21-9-HF-0001 Rev B. AIRCONDITIONING DUCTWORKS GRP and Galvanised Steel ventilation ductwork and fittings conforming to the latest HVAC /ASHRAE /SMACNA duct construction standards complete as specified and indicated on the drawings; including test holes, turning vanes, splitters, stiffeners, transformation pieces, access, panels and doors etc. on and including supports. Ref layout no . MICSC21-9-HC-0008-001-B	2	No	73,000.00	36,500.00	109,500.00
B	Over 750mm but not exceeding 1100mm wide ducts including fittings and accessories. Rigid fibre glass insulation 96 kg / m ³ density and 25mm thick; wrapped with reinforced aluminium foil and covered with high quality canvass cloth 200 gm/m ³ soaked in weatherproofing compound and sealed with vapor barrier seal within the building. Ref layout no . MICSC21-9-HC-0008-001-B	28	m ²	INCL	INCL	INCL
C	Insulation to air-conditioning ductwork within the building.	28	m ²	INCL	INCL	INCL
To Collection				73,000.00	36,500.00	109,500.00
Bill 5/20						



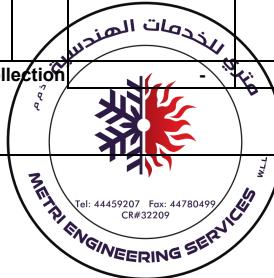
BILL OF QUANTITIES		BILL NO.5 - FIRE PUMP, DG & ATS ROOM (B5) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	AIR INLETS AND OUTLETS Supply, installation, balancing/testing of Supply, exhaust air grilles and diffusers along with insulated plenum boxes (as applicable) as specified in the technical specification, local codes and standards and drawings, extruded aluminium construction with powder coated finish to approved colour, complete with supports and flexible connections; fixing in position including connections to ductwork as per standards, equipment schedule, technical specifications and details in drawings of following sizes.					
A	Double deflection supply registers with 1/2' spacing size 600x450 mm ; Ref no HGS-001 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	4	No			-
B	Return air registers with 1/2' spacing size 600x450 mm ; Ref no HGH-001 as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	3	No			-
	MOTORIZED ISOLATION DAMPER Motorized Isolation Damper as specified and as shown including all accessories, fix in position with ductwork.					
C	Motorized Isolation damper ; Ref no HID-001 connecting to ductwork size 600x500 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	1	No			-
D	Motorized Isolation damper ; Ref no HID-002 connecting to ductwork size 600x500 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	1	No			-
E	Motorized Isolation damper ; Ref no HID-003 connecting to ductwork size 600x500 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	1	No			-
F	Motorized Isolation damper ; Ref no HID-004 connecting to ductwork size 600x500 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.	1	No			-
	GAS TIGHT SHUT OFF DAMPER Supply, installation of gas tight shut off damper as per the specification and drawing.					
G	Gas tight shut off damper , ref no HGD-001 size 700x700 mm as per and layout no MICSC21-9-HF-0001-002 Rev B.	1	No			-
H	Gas tight shut off damper , ref no HGD-002 size 2000x1500 mm as per and layout no MICSC21-9-HF-0001-002 Rev B.	1	No			-
J	Gas tight shut off damper , ref no HGD-003 size 700x650 mm as per and layout no MICSC21-9-HF-0001-002 Rev B.	1	No			-
		To Collection				5,000.00
Bill 5/21						



BILL OF QUANTITIES		BILL NO.5 - FIRE PUMP, DG & ATS ROOM (B5) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
A	<p>FRESH AIR INTAKE LOUVER</p> <p>Supply, installation of Fresh air intake louver connected with fire alarm panel as shown in the layout with GI Insect Mesh Screen, Weather Resistant Sand Trap Louver, 50mm thick Washable Metallic Filter, Pre Filter, and volume Control Damper as per specification. Ref layout no. MICSC21-9-HF-0001-002-C</p> <p>Fresh air intake with Sand Trap Louver, Size; 2000x1500mm, Ref; HSL-01, as shown in the layout and specification.</p>	1	No			-
B	<p>MOTORIZED SMOKE DAMPER</p> <p>Motorized Smoke Damper as specified and as shown including all accessories; fix in position with ductwork.</p> <p>Motorized Smoke Damper ; Ref no HMSD-001 connecting to ductwork size 700x700 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.</p>	1	No			-
C	<p>Motorized Smoke Damper ; Ref no HMSD-002 connecting to ductwork size 700x700 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.</p>	1	No			-
D	<p>Motorized Smoke Damper ; Ref no HMSD-003 connecting to ductwork size 700x650 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.</p>	1	No			-
E	<p>Motorized Smoke Damper ; Ref no HMSD-004 connecting to ductwork size 700x650 mm as per HVAC equipment layout MICSC21-9-HF-0001 Rev B.</p>	1	No			-
Bill 5/22		To Collection				25,000.00



