

**AIR CONDITIONING WORK BANK OF MAHARASHTRA, MAIN
BRANCH, JAWAHAR ROAD, AMRAVATI**

Note : For any make, if OEM doesn't has specific star rating for the product but that product has

equivalent energy saving as compared to the star rating, then vendor shall mentioned the same against the model number.

Sr. No	Particulars	Product Model No.
1.	3.0 TR Ceiling Suspended Cassette Unit 5 Star Inverter Model or equivalent	5 STAR INVERTER
2.	2.0 TR Ceiling Suspended Cassette Unit 5 Star Inverter Model or equivalent	5 STAR INVERTER
3	1.5 TR Ceiling Suspended Cassetter Unit 5 Star Inverter Model or Equivalent	5 STAR INVERTER
3.	2.0 TR Wall mounted Split Unit 5 Star Inverter Model	5 STAR INVERTER
4.	1.5 TR Wall mounted Split Unit 5 Star Inverter Model	5 STAR INVERTER
5.	1 TR Wall mounted Split Unit 5 Star Inverter Model	5 STAR INVERTER

AIR-CONDITIONING WORKS :

Air-conditioning System (Inverter Model/ 5 Star - Wall mounted Split Unit/ Ceiling Suspended Cassette unit)

Equipment Make – Voltas/LG/Blue star/Daikin/Carrier/Mitsubishi/GE/- 5 star split & 5 star or Equivalent energy saving latest model – cassette (inverter units) with copper condenser

All the work of Drain pipe/copper pipe/cable shall be properly supported by clamps from the slab.

Sr. No	SPLIT TYPE AIR CONDITIONERS				
A.	PART -A				
	HIGH SIDE WORK				
	Description	Unit	Quantity	Rate	Amount

1	<p>Supplying, erection, testing and commissioning following wall mounted Split/ Roof mounted cassette units of (Toshiba/ Mitsubishi/ Hitachi/ Daikin/LG/Bluestar/ Carrier/ Voltas) with cordless remote complete with all necessary fittings duly insulated with 9 mm thick nitrile rubber pipe insulation with (evaporator coil – copper only), fan and fan motor, machine control panel improved Refrigerant Joints, .Air conditioners shall be fitted with hermetically sealed type suction cooled reciprocating or discharge cooled rotary compressor or scroll compressor. Compressor unit operating on R- 22/ R-410. All complete as per drawing, approval and instructions of the Employer (Rates to be inclusive of Copper refrigerant pipe with insulation and Drain pipe up to 5 Mtr. length). Rate should inclusive of instaletation.</p>					
a	1.0 TR wall mounted split unit (Minimum 5-Star rating inverter type) including all necessary	Nos.	2			
	fittings and mountings as specified by the manufacturer.					
b	1.5 TR wall mounted split unit (Minimum 5-Star rating inverter type) including all necessary fittings and mountings as specified by the manufacturer.	Nos.	4			
c	2 TR wall mounted split unit (Minimum 5-Star rating inverter type) including all necessary fittings and mountings as specified by the manufacturer.	Nos.	5			
d	3.0 TR Cassette type unit with 4 way/ round air flow including all necessary fittings and mountings as specified by the manufacturer (Three phase).(5 star or Equivalent energy saving latest model Inverter Type)	Nos.	0			
PART A –HIGH SIDE WORK SUB TOTAL AMO UNT						
GST @.....				28%		
PART B –LOW SIDE WORK SUB TOTAL AMO UNT						
B.	PART –B					
LOW SIDE WORK						
1	EXTRA REFRIGERANT PIPING					

