

Products

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1) Water / Process / Laboratory / Mini / Portable / Plastic / Compact / Air Cooled / Water Cooled / Lackre / Mold Chillers:-

A water chiller is an industrial water refrigeration system that produces cold water to cool industrial process equipment. A WC is a complete system filled with refrigeration components including a compressor, condenser, evaporator, refrigerant pipes, coolant expansion reservoir, pumps and so on. Water is cooled to temperature ranging anywhere between 6degC to 25deg C and pumped via a hydraulic circuit to re-circulate through the process equipment.

Chiller operates year round for a variety of water cooled industrial and medical equipment.

GENERAL DESCRIPTION

Chillers are divided into three basic units.

1. Refrigeration system
2. Control system
3. Water circulating system.

1. Refrigeration System:

This system consists of compressor, evaporator condenser and expansion valve. The evaporator is the Tank N Coil/ Shell & Tube / Plate Heat Exchanger type, which is specially designed for higher cooling efficiency and better contact surface area between water and evaporator with insulated stainless steel tank.

Hermetically scaled reciprocating / semi scaled / scroll compressor are highly energy efficient and wide operating voltage range of 180-260v, giving the trouble free performance and long life. The condenser is specially designed and made of bright copper tube for better condensation.

The high quality TEV valve having temperature sensing bulb to controls. The opening of valve needle. Additional of this thermal element of the valve lets the evaporator fill more quickly and permits more efficiency.

2. Control System:

Electric cabinet accommodating all necessary power and control components:

- 1) Microprocessor based digital temperature controller to set the temperature as per requirement. Multi protection circuit breaker, Single-phase preventer, Air-break contactor and relay for electrical safety High and Low Pressure switch to cut-off the compressor on undesirable operating pressure Selector switch for operate compressor and pump. Indicator lamps to indicate plant and pump are working.

- | | |
|-------------------------|------------------------------|
| 2) Temperature Setting | Settable as per requirement |
| High pressure cut out | 350 PSI |
| Low pressure cut out | 35 PSI |
| Safety Devices Settings | OLP Factory set |
| | Over load relay Factory set. |

3. Water Circulation System:

The Chiller has insulated Stainless Steel Tank with inlet, outlet overflow and make up lines for water-cooled condenser, inlet and outlet connections are provided for water circulation to condenser from cooling tower. Incase of Air cooled type Unit in-built pump of suitable capacity is provided to circulate chilled water to-n-fro from process.

ADVANTAGES:-

- 1) Precise temperature control under continuous regulated supply of cooling fluid.
- 2) Factory tested, piped, wired and charged for hassle free start-up and operation.
- 3) Local Services and parts for quick and knowledgeable maintenance and service.
- 4) Easy Operation

5) High Energy Efficiency

TECHNICAL SPECIFICATIONS – CHILLER						
Model	TR/KW	Amps/W	Water Flow (LPM)	Storage Capacity (LPM)	Temp.Range Deg C	Dimensions
500	0.5/1.7	03/660	15	50	+20 to +2	26x20x20
1000	1.0/3.5	08/1760	35	100	+20 to +2	46x25x25
1500	1.5/5.2	10/2200	45	150	+20 to +2	46x27x27
1500/3Ph	1.5/5.2	04/1760	45	150	+20 to +2	46x27x27
2000	2.0/7.0	14/3080	65	175	+20 to +2	46x27x27
2000/3Ph	2.0/7.0	05/2200	65	175	+20 to +2	46x27x27
3000/3Ph	3.0/10.5	08/3520	90	250	+20 to +2	46x25x25
4000/3Ph	4.0/14.0	10/4400	110	275	+20 to +2	46x25x25
5000/3Ph	5.0/17.6	12/5280	175	300	+20 to +2	46x25x25
Due to continuous R& D, specification and dimensions may change without prior notice.						
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1B) Hydraulic Oil Chillers:-

Sophisticated multi tasking machines of today employ numerous hydraulic operations to achieve high productivity at desired quality levels. Hydraulic systems in turn employ special and specific oil with a wide viscosity range. These hydraulic oils stores heat during its operation and the continuous addition of heat reduces the viscosity of these oils. As the oil thins down, the hydraulic system starts to malfunction due to internal leaks. Therefore it becomes essential to maintain specified temperature limits for this oil during operation. A hydraulic oil chiller is normally connected in parallel to the oil tank through a dedicated built in pump.

