

Precise Temperature Control; Compact Footprint

The Conair EP1 Series Portable Chillers are designed for 1 to 3 ton applications. Available as air-cooled or water-cooled, with pump sizes from 1/4 to 3 Hp {0.2 to 2.2 kW} for air-cooled units, and 1 to 3 Hp {0.7 to 2.2 kW} for water-cooled units, the EP1 Series boasts nonferrous construction (evaporator, pump, reservoir and piping) to resist corrosion, a compact footprint with easy-to-access interior, and a control that provides precise temperature control along with extensive diagnostics.



Model EP1A-02
(air-cooled, 2 ton capacity)

Quality Construction; Reliable Operation

With more standard features than the competition, the EP1 Series Portable Chillers are designed for indoor use in industrial manufacturing locations.

Both water-cooled and air-cooled units ship with a full refrigerant charge, eliminating the need for charging before operation. This saves time and money, right out of the box. Units with a remote air-cooled condenser ship with a nitrogen charge.

All EP1 Chillers are manufactured using painted, heavy-gauge steel to form a cabinet with tool-free access.

Conair's innovative control system is designed specifically for portable chiller applications. The easy-to-use operator panel utilizes a four-plug wiring design which allows the entire control board to be replaced in minutes.

▶ Dependable chiller performance

Designed with a comprehensive group of built-in protective features, the EP1 assures dependable performance with minimum downtime. A start-to-start anti-recycle timer prevents excessive compressor cycling for extended compressor life. An evaporator inlet strainer removes any debris from the process fluid to prevent costly downtime due to a clogged evaporator.

▶ More standard features

The EP1 Series Portable Chillers come equipped with standard features that other manufacturers would offer as options. Features which guarantee long life, simple operation, and quality end results are included as standard with this series.

▶ Energy efficient

Constructed with the energy efficient and reliable rotary compressor (1 ton unit) and the energy efficient and industrial scroll compressor (2 and 3 ton units), these compact chillers save you money by saving energy.



Control Features



Standard control features:

- Easy-to-read display of operating temperatures, alarms, and menus.
- Manual reset of safeties from front panel eliminates need to open chiller cabinet
- Alarm delay times stop nuisance alarms during start-up and setpoint changes
- Compressor cycling delay prevents short cycling and extends compressor life

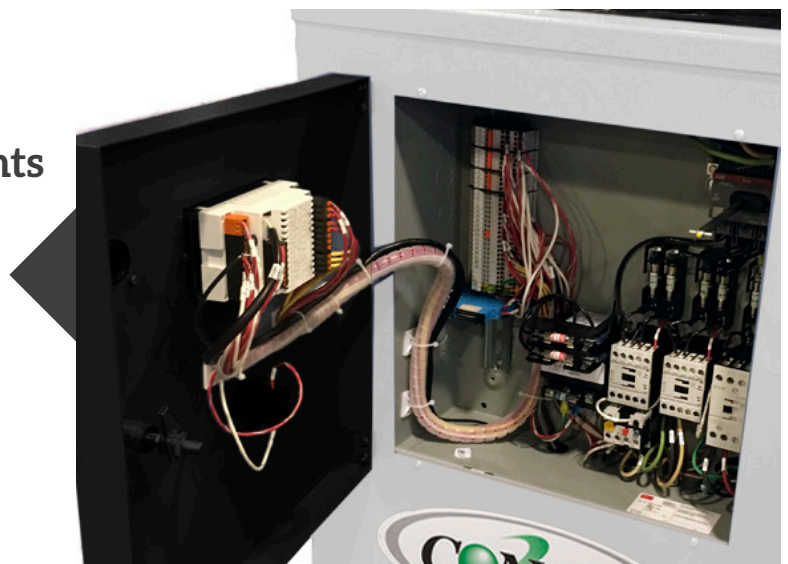
- PID control program algorithm provides $\pm 1^\circ\text{F} / ^\circ\text{C}$ accuracy
- High/low temperature deviation alarms
- Easily switches between $^\circ\text{F}$ and $^\circ\text{C}$ readouts
- Low-flow protection

Optional control features:

- Larger pumps
- Alarm horn
- Automatic make-up
- Low tank level alarm
- Power phase monitor alarm
- Rotary non-fused disconnect
- Branch circuit fusing
- CUL508A industrial control
- Modbus TCP/IP communications
- Return fluid temperature display

High Quality Electrical Components

All Conair EP1 Series Portable Chillers come standard with a NEMA 1 electrical enclosure to protect the microprocessor and chiller wiring. High quality electrical components meet IEC electrical standards and are fully tested before shipping. Disconnect switches, C-UL 508A industrial control panel are affordable options.



