

**NATIONAL AUTOMOTIVE BOARD
(NATRIP)**

Ref. No: NAB/NATRIP/Utility/22/02/24758

New Delhi, dated 5th April, 2022

Subject: NIQ No. NAB/NATRIP/Utility/22/02 for Supply, Installation, testing and commissioning including modification, repairing & replacement of existing HVAC system, corrigendum-3

Dear Bidders,

Kindly note the following;

1. The Bid submission date has been extended to 11th April, 2022 at 1200 Hrs and Bid opening date shall be 1230 Hrs on the same day.
2. The amendments has been made in the Annexure-E i.e. Bills of Quantity (BoQ), revised Annexure-E is enclosed.
3. Bidders may submit their bid as per revised BoQ. The bidders who have already submit their bid may collect their sealed from NAB (NATRIP) and submit a fresh bid.

Thanking You

Yours faithfully



Asst. Director (U&P)

National Automotive Board

National Automotive Testing and R&D Infrastructure Project

Corporate Office: 2nd Floor, Administrative Building, International Centre for Automotive Technology (ICAT) Campus-II, Sector-11,
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VRF EQUIPMENT (BILL OF QUANTITY)			Annexure-E			
S.NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
A	EQUIPMENT					
	VRF UNITS					
1	Outdoor Units-Heat Pump (R410A)-N. Cap. (Supply, Instalaltion, testing & commissioing) Including loading, unloading and charging of refrigerant					
	Design, manufacturing, supplying, Installation, Testing and Commissioning of outdoor type of following capacity air cooled 100% scroll inverter compressor based VRV/VRF system using R410A/R407 refrigerant, i/c first fill of refrigerant. The system shall be suitable for cooling as well as for heating operation and to operate on 3 phase, 415 V. 50 HZ AC power supply and shall comprise of scroll compressors, air cooled condensors and its fan with motor micro-processors controls, control panels, suitable starters, along with internal control and power wiring, internal interconnecting refrigerant pipes, charging ports, system single enclosure . MS base frame for Outdoor units complete with epoxy painting and vibration isolation pads.Including refrigerent charging. Make: Daikin/Carrier/Trend					
1.1	Individual VRF ODU 16 HP	Nos.	1			
2	INDOOR UNITS, SITC including loading, unloading and charging of refrigerant					
	Design, Supplying, Installation, Testing and Commissioning of VRF type indoor air- conditioning units with cordless remotes of the following capacity for mounting on ceiling, Each comprising of cooling/heating coil, blower with multi-speed motor,electronic expansion valve, supply and return air grill, filters, insulated connection of refrigerant circuit, intake air port for fresh air entry,condensate water drain pump with electronic level sensor complete, suitable to operate from central remote control & installation from ceiling with all required supports, anchor fasteners hardwares,interconnecting refrigerant copper piping, valves, supports etc.including terminations at nearest power outlet with copper wire of 3 C x2.5 sq.mm. in metallic flexible conduit and interlocking with outdoor units. Make: Daikin/Carrier/Trend					
2.1	2.0 TR 4 Ways Cassette Units with Remote controller (Cordless)	Nos.	5			
2.2	1.5 TR 4 Ways Cassette Units with Remote controller(Cordless)	Nos.	2	2500		
3	Y Joint	Nos.	7			
	TOTAL OF EQUIPMENT (A), inclusive of GST			Sub Total		
B	Low -Side works for VRF Units					

4	Supply, Installation of Copper tubing of different dia insulated with 13 mm & 19 mm nitrile rubber insulation and finished.				-
a	Copper Refrigerant Pipe for VRF - Suction Pipe	Rmt	30		
b	Copper Refrigerant Pipe for VRF - Discharge Pipe	Rmt	30		
5	Providing & Fixing of MS Outdoor Stand(VRF Outdoor)	Nos	1		
6	Supply and Installation of make 32 mm PVC Drain piping with Insulation.	Rmt	30		
7	Loading & Unloading, Minor civil works such as making any small openings/closing the same for Ref pipes / ducts etc.	Lot	1		
8	200 mm cable tray suport for copper pipes	Rmt	30		
9	Electrical Wire, Copper cable, PVC insulated, arurmored Make: Polycab, Havells, RPG				
a	Supply Installation for 4 Core 10 SQM	MTR	40		
b	Supply of Transmission cable between IDU & ODU4c x1.5sq.mm in conduit pipe	Rmt	80		
c	Supply of Transmission cable between IDU & ODU4c x2.5sq.mm in conduit pipe	Rmt	80		
10	MCB 63 Amps , 3ph of reputed make	Nos.	1		
11	Installation, testing, commisioning of existing split/tower ACs 1 to 2 ton including gas filling with copper tubing 10mtr each, complete all fitting etc.	Nos	7		
TOTAL OF EQUIPMENT (B) inclusive of GST					