BILL OF QUANTITIES		BILL NO.5 - FIRE PUMP, DG & ATS ROOM (B5) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	<u>VENTILATION EQUIPMENT.</u> Ducted inline Smoke extract fans from approved manufacturer with weatherproof motor, direct driven, including air operated shutter, bird/insects guards etc., complete as specified and indicated on the drawings; connections to local power outlets installed on as shown on the drawings; connections to ductwork. Ref layout no. MICSC21-9-HF-0001-002-C					
A	Ceiling mounted 2 speed Smoke exhaust fan, 2 hours fire rated 250 °C, Ref; HEF-01 & 01A, Air flow; 1875/3125 lps, as per layout and schedule.	2	No			-
B	Ceiling mounted 2 speed Smoke exhaust fan, 2 hours fire rated 250 °C, Ref; HEF-02 & 02A, Air flow; 1444/2407 lps, as per layout and schedule.	2	No			-
	<u>VENTILATION DUCTWORKS</u> Galvanized sheet metal fire rated ventilation ductwork and fittings conforming to the latest HVAC / ASHRAE / SMACNA duct construction standards complete as specified and indicated on the drawings; including test holes, turning vanes, splitters, stiffeners, transformation pieces, access panels and doors etc. on and including supports. Ref layout no. MICSC21-9-HC-0008-001-B					
C	Over 250mm but not exceeding 750mm wide ducts including fittings and accessories.	26	m ²			-
	<u>EXTERNAL WEATHER LOUVER</u> Supply, installation of Extract air louver with powder coated finish to approved color, including insect screen / bird guard, louver and volume Control Damper as per specification.					
D	Rectangular external weather louver ; ref no HWL-001 ; total Extract flow rate 3125 lps as per layout MICSC21-9-HF-0001-002-C	1	No			-
E	Rectangular external weather louver ; ref no HWL-002 ; total Extract flow rate 2407 lps as per layout MICSC21-9-HF-0001-002-C	1	No			-
To Collection						76,000.00
Bill 5/23						



BILL OF QUANTITIES		BILL NO.5 - FIRE PUMP, DG & ATS ROOM (B5) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Eqpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
	DRAINAGE INSTALLATION <u>uPVC pipes and fittings to 1329-1:2014 with Socket and Spigots with Sealing Rings to BS EN 681-2: 2000; encased in concrete or buried under ground . Ref layout no MICSC21-9-DC-0010-001-A</u>					
A	110 mm diameter soil, waste and vent pipes including fittings.	5	m			-
B	160 mm diameter soil, waste and vent pipes including fittings.	11	m			-
C	300mm wide Trench drain heavy duty class D400 Channel grating & frame as per drawings MICSC21-9-DC-0010-001-A	4	m			-
	CONDENSATE DRAINAGE PIPE WORK					
D	Supply and install condensate drainage pipework from Air Conditioning Unit including all associated builder's work. Ref layout no MICSC21-9-DC-0010-001-A	1	Item			-
	RAINWATER INSTALLATION					
	<u>uPVC pipes and fittings to BS 4514 with solvent welded joints ; exposed, clipped to wall or hanged from soffit on and including supports</u>					
E	110 mm diameter pipes and fittings <u>Rainwater outlet, cast iron body complete with 150 x 150 mm cast stainless grating and frame; joining to rainwater pipework.</u>	55	m			-
F	Rain water outlet.	4	No.			-
G	Catchment pit of size 600x600x500mm	8	No.			-
		To Collection				9,000.00
Bill 5/24						



BILL OF QUANTITIES		BILL NO.5 - FIRE PUMP, DG & ATS ROOM (B5) MECHANICAL WORKS				
Item	Description	Quantity	Unit	Procurement (Equpt.& Material) Cost (QAR)	Installation Cost (QAR)	Total Direct Cost (QAR)
MECHANICAL WORKS						
Collection						
	Bill 5/17			-	-	-
	Bill 5/18			-	-	-
	Bill 5/19			-	-	-
	Bill 5/20			73,000.00	36,500.00	109,500.00
	Bill 5/21			-	-	5,000.00
	Bill 5/22			-	-	25,000.00
	Bill 5/23			-	-	76,000.00
	Bill 5/24			-	-	9,000.00
To Bill No.5 Summary						
Bill 5/25				73,000.00	36,500.00	224,500.00