Features



01

Stainless steel brazed plate evaporator provides high efficiency heat transfer

02

Insulated polyethylene reservoir with removable cover

03

Water-cooled units have cleanable shell-and-tube condensers and a water regulating valve for head pressure control

04

Efficient and reliable one ton rotary compressor or two and three ton scroll compressors

05

Process pump with pressure gauge

Mechanical features

- Electronic hot gas bypass for stable capacity control
- Air-cooled units have copper tube / aluminum finned condensers and includes air inlet filter
- Remote condenser units include a galvanized steel remote condenser with fans and copper tube / aluminum fin coils with a nitrogen holding charge

Electrical features

- Compressor, pump and condenser fan starters mounted and wired to motors
- Single-point main power block for simple wiring connection
- Freezestat safety switch with solid state sensor
- High and low refrigerant pressure safeties
- Pressure or flow switch interlocked with compressor

Other features

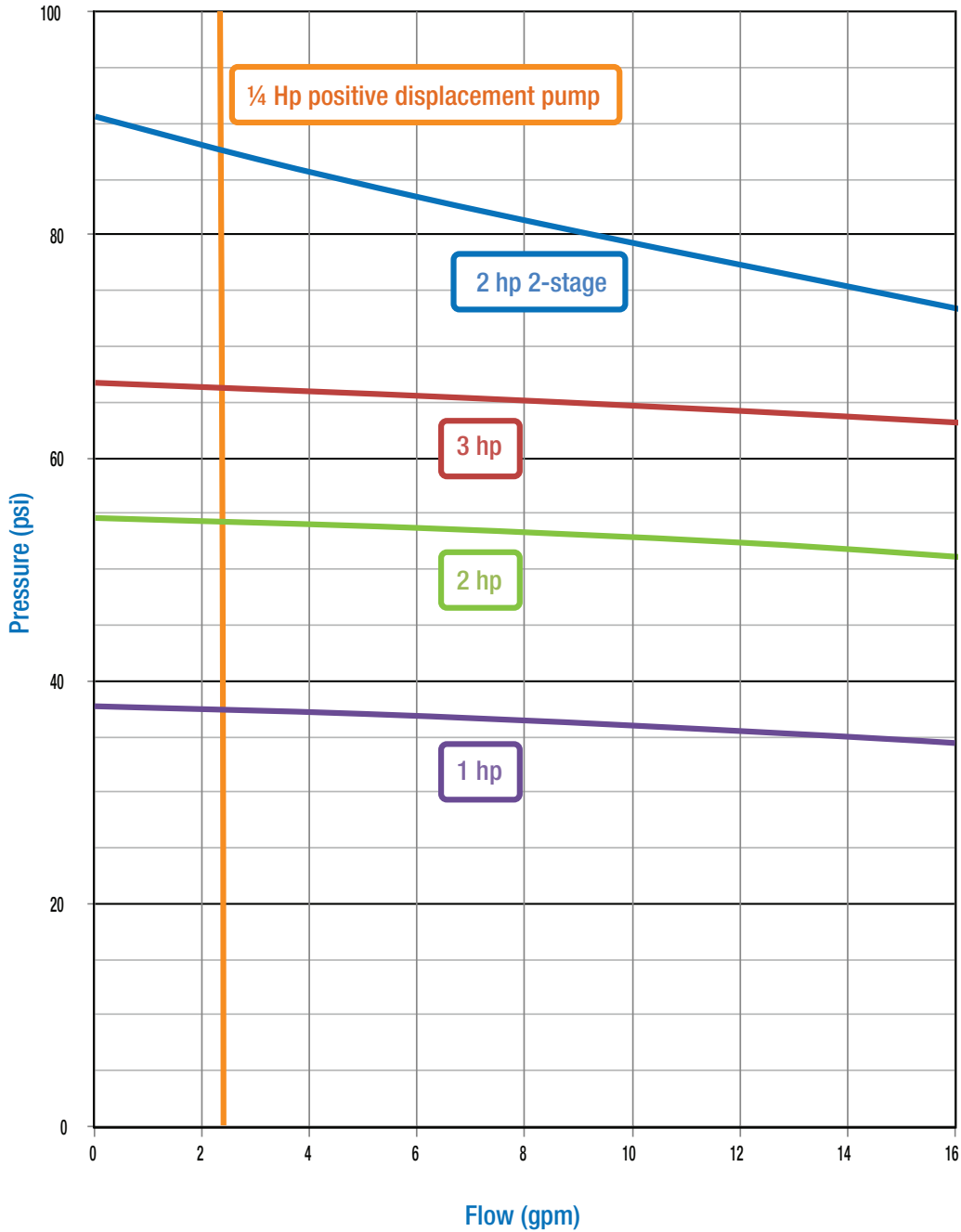
- Nonferrous construction of evaporator, pump, reservoir and piping to resist corrosion
- Controller to provide complete diagnostic and operational display, as well as accurate temperature control
- Air-cooled condenser is generously sized for ambient temperatures up to 115°F {46°C}
- Internal insulated polyethylene reservoir comes with large capacity and a removable top
- Condenser fan discharges air quietly through the top of the unit
- Hot gas bypass provides accurate capacity control and extends compressor life
- Process Y-strainer protects the evaporator from contaminants in the water
- External sight glass, fill connection and drain connection
- Smaller footprint that takes up less floor space
- Easily removable side panels allow quick access to interior components



