

SUMMARY OF COSTS(CLARKS - LUCKNOW)

Item	Description	BLUE STAR - LUCKNOW	MAESTRO ENGINEERS JAIPUR	SIGMA AIRTECH LUCKNOW	SAKSHI AIRCON- JPR. LUCKNOW	ZEEL-LUCKNOW	HALCYON- LUCK-JAIPUR	ESTIMATED
1	HI-SIDE							
A.	EQUIPMENT	1976810	1955000	1747091	2195270	1762390	1826760	1458500
2	LOW-SIDE							
A.	EQUIPMENT	200185	146000	132500	145800	211300	323500	96000
B.	PIPING-CHILLED, AND DRAIN WATER	1407263	1322350	1141226	1594474	1689399	1280310	1069050
C.	AIR DISTRIBUTION	1599417	1579725	1351621	1743616	1665900	1348250	1192650
D.	THERMAL INSULATION	896125	1054950	997145	1127255	1069750	1031125	879650
E.	ELECTRICAL INSTALLATION	188038	251000	195400	195000	202000	351400	229500
	TOTAL	6267838	6309025	5564983	7001415	6600739	6161345	4925350
	GST EXTRA@18% OR APPLICABLE AS PER GOVT. NORMS							

SCHEDULE OF QUANTITIES																							
GENERAL NOTES :																							
1	All items of work under this Contract shall be executed strictly to fulfill the requirements laid down under “Basis of Design” in the specifications. Type of equipment, material specification, methods of installation and testing and type of control shall be in accordance with the specifications, approved shop drawings and the relevant Indian Standards, however capacity of each component and their quantities shall be such as to fulfill the above mentioned																						
2	The rate for each item of work included in the Schedule of Quantities shall, unless expressly stated otherwise, include cost of:																						
	a. All materials, fixing materials, accessories, appliances tools, plants, equipment, transport, labour and incidentals required in preparation for and in the full and entire execution, testing, balancing, commissioning and completion of work called for in the item and as per Specifications and Drawings.																						
	b. Wastage on materials and labour.																						
	c. Loading, transporting, unloading, handling/double handling, hoisting to all levels, setting, fitting and fixing in position, protecting, disposal of debris and all other labour necessary in and for the full and entire execution and for the job in accordance with the contract documents, good practice and																						
	d. Liabilities, obligations and risks arising out of Conditions of Contract.																						
	e. All requirements of Specifications, whether such requirements are mentioned in the item or not. The Specifications and Drawings where available, are to be read as complimentary to and part of the Schedule of Quantities and any work called for in one shall be taken as required for all.																						
	f. In the event of conflict between Schedule of Quantities and other documents including the Specifications, the most stringent shall apply. The interpretation of the Consultant/Project Manager shall be final and binding.																						
3	All equipments, quantities and technical data indicated in this Schedule are for the Contractor’s guidance only, these are based on the documents prepared by the Services Consultant. This schedule must be read in conjunction with other documents. The Contractor shall be paid for the actual quantity of work executed by him in accordance with the approved Shop Drawings at the contract rates.																						
4	This Schedule shall be fully priced and the extensions and totals duly checked. The rates for all items shall be filled in INK including NIL items.																						
5	No alteration whatsoever is to be made to the text or quantities of this Schedule unless such alteration is authorised in writing by Services Consultant. Any such alterations, notes or additions shall, unless authorized in writing, be disregarded when tender documents are considered.																						
6	In the event of an error occurring in the amount of the Schedule, as a result of wrong extension of the unit rate and quantity, the unit rate quoted by the tenderer shall be regarded as firm and the extensions shall be amended on the basis of rates.																						
7	Any error in totaling in the amount column and in carrying forward total shall be corrected. Any error, in description or in quantity, omission of items from this Schedule shall not vitiate this Contract but shall be corrected and deemed to be variation required by the Consultant/Project Manager.																						
8	The Contractor shall procure and bring Materials/Equipment to the site only on the basis of drawings approved for construction and shop drawings and not on the basis of Schedule of Quantities which are approximate only. This also applies to the Contractor’s requisition for Owner supplied materials.																						
