

**BoQ OF AIR CONDITIONING WORK FOR CIRCLE OFFICE, CANARA BANK, KOZHIKODE**

SL.No.	DESCRIPTION	UNIT	QTY	SITC Rate	TOTAL COST
	<b>HIGH SIDE</b>				
1	<b>OUT DOOR UNIT</b>				
	Supply of following capacity high efficiency VRF / VRV Air conditioning system (2 pipe system /cooling only) with air cooled side discharge condenser units with anticorrosive blue / black coating fins, high efficiency DC motor, electronic expansion valve, control panel with all necessary protection functions, including single phase preventer, enclosed in powder coated GI sheet metal body. Minimum COP of the system shall be greater than 4 under ARI conditions for 100% load and system suitable for R410A refrigerant, complete with all accessories including anti vibration isolators.				
	The compressor shall be of highly efficient hermetic scroll type and equipped with inverter control capable of changing the speed in accordance to the cooling load requirement.				
	The outdoor unit shall have the multi-step of capacity control to meet load fluctuation and indoor unit individual control.				
a	<b>36 HP</b>	Nos	2.0		
b	<b>30 HP</b>	Nos	1.0		
2	<b>CEILING SUSPENDEED INDOOR UNITS</b>				
	Supply, installation, testing and commissioning of ceiling suspended type AHU units with 40 mm thick sandwich panel , multi speed fan, multi row DX cooling coil, insulated extended drain pan Filter.				
a	<b>13TR AHU units</b>	Nos	3.0		
b	<b>16TR AHU unit</b>	Nos	1.0		
3	<b>CEILING MOUNTED 4 WAY ROUND FLOW CASSETTE TYPE INDOOR UNITS</b>				
	Supply of following type & capacity (or nominal higher capacity) VRF / VRV Indoor units comprising of multi speed blower, electronic expansion valve,10 micron filter, condensate water drain pump with electronic level sensor (for all cassette units) and IR receiver and Supply of wireless remote controller for VRF IDU. All indoor units shall be of the same make & compatible to work with above VRV / VRF type condensing unit.				
a	<b>1.3 TR</b>	Nos	3.0		
b	<b>1.6 TR</b>	Nos	1.0		
c	<b>2.0 TR</b>	Nos	8.0		
d	<b>3.2 TR</b>	Nos	2.0		
	<b>Inverter hiwall split units</b>				
e	<b>1.0 TR Inverter Split</b>	Nos	3		
	<b>(A) TOTAL FOR SUPPLY OF MACHINES</b>				
4	<b>LOW SIDE</b>				
a	Supply & Installation of AHU Kit	nos	4.0		
b	Supply & Installation of refrigerant joints	nos	18.0		
c	Supply & Charging Of Refrigerant Gas	Kg	60.0		
d	Refrigerant piping, interconnecting the liquid and suction lines between the VRV aircooled outdoor units and the indoor units With Insulation	Rmt	388.0		

	Supply, Fabrication, installation and testing of factory fabricated sheet metal ducts in accordance with the approved shop drawings				
e	24 gauge galvanised sheet steel	Sqm	278.0		
f	22 gauge galvanised sheet steel	Sqm	142.0		
g	Supply & installation of aluminium powder coated Supply diffusers	Nos	28.0		
h	Supply & installation of aluminium powder coated Return diffusers	Nos	28.0		
i	Supply & installation of 18G Aluminium volume control Damper	Nos	37.0		
j	Supply And Installation Of Canvas Connection For AHU	Nos	4.0		
k	Supply & Installation of <b>15 mm thick Open cell Elastometric nitrile rubber</b> for duct insulation. The quoted price inclusive of adhesives fixtures etc.,	Sqm	438.0		
l	Supply & Installation of <b>13 mm thick Elastometric nitrile rubber</b> for rectangular duct insulation. The quoted price inclusive of adhesives fixtures etc.,	Sqm	400.0		
m	<b>DRAIN PIPING</b>				
	Supply and installation of <b>PVC</b> drain pipe insulated with <b>9mm</b> nitrile rubber insulation	Rmt	114.0		
	<b>OUT DOOR POWER WIRING</b>				
	Supply, installation, testing & laying of 1.1 KV grade XLPE insulated, Cu conductor armoured and PVC sheathed cables.				
n	4C x 10 sqmm - YRY	Rmt	40.0		
	<b>IN DOOR POWER WIRING</b>				
	Supply, installation, testing & laying of 1.1 KV grade XLPE insulated, Cu conductor armoured and PVC sheathed cables.				
o	3C x 1.5 sqmm	Rmt	35.0		
	<b>Communication cable laying connecting the IDUs to ODU's inside 1 ' PVC conduit.</b>				
p	2C x 0.75 sqmm	Rmt	330.0		
q	Supply, Installation & Commissioning of M.S. Catwalk of suitable size, accordingly to place all the Outdoor AC units, made out of M.S. sections like flats, hollow sections, L-Angles with necessary approved hardware and proper welding, finished with two coats of metal primer and paint, complete with scaffolding and carting away debris out of compound, cleaning the site etc. complete as per site requirements and instructions of the Architect. The bidders are requested to visit the site for assessing the required size and space.	Job	1.0		
	<b>(B)TOTAL FOR LOW SIDE</b>				
	<b>TOTAL OF A+B</b>				
<b>5</b>	<b>CAMC FOR ONE YEAR AFTER DEFECT LIABILITY PERIOD- FULL UNITS</b>				
	VRF UNITS (2 nos. of 36HP , 1 No of 30HP ODU and all VRF indoor units including 13TR -3 nos, 16 TR-1 no AHU units.				
	CAMC Charges shall not be less than 6% of A+B. If quoted less than 6%, 6% of (A+B) will be considered for arriving at L1				
a	CAMC FOR FIRST YEAR	<b>SET</b>	<b>1</b>		
b	CAMC FOR SECOND YEAR	<b>SET</b>	<b>1</b>		
c	CAMC FOR THIRD YEAR	<b>SET</b>	<b>1</b>		
	<b>(C)TOTAL FOR CAMC</b>				
<b>A+B+C</b>	<b>GRAND TOTAL ( HIGHSIDE+LOW SIDE+CAMC) EXCLUDING GST</b>				
	DATE				
	PLACE				
		SEAL AND SIGNATURE OF BIDDER			