



PREMISES, ESTATE & EXPENDITURE DEPARTMENT,
CORPORATE OFFICE, NO: 254-260,
AVVAI SHANMUGAM SALAI,
CHENNAI – 600014.

**TENDER DOCUMENT
FOR
S/I/TC OF VRF/VRV AIR CONDITIONING SYSTEM ALONGWITH
ASSOCIATED ACCESSORIES FOR SETTING OF CAPC & MCB
IN INDIAN BANK PREMISES
AT FIRST FLOOR, GEE GEE COMPLEX , NO.:42,ANNA SALAI, CHENNAI - 600002**

PART-II FINANCIAL BID

Ref.No: CO:EST:CAPC -05
Date : 02.01.2021

Name of the contractor:

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Last date of submission of tenders	20.01.2021 upto 15.00Hrs. at Indian Bank, Corporate Office, Premises, Estate & Expenditure dept, First Floor, No. 254-260, Avvai Shanmugam Salai, Royapettah, Chennai – 600 014.
Date of opening Tender	20.01.2021 upto 15.30Hrs . at Indian Bank, Corporate Office, Premises, Estate & Expenditure dept, First Floor, No. 254-260, Avvai Shanmugam Salai, Royapettah, Chennai – 600 014.
Cost Of Tender	Free Of Cost.

This part of the tender should be submitted in a separate envelope and financial bid shall be quoted only in this form and no other form will be accepted.

This Tender document contains 07 pages



BILL OF QUANTITY FOR S/I/T/C OF VRV/VRF AIRCONDITIONING SYSTEMS AND ALONG WITH ASSOCIATED WORKS FOR INDIAN BANK CAPC & MID CORPORATE BRANCH AT F.FLOOR , GEE GEE COMPLEX,NO.:42,ANNASALAI,CHENNAI-02	
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1	<i>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 requirement. The basis of the design to be submitted by contractor for approval by Bank</i>
2	<i>The rate for each item of work included in the Schedule of Quantities shall, unless expressly stated otherwise, include cost of:</i>
a	<i>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.</i>
b	<i>Wastage on materials and labour.</i>
c	<i>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 recognize principles.</i>
d	<i>Liabilities, obligations and risks arising out of Conditions of Contract.</i>
e	<i>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.</i>
f	<i>The contractor shall submit all item technical submittal (Equipments, Air distribution, Insulation, etc.) for approval to meet specifications as specified before procurement at site.</i>
g	<i>In the event of conflict between Schedule of Quantities and other documents including the Specifications and approved basis of design, the most stringent shall apply. The interpretation of the Bank shall be final and binding.</i>
3	<i>All equipments, quantities and technical data indicated in this Schedule are for the Contractor's guidance only; This schedule must be read in conjunction with other documents and site conditions. The Contractor shall be paid for the actual quantity of work executed by him in accordance with the approved Shop Drawings & Basis of Design at the contract rates</i>

4	<i>This Schedule shall be fully priced and the extensions and totals duly checked. The rates for all items shall be filled in INR including RO items.</i>
5	<i>No alteration whatsoever is to be made to the text or quantities of this Schedule unless such alteration is authorised in writing by Employer. Any such alterations, notes or additions shall, unless authorized in writing, be disregarded when tender documents are considered.</i>
6	<i>The Contractor shall procure and bring Materials/Equipment to the site only on the basis of drawings approved for construction and shop drawings /Basis of Design 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.</i>
7	<i>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 works required.</i>
8	<i>The Contractor /vendor free to make site visit to ascertain feasibility/feature</i>
9	<p><i>One year (12 months) on site Comprehensive Warranty (DLP) for complete work from the date of acceptance by Bank.</i></p> <ul style="list-style-type: none"> <i>• Down-time call attendance should be within 48 hours.</i> <i>• In case the Equipment / System remains non-operational for more than 7 days then warranty period will be extended for the equivalent period for which Equipment / System remained non operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract.</i> <p><i>The total price including 1 year CMC (comprehensive maintenance contract after expiry of DLP/ Comprehensive Warranty) will be considered for evaluation of the lowest price</i></p>

