





Checked  
M. P. AB  
20

<b>THERMAL INSULATION</b>										0			
<b>THERMAL INSULATION FOR DUCTWORK</b>										0			
Supply and Application of external thermal insulation of supply /return air ducting using closed cell elastomeric nitrile rubber insulation with class 'O' fire retardant properties as per the specifications and drawings. Quoted price shall be inclusive of adhesive, tapes as per specification. Insulation shall be provided with aluminium foil, factory laminated.										0			
Insulation thickness/application will be as per approved shop drawing notes.										0			
25 mm thick										Sqm	RO	2401	
19 mm thick										Sqm	RO	2016.84	
16 mm thick										Sqm	RO	1728.72	
13 mm thick										Sqm	225	1200.56	2,70,126.00
9 mm thick										Sqm	RO	1152.48	258.5
3,10,344.76													
<b>ACOUSTIC LINING OF DUCTS</b>										0			
Supply and Application of internal acoustic lining of supply air ducting using open cell nitrile rubber insulation with density within 140-180 Kg/m3 as per the approved shop drawings and specifications. Insulation material shall be bonded with the ducts using metal screw and washers to facilitate grip to the GI sheet.										0			
10mm thick lining										SqM	20	1200.5	24,010.00
25mm thick lining										SqM	R/o	1920.8	
<b>Air Transfer Grilles</b>										0			
Supply, Installation and testing of extruded aluminium powder coated air transfer grilles to be provided at the door of toilets/pantry.										SqM	0.2	14406	2,881.20
<b>TOTAL ITEM NO. 2 (AIR DISTRIBUTION)</b>													8,13,712.40
<b>TOTAL "SECTION-A"</b>												Rs.	8,13,712.40
<b>SECTION-B: KITCHEN VENTILATION SYSTEM (COOKING KITCHEN)</b>													7,67,385.99
<b>EQUIPMENT</b>													7,67,385.99
Supply, Installation, Testing and Commissioning of Dry Type Scrubber each comprising of extract air intake section, electrostatic precipitation technology, dry type air cleaner to remove oil, smoke and fumes from exhaust air, as per the Specifications.													

1315  
25/12/20



Electrostatic section shall be made of 16/18 gauge galvanized sheet, high baked epoxy powder coated, washable type aluminium mesh filters, stainless steel spiked ionizers to create high voltage DC field, aluminium collector plates which should be alternatively charged positive and negative with large collecting area with 14" deep cell, to work as magnet for charged smoke and oil particles. Average efficiency of 90-95% in single pass as per ASHRAE test method. Electrostatic Precipitator should be able to charge particles from 0.01 micron to 10 microns through solid state power supply. Collector cell should be of permanent type and incorporate slide out facility for easy removal for cleaning. Power supplies shall be 100% solid state UL Listed, Module of capacity above 3000 CFM shall be equipped with Pulse width modulating (PWM) The system should be fitted with interlock switch for safety. The system should allow connection to a fan section to achieve 500 FPM velocity across the air cleaner. Vendor to include cost of MCB & single phase wiring for AC supply to the Scrubber.

Operating Voltage : 220V, 50 Hz

Ionizing Voltage : 12.5 to 13 KVDC

Collector Cell Voltage : 6 to 6.5 KVDC

The Scrubber Machines (EAC) shall be of following duty parameters :

M/c No Capacity (CFM)

AS-1 3000

Supply, installation, testing and commissioning of single width single inlet class I centrifugal fans for ventilation system. Each fan shall be complete with totally enclosed fan cooled motor, belt drive, pulley mounted on motor (IE2) with efficiency ≥60 % & fan shaft, belt guard, motor mount and vibration isolators. The motor shall be suitable for 415±10% volts 3 phase 50 cycles, AC supply. The motor selected shall be energy efficient having efficiency at full load ranging between 82.5% to 92% in accordance with motor rating as per specification. Fan capacities shall be as follows:

M/c No Capacity (CFM) S.P (mm) Motor (HP) Area

AS-1 3000 75 1.5 Kitchen

No 1 216090 2,16,090.00 1 216090

0

No 1 105644 1,05,644.00 1 105644

0



<p>Supply, installation, Testing &amp; Commissioning of direct driven TUBE/VANE AXIAL FLOW FAN. Vane Axial flow fan for Normal Fresh air supply. Fan motor shall be suitable for 415 ± 10% volts, 50 cycles, 3 phase power supply with high efficiency, IE-3 type for normal application and fan total efficiency should not be less than 65%. The fan shall be equipped with mounting bracket &amp; spring isolators for the installation of the fans. Fan static pressure shall be as indicated but actual ducting &amp; fan static pressure to be checked by vendor. Fan shall be with fire proof flexible connection at inlet and outlet. Noise level for normal application fans shall be less than 70 dbA @1 meter distance. If required, shall be included to meet the desired sound levels. All Fans shall be with back draft damper and cost will be included in the cost.</p>	<p>0</p>	<p>0</p>	<p>57624</p>	<p>57624</p>	<p>57624</p>
<p>Description</p>	<p>CFM</p>	<p>ESP (mm.of wg)</p>	<p>Suggested Motor kw</p>	<p>No</p>	<p></p>
<p>Kitchen Fresh Air</p>	<p>1500</p>	<p>40</p>	<p>0.75</p>	<p>57,624.00</p>	<p>57,624.00</p>
<p>TOTAL ITEM NO. 1 (EQUIPMENT)</p>	<p></p>	<p></p>	<p>0</p>	<p>3,79,358.00</p>	<p>3,79,358.00</p>
<p>AIR DISTRIBUTION</p>	<p></p>	<p></p>	<p>0</p>	<p></p>	<p></p>
<p>Supply, installation and testing of SITE Fabricated GI sheet metal ducts as per IS-655 standard in accordance with the approved shop drawings as required by the specifications. Quoted price shall be inclusive of all necessary supports by MS structural steel if required, hangers, clamp supports from walls, floors and ceiling including cutting holes and chases in brick, R.C.C. work, making good the same to original condition complete in all respects with painting with one coat of primer and two coats of paint to supports of MS work</p>	<p></p>	<p></p>	<p>0</p>	<p>0</p>	<p></p>
<p>Note:Note:All kitchen exhaust duct shall be painted with fire rated paint tested by CBRI &amp; BS 476 part 6.7.20&amp;24.</p>	<p></p>	<p></p>	<p>0</p>	<p>0</p>	<p></p>
<p>24 gauge galvanised sheet steel (0.63 mm)</p>	<p>130</p>	<p>1440.6</p>	<p>1,87,278.00</p>	<p>82.89</p>	<p>1,19,411.33</p>
<p>22 gauge galvanised sheet steel (0.8 mm)</p>	<p>10</p>	<p>1632.68</p>	<p>16,326.80</p>	<p>79.44</p>	<p>1,29,700.10</p>
<p>20 gauge galvanised sheet steel (1.0 mm)</p>	<p>5</p>	<p>1920.8</p>	<p>9,604.00</p>	<p></p>	<p></p>
<p>18 gauge galvanised sheet steel (1.25 mm)</p>	<p>0</p>	<p>2881.2</p>	<p>0.00</p>	<p></p>	<p></p>
<p></p>	<p></p>	<p></p>	<p>0</p>	<p></p>	<p></p>
<p>Supply, installation and testing of GI construction Opposed blade Volume control dampers within ducts to be provided with suitable ducts lever and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system.</p>	<p>0.5</p>	<p>9604</p>	<p>4,802.00</p>	<p>1.25</p>	<p>12005</p>
<p>Supply, installation, testing and balancing of Powder coated extruded aluminium construction square / round shape Supply Air Diffusers with removable core &amp; anti smudge ring &amp; key operated volume control dampers as per approved drawings and specifications</p>	<p>2</p>	<p></p>	<p>24,970.40</p>	<p></p>	<p></p>



<p>on/off/remote and local operation, 3 pole single throw switch shall be provided in a panel to facilitate override of the automatic operation.</p> <p>starters shall be provided with suitable potential free contract for connections to Building Automation System.</p> <p>able trays shall be MS Powder coated and Conduits shall be MS.</p> <p>number of control panels shall be as follows.</p> <p><b>F PANEL (Location: Terrace IP 65)</b>  <b>Scrubber, 1.5KW</b></p> <p>uitable rating MPCB along with 1.5 HP DOL starter  No. 25 Amp single Phase switch socket &amp; control Cable for interlocking between scrubber &amp; fan shall be included.</p> <p>uitable Rating TP MPCB for 0.75 kW DOL Starter</p>															
				No	1	72030				72030					
				No	1	14406				14406					
<p><b>ABLING</b></p> <p>upply, laying, affecting connections and Testing of the following sizes of 1.1 KV armoured PVC insulated aluminium/ copper conductor cables. Cables shall be inclusive of all clamps, saddles, screws, cable identification tags, cable terminal joints including terminal lugs, insulating tapes, affecting terminal connections to the equipment as per the specifications and as required. Quoted price shall be inclusive of perforated duly painted 2mm thick MS trays to be installed inside and GI trays to be installed outside exposed and 8SWG copper earth wire for all equipment except chillers for which 32mmx6mm GI strip shall be used. All cables shall be LSHF type.</p> <p>3 C x 6 Sqmm cable (Copper)</p> <p>3 C x 4 Sqmm cable (Copper)</p> <p>3 C x 2.5 Sqmm cable (Copper)</p> <p>3 C x 2.5 Sqmm cable (Copper Control cabling)</p> <p>3 C x 1.5 Sqmm cable (Copper Control cabling)</p>				RM	10	720.3			7,203.00	10					
				RM	50	672.28			33,614.00	50					
				RM	10	576.24			5,762.40						
				RM	10	576.24			5,762.40						
				RM	50	576.24			28,812.00						
									1,67,590						
									8,06,256						
<p><b>TOTAL "SECTION-B"</b></p>															

6,40,474

Rs.

