

Negative Temperature Chiller

EP3WB Series



Micro-controller Based

Key Highlights

- Precise temperature control
- Ultra-low temperature output: -25 deg C
- Semi Sealed Reciprocating Compressor with R 404a refrigerant
- High performance, low maintenance system
- Integrated skid design
- Highly efficient Straight Tube Shell & Tube Evaporator
- Micro Controller

ULTRA LOW TEMPERATURE CHILLERS WITH ENERGY EFFICIENT R-404A REFRIGERANT

EP3WB series Negative Temperature Chillers are quality engineered for year – round operation under demanding industrial applications. Combining a compact design, durable construction and a superior control platform, EP3WB chillers will provide maximum cooling for your application. The cooling capacity of EP3WB series chillers ranges from 2 TR to 17 TR with operating temperature of 0°C to -25°C.

Proven key component from reputed international brands have been chosen for ultimate reliability. All chilled Media contact surfaces are non-ferrous for protection against corrosion. All wetted surfaces are stainless steel, copper or other non-ferrous material. Shell and Tube Evaporator provide higher heat transfer coefficients due to reduced fouling. Evaporator Strainer - protects the evaporator from solid contaminants in the process Media stream. Tool free access panels and a neatly organized internal component layout provide easy access and service. Simply remove the panels to gain access to the entire cabinet of the chiller. Factory tested on load condition prior to shipment.

Description of Functions	Micro-Controller Based	Premium Control PLC Based
Display Parameters		
Process Fluid Supply Temperatures	●	●
Process Fluid Return Temperatures	-	●
Evaporator Fluid Leaving Temperature	●	●
Compressor Running Hours	●	●
Pump Running Hours	●	●
Control Parameters		
Prevent Short Cycling of Compressor	●	●
Adjustable Deviation Alarm Timer	●	-
Freeze Protection Safety	●	●
Automatic Water Make-up Valve	●	●
Master Reset Function to Restore Factory Defaults	●	●
Three Phase Monitor Feature	●	●
Compressor Running Current	-	●
Remote Control Option	●	●
Alarms & Warnings		
High Process Fluid Temperature	●	●
Low Process Fluid Temperature	●	●
Evaporator Fluid Freeze	●	●
Evaporator Fluid Low Flow	●	●
Refrigerant High Pressure	●	●
Refrigerant Low Pressure	●	●
Compressor Overload	●	●
Pump Overload	●	●
Condenser Fan Overload	●	●
Reservoir Low Level	●	●
Compressor Motor Trip on High Temperature	●	●
Oil Level Low	●	●
Communications & Remote Interfaces		
Modbus RTU	○	○
Modbus TCP/IP	-	○

● = Standard, ○ = Optional, - = Not Available

Unique Features

- Micro-controller based operating system
- Energy efficient & reliable reciprocating compressor with suction gas cooled motor
- Crank case heater to prevent liquid migration of refrigerant to compressor
- Accumulators to avoid liquid refrigerant migration to compressor
- Filter dryer and sight glass with moisture indicator to ensure moisture free system
- Large size stainless steel insulated tank to prevent heat loss
- Dry running protection of pump by water level sensor in the tank
- Antifreeze thermostat for protection of evaporator and compressor
- High-volume, high-pressure pump with stainless steel impeller
- Inbuilt process media bypass with valves
- Suction and discharge refrigerant gauges

Optional Features

- Water pressure gauge
- PLC based control
- Water flow meter
- Solenoid valve & NRV for overhead plumbing
- Tankless / Pumpless kits
- High pressure (high flow process pumps)
- Variable speed compressor

Technical Specifications

Model	EP3WB 7	EP3WB 16	EP3WB 24	EP3WB 28	EP3WB 38	EP3WB 43	EP3WB 60
Performance Characteristics							
Nominal Capacity in KW (TR) @ +5 °C - Brine 7.5 %	23.2 (6.6)	43 (12.3)	70.6 (20.1)	82.5 (23.5)	100.8 (28.7)	127.5 (36.3)	172.6 (49.1)
Nominal Capacity in KW (TR) @ 0 °C - Brine 20 %	19 (5.4)	35.3 (10.1)	57.6 (16.4)	67.8 (19.3)	82.9 (23.6)	104 (29.6)	140.9 (40)
Nominal Capacity in KW (TR) @ -5 °C - Brine 35 %	15.4 (4.4)	28.83 (8.2)	46.4 (13.2)	55.2 (15.7)	67.5 (19.2)	83.8 (23.9)	113.6 (32.3)
Nominal Capacity in KW (TR) @ -10 °C - Brine 45 %	12.3 (3.6)	23.2 (6.6)	36.9 (10.5)	44.4 (12.6)	54.2 (15.4)	66.8 (19)	90.4 (25.7)
Nominal Capacity in KW (TR) @ -15 °C - Brine 60 %	9.7 (2.8)	18.5 (5.3)	29 (8.2)	35.1 (10)	43 (12.2)	52 (14.8)	70.8 (20.2)
Nominal Capacity in KW (TR) @ -20 °C - Brine 75 %	7.5 (2.1)	15.78 (4.5)	23.8 (7.5)	28 (8)	37.8 (10.8)	43.3 (12.3)	60.2 (17)
Nominal Capacity in KW (TR) @ -25 °C - Brine 85 %	-	11 (3.2)	16.8 (4.8)	20.7 (5.9)	25.2 (7.2)	29.7 (8.5)	-
Compressor Quantity / KW	1/5	1/7	1/12	1/14	1/17	1/20	1/31
Refrigerant	R 404 A						
No. of Refrigerant Circuits	1						
Standard Evaporator cum Process Pump Qty. / KW	1/1.1	1/1.5		1/3		1/4	
Maximum Flow to Evaporator LPM	120	230		380		480	
Maximum Pressure Bar	6	4.8		5.4		5.6	
Nominal Flow LPM @ Bar	83 @ 4	150 @ 3.8		280 @ 4.2		333 @ 4.8	
Water Reservoir Capacity Liters	200		240	280	360		
Condenser Water Cooling Capacity Require TR	15	24	38	50	60		
Condenser Water Flow Rate LPM	150	240	380	500	600		
Condenser Water In/Out - BSP	1-1/2"	1-1/2"	2"	2-1/2"	2-1/2"		
Dimension (mm)							
W - Width	1120		1360				
D - Depth	2070		2070				
H - Height	1800		1800				
Weight (Installed Kg)	850	950	1050	1200	1300	1350	1550
Chiller Connections In / Out BSP	1"	1-1/2"	2"	2-1/2"			
Voltage / Connected Load KW							
Voltage	415V, 50 Hz, 3 Phase						
Connected Load (KW)	7.06	11.5	19.5	24.8	29.3	30.3	40.3
Control Voltage	24V DC						
Control Range in Degree Celsius	-25°C to +5°C						
Water Quality	Require treated water with PH value in 7.5 to 8.5, hardness less than 50 PPM , electrical conductivity < 10-30 µS/ cm2 with glycol addition require						
Color	Black RAL 9005 / RAL 7047 Telegrey 4						

All specifications are subject to change without prior notice.

*Nominal capacity mentioned at different brine temperature & based at cooling tower water inlet temperature of 32°C for condenser cooling.

LEADING MANUFACTURER OF PLASTIC AUXILIARY EQUIPMENT

Material Storage | Conveying | Drying | Blending | Heat Transfer | Size Reduction



(An ISO 9001:2015 Certified Organization)

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