

**STATE BANK OF INDIA -MAIN BRANCH UDGIR**  
**AIR CONDITIONING WORKS**  
**BILL OF QUANTITIES**

**MAKE:Hitachi/Carrier/Daikin/ Toshiba/Bluestar /Mitshubishi Make ( No Hitachi Logicool Series , NoCarrier Midea Series)**

PART A					
SR.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	Supply of <b>2 TR Casset type (1 phase) air conditioning units</b> comprising of indoor unit, outdoor unit, first fill of refrigerant gas, thermostatic control, safety cut outs, cord less remote for unit operation, isolating valves, thermostatic control, safety cutouts, (condensor mounting stand excluded) and vibration isolation pads.The unit should have following specification. i)Condensing unit should be equipped with copper tubing ii) Compressor Type- Hermetic Rotary DC inverter iv)Refrigerant - R290 or R410A	12	Nos.		
2	Supply of following rated <b>High wall mounted type air conditioning units</b> comprising of indoor unit, outdoor unit, first fill of refrigerant gas, thermostatic control, safety cut outs, cordless remote for unit operation, isolating valves, (condensor mounting stand excluded) and vibration isolation pads .i)5 STAR RATING ii)Condensing unit should be equipped with copper tubing iii) Compressor Type- Hermetic Rotary DC inverter iv)Refrigerant - R290 or R410A				
a	1.0 TR HIGH WALL 5 STAR RATING	2	Nos.		
b	1.5 TR HIGH WALL 5 STAR RATING	4	Nos.		
3	<b>TIMER</b>				

	Providing & fixing timer switch for switching power alternatively between two ACs, Timer will be Analogue dial type adjustable TIMER switch which is adjustable over 24 hrs with 4-6-8 hours intervals & is to have 1 NO+1NC (20A) contact. Timer will have its own backup battery & will be enclosed in 16 gauge MS box with acrylic lid together with suitable connector block. (ABB/ MDS / L&T)	1	no.		
4	Providing and fixing Stabilisers for AC with 3 step relay and TDR with Input Voltage range: 160V-280V and Output : 230 V.				
i	3.0 KVA	2	Nos.		
ii	4.0 KVA	4	Nos.		
iii	5.0 KVA	12	Nos.		
	SUB TOTALPART A				
	add				
	<b>TOTAL PART A</b>				
<b>PART B-LOW SIDE WORKS (INSTALLATION OF HVAC SYSTEM)</b>					
1	<b>Installation &amp; commissioning of AC units</b>				
	i) 2 TR casset type unit	12	nos.		
	ii) 1.5TR Hi wall high wall mounted unit	4	no.		
	ii) 1.0TR Hi wall high wall mounted unit	2	nos.		
2	<b>Installation &amp; commissioning of Stabiliser units</b>	18	nos		
3	Providing and fixing Stabilisers stand for 10 nos AC as mentioned above either step wise or seprate	18	nos		
4	Installation of 24 hrs user selectable timer with all accessories and wiring	1	no.		
5	<b>ELECTRICAL CABLING</b>				

	Providing and laying power & control cabling required from indoor unit to outdoor unit. Power supply will be made available near the indoor unit only. makes : Polycab,Finolex, Flameguard,Polyplast				
	i). Power & control cabling for 2TR (1 Phase)	160	mtrs		
	i). Power & control cabling for 1/1.5 TR High Wall AC	25	mtrs		
<b>6</b>	<b>Copper Refrigerant Piping</b>				
	Supply & installation fo additional hitlon insulated hard/soft copper refrigerant piping complete with fittings, elbows, bends, supporting arrangement on walls, cable trays. (separate for each unit) Hot side + cold side piping will be measured as one length existing copper, drain piping and cabling shall be used int he new system.				
	i) 2 TR casset type unit	160	mtrs		
	ii)1/1.5 TR Hi wall high wall mounted	25	mtrs		
<b>7</b>	<b>Drain water piping</b>				
	Drain water piping work out of PVC/HDPE hard pipes covered with hitlon insulations, compelte with fittings, bends, elbows, tees flanges, tappings, wall sleeves, hangers, supports, anchors				
	i) 25 mm nom. Dia 2 mm thick	160	mtrs		
<b>8</b>	<b>Frame work</b>				
	Supply, fabrication & installatioonf MS base frame for outdoor units complete with epoxy painting, vibrantion isolating pads, supports, hangers, railing, branckets etc. suitable for the above AC units. Note : Apply 2 coats of epoxy primer & 2 coats of anticorrosive paint.				
	i) 2 TR casset type unit	12	nos.		
	ii)1 /1.5TR Hi wall high wall mounted	6	nos.		

