

**SECTION III/A: BILL OF QUANTITIES FOR HVAC WORKS**

BOQ No.	Specification Reference	Description	Qty.	Unit	Material Unit Rate	Material Cost	Installation Unit Rate	Installation Cost	Total Cost
	23 73 13 40 92 49 23 41 00	Installation of Air Handling Unit, including the cost loading, unloading and placing on each floor, material or foundation or any other material or tool and equipment which may be required complete in all respects with necessary fittings and as per schedule and specifications.							
E		AHU - PCKG. - 01	1	No.		-	35,000	35,000	35,000
E		AHU - TF - 01	1	No.		-	5,000	5,000	5,000
F		AHU - TF - 02	1	No.		-	5,000	5,000	5,000
	23 81 29 23 23 00	Installation of DX Single Split Units along with control and termination power wiring, thermostats, flexible connector, vibration isolators complete in all respects, as per schedule, drawings and specifications.							
		<u>Indoor/Outdoor Units</u>							
A		SP-TF-01 / CU-TF-02	2	Nos.		-	5,000	10,000	10,000
	23 37 13	Supply, Installation and Commissioning of fresh air intake louvers with sand trap, Aluminum constructed and powder coated finished as per specifications.							
		<u>Fresh Air Intake Louvers</u>							
A		2.61 sq.ft (with 33% free area)	1	No.	8,350	8,350	1,000	1,000	9,350
A		2.05 sq.ft (with 33% free area)	1	No.	6,560	6,560	1,000	1,000	7,560
		<u>Exhaust Air Louvers</u>							
A		1.75 sq.ft (with 41% free area)	1	No.	5,600	5,600	1,000	1,000	6,600
	23 31 00	Supply, Installation and Commissioning of G.I Sheet metal air ducts as per ASHRAE Standards for air ducting, plenums and other sheet fabrications including splitter dampers, take off, vanes elbows and other necessary fittings.							
E		26 Gauge	35	Sq ft.	200	7,000	65	2,275	9,275
E		24 Gauge	1,260	Sq ft.	220	277,200	65	81,900	359,100

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A	23 07 00	Supply, Installation & Commissioning of Glass wool insulation of 1" thickness for ducts. Complete in all respect as mentioned in the schedule & specifications.	1,295	Sq ft.	125	161,875	45	58,275	220,150
B	23 07 00	Supply, installation & commissioning of 0.032" Aluminum cladding (G.I 26 SWG) over Exposed Ducts complete with all respects as mentioned in the schedule & specifications.	1,295	Sq ft.	200	259,000	50	64,750	323,750
C	23 07 00	1" thick Glass Fibre sound liner for Air Ducting including accessories.	1	Job	35,000	35,000	10,000	10,000	45,000
	23 37 13	Supply, installation and commissioning to Air Devices as per drawings and specifications.							
		<b>Sub Total (Page 01)</b>							<b>1,035,785</b>
	23 37 13	Supply Air Diffuser (S.A.D) (Contd.)							
		9x9	10	Nos.	2,000	20,000	1,000	10,000	30,000
	23 37 13	Return Air Diffuser (R.A.D) (Contd.)							
		9x9	7	Nos.	2,000	14,000	1,000	7,000	21,000
	23 37 13	Exhaust Air Diffuser (E.A.D) (Contd.)							
		12x12	1	Nos.	3,500	3,500	1,000	1,000	4,500
		Supply, Installation and Commissioning of HEPA Filters in SAG as per drawings and specifications.							
A		H14 filter (12"x12") with S.S Housing	5	Nos.	37,400	187,000	3,000	15,000	202,000
		Supply, Installation and Commissioning of Perforated HEPA Filter Diffuser as per drawings and specifications.							
A		H14 filter (48"x24") with S.S Housing	8	Nos.	113,300	906,400	3,000	24,000	930,400
A		H14 filter (24"x24") with S.S Housing	2	Nos.	51,700	103,400	3,000	6,000	109,400
	23 23 00	Supply, Installation & Commissioning of Refrigerant Copper Piping with closed cell elastomeric insulation 20mm thick with supports, fittings, and accessories.							