9	The unit rate for all local equipment or materials in Indian Rupees shall include cost of equipment and materials including all taxes and duties and also including forwarding, freight, insurance and transport into Contractor’s store at site, storage, installation, testing, balancing, commissioning and other																						
							BLUE STAR(LUCKNOW)		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH(LUCKNOW)		SAKSHI AIRCON(JAIPUR)		ZEEL - LUCKNOW		HALCYON-LUCK-JAIPUR		ESTIMATED				
Item	Description						Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount			
A.	EQUIPMENT																						
1	Supplying of double skin construction draw thru type AIR HANDLING UNITS as per specification, each complete with following :-																						
a.	Supply air centrifugal Forward curved fan with efficiency >65%																						

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Item	Description						Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount		
b.	VFD designed for HVAC applications for supply air fan with built-in PID controller, control panel (keypad & display) , IP-55 enclosure for use on standard centrifugal fans. The VFDs should not cause any deration of the connected motors and must ensure that class B temperature levels of the connected motors are never exceeded. The display should be in alpha-numeric characters and programming facility should be in user-friendly HVAC terminology. VFD's shall have builtin harmonic filters.																					
	Each VFD panel to be provided with digital display showing electrical parameters like voltage, current and power consumption.																					
	Each VFD shall be installed in a dedicated external IP-55 enclosure and the inter connecting wires between driver and MCC shall be included.																					
c.	Coil of copper tube and aluminum construction sized at maximum face velocity of 500 fpm.																					
d.	Pre Filter (MERV-8) in supply air stream																					
e.	Squirrel cage induction motors suitable for 415 ± 10% volts, 50 Hz, AC supply & high efficiency.																					
f.	Fan belt drive package																					
g.	Vibration isolators and SS 304 drain pan																					
h.	Fan outlet velocity not exceeding 10 mps.																					
i.	Height of Ceiling Suspended AHU shall not exceed 700 mm.																					
	Tag No.	Floor Space	CFM	TR	Minm Total Static (mm)																	
	Basement																					
	AHU-01	Meeting room	1800	3	40		No.	1	60230	60230	75000	75000	72360	72360	53600	53600	73960	73960	61200	61200	49000	49000
	AHU-02	Reception	1400	3	40		No.	1	52750	52750	70000	70000	63480	63480	47100	47100	65270	65270	48700	48700	44500	44500
	AHU-03	House keeping, Linnen & locker	3700	6	50		No.	1	101045	101045	110000	110000	112680	112680	181400	181400	121370	121370	108900	108900	96000	96000
	AHU-04	Bar sitting area	3300	6	50		No.	1	91960	91960	110000	110000	103680	103680	173000	173000	110810	110810	98900	98900	85000	85000
	Ground Floor																					
	AHU-05 & 06	All day dinning	4000	8	50		No.	2	221105	442210	190000	380000	142297	284594	220000	440000	152440	304880	165600	331200	145000	290000
	AHU-07 & 08	All day dinning	4000	8	50		No.	2	232375	464750	190000	380000	121177	242354	245000	490000	165530	331060	165600	331200	125000	250000
	AHU-9	Reception, front office & reservation	4500	8	50		No.	1	234645	234645	199000	199000	158820	158820	256000	256000	168170	168170	176800	176800	145000	145000
	AHU-10	GM office, Dir. Office, Mr. Ashok office etc.	1500	3	40		No.	1	53985	53985	70000	70000	64680	64680	48100	48100	66700	66700	46500	46500	55000	55000
	AHU-11	Lift lobby & Passage	2100	4	40		No.	1	71025	71025	75000	75000	75600	75600	63300	63300	86500	86500	58600	58600	68000	68000
	Terrace Floor																					
	AHU-12	TFA AHU for Fresh air	4050	30	50		No.	1	141300	141300	125000	125000	137160	137160	128800	128800	168120	168120	213000	213000	138000	138000

				BLUE STAR(LUCKNOW)		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH(LUCKNOW)		SAKSHI AIRCON(JAIPUR)		ZEEL - LUCKNOW		HALCYON-LUCK-JAIPUR		ESTIMATED		
Item	Description	Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	
	Note :																	
	Quoted price shall include the following:																	
	i. AHU- 12 shall be provided with thermal break profile.																	