Pump Curves

Water temperature at 50° F {10° C}

EP1 Series Pump Curves (60 Hz)



Specification Notes

Pump availability: 0.25 Hp {0.19 kW} standard for 1.0 ton; 1 Hp {0.75 kW} standard for 2 and 3 ton; 2 Hp, 2 Hp {1.49 kW} 2-stage and 3 Hp {2.24 kW} optional for 2 and 3 ton.

Pump curves do not reflect pressure drops due to internal piping.

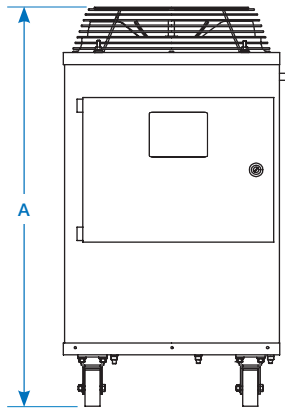
These pump curves are non-overloading using the service factor of the motors.

Specifications may change without notice. Check with your Conair representative for the most current information.

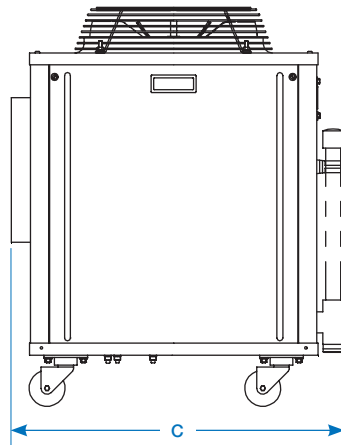


Specifications

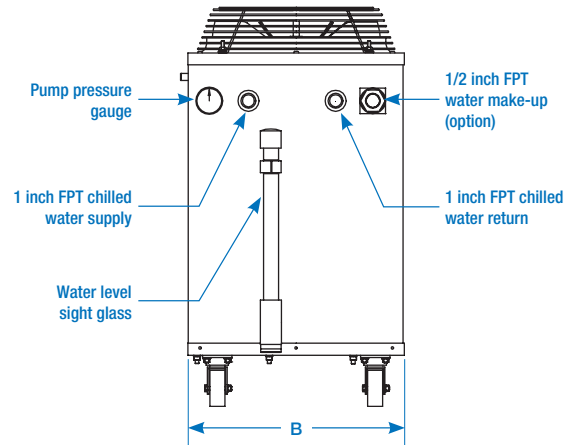
Air cooled



Front view
(EP1A)

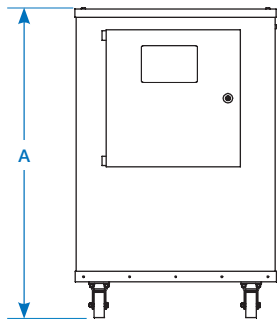


Side view
(EP1A)

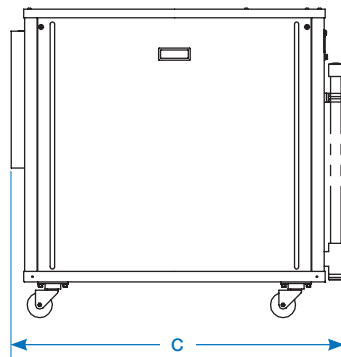


Rear view
(EP1A)

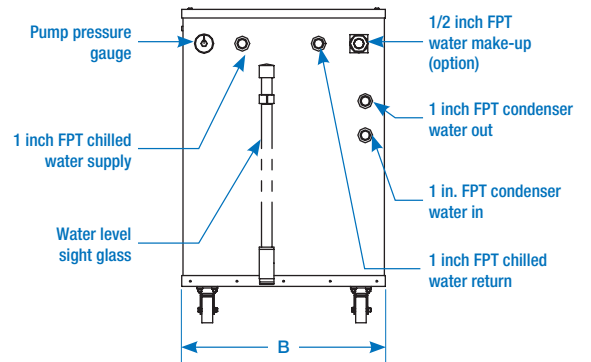
Water cooled / remote condenser indoor unit



