



**SHORT URGENT QUOTATION NOTICE No: 01/EW/2021-22**

Memo No: 515/EC/EW/21

Date: 11-10-2021

Sealed quotations for estimation purpose of following per unit items are hereby invited from the Manufacturers/ Distributors/ Dealers / Suppliers/ Contractor up to 18/10/2021 till 03:30 PM at IGIMS Patna. Agency can download the quotation from the institute website: [www.igims.org](http://www.igims.org) and submit their quotation within schedule time by hard copy.

Date of obtaining quotation from the institute website: <a href="http://www.igims.org">www.igims.org</a>					11/10/2021 to 18/10/2021
Last Date , Time and Place for submission of quotation					18/10/2021 up to 03.30 PM in the office of Executive Engineer (Electrical) IGIMS Patna through reg./ speed post/courier or by hand.
Date & time of opening the received quotation					20/10/2021 at 12:30 PM in the conference hall, IGIMS, Patna
SI No.	Item descriptions	unit	Qty.	Rate/unit	Rate (In words)
1	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having all hermetically sealed inverter type Scroll Compressor(s), minimum two compressors for above 14 HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R 410 A Refrigerant, vibration isolators, with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%,3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and IEER not less than 6.5.  <b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b>	HP	1.00		

**INDOOR UNIT-CASSETTE TYPE**

2	<p>Supply, installation, testing and commissioning of following minimum capacity 4-way flow VRV/VRF Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower, multi speed motor, coil section with DX Copper coil, electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration isolation, cord less remote control etc., suitable for operation on single phase 230 V ± 10%, 50Hz AC supply, complete, as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree CWB temperature.</p> <p><b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b></p>				
a)	0.8 TR	Each	1.00		
b)	1 TR	Each	1.00		
c)	1.2 TR	Each	1.00		
d)	1.6 TR	Each	1.00		
e)	2 TR	Each	1.00		
f)	2.4 TR	Each	1.00		
g)	2.8TR	Each	1.00		
h)	3.2 TR	Each	1.00		
i)	3.6 TR	Each	1.00		
j)	4 TR	Each	1.00		
k)	4.8TR	Each	1.00		

**INDOOR UNIT-HIGH WALL TYPE**

3	<p>Supply, installation, testing and commissioning of following minimum capacity VRV/VRF High wall type Indoor unit equipped with washable synthetic media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX copper coil, electronic expansion valve, outer cabinet, cord less remote control, drain pan, necessary accessories etc., suitable for operation on 230 V ± 10%, 50 Hz, single phase AC supply, complete as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27Degree C DB and 19 Degree C WB temperature.</p> <p><b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b></p>				
	a) 0.6 TR	Each	1.00		
	b) 0.8 TR	Each	1.00		
	c) 1 TR	Each	1.00		
	d) 1.3 TR	Each	1.00		
	e) 1.45 TR	Each	1.00		
	f) 1.65 TR	Each	1.00		
	g) 2 TR	Each	1.00		
	h) 2.4TR	Each	1.00		
	i) 3.2 TR	Each	1.00		
	j) 4.8TR	Each	1.00		

**INDOOR UNIT-DUCTABLE TYPE**

4	<p>Supply, installation, testing and commissioning of following minimum capacity and external static pressure VRF/VRV ceiling mounted ductable type Indoor unit equipped with washable synthetic media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX copper coil, electronic expansion valve, corded remote control, outer cabinet, vibration isolators, drain pan, other necessary supports etc., suitable for operation on single phase AC supply 230 V± 10%, 50 Hz complete as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature.</p> <p><b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b></p>				
<b>1) Low static ductable units (minimum 25 Pascal external static pressure)</b>					
a)	0.6TR	Each	1.00		
b)	0.7 TR	Each	1.00		
c)	0.8 TR	Each	1.00		
d)	0.9 TR	Each	1.00		
e)	1 TR	Each	1.00		
f)	1.1 TR	Each	1.00		
g)	1.3 TR	Each	1.00		
h)	1.4 TR	Each	1.00		
i)	1.6 TR	Each	1.00		
<b>2) Mid Static Ductable units (minimum 45 Pascal external static pressure)</b>					

	1.8TR	Each	1.00		
	2 TR	Each	1.00		
	2.3 TR	Each	1.00		
	2.6TR	Each	1.00		
	2.8TR	Each	1.00		
	3.4TR	Each	1.00		
	4TR	Each	1.00		
<b>3) High Static Ductable units (minimum 110 Pascal external static pressure)</b>					
	5.5TR	Each	1.00		
	7.1TR	Each	1.00		
	8TR	Each	1.00		
<b>COPEER REFRIGERANT PIPING</b>					
5	Supply, Installation, testing and commissioning including vaccumiazation and Nitrogen testing of following nominal sizes of soft/hard drawn copper refrigerant piping for VRV/VRF system, complete with fittings, with suitable adjustable ring type hanger supports, jointing/brazing including accessories, insulated with XPLE Class-O tubular insulation/with Class-O closed cell elastomeric nitrile rubber tubular sleeves sections of specified thickness as given below for Suction and Liquid lines, all accessories as per specifications etc. as required :				
a)	6.4 mm dia. (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Each	1.00		
b)	9.5 mm dia. (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Each	1.00		
c)	12.7 mm dia. (OD) (Soft drawn) with tube thickness 1.2 mm with	Each	1.00		