Signature & Seal of the Tenderer





S.No.	Description Of Equipments / Materials	Unit	Qty.	Rate	Amount
	SECTION-1 (HVAC EQUIPMENT)				
A)	VRF AC EQUIPMENT				
1)	Variable Refrigerant Flow Air-conditioning System				
	Supply, Installation, testing and commissioning of Variable Refrigerant Flow modular type air-conditioning system with complete with indoor and outdoor units, individual remote controller, interconnected refrigerant piping, full charge of refrigerant gas , control cabling etc. as per detail given in specifications and having following items. The prices to be given in Indian rupees including all taxes and duties and delivered at site. Refrigerant to be used shall be - R 410 A only.etc as per specification complete as required.				
1.1	Outdoor Unit				
	Supply, Installation, testing and commissioning of modular type outdoor units equipped with highly efficient scroll /twin Rotary inverter type compressors single module, low noise condenser fan, vibration isolator ,suitable MS painted stand, auto check function for connection error, Y joints, auto address setting and capacity as mentioned. The system shall be suitable to operate 50HZ AC power supply & shall comprises with multiples no's of inverter, digital scroll compression, air cooled condenser fan with motor, microprocessor and condenser fan motors along with internal control and power wiring, cooling coil with internally interconnected various capacity modules ,charging port and all other required accessories and hardware. the entire unit shall be with weather resistant powder coating paint for withstanding all ambient conditions for continuous outdoor operation. The quoted capacity of the outdoor units should be actual at ambient conditions. All interconnecting piping, Y -joints and U bends within the condensing unit shall be painted with special coating to protect against severe atmosphere conditions (like drain & Pollution area) of clear transparent polymer coating for protection against corrosion from ambient air.etc as per specification complete as required. The item inclusive of lifting and installation of ODU at Terrace floor or specified location and necessary stands with centralised remote and ODU Connecting Kit etc				
	48 HP Outdoor Unit (cooling only) : Three outdoor units (Up to three combination of ODU various HP)	Nos.	1		





1.2	Indoor Units				
	SITC of Cassette type Indoor units complete with all necessary fittings and all accessories ,drain pump, supports including cordless remote control, decorative outer grille panels as per specifications and drawings. If the specified indoor unit not available nearest above (+) 5 % or upto (-) 5% can be considered				
a)	0.8tr TR Cassette unit (Compact Type with Multiple flow/ 4 Way)- 1.0 HP	Nos.	1		
b)	1tr TR Cassette unit (Compact Type with Multiple flow/ 4 Way)- 1.25 HP	Nos.	1		
c)	1.28 TR Cassette unit (Compact Type with Multiple flow/ 4 Way)- 1.6 HP	Nos.	1		
d)	1.60 TR Cassette unit (Compact Type with multiple flow/ 4 Way)- 2 HP	Nos.	1		
e)	2.0 TR Cassette unit (Round flow)- 2.5 HP	Nos.	3		
f)	2.5 TR Cassette unit (Round flow)- 3.12 HP	Nos.	1		
g)	3.20 TR Cassette unit (Round flow)- 4HP	Nos.	2		
h)	4 TR Cassette unit (Round flow)- 5HP	Nos.	7		
2.0	Y-joints For Indoor Unit				
	Supply, Installation, Testing & Commissioning of Y-joints (Suction + Liquid = complete set) for Indoor Unit of sizes as required to suit various capacity of Indoor Unit as specified above etc as per specification complete as required.	Set	16		
	ITEM A: HVAC Equipments Sub Total (A)				
B	ANCILLARY WORKS				
3.0	Refrigerant Piping for VRV / VRF System				
	Supply & fixing of interconnecting copper refrigerant pipe work between Indoor Unit & outdoor units with full gas charged R-410 A. pipe shall be insulated with Nirile Rubber insulation with fire retardent grade GC faced and thickness as per pipe dia as mention below complete as per specifications as required. (suction /liquid line)				