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S. N.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A	EQUIPMENT				
	VRF UNITS				
1	Outdoor Units-Heat Pump (R410A)-N. Cap., Supply , installtion, testing and commissioing, Loading & Unloading				
	Design, manufacturing, supplying, Installation, Testing and Commissioning of outdoor type of following capacity air cooled 100% scroll inverter compressor based VRV/VRF system using R410A/R407 refrigerant, including first fill of refrigerant. The system shall be suitable for cooling as well as for heating operation and to operate on 3 phase, 415 V. 50 HZ AC power supply and shall comprise of scroll compressors, air cooled condensers and its fan with motor micro-processors controls, control panels, suitable starters, along with internal control and power wiring, internal interconnecting refrigerant pipes, charging ports, system single enclosure . MS base frame for Outdoor units complete with epoxy painting and vibration isolation pads.				
1.1	Individual VRF ODU 22 HP(Model No: 38VR022H119013), including refrigent charging	Nos	2		
2	INDOOR UNITS, Cap., Supply , installtion, testing and commissioing,Loading & Unloading				
	Design, Supplying, Installation, Testing and Commissioning of VRF type indoor air-conditioning units with cordless remotes of the following capacity for mounting on ceiling, Each comprising of cooling/heating coil, blower with multi-speed motor,electronic expansion valve, supply and return air grill, filters, insulated connection of refrigerant circuit, intake air port for fresh air entry,condensate water drain pump with electronic level sensor complete,suitable to operate from central remote control & installation from ceiling with all required supports, anchor fasteners hardwares,interconnecting refrigerant copper piping, valves, supports etc.including terminations at nearest power outlet with copper wire of 3 C x2.5 sq.mm. in metallic flexible conduit and interlocking with outdoor units Including REMOTE Controller				
2.1	High Static Duct Type 16 TR (Model No: 42VD190H112011010), including remotr & refrigent charging	Nos.	2		
	TOTAL OF EQUIPMENT (Inclusive of GST)		Sub Total		
3	Supply and Installation of Copper tubing of different dia insulated with 13 mm & 19mm nitrile rubber insulation and finished				
a	Copper piping with different dia as per design for the 16.5 TR units b/t IDU & ODU, with suitable siz eof insulation.	Rmt	30		
b	Copper tubing for the room split unit b/t 1 to 2 TR , with insulation	Rmt	20		
4	Providing & Fixing of MS Outdoor Stand(VRF Outdoor)	Nos	2		
5	Supply and Installation of make PVC Drain piping 32 mm with Insulation	Rmt	80		
6	Supply & Installation for Canvas Connection for the IDU to Duct and Duct to diffusers as per site condition with the clamping etc.	Sqm	6		

7	Duct Modification for Mouth to connect with the new difusers of supply to balance a air and proper cooling in rooms , 1 lot for 1 Unit and its ducts. Cutting jointing, canvash connection, duct connection etc. as per site condition with the fitting clampping etc.	Lot	1		
8	Supply and fixing of the Supply and return diffuser 2ft X2ft	Nos.	10		
9	Electrical Wire, Cuppor cable PCV insulated, FR armoured cable				
a	Supply Installation for 4 Core 6 SQM	Rmt	40		
b	Supply of Transmission cable between IDU &ODU 3cx1.5sq.mm in conduit pipe	Rmt	90		
10	300 mm cable tary with support for the copper piping	Rmt	50		
11	Dismantelling 6400 CFM Chilled water Ductable IDU	Nos.	2		
12	False ceiling repairing	Sqm	20		
	Sub Total				
	Total Amount				