This chiller consists of systems fitted with refrigeration components including the compressor, condenser, evaporator, refrigeration pipes, oil pump and electric panel. Chillers help maintain the oil temperature to precise temperature levels which in turn maintains uniform physical and chemical properties of the coil in operation. This level of precise temperature control of fluids is not possible by any other method of cooling. Critical industrial hydraulics have special needs beyond mere cooling such as year round operation, precise temperature regulated and a lean circulation loop: which is only possible with equipment matched factory tested oil chillers.



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3000/3Ph	3.0/10.5	08/3520	90	250	+20 to +2	46x25x25
4000/3Ph	4.0/14.0	10/4400	110	275	+20 to +2	46x25x25
5000/3Ph	5.0/17.6	12/5280	175	300	+20 to +2	46x25x25
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2) **DEHUMIDIFIERS**:- Dehumidifier is an appliance that reduces the level of humidity in the air. It is the most common most type, usually work by drawing moist air over a refrigerated coil with a small fan. Since the saturation vapour pressure of water decreases with decreasing temperature, the water in the air condenses and drips into a collecting bucket. The air is then reheated by the warmer side of the refrigeration coil. This process works most effectively with higher ambient temperatures with a high dew point temperature. In cold climates, the process is less effective. They are most effective at over 45 percent relative humidity, higher if the air is cold.

TECHNICAL SPECIFICATIONS:- INDUSTRIAL DEHUMIDIFIERS

Model	AESDH-100	AESDH-150	AESDH-200	AESDH-250
Capacity	100 Ltr	150 Ltr	200 Ltr	250 Ltr
Coverage Area	1000ft ²	1500sqft	2000ft ²	2500ft ²
Humidity Setting	31% to 80%	31% to 80%	31% to 80%	31% to 80%
Water Tank	10 Lit	10 LTR	15 Lit	15 Lit
Body Material	M.S.Powder Coated	Powder Coated	M.S.Powder Coated	M.S.Powder Coated
Refrigerant	R22	R22	R22	R22
Max Power	1800 Watt	3500 Watt	5000 Watt	7000 Watt
Voltage	220V AC Hz	220V AC 50Hz	220V AC Hz	220V AC Hz
Noise Level	50Db	55dB	50dB	50dB
Control System	Digital Controller	Digital Controller	Digital Controller	Digital Controller

Size (LxBxHInch)	22 x 22 x38	24 x 24 x 38	28 x 28 x38	28 x 28 x38
Weight (Kg)	80Kg	85 Kg	95Kg	115Kg

3) HUMIDIFIERS:-A **humidifier** is appliance that increases humidity (moisture) in a single room or in the entire area. There are point-of-use humidifiers, which are commonly used to humidify a single room, and whole-space, which connect to the HVAC system to provide humidity to the entire area.

ULTRASONIC HUMIDIFIER

GENERAL DESCRIPTION

Humidifier are divided into three basic units.

4. Ultrasonic modular plate
5. Water Tank & mist blowers
6. RH meter & Electrical Panel.

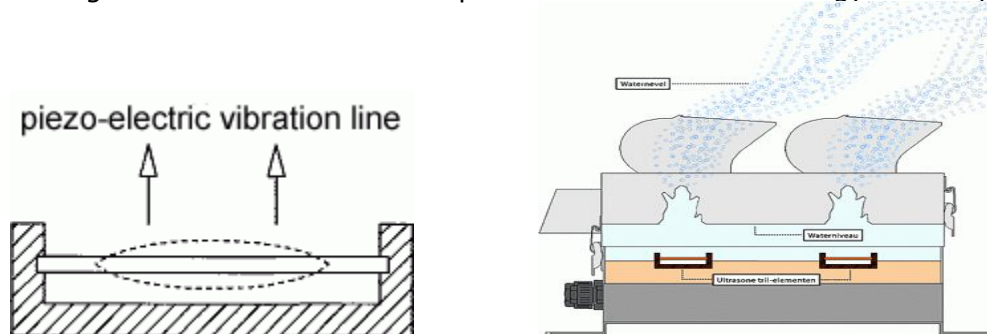
4. Working Principle:

A piezoelectric transducer immersed in water bed, converts a high frequency, electronic signal into a high frequency mechanical oscillation. As the oscillation speed is increased to a level where the water particles can no longer follow the oscillation surface, momentary vacuum and strong compression occurs, leading to explosive formation of air bubbles (cavitations). At cavitations broken capillary waves are generated and minute droplets break the surface tension of water and are quickly dissipated into air, taking vapor (1-10 μ dia.) form and absorb into the air stream that too without heating it.