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	AHU - TF - 01	1/2" diameter	100	Rft	425	42,500	200	20,000	62,500
		2/5" diameter	100	Rft	810	81,000	250	25,000	106,000
	AHU - TF - 02	1/2" diameter	98	Rft	425	41,650	200	19,600	61,250
		2/5" diameter	98	Rft	315	30,870	180	17,640	48,510
		For DX Split Units							
	SP - TF - 01	Ø 5/8 in. (Gas Piping)	140	Rft	480	67,200	150	21,000	88,200
		Ø 3/8 in. (Liquid Piping)	140	Rft	290	40,600	120	16,800	57,400
		Sub Total (Page 02)							<b>1,721,160</b>
	23 21 14	Supply, Installation and Commissioning of U-PVC piping Class- D. with closed cell elastromeric 15mm thick Insulation for condensate drain including all cutting, fixing fitting, laying, cleaning, making good and supports complete in all respect as per drawings and specifications.							
	AHU - TF - 01	3/4" diameter	34	Rft	160	5,440	80	2,720	8,160
	AHU - TF - 02	3/4" diameter	8	Rft	160	1,280	80	640	1,920
	23 81 26	Supply, Installation and Commissioning of Exhaust and Ventilation Fans with flexible connectors, vibration isolators and other accessories complete with all respect as per schedule & specifications.							
		EF-TF-01	1	No.	32,000	32,000	5,000	5,000	37,000
		VF-TF-01	1	No.	32,000	32,000	5,000	5,000	37,000
		Supply, Installation and Commissioning of Dampers as per SMACNA standards and specifications.							
	23 33 13.13	<u>Voume Control Dampers (VCD) (Contd.)</u>							
		12"x6"	1	No.	2,000	2,000	1,000	1,000	3,000
		14"x8"	1	No.	6,500	6,500	1,000	1,000	7,500
		18"x12"	1	No.	4,500	4,500	1,000	1,000	5,500

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		16"x10"	1	No.	3,500	3,500	1,000	1,000	4,500
		14"x6"	1	No.	2,500	2,500	1,000	1,000	3,500
A	23 09 00	MISCELLANEOUS							
B		Supply, Installation & commissioning of brass tags for Equipment and system including all accessories complete in all respect.	1	Job	5,000	5,000	2,000	2,000	7,000
C		Supply, Installation & commissioning of foundation for pipes and equipment including all noise and Vibration controller as per drawings and specifications.	1	Job	25,000	25,000	8,000	8,000	33,000
D	23 09 00	Supply, Installation & commissioning of hangers and supports for pipes and equipment including all noise and Vibration controller roller type and others as per drawings and specifications.	1	Job	40,000	40,000	20,000	20,000	60,000
		Painting on equipment / Hangers, Supports, Pipe etc as per specifications.	1	Job	10,000	10,000	5,000	5,000	15,000
F		<u>Drawings</u>							
G		Shop Drawings as per specifications.	1	Job	5,000	5,000	5,000	5,000	10,000
		As Built Drawings as per specifications.	1	Job	5,000	5,000	5,000	5,000	10,000
H		<u>Testing (3 months test run) &amp; Commissioning with Air &amp; water balancing</u>							
		HVAC System.	1	Job	-	-	60,000	60,000	60,000
I		<u>Sundries</u>							
		Supply, installing and commissioning of items not listed in BOQ but required.	1	Job	-	-	-	-	-
		<b>Sub Total (Page 03)</b>							<b>303,080</b>
		<b>GRAND TOTAL FOR HVAC WORKS</b>							<b>3,060,025</b>
		<b>Less Discount</b>							<b>360,025</b>
		<b>NET TOTAL FOR HVAC WORKS</b>							<b>2,700,000</b>

**Note: Quoted prices are exclusive of all taxes.**