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## 100-Ton Chiller Machine Specification

The Screw chiller is controlled with the following salient features:

- Temperature sensing of chilled water in and out, evaporating and ambient temperature.
- Pressure transducer based low and high pressure alarms.
- Compressor : **Compact Screw Compressor**
- Expansion valve : **Thermostatic expansion valve** used which is interlocked With the PID based temperature controller
- Capacity Control : Fully automatic, seamless from 25% to 100%
- Motor Protection : Electronic Thermistor based, with heat sensor Embedded In the stator coil.
- Reverse Rotation Protection : In-built into the chiller.
- Oil level protection : In-built into the compressor.
- Compressor : At no Load

## TECHNICAL SPECIFICATIONS (100 TR, WATER COOLED CHILLER)

### A) CHILLER

Sr. No	Item	Description
1	SYSTEM	INDUSTRIAL WATER CHILLER
2	MODEL	FC/110
3	FLOW RATE	30.28 m <sup>3</sup> / hr.
4	INLET TEMPERATURE TO CHILLER	40 DEG. C.
5	OUTLET TEMPERATURE FROM CHILLER	20 DEG. C.
6	REFIGERATION LOAD	100 TON
7	CHILLER TYPE	SHELL 'N' TUBE TYPE
8	CONDENSOR TYPE	WATER COOLED TYPE
9	CONTROL	FULLY AUTOMATIC
10	SAFETY INTERLOCKS	L.P. SWITCH & GAUGE H.P. SWITCH & GAUGE DIGITAL TEMPERATURE CONTROLLER WATER FLOW FAILURE TRIP COMPRESSOR OVERLOAD TRIP VOLTAGE SCANNER WITH UV/ OV / SPP / RP OIL FAILURE SWITCH

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**B) COMPRESSOR**

1. MAKE

:

BITZER / FRASCOLD
2. NO. OF COMPRESSOR

:

2 Nos.
3. TYPE

:

COMPACT SCREW COMPRESSOR
4. MAX OPERATING CURRENT

:

160.0 A
5. MAX POWER INPUT

:

95 KW
6. REFRIGERANT GAS

:

R – 22

**C) PUMP**

1. MAKE

:

CROMPTON / KIRLOSKAR
2. NO. OF PUMPS

:

6 NOS.

**D) ELECTRICAL SPECIFICATION**

1. POWER SUPPLY

:

400 V +/- 10% / 3 PH. / 50 Hz +/- 5 %
2. CONNECTED LOAD CAPACITY

:

210 KW

**E) GENERAL CONDITION**

1. DESIGN TEMPERATURE

:

45 DEG. C. AMBIENT
2. NOISE LEVEL

:

LESS THAN 85 db at 1.0 MTR DISTANCE
3. CONDENSER FAN CONTROL

:

N. A.
4. CONDENSER FAN TYPE

:

N. A.
5. REFRIGERANT REQUIRED

:

R – 22



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## 1. MAKE OF ITEMS : SEMI HERMETIC CHILLER

SR. NO.	ITEM	MAKE
1.	COMPRESSOR	BITZER / FRASCOLD
2.	CONDENSOR	BHARAT
3.	CHILLER	ALFA LAVAL
4.	BASE FRAME	Self
5.	EXPANSION VALVE	DANFOSS / SPORLANE / ALCO
6.	LP / HP SWITCH	DANFOSS / ALCO
7.	OIL LEVEL SWITCH	N. A.
8.	CONTROL PANEL	Self
9.	ELECTRICALS	L & T / SIEMENS / SCHNIDER
10.	VALVE	IMPORTED
11.	ISOLATION VALVES	IMPORTED
12.	FILTER / DRIER	DANFOSS (DENMARK)
13.	VOLTAGE SCANNER	PROTON / MINILEC / L & T
14.	MICRO PROCESSOR	Self
15.	GLYCOL PUMP	CROMPTON / KIRLOSKAR
16.	GLYCOL STORAGE TANK	Self
17.	COOLING TOWER	RAJ FIBRE
18.	EXHAUST FAN	N. A.

## 2. EXCLUSION

1. ALL CIVIL WORK
2. TOTAL INTERCONNECTING PIPING AND INSULATION WORK, OUTSIDE THE BASE FRAMES OF SUPPLIED EQUIPMENT
3. TOTAL INTERCONNECTING POWER CABLING AND OTHER RELATED ELECTRICAL WORK, OUTSIDE THE BASE FRAMES OF OUR SUPPLIED EQUIPMENT.
4. UNLOADING, POSITIONING AND INSTALLATION OF ALL THE EQUIPMENT AT THEIR PROPER PLACE, WITH DUE CARE.
5. ANY OTHER MATERIAL / WORK, WHICH IS NOT INCLUDED WITHIN OUR SCOPE AND MAY BE REQUIRED FOR THE PROPER COMMISSIONING AND OPERATION OF THE SYSTEM.
6. GLYCOL SOLUTION.