The Operating principle of humidifier is based on superimposition of two effects:

- 1) Cavitations Bubble implosion: - Change in amplitude of oscillator gives rise to powerful hammer that release tiny cavitations bubbles. The implosion of bubbles on the surface emits tiny water aerosols into the ambient air.
- 2) Capillary wave theory: - The ultrasonic oscillators generates the regularly formed Rayleigh surface waves in the water tank. Minute water aerosols are also emitted into the ambient air on the crests of these waves.

By superimposing these two effects, the use of ultrasonic humidifiers enables the homogeneous aerosol mist to be produced with minimal energy consumption.



5. Control System:

Electric cabinet accommodating all necessary power and control components: Microprocessor based digital RH controller to set the RH% as per requirement. Multi protection circuit breaker, FUSE, CONTACTOR for electrical safety to cut-off the HUMIDIFIER on undesirable operating HUMIDITY to be maintained.

6. Water Tank & Mist Blowers:

The unit has stainless steel tank with inlet, overflow, make up & drain line. Float valve is provided to cut-off the supply when the water level is achieved. It is strongly recommended to use soft water/ro/DM water in the humidifier which will results in increase the life of unit. Drain valve is provided to clean the water at regular interval of 8days.

Mist Blowers send the fumes into the space where the RH% level needed to increase.

NOTE : DO NOT START THE UNIT WITH OUT WATER IN TANK.

TECHNICAL SPECIFICATIONS:- ULTRASONIC HUMIDIFIER

Sr. No.	TECHNICAL SPECIFICATIONS	Model:UH-A01	Model: UH-A02	Model:UH-A03	Model:-UH-A04
1	Evaporation Capacity-LPH	6	9	12	15
2	Power Consumption	600W	900W	1200W	1500W
3	Water Level	AUTO	AUTO	AUTO	AUTO
4	Water Quality Required	R.O./D.M	R.O./D.M	R.O./D.M	R.O./D.M
5	Display & Humidity Controller	Digital	Digital	Digital	Digital
6	Working Temperature	5 to 40°C	5 to 40°C	5 to 40°C	5 to 40°C
7	Air Volume	400 m ³ /hr	400 m ³ /hr	400 m ³ /hr	400 m ³ /hr
8	Dimensions- L x B x H(inch)	20" x 15" x 18"	20" x 15" x 18"	32" x 18" x 21"	32" x 18" x 21"
9	Body Construction	G.I.PowderCoated	G.I.PowderCoated	G.I.PowderCoated	G.I.PowderCoated
10	Water Tank Construction	S.Steel	S.Steel	S.Steel	S.Steel
11	Floor Space Area (Sq.mtr)	80 -100 (HS441)	100 -150	150 - 200	200 – 250 (HS443)



4) Panel Air Conditioners:-

Sensitive electronic / electrical enclosures used for machine tools and other industrial applications are installed in shop floors, which are laden with oil mist and conductive dust in its atmosphere. Protecting the electronic devices and operating them at highest efficiency levels becomes mandatory to maintain high productivity. Mounting a panel air conditioner to such enclosures will ensure controlled temperature levels, low relative humidity, freedom from oil mist and dust.

Telecommunication infrastructure panels that house sensitive and critical electronics are installed in outdoor locations. These panels are subjected to high /low ambient temperature, rain, wind, saline environment and dust. Use of an appropriate air conditioner is mandatory in such applications. The PAC are designed and manufactured to suit hazardous outdoor environment and still operate at high efficiency

levels ensuring optimum operation of critical electronics. Testing of these air conditioners are carried out at sophisticated laboratories that include test like high and low temperature tests, cooling performance tests at various ambient temperatures, salt fog test, temperature cycling test, random vibration test, etc. Various other applications like medical equipments, robotics, analytical equipment, food processing equipment, etc. are also driven and controlled by sensitive electronics that require an equally sensitive air conditioner. We are able to provide thermal solutions to a wide gamut of applications owing to our broad portfolio of air conditioners and constant R&D efforts to provide a unique solution each time.