	ii. AHU- 12 shall be provided with 8 row deep coil.																	
	iii. AHU-01,02,03, 04, 05, 06 ,09, 10, & 11 shall be suitable for ceiling mounted.																	
	iv. All AHU's shall be supplied with hydrophillic coating on fins																	
	v. Frame-work for coils of all AHU's shall be SS-304 construction.																	
	vi. AHU- 05,06, 07, 08, & 09 shall be provided with VFD.																	
	vii. AHU- 07, 08, & 12 shall be suitable for Floor mounted.																	
2	Supplying of vertical / horizontal FAN COIL UNITS , blow through type, each complete with 3 row deep chilled water coil, one or more 3 speed centrifugal fans, cleanable metallic filters,SS 304, main condensate drain pans, auxillary drain pan, as described in specifications, casing, coil piping connections, through copper pipes, condensate drain connections, wiring, control wiring in conduit upto thermostat boxes. All fan coil units shall be suitable for 220 ± 6% volts, 50 cycles, single phase power supply. Fan Coil Units shall be of following refrigeration capacities as listed.																	
	1.0 TR nominal capacity	No.	9	12385	111465	18000	162000	21,680	195120	17334	156006	13000	117000	21340	192060	14500	130500	
	1.5 TR nominal capacity	No.	1	13750	13750	24000	24000	22,520	22520	20736	20736	15000	15000	23400	23400	16000	16000	
	2.0 TR nominal capacity	No.	R/0	15110		28000		24,200		23444		16000		26700		17500		
	2.5 TR nominal capacity	No.	2	18825	37650	32000	64000	29,960	59920	32000	64000	18000	36000	29800	59600	19000	38000	
	3.0 TR nominal capacity	No.	1	20560	20560	36000	36000	31,280	31280	34500	34500	20000	20000	32400	32400	20500	20500	
				Low Quote								Low Quote						
3	Supplying, of IN LINE FANS suitable for installing in any position in vertical or horizontal ducts. The casing shall be double skin, internally acoustically lined and constructed of galvanised steel. The fan shall be DIDW with forward curve impeller fitted with maintenance free external rotor motor. The motor shall be suitable for 220±10% volt single phase 50 cycles AC supply. Quoted price shall be inclusive of electronic speed regulator and wiring between fan & speed regulator for single phase fans. Incase of 3 phase fans quated price shall be inclusive of DOL starter panel with cabling between starter panel and fan. The																	
	Tag No.	Decription	Loc	CFM														
	IF-1	Toilet Exhaust	Terr	2500	No.	1	52890	52890	50000	50000	68412	68412	22351	22351	40810	40810	23400	18500
	IF-2	Fresh air	Gro	1150	No.	1	26595	26595	25000	25000	54431	54431	16377	16377	36740	36740	20900	14500
	TOTAL CARRIED TO SUMMARY						1976810		1955000		1747091		2195270		1762390		1826760	1458500

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								BLUE STAR -LUCKNOW		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH-LUCK. (DAIKIN)		SAKSHI AIRCON JPR.		ZEEL-LUCKNOW		HALCYON-LUCK-JPR.		ESTIMATED		
Item	Description							Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	
e.	Squirrel cage induction motors suitable for 415 ± 10% volts, 50 Hz, AC supply & high efficiency.																					
f.	Fan belt drive package																					
g.	Vibration isolators.																					
h.	Fan outlet velocity not exceeding 10 mps.																					
i.	Height of Ceiling Suspended AHU shall not exceed 700 mm.																					