	19 mm thick insulation				
d)	15.86 mm dia. (OD) (Soft drawn) with tube thickness 1.2 mm with 19mm thick insulation	Each	1.00		
e)	19 mm dia. (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Each	1.00		
f)	22.2 mm dia. (OD) (Hard drawn) with tube thickness 1.2 mm with 19mm thick insulation	Each	1.00		
g)	25.4 mm dia. (OD) (Hard drawn) with tube thickness 1.2 mm with 19mm thick insulation	Each	1.00		
h)	28.58 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19mm thick insulation	Each	1.00		
i)	31.8 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19mm thick insulation	Each	1.00		
j)	34.9 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19mm thick insulation	Each	1.00		
k)	38.1 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19mm thick insulation	Each	1.00		
l)	41.27 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19mm thick insulation	Each	1.00		
6	Supply , installation, testing & commissioning of control cum transmission wiring of 2 core X 1.5 sq mm copper in suitable PVC conduits for interconnection between IDUs & ODUs.	Each	1.00		
7	Supply and commissioning of rigid PVC drain pipe with fitting proper support at 5 feet interval and insulated with 6mm thick closed cell nitrile rubber insulation	Each	1.00		
a)	25 mm	Meter	1.00		

b)	32 mm	Meter	1.00		
8	Supply and topping up of additional refrigerant (R-410)	Kg	1.00		
9	Supply of pair of Indoor & Outdoor refnet joints Y-Type.	Each	1.00		
10	Supply of codeless remote controller along with receiver kit for VRF units.	Each	1.00		
11	Central Controller for Indoor & Outdoor Units- Touch Screen Type. Supply, installation, testing & commissioning of Central Controller capable of controlling of all IDUs ( Minimum 32 Group), ODUs ( Minimum 64 Nos.) complete with necessary hardware, accessories etc. to perform the following functions:				
	Control of IDUs, ODUs Units as above with monitoring of vital parameters such as temperature sensing & setting, ON/OFF, status etc. Permit / prohibit function of each remote controlled unit, , Operation of units in individually or in group, Fault indication with Alarm scheduling of units.. The central controller will be complete including all hardware & software (including wiring) suitable to perform above function.  <b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b>				
11	Under deck thermocal insulation of 50mm.	sqft	1.00		
12	Nitrile Insulation for duct of 9mm	sqft	1.00		
13	Nitrile Insulation for copper pipes of 13 mm	sqft	1.00		
14	Nitrile Insulation for copper pipes of 19 mm	sqft	1.00		

15	Comprehensive Annual Maintenance (including battery) of 3-phase online UPS installed at IGIMS, Patna-14.	Per KVA	480.00		
15	Rectification of one no 3-phase 60 KVA, online UPS installed at IGIMS, Patna-14	Each	1.00		
16	Rectification of one no 3-phase 120 KVA, online UPS installed at IGIMS, Patna-14	Each	1.00		
17	Comprehensive Annual Maintenance of 3-phase Servo Voltage stabilizer of 100 KVA installed at IGIMS, Patna-14.	Per KVA	1200.00		
18	Rectification of 3-phase 3- phase Servo Voltage stabilizer of 100 KVA installed at IGIMS, Patna-14.	Each	5.00		
18	Comprehensive Annual Maintenance of 3-phase 250 amp phase sequence corrector installed at IGIMS, Patna-14.	Each	14.00		
19	Comprehensive Annual Maintenance of 3-phase 400 amp phase sequence corrector installed at IGIMS, Patna-14.	Each	3.00		
20	Rectification of 3-phase 400 amp phase sequence corrector installed at IGIMS, Patna-14.	Each	3.00		
21	Rectification of 3-phase 250 amp phase sequence corrector installed at IGIMS, Patna-14.	Each	7.00		
22	Supply of split type 1.5TR, 240 volts air-conditioner.  <b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b>	Each	1.00		
23	Supply of split type 2 TR, 240 volts air-conditioner.  <b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b>	Each	1.00		



24	Supply of window type 1.5TR, 240 volts air-conditioner.  <b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b>	Each	1.00		
25	Supply of window type 2TR, 240 volts air-conditioner.  <b>Make - Hitachi / Daikin/ O' General / Carrier / Mitsubishi Heavy/ Mitsubishi Electric or equivalent</b>	Each	1.00		
26	SITC of 4KVA voltage stabilizer input voltage 160-270 volts, output 220 volts with time delay.  <b>Make- LIV Guard/ V-Guard/ Voltas or equivalent.</b>	Each	1.00		
27	SITC of 5KVA voltage stabilizer input voltage 160-270 volts, output 220 volts with time delay.  <b>Make- LIV Guard/ V-Guard/ Voltas or equivalent.</b>	Each	1.00		
28	SITC of 450 mm, 230 Volt. AC wall/ cabin fan including fixing the bracket & aluminum body making connection, testing, commissioning etc. as required.  <b>Make- Havells / Crompton / Bajaj / Khetan / Orient or equivalent.</b>	Each	1.00		

**Note:- Each quoted rate by the agency must include all complete works including supply, installation, testing and commissioning and taxes i.e GST or any taxes liable and contractor profit. The interested Quotationer /agency must visit the site (IGIMS, Patna) before quoting their rate.**

**Obtained quotations will be opened on scheduled date and time before the committee in the conference hall, IGIMS, Patna in presence of the bidders / agency or their representative.**

**Name:**

**Executive Engineer (E)  
IGIMS, Patna**

**Address:**

**Signature of authorized agency:**

**Seal of the Firm:**

Memo No.-.....

Dated:-

C.C. to: Director /SE (BME), all notice boards, IGIMS Patna-14

**Executive Engineer (E)  
IGIMS Patna-14**