TOTAL "SECTION-B"



HVAC  
**JAIPUR AIRPORT LOUNGE HVAC M.B**

S.NO	L-1	W-1	L-2	W-2	PARAMETER	H-1	H-2	AVERAGE	PIECES	24 G	22 G	20 G	18 G
<b>SUPPLY AIR DUCT</b>													
1	450	300	450	300	1500	2700	EX-PA	2700	3	12.15	X	X	X
2	450	200	450	200	1300	2600		2600	3	10.14	X	X	X
3	750	250	750	250	2000	1400		1400	8	22.4	X	X	X
4	300	250	300	250	1100	1350		1350	1	1.485	X	X	X
5	300	250	300	250	1100	2700		2700	1	2.97	X	X	X
6	750	250	750	250	2000	1400		1400 = 3.9 m	8	22.4	X	X	X
7	600	X 400	600	400	2000	750		750	X 1	1.5	X	X	X
8	600	X 400	600	400	2000	1100		1100	X 1	2.2	X	X	X
9	850	250	850	250	2200	1400		1400	2	X	6.16	X	X
10	850	250	850	250	2200	600		600	1	X	1.32	X	X
11	750	250	750	250	2000	1400		1400	2	5.6	X	X	X
12	750	250	750	250	2000	1650		1650	1	3.3	X	X	X
13	650	250	650	250	1800	2300		2300	2	8.28	X	X	X
14	450	200	450	200	1300	2700		2700	1	7.02	X	X	X
15	450	200	450	200	1300	1450		1450	1	1.885	X	X	X
16	500	600	500	600	2200	1300		1300	1	2.86	X	X	X
17	500	600	500	600	2200	1300		1300	1	2.86	X	X	X
18	850	250	850	250	2200	1950		1950	1	X	4.29	X	X
19	850	250	850	250	2200	1350		1350	1	X	2.97	X	X
20	850	250	850	250	2200	1600		1600	2	X	7.04	X	X
21	850	250	850	250	2200	2600		2600	1	X	5.72	X	X
22	650	250	650	250	1800	1600		1600	1	2.88	X	X	X
23	650	250	650	250	1800	1600		1600	X 2	5.76	X	X	X
24	650	250	650	250	1800	2700		2700 + 1800	1	4.86	X	X	X
25	650	250	650	250	1800	850		850	1	1.53	X	X	X
26	700	250	700	250	1400	2700		2700 + 1800	2	7.56	X	X	X
27	700	250	700	250	1900	1300		1300	1	2.73	X	X	X
28	700	250	700	250	1900	2700		2700	2	10.26	X	X	X
29	700	250	700	250	1900	1350		1350	1	2.565	X	X	X
30	400	250	400	250	1300	1250		1250	1	1.625	X	X	X
31	300	250	300	250	1100	1100		1100	1	1.21	X	X	X
32	400	250	400	250	1300	750		750	1	0.975	X	X	X
<b>FRESH AIR DUCT</b>													
1	450	300	450	300	1500	1950		1950	1	2.925	X	X	X
2	450	300	450	300	1500	1300		1300	1	1.95	X	X	X
3	450	300	450	300	1500	1900		1900	3	8.55	X	X	X
4	450	300	450	300	1500	1500		1500	2	4.5	X	X	X
5	450	300	450	300	1500	1600		1600	2	4.8	X	X	X
6	450	300	450	300	1500	2800		2800	2	8.4	X	X	X
7	450	300	450	300	1500	1300		1300	2	3.9	X	X	X
8	450	200	450	200	1300	2800		2800	2	7.28	X	X	X
9	450	200	450	200	1300	1300		1300	2	3.38	X	X	X
<b>EXHAUST AIR DUCT</b>													
1	450	300	450	300	1500	2800		2800	2	8.4	X	X	X
2	450	450	450	450	1800	1300		1300	1	2.34	X	X	X
3	450	300	450	300	1500	1500		1500	3	6.75	X	X	X
4	450	300	450	300	1500	1750		1750	1	2.625	X	X	X
5	450	300	450	300	1500	1250		1250	3	5.625	X	X	X
6	450	300	450	300	1500	1400		1400	1	2.1	X	X	X
7	450	300	450	300	1500	1800		1800	3	8.1	X	X	X
8	450	200	450	200	1300	2800		2800	2	7.28	X	X	X
9	450	200	450	200	1300	1400		1400	2	3.64	X	X	X
10	600	600	600	600	2400	600		600	3	4.32	X	X	X
<b>EXHAUST LINE</b>													
1	600	450	500	350	1800	1200		1200	1	2.16	X	X	X
2	600	500	450	450	2000	700		700	1	1.4	X	X	X
3	450	450	450	450	1800	500		500	1	0.9	X	X	X
4	450	450	450	450	1800	1000		1000	1	1.8	X	X	X
<b>FRESH AIR LINE</b>													
6	500	500	500	500	2000	500		500	1	1	X	X	X

inside Bu

10 mtr.

3.5 mtr

Glass side-air

Toilet end cap

12/25/2

12/25/2

12/25/2

12/25/2