	Tag No.	Floor Space	CFM	TR	Max (HP)	Minm Total Static (mm)																
	Basement																					
	AHU-01	Meeting room	1800	3	1	40	No.	1	7535	7535	6000	6000	4500	4500	4500	4500	11700	11700	15000	15000	5000	5000
	AHU-02	Reception	1400	3	0.5	40	No.	1	7535	7535	6000	6000	4500	4500	4500	4500	11700	11700	15000	15000	5000	5000
	AHU-03	House keeping, Linnen & locker	3700	6	3	50	No.	1	7535	7535	7000	7000	6500	6500	9000	9000	12000	12000	20000	20000	6000	6000
	AHU-04	Bar sitting area	3300	6	3	50	No.	1	7535	7535	7000	7000	6500	6500	9000	9000	12000	12000	20000	20000	6000	6000
	Ground Floor																					
	AHU-05 & 06	All day dinning	4000	8	3	50	No.	2	16750	33500	9000	18000	8000	16000	6000	12000	14000	28000	25000	50000	6000	12000
	AHU-07 & 08	All day dinning	4000	8	3	50	No.	2	16750	33500	9000	18000	8000	16000	6000	12000	14000	28000	25000	50000	6000	12000
	AHU-9	Reception, front office &	4500	8	3	50	No.	1	16750	16750	10000	10000	8000	8000	12000	12000	14000	14000	25000	25000	6000	6000
	AHU-10	GM office, Dir. Office, Mr. Ashok	1500	3	0.5	40	No.	1	7535	7535	6000	6000	4500	4500	4500	4500	11700	11700	15000	15000	5000	5000
	AHU-11	Lift lobby & Passage	2100	4	1.5	40	No.	1	7535	7535	6000	6000	4500	4500	6000	6000	11700	11700	20000	20000	5000	5000
	Terrace Floor																					
	AHU-12	TFA AHU for Fresh air	4050	30	3	50	No.	1	8375	8375	15000	15000	10000	10000	45000	45000	15000	15000	25000	25000	7500	7500
	Note :																					
	Quoted price shall include the following:																					
	i. AHU- 12 shall be provided with thermal break profile.																					
	ii. AHU- 12 shall be provided with 8 row deep coil.																					
	iii. AHU-01,02,03, 04, 05, 06 ,09, 10, & 11 shall be suitable for ceiling mounted.																					
	iv. All AHU's shall be supplied with hydrophillic coating on fins																					
	v. Frame-work for coils of all AHU's shall be SS-304 construction.																					
	vi. AHU- 05,06, 07, 08, & 09 shall be provided with VFD.																					
	vii. AHU- 07, 08, & 12 shall be suitable for Floor mounted.																					

				BLUE STAR -LUCKNOW		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH-LUCK. (DAIKIN)		SAKSHI AIRCON JPR.		ZEEL-LUCKNOW		HALCYON-LUCK-JPR.		ESTIMATED	
Item	Description	Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
	125 mm dia Valves.	No.	2	5755	11510	7500	15000	6987	13974	8217	16434	4500	9000	12300	24600	9000	18000
	100 mm dia Valves.	No.	R/o	4627		7000		NQ		7704		3500		10900		8000	
	80 mm dia Valves.	No.	6	3636	21816	6000	36000	3765	22590	6280	37680	2600	15600	8700	52200	7000	42000
	65 mm dia Valves.	No.	R/o	3170		5000		NQ		5243		2200		6700		6000	
	50 mm dia Valves.	No.	R/o	2797		4000		NQ		4440		2050		4600		4000	
3	Providing and fixing in position the following balancing valves (PN 16) :																
	125 mm dia Valves.	No.	R/o	20543		20000		NQ		19666		14500		19800		12500	
	100 mm dia Valves.	No.	R/o	14678		15000		NQ		14156		11500		16700		12000	
	80 mm dia Valves.	No.	1	10619	10619	12000	12000	11012	11012	10197	10197	9277	9277	15400	15400	10500	10500
	65 mm dia Valves.	No.	R/o	9119		11000		NQ		9046		8260		12800		7500	
	50 mm dia Valves.	No.	R/o	7763		9000		NQ		7992		7373		8900		7000	
	40 mm dia Valves.	No.	5	5365	26825	7000	35000	5811	29055	6002	30010	5700	28500	5600	28000	5500	27500
	32 mm dia Valves.	No.	3	4483	13449	6000	18000	5060	15180	5350	16050	5150	15450	4800	14400	4250	12750
	25 mm dia Valves.	No.	3	3339	10017	5000	15000	3555	10665	4237	12711	4214	12642	3400	10200	3050	9150
4	Providing and fixing in position following ball valves (PN 16) :																
	40 mm dia valves	No.	10	2407	24070	2500	25000	3030	30300	2247	22470	2000	20000	1290	12900	1050	10500
	32 mm dia valves	No.	6	1763	10578	2000	12000	2135	12810	1947	11682	1650	9900	1120	6720	1000	6000
	25 mm dia valves	No.	9	1238	11142	1800	16200	1442	12978	1401	12609	1500	13500	1020	9180	900	8100
	20 mm dia valves	No.	10	992	9920	1500	15000	1310	13100	1326	13260	1200	12000	980	9800	850	8500