	<p><b>Note : The rates quoted above shall include the cost of indoor units, mounting brackets, first charge of gas. Materials like fittings, clamps, supports, U trap in drain piping with necessary slope etc., minor civil work like opening in the walls for piping and cables and finishing the same. pipes &amp; cables between through wall shall be taken through sleeves and plugged to avoid leakages, condenser mounting with all accessories vibration mounting pads etc., piping and cabling connections at indoor.</b></p> <p><b>Note-In case of High wall split type AC (1/1.5 TR) unit, the 5.0 RMT of Electrical cabling ,Copper Refrigerant Piping and Drain water piping shall not be considered in the measurement.</b></p>				
8	<p>Removing &amp; shifting and reinstallation of old high wall 1.0/1.5 TR AC unit from old/existing branch premises. Rates are inclusive of reinstallation of the same indoor &amp; outdoor unit at different location with frame and refilling of gas, necessary related hardware including all accessories. New copper tubing &amp; power cabling will be paid extra as per tender rates.</p>	6	nos.		
	<b>SUBTOTAL PART B</b>				
	ADD GST @18%				
	<b>TOTAL OF PART B</b>				

<b>PART C-COMPREHENSIVE ANNUAL MAINTANANCE CONTRACT AFTER COMPREHENSIVE PRODUCT WARRANTY OF ONE YEAR FOR</b> i).1/1.5 TR High Wall Split AC - 5nos ii).2TR Cassetts AC-8nos iii) Votlage Stabilisers 3/4/5KVA-6nos				
FIRST YEAR	1	JOB		
SECOND YEAR	1	JOB		
THIRD YEAR	1	JOB		
FOURTH YEAR	1	JOB		
FIFTH YEAR	1	JOB		
<b>SUBTOTAL PART C</b>				
<b>ADD GST18%</b>				
<b>TOTAL OF PART C</b>				
<b>PART 'A' TOTAL</b>				
PART 'B' TOTAL				
PART 'C' TOTAL				
<b>NET TOTAL A+B+C</b>				

**NOTE:**

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1.Supplied AC's shall have Copper Evaporator & Condenser coils.

2.Evaporator & Condenser coils fins should have formal portative coating (blue coating)

3. The entire job shall be executed in total co-ordination with the other agencies working on this project more particularly with the false ceiling and electrical work. IF THE CONTRACTOR HAS NOT CARRIED OUT AIR CONDITIONING WORK AS PER STANDARD SPECIFICATION THEN CONTRACTOR IS LIABLE TO REMOVE AND REWORK AS PER STANDARD SPECIFICATION AND WHATEVER THE DAMAGE IN CONNECTION WITH CIVIL/ FURNITURE/ ELECTRICAL WORK WILL BE BEAR BY CONTRACTOR. IF CONTRACTOR WILL NOT DONE REWORK THEN WHATEVER BEEN THE COST FOR REWORK WILL BE DEDUCTED FROM CONTRACTOR'S BILL.

4.The contractor will attend to all defects noticed during defect liability period. Within 24 hours from the time of complain If the contractor fails to attend to the defects within 24 hours time these defects will be rectified by the Bank and the expenditure incurred on this account will be recovered from security deposit, or any other money due on to time.

**CONTRACTOR'S SIGNATURE & SEAL**