	Supplying and laying of Extra copper refrigerant piping with nitrile rubber pipe insulation, both of size as specified by the manufacturer suitable for 1.0 TR/ 1.5/2.0 TR Split type AC and 2.0/3.0 TR Cassette AC (From Indoor to outdoor Units) Beyond 3 M.				
a	For 1.0 T Split unit	Mtr.	32		
b	For 1.5 T Split unit	Mtr.	60		
c	For 2.0 T Split Unit	Mtr.	54		
d	For 1.5 T Cassette Unit	Mtr.	0		
e	For 2.0 T Cassette Unit	Mtr.	0		
f	For 3.0 T Cassette Unit	Mtr.	0		
2	DRAIN PIPING				
	Providing and fixing drain piping up to drain as directed by the engineer in charge with all accessories e.g. elbows, unions, sockets, reducers, reducing tees, nipples etc. Complete job including cutting chiseling in walls, fixing with GI clamps, floor and making good of all chases/ cuts etc. and discharging the drain into a floor trap/ gully as per site conditions with insulation, both as specified by the manufacturer.				
a	25 mm dia PVC drain pipe for Split AC	Mtr.	146		
b	32 mm dia PVC drain pipe for Cassette AC	Mtr.	0		
c	40mm dia PVC drain pipe for Cassette AC	Mtr	0		
3	AUTOMATIC VOLTAGE CONTROLLER				
	Stabilizer shall be Automatic version with copper coil transformer and the voltage selection range shall be minimum depending on lowest peak recorded average in a month. Precise output voltage range (130V-170V to 240V -270 V). Ensure the rating of Stabilizer shall be in accordance with max rated power of ACs considering instantaneous peak load fluctuation.				
	Providing and fixing Stabilizer with 3-4 step relay and input voltage range of 130-270 V and output to be 230- 240 V (Blue bird/ Logic state/ Inline/ V-Gaurd/Equivalent Reputed Make) (copper winding).				
a	5 KVA (For 3.0/ 2.0 TR Split AC)	Nos.	2		
b	4 KVA (For 1.5/ 2.0 TR Split AC)	Nos.	2		
c	3 KVA (For 1.0/ 1.5 TR Split AC)	Nos.	2		

4	AIR-CONDITIONERS STAND				
1.	MS-STAND -Providing and fixing of lockable caging for outdoor unit grouted on wall or on roof with open able shutter made of 10 X 10 mm MS square bars placed vertically @ 5" c/c welded with 40 X 3 mm MS flat all- round. The frame shall be of angle 35mm*35mm and it shall be fixed to wall or roof with proper MS bracket to tackle the weight of outdoor unit. Item includes all necessary hardware, priming coat, synthetic enamel paint, hanger, clamps other accessories etc. All complete as per approval and instructions of the employer. Size shall be adequate for AC outdoor size & sufficient space around the outdoor suitable for servicing purpose for Outdoor unit.				
a	For 1.0 TR Hi Wall split units	Nos.	2		
b	For 1.5TR Hi Wall split units	Nos.	4		
c	For 2.0 TR Hi Wall split units	Nos.	5		
d	For 2.0 TR ceiling mounted cassette unit	Nos.	0		
e	For 3.0 TR ceiling mounted cassette unit	Nos.	0		
2.	Powder coated readymade stands				
	For 1.0 TR Hi Wall split units	Nos.	0		
	For 1.5TR Hi Wall split units	Nos.	0		
	For 2.0 TR Hi Wall split units	Nos.	0		
	For 2.0 TR ceiling mounted cassette unit	Nos.	0		
	For 3.0 TR ceiling mounted cassette unit	Nos.	0		
5	ELECTRICAL CABLES				
	Suitable IS/BIS standard Cable of 1.1-2.2 KV, Multi strand, FRLS 2- 4 C / 1.5/2.5 -6.0 Sqmm) as per design requirement of Peak load calculation of specific ACs system installed at site with 1 1/2" PVC conduit pipe between indoor/outdoor unit				
a	Supplying and laying of Extra Electrical interconnecting control cable from indoor to outdoor of size as specified by the manufacturer suitable for 1.0 TR/ 1.5/2.0 TR Split type AC.	Mtr.	22		
b	Supplying and laying of Extra Electrical interconnecting control cables from indoor to				

	outdoor of size as specified by the manufacturer suitable for 2.0/ 3.0 TRCassette type AC.	Mtr.	12		
6	TIMER				
a	Supplying, installation and commissioning of automatic 24 HRS. programmable TIMER of required capacity to run A.C. alternately (MDS/ L&T/ Other reputed make).	Nos.	1		
7	CORE CUTTING				
a	Core cutting member in Non RCC	Mtr.	25		
PART B –LOW SIDE WORK SUB TOTAL AMO UNT					
GST @.....				18%	
PART B –LOW SIDE WORK SUB TOTAL AMO UNT					
GRAND TOTAL (PART A + PART B) EXCLUDING GST					
GRAND TOTAL (PART A + PART B) INCLUDING GST					