Sr.No	MODEL	PAC-01	PAC-02	PAC-03	PAC-04
1	CAPACITY	350W / 500W	750W / 1000W	1400W / 1600W	2500W / 2700W
2	COMPRESSOR	Kirloskar Copeland	Kirloskar Copeland	Kirloskar Copeland	Kirloskar Copeland
3	REFRIGERANT	134a	134a	134a	134a
4	RATED CURRENT	2.2 Amps	3.5 Amps	4.6 Amps	5.5 Amps
5	SUPPLY VOLTAGE	230V,50Hz,1Ph	230V,50Hz,1Ph	230V,50Hz,1Ph	230V,50Hz,1Ph
6	UNIT DIMENSION(H x W x D)	22" x 15" x 8"	30" x 15" x 8"	38" x 15" x 8"	42" x 15" x 8"
7	UNIT WEIGHT(Apprx.)	28 Kgs	35 Kgs	48 Kgs	54 Kgs
8	TEMPERATURE RANGE	+28°C To +55°C	+28°C To +55°C	+28°C To +55°C	+28°C To +55°C
9	DUTY CYCLE	100%	100%	100%	100%
10	HEAT EXCHANGERS	Cu Tubes & Al.Fins	Cu Tubes & Al.Fins	Cu Tubes & Al.Fins	Cu Tubes & Al.Fins
11	MOUNTING TYPE	Panel Mounting	Panel Mounting	Panel Mounting	Panel Mounting

TECHNICAL SPECIFICATIONS:-PANEL AIR COOLER

- 1) **Refrigerated Air Dryer:** - The Copper Corrosion free tube in tube type Heat Exchanger performs as a evaporator as well as Pre-cooler. The well balanced design maintains fluid velocities through tubes and promotes maximum heat transfer and minimum pressure drop. Adjustable Electronic timer controlled Auto drain valve discharged contaminate and water automatically at regular interval. The compact and portable space conscious designs are easy to install and operate.



Refrigerated Air Dryer

REFRIGERATED AIR DRYER- TECHNICAL SPECIFICATIONS						
SL.NO.	MODEL	Capacity CFM/CMH	Max. Pr Bar G / PSIG	Amps / W	Air Connections In / Out	Dimensions H x L x D
1	A20	20/34	16/232	1.5/330	½ " BSP	25x18x16
2	A40	40/68	16/232	2.0/440	½ " BSP	25x18x16
3	A60	60/102	16/232	3.0/660	1" BSP	39x25x21
4	A80	80/136	16/232	3.5/770	1" BSP	39x25x21
5	A100	100/170	16/232	4.0/880	1 1/2" BSP	39x25x21
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2) Heat Pump (Water Heater)



7) Mould Temperature Controllers :-1) Advanced microprocessor controller displays operation and fault status. 2) Accurate digital readout of process temperature against set point. 3) Easy to service and maintain: Side panels easily openable.4) Tubular cooling coil and stainless steel heater. 5) Reliable and high performance pump. All moveable parts in contact with the medium (water) made of stainless steel. 6) Totally safe; dual safety heaters. 7) Can handle processing temperature upto 150oC in oil version and upto 90oC in water version. 8) Easy to move: mounted on wheels.



8) Cooling Tower :- The Fiber glass Reinforced Plastic **Cooling Tower** also called as **Bottle Shape Cooling Tower**. The Ranges are from 10 TR to 500 TR. Bottle Shape Cooling Towers Specifications 10 RT to 500 RT FRP Cooling Towers India.

Our spectrum of offerings covers:

- Process Refrigeration Plants
- Cooling Appliances
- Food Process Machinery Plant

- Cold Storage Systems
- Refrigeration Systems
- Industrial air conditioning Central Plant
- Water Treatment Plant (RO Plant and swimming Pool)
- Building Management Services
- Mechanical, Electrical & Plumbing Services

10a) Ducting Distribution System

10b) Chilled Water Piping.

11) Industrial Ventilation Unit (Centrifugal Blowers):Pls attached photos as given



12) Industrial Exhaust Unit (Hot Air Exhaust Unit) (Centrifugal Blower Unit):Pls attached photos as given