A)	Suction line				
a)	41.6 mm O.D. (Min. Wall Thickness - 1.21 mm)19mm thick insulation	Rmt.	30		
b)	34.9 mm O.D. (Min. Wall Thickness - 1.21 mm)19mm thick insulation	Rmt.	20		
c)	28.6 mm O.D. (Min. Wall Thickness - 0.99 mm)19mm thick insulation	Rmt.	30		
d)	25.4 mm O.D. (Min. Wall Thickness - 0.80 mm)19mm thick insulation	Rmt.	15		
e)	22.2 mm O.D. (Min. Wall Thickness - 0.80 mm)19mm thick insulation	Rmt.	15		
f)	19.1 mm O.D. (Min. Wall Thickness - 0.80 mm)19mm thick insulation	Rmt.	10		
g)	15.9 mm O.D. (Min. Wall Thickness - 0.80 mm)19mm thick insulation	Rmt.	70		
h)	12.7 mm O.D. (Min. Wall Thickness - 0.80 mm)19mm thick insulation	Rmt.	20		
B)	Liquid Line				
a)	19.1 mm O.D. (Min. Wall Thickness - 0.80 mm)13mm thick insulation	Rmt.	40		
b)	15.9 mm O.D. (Min. Wall Thickness - 0.80 mm)13mm thick insulation	Rmt.	25		
c)	12.7 mm O.D. (Min. Wall Thickness - 0.80 mm)13mm thick insulation	Rmt.	15		
d)	9.50 mm O.D. (Min. Wall Thickness - 0.80 mm)6mm thick insulation	Rmt.	90		
e)	6.35 mm O.D. (Min. Wall Thickness - 0.80 mm) 6mm thick insulation	Rmt.	25		
4.0	Condensate Drain Piping				
	Supply, Installation, Testing and Commissioning of PVC drain piping , 15 Kg pressure rating complete with fittings, supports as per specifications and insulated with 9 mm thick Nirile Rubber insulation including with Chase cutting and repairing as per specifications and drawings complete as required. The rate including P/F of Hitech pipe support with required slop and connecting to the nearest drain line				
a)	20 mm dia pipe	Rmt.	30		
b)	25 mm dia pipe	Rmt.	30		
c)	32 mm dia pipe	Rmt.	140		
5.0	Protective Coating				
	Supply & Application of protective poly shield polymer coating for protection exposed to sun light (Various size of pipes)	Rmt	RO		



6.0	Control Cable				
	Supply, installation, testing and commissioning of control cum transmission wiring of 2 x 1.0 sqmm shielded copper wire in existing MS/PVC conduits between indoor and outdoor to central remote controllers	Rmt.	350		
7.0	ODU Cowl				
	Providing & Fixing suitable ODU Cowl in order to get outside airflow including breaking of walls in finishing suitably. The rate including necessary metal gauges.	lot	3		
	ITEM A: ANCILLARY WORKS SUB TOTOA (B)				

SUMMARY OF VRV/VRF AIRCONDITIONING SYSTEM AND ASSOCIATED WORKS

SL:N O	HVAC WORKS (VRF/VRV)	Amount (In Rs)	GST in(%) in Rs	
A	HVAC Equipments		28%	
1.0	Variable Refrigerant Flow Air-conditioning System			
1.1	Out door Unit			
1.2	Indoor Unit			
2.0	Refnet Joints			
	ITEM A: HVAC Equipments Sub Total (A)			
B	ANCILLARY WORKS		18%	
3.0	Refrigerant Piping for VRV / VRF System			
4.0	Condensate Drain Piping			
5.0	Protective Coating			
6.0	Control Cable			
7.0	ODU Cowl			
	ITEM B: Ancillary works Sub Total (B)			
	Grand Total (A+B)			

Applicable GST (taxes) will be extra

Total Amount in words: Rupees.....only

GST (taxes) will be extra

Place:

Signature & Seal of the Tenderer

Date:

