

S. No.	Description	Qty
1	AIR COOLED WATER CHILLER (specification attached at page-02/04)	01 No.
2	Spare parts (specification and quantity as per page-02/04)	01 Lot
3	Required documentations/drawings and others as per page-03~04/04	

## Specification Sheet for Air Cooled Water Chiller

Type	Air Cooled Water Chiller
Installation Location	Outdoor
Standard	ASHRAE Standard 90.1
Quantity	01 No.
Cooling Capacity	180 USRT = 633 KW
Chilled water entering Temperature	12 °C
Chilled water leaving Temperature	7 °C
Ambient Temperature Min-Max	-3 °C to 46 °C
Altitude	2000 Ft
Refrigerant Gas type	R-134a, R-407C or R-410a
Fouling Factor	0.00010 ft <sup>2</sup> hr °F/BTU
No. of Refrigerant Circuits	02 Nos. (Factory Charged)
No. of Refrigerant Compressors	02 Nos. (Preferably having equal capacity and with variable Frequency Drive VFD )
Compressor Type	Preferably Direct Drive Semi Hermetic Rotary Screw Type
Power Supply	3 Phase, 400 Volts, 50 Hz
Power and Control Panel	Should be factory wired and function tested. Each compressor must have its own independent power and control panel. Panel enclosure should be as per IP 65 rating
Display	Preferably Backlit Digital (LCD screen) display showing all operation parameters i.e. chilled water temperatures, compressor pressures, oil pressure etc.
Temperature Controller Type	Temperature controller with compressor capacity control
Evaporator type	Preferably Shell and tube type with water at shell side and refrigerant at tube side
Condenser Fin Material	Aluminum
Condenser Fan/Motor Configuration	Condenser must have low ambient control option. Condenser fan motor should be as per IPW55/TEAO motor
Brand/Make	Preferably of Trane, Daikin, Carrier, Hitachi.

## **Spare Parts**

The supply will include spares consisting of following.

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>
i.	Compressor for circuit-1 ~ ~	01 No.
ii.	Compressor for circuit-2	01 No.
iii.	Condenser Fan Motor with fan blades	02 sets.
iv.	All Control modules with software	01 set
v.	Display Module	01 set
vi.	Low Pressure safety switch	03 Nos.
vii.	High Pressure safety switch	03 Nos.
viii.	Filter Dryer	03 Nos.
ix.	Expansion Valve	03 Nos.
x.	Overload relay	03 Nos.
xi.	Thermostat	03 Nos.
xii.	Control Transformer	02 Nos.

## **Standard Safeties & Indications:**

The Chiller unit should be factory assembled, piped, wired and shipped in one piece ready for field connection. It should be leaked tested (Pressure & Vacuum Tested) and Factory Charged with appropriate quantity of refrigerant. Unit should be supplied with all the standard temperature, Pressure gages and Safeties. In addition Unit must also have compressor over current relays, thermal protectors, high and low pressure switches etc.

## **Documents/Drawings:**

Bidder should be responsible for provision of at least 02 set of below mentioned documents / drawings in English Language for the shipped Unit.

- Certificate by the manufacturer that the equipment being supplied is brand new.
- Warranty certificate by manufacturer that equipment being supplied have been manufactured with good workmanship and are free from any defect. In case of some manufacturing defect the equipment will be replaced free of cost.

- iii. Equipment part and assembly drawing.
- iv. Unit installation drawing and manuals.
- v. Operation / Maintenance manual describing operation of unit, troubleshooting of equipment, maintenance techniques / methods and maintenance schedule etc.
- vi. Detail of Standard parts with part number and its manufacturing name.
- vii. Control and Electric wiring Diagram of Unit
- viii. CD containing all level passwords and control software.
- ix. Testing and Calibration Certificate of all supplied equipment, instruments and safeties.