5	Providing and fixing in position the following ball valves with Y-strainer (PN 16) .																
	25 mm dia pipes	No.	3	3085	9255	2900	8700	2056	6168	3520	10560	3000	9000	2100	6300	2250	6750
	20 mm dia pipes	No.	10	2077	20770	2100	21000	1763	17630	3070	30700	2500	25000	1890	18900	1650	16500
6	Providing and fixing in position the following 'Y' Strainers :																
	80 mm dia strainers	No.	1	6077	6077	7500	7500	3129	3129	6490	6490	5420	5420	10200	10200	4500	4500
	65 mm dia strainers	No.	R/o	5272		6500		NQ		5355		4650		9800		3500	
	50 mm dia strainers	No.	R/o	4602		5500		NQ		4850		3980		8650		3000	
	40 mm dia strainers	No.	5	3399	16995	4500	22500	1371	6855	4490	22450	3860	19300	5200	26000	2500	12500
	32 mm dia strainers	No.	3	2797	8391	3500	10500	1201	3603	4325	12975	3320	9960	4290	12870	2200	6600
	25 mm dia strainers	No.	3	2492	7476	3000	9000	972	2916	3975	11925	3250	9750	3200	9600	2000	6000
7	Supplying, installation, testing and commissioning of Auto air vents.	No.	5	2322	11610	2500	12500	2400	12000	3320	16600	1500	7500	2560	12800	1800	9000

[illegible]

					BLUE STAR -LUCKNOW		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH-LUCK. (DAIKIN)		SAKSHI AIRCON JPR.		ZEEL-LUCKNOW		HALCYON-LUCK-JPR.		ESTIMATED	
Item	Description	Unit	Qty		Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
1	Supply, installation and testing of factory fabricated sheet metal ducts as per SMACNA standards in accordance with the approved shop drawings and as required by the																	
	Maximum	Gauge																
	Duct Size																	
	1 -900mm	26			Sq.m.	640	738	472320	680	435200	680	435200	695	444800	870	556800	660	422400
	901 -1200 mm	24			Sq.m.	510	831	423810	800	408000	774	394740	759	387090	970	494700	760	387600
	1201 -1800 mm	22			Sq.m.	R/o	984		1050		950		866		1050		890	
	1801 - 2100 mm	20			Sq.m.	R/o	1162		1250		1050		1209		1200		1020	
	2101 - above	18			Sq.m.	R/o	1331		1450		1250		1958		1350		1200	
2	Supply, fabrication, installation and testing the flexible connections constructed of fire resistant double resin sleeve as per the approved shop drawings.	Sqm.	10		6509	65090	3700	37000	2500	25000	2140	21400	2000	20000	1500	15000	1400	14000
3	Supply, installation and testing of GI construction Louver 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.	Sqm.	1		6314	6314	11000	11000	13400	13400	10486	10486	9700	9700	5600	5600	5500	5500
4	Supply, installation, testing and commissioning of motorised combined smoke & fire damper complete with control panel, inter connecting wiring at locations shown in approved shop drawings and as per specifications.																	
	Smoke & Fire Dampers.	Sqm.	2		9958	19916	12900	25800	6500	13000	14766	29532	10000	20000	10900	21800	6800	13600
	Control Panel & Wiring (including actuators)	No.	4		13179	52716	12500	50000	9900	39600	21047	84188	11700	46800	7200	28800	5500	22000
5	Supply, installation, testing and balancing of powder coated Extruded Aluminium supply air Grilles with volume control dampers in accordance with the approved shop drawings and	Sqm.	7		9416	65912	9700	67900	6362	44534	12305	86135	14000	98000	6500	45500	5500	38500
6	Supply, installation, testing and balancing of powder coated extruded aluminium Air Grilles without volume control dampers with adjustable double louvers.	Sqm.	4		5924	23696	6800	27200	5112	20448	8025	32100	1100	4400	5600	22400	4500	18000
7	Supply, installation, testing and balancing of Powder coated extruded aluminium construction square / round shape supply air diffusers with removable core & anti smudge ring & volume control dampers as per approved drawings and specifications.	Sqm.	15		11263	168945	11900	178500	6864	102960	13375	200625	1100	16500	7600	114000	5250	78750
8	Supply, installation, testing and balancing of Powder coated extruded aluminium construction. Square / round shape return air diffusers with removable core, antismudge ring & without volume control damper as per specifications.	Sqm.	15		7772	116580	9900	148500	5632	84480	10165	152475	7000	105000	6500	97500	4850	72750
9	Supply, Installation, Testing and Balancing of Powder coated extruded aluminium construction Supply/ Return air Linear Grilles with removable core as per approved drawings and	Sqm.	14		5924	82936	6700	93800	5500	77000	10165	142310	11000	154000	5600	78400	5500	77000
																		0
10	Supply, installation, testing and balancing of powder coated Extruded Aluminium exhaust air Grilles with volume control dampers in accordance with the approved shop drawings and specifications. for toile, .	Sqm.	3		9416	28248	8900	26700	7553	22659	13375	40125	11000	33000	7200	21600	6000	18000
																		0
11	Supply, installation, testing and balancing of Powder Coated Extruded Aluminium Linear supply Air Multi Slot Diffuser complete with air pattern controllers & Hit & Miss volume control damper as per specifications and approved drawings.	Sqm.	1		11017	11017	11120	11120	14500	14500	15515	15515	15000	15000	16700	16700	11500	11500
																		0
12	Supply, installation, testing and commissioning of Powder Coated Extruded Aluminium Multi Slot return Air Diffuser with air pattern controller as per specification and approved	Sqm	1		9661	9661	8900	8900	9500	9500	11235	11235	15000	15000	25450	25450	10500	10500

				BLUE STAR -LUCKNOW		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH-LUCK. (DAIKIN)		SAKSHI AIRCON JPR.		ZEEL-LUCKNOW		HALCYON-LUCK-JPR.		ESTIMATED	
Item	Description			Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
																	0
13	Supplying & fixing of opposed blade volume control dampers in supply air duct collars as per approved drawings and specifications.			Sqm.	4	5085	20340	6520	26080	5642	22568	10165	40660	11000	44000	6500	26000
																5500	22000
14	Supply, installation, testing and balancing of Powder coated/Anodised extruded aluminium construction. inlet air louvers with bird screen and volume damper for fresh air as per specifications and approved shop drawings.			Sqm.	2	12212	24424	8520	17040	12194	24388	14980	29960	11000	22000	6500	13000
																5800	11600
15	Supply, installation, testing and balancing of Powder coated/Anodised extruded aluminium construction. louvers with bird screen for exhaust air as per specifications and approved			Sqm.	1	7492	7492	6985	6985	7644	7644	14980	14980	11000	11000	6500	6500
																6000	6000
	TOTAL CARRIED TO SUMMARY						1599417		1579725		1351621		1743616		1665900		1348250
	Note: All exposed surfaces & duct shall be painted in black mat finish by the HVAC																
D.	THERMAL INSULATION																
1	Supply, installation testing and commissioning of acoustic insulation. Material shall be OPEN CELL NITRILE and all accessories as per specification.																
	25 mm thick acoustic lining			Sqm	155	1704	264120	900	139500	700	108500	802	124310	850	131750	765	118575
																695	107725
2	Supply and installation of External Thermal closed cell crosslinked polyethelene/Nitrile rubber insulation with Self adhesive backing on ducts as per the approved specifications.																