Front view
(EP1W and EP1R)

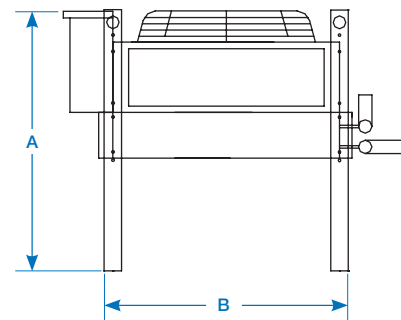


Side view
(EP1W and EP1R)

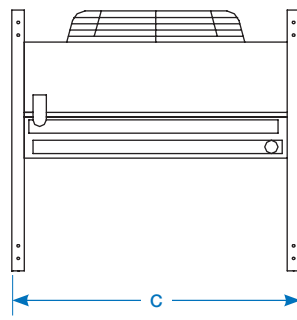


Rear view
(EP1W and EP1R)

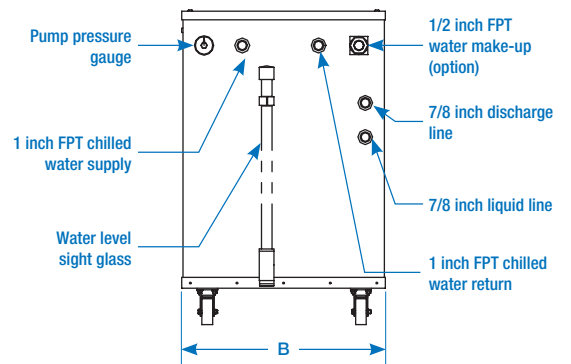
Remote condenser outdoor unit



Front view
(EP1W and EP1R)



Side view
(EP1W and EP1R)



Rear view
(EP1W and EP1R)

Specifications

Models	EP1A-01	EP1A-02	EP1A-03	EP1W-02	EP1W-03	EP1R-03 (Indoor unit) [†]	EP1R-03 (Outdoor unit) [‡]	
Condenser	Air cooled			Water cooled		Remote		
Performance characteristics								
Cooling capacity tons*	1.0	2.0	3.0	2.2	3.3	3.0	N/A	
Setpoint range °F {°C} †	20 to 65 {-7 to 18}						N/A	
Refrigerant	R407C							
Air flow ft ³ /min	1110	1585	2470	N/A		6750		
Condensed water flow gpm {l/min}	N/A			7 {27}	10 {38}	N/A		
Reservoir holding capacity gal. {l}	3 {11}	N/A			11 {42}	N/A		
Condenser fan Hp {kW}	N/A			N/A		0.50 {0.40}		
Pump performance								
Pump motor size Hp {kW}	0.25 {0.18}	N/A			1 {0.75}	N/A		
Pump flow gpm {l/min}	2 {7.5}	5 {18.9}	7 {26.4}	5 {18.9}	8 {30.2}	7 {26.5}	N/A	
Pump pressure psi {bar}	80 {5.5}	39 {2.68}	38 {2.62}	39 {2.68}	37 {2.55}	38 {2.6}	N/A	
Dimensions inches {mm}								
A - Height	30.00 {762}	44.00 {1118}		36.00 {914}				
B - Width	19.00 {483}	N/A			24.00 {610}			
C - Depth	28.00 {711}	N/A			40.00 {1016}			
Voltages MCA								
230/1 phase/60 Hz	11.8	N/A			N/A		3.0	
230/3 phase/60 Hz	N/A	17.0	21.5	15.4	18.9		N/A	
460/3 phase/60 Hz	N/A	9.0	11.9	8.2	10.6		N/A	
575/3 phase/60 Hz	N/A	7.2	9.6	6.6	8.5		N/A	
Weight lb {kg}								
Shipping	255 {116}	420 {191}	430 {195}	420 {191}	430 {195}		565 {256}	
Specification Notes								
<p>* Based on the 50°F {10°C} water to the process, single pump selections, a maximum of 95°F {35°C} ambient air and 60 Hz. Adjust capacities up 2% per degree above 50°F {10°C} to a maximum of 65°F {18°C}. Adjust capacities down 2% per degree below 50°F {10°C} to a minimum of 20°F {-7°C}. Capacities are ± 5% based on the compressor manufacturer's ratings and are subject to change without notice. Consult with a Conair representative for other conditions. Capacities change depending on selected options.</p> <p>† Standard set point range is 20°F to 65°F {-7 to 18°C}. To extend range to 20°F to 80°F {-7 to 27°C} the CPR valve option is required.</p> <p>‡ Remote condenser operation requires both indoor and outdoor unit.</p> <p>Specifications may change without notice. Consult a Conair representative for the most current information.</p>								

How it Works