	13 mm thick insulation for supply & return air ducts in SA & RA path			Sqm	870	517	449790	680	591600	700	609000	749	651630	550	478500	690	600300
																575	500250
	9 mm thick insulation for supply & return air ducts in SA & RA path			Sqm	10	458	4580	620	6200	600	6000	642	6420	450	4500	580	5800
																540	5400
3	Supplying, installing and testing of 25 mm thick (pre-moulded pipe section of T.F. quality expanded polystyrene, 24 Kg / M³) insulation on chilled water and condensate drain piping and fitting like valves, flanges union etc. as per the approved shop drawings and specifications.																
	40 mm dia pipes			RM	110	272	29920	490	53900	475	52250	567	62370	800	88000	560	61600
																480	52800
	32 mm dia pipes			RM	175	229	40075	450	78750	425	74375	513	89775	700	122500	410	71750
																445	77875
	25 mm dia pipes			RM	50	187	9350	430	21500	384	19200	353	17650	650	32500	290	14500
																305	15250
	20 mm dia pipes			RM	60	145	8700	410	24600	320	19200	288	17280	650	39000	210	12600
																225	13500
4	Supplying, installing and testing of 50 mm thick (pre-moulded pipe section of T.F. quality expanded polystyrene, 24 Kg / M³) insulation on chilled water piping and fitting like valves, flanges union, etc. as per the approved shop drawings and specifications.																
	125 mm dia pipes			Rm	20	848	16960	830	16600	924	18480	1145	22900	1200	24000	1200	24000
																850	17000
	100 mm dia pipes			Rm	20	695	13900	790	15800	640	12800	995	19900	1100	22000	980	1960

				BLUE STAR -LUCKNOW		MAESTRO ENGINEERS- JAIPUR		SIGMA AIRTECH-LUCK. (DAIKIN)		SAKSHI AIRCON JPR.		ZEEL-LUCKNOW		HALCYON-LUCK-JPR.		ESTIMATED	
Item	Description	Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
1.1	Design, manufacture, supply, installation, testing and commissioning of the following cubicle type, dead front, sheet steel, wall mounted control panels including anchoring into the wall, wiring, incoming, control/ power cable, earthing & terminating into MCCB in each panel shall be provided by the electrical contractor.																
	All outgoing shall be provided with Stop /Manual /Auto selector switch to facilitate operation through BAS. All starters shall be provided with potential free Contact for Connections to Building Automation System.																
	The panel shall include the following components & accessories.																
	All wiring, control & power cable, cable tray and GI earthing of motors from the panel shall be included. Please refer specification for cable size.																
	MCCB as per the ratings given below, suitable for motor duty and able to withstand fault level																
	DOL/SD starter as HP rating																
	Terminal block for power distribution as required.																
	Contactor, over load relay with built in single phasing protection.																
	Phase indicating lights and indicating light for ON status.																
	Digital voltmeter and digital ammeter.																
	Time delay relay for delayed automatic restart of motor.																
	Wiring for microswitch for stopping the fan when fire damper closes (in case of Fan only).																
	For on/off/remote and local operation, 3 pole single throw switch shall be provided in each panel to facilitate override of the automatic operation.																
	3 No. of Single Pole MCB's Shall be provided at the incoming section of the starter panel for DDC Panel , fire damper actuator & as a spare.																
	All starters shall be provided with suitable potential free contract for connections to the Building Automation System.																
	220 / 24 V Transformer																
	The number of control panels shall be as follows.																
	Suitable rating MPCB along with 0.5 to 1 HP DOL starters.	No.	3	17373	52119	16000	48000	18600	55800	13500	40500	24000	72000	24500	73500	14500	43500
	Suitable rating MPCB along with 1.5 to 2 HP DOL starters.	No.	1	17661	17661	18000	18000	19900	19900	14500	14500	26000	26000	26500	26500	16500	16500
	Suitable rating MPCB along with 3 HP DOL starters.	No.	3	18246	54738	20000	60000	19900	59700	15000	45000	28000	84000	29800	89400	19000	57000
	Suitable rating MPCB for outgoing to 3 HP VFD .	No.	5	12704	63520	25000	125000	12000	60000	19000	95000	4000	20000	32400	162000	22500	112500
	TOTAL CARRIED TO SUMMARY				188038		251000		195400		195000		202000		351400		229500