RECIRCULATING LOOP CHILLERS

MODEL..........................PCP or POC-2000S-230

FIELD SERVICEABLE HERMETIC MODELS

DESCRIPTION
Recirculating chillers recirculate a clean coolant at constant temperature and pressure to increase the stability and consistency of water cooled machines and instruments. Air cooled chillers eliminate the use of tap water and prevent clogging and corrosion of small diameter heat exchangers due to rust and scale build-up.

• PCP - Closed Loop Chillers: Use a storage type cooling tank, with immersion coil evaporator, to provide close temperature control of recirculating coolants. The tank is sealed to prevent coolant evaporation and fouling, and supplied with a liquid level gauge, fill port and clean out. The pump recirculates coolant at constant pressure and flow, which is adjustable by turning a manual bypass valve.

• POC - Open Loop Chillers: Pump liquid from an open tank or sump, through the chiller and back to the sump. An adjustable thermostat senses the make up liquid temperature, cycling the chiller to insure constant temperature in the sump.

SPECIFICATIONS

COOLING CAPACITY: BTU/HR ......................................................... 230,000
Watts ..................................................................................................67,409
Rating Conditions
Coolant Discharge Temperature .................................................. 68°F (20°C)
Ambient Temperature ................................................................. 90°F (32°C)

COMPRESSOR: HP .........................................................................................20

Field serviceable semi-hermetic type supplied condenser as specified below, high/low pressure stat, freeze control, head and suction gauges, oil pressure switch, pump down solenoid valve, thermostatic expansion valve, refrigerant sight glass and dehydrator.

STANDARD CONDENSERS (Designated by suffix)
A ...............Fan cooled condenser for indoor installation.
AR ..............Remote Air cooled condenser furnished separately for mounting on roof.
W ..............Water cooled condenser for hookup to city or tower water
A-WP ...........Self-contained air cooled condenser; complete unit made weather-resistant for outdoor installation

COOLING TANK & EVAPORATOR: Capacity ........................................130 gal (494 l)

Welded stainless steel shell and immersion coil evaporator. Tank tested at 250# for 125# working pressure. Supplied with liquid level gauge and insulated with closed cell thermo-elasstomer with an R factor of 3.7.

PUMP: HP ........................................................................................................2

Capacity .................................................................................................40 gpm (152 lpm) @ 35 psi

Stainless steel centrifugal pump mounted on rubber pads over a stainless steel condensation tray and supplied with unions and service valves and manually adjustable bypass valve. All piping and fittings brass, copper, or bronze and insulated with closed cell thermo-elasstomer with an R factor of 3.7.

THERMOSTAT: Adjustable Range .............................................. 40°F to 90°F (5°C to 32°C)
Temperature Stability ................................................................. ±1.5°F (1°C)

CABINET: Enameled aluminum panels with stainless steel corner legs and top on a welded angle iron frame. Panels removable for access to all components.

SUPPLY POWER: ......................................................... 208 - 230/60/3 or 460/60/3
FLA Amps Maximum: ................................................................. 75 or 38

NOTE: FLA may vary depending on options. See MCA and MOP ratings on as-built unit.

PLUMBING CONNECTIONS IN & OUT ........................................... 1-1/2" (38mm) MPT

APPLICATIONS

Jacket Cooling
Lasers
Induction Heaters
Machine Tools
Welders
MRI Equipment
CAT Scans
Computers
Power Supplies
Vacuum Ovens
Injection Molding
Plasma Spraying
Linear Accelerators
Electron Microscopes

FEATURES

Energy Saving Design
Unlike most process chillers, compressor runs only as needed. Storage design provides close temperature control and safety from freeze-up without constant operation.

Complete Temperature Control
Temperature adjustable within a range of 40°F to 90°F [5°C to 32°C] and will hold temperature within ±1.5°F [1°C] of setting. [±0.5°F optional]

Welded Stainless Steel Cooling Tank
Recirculates clean coolant sealed from the atmosphere, eliminates bacterial build-up and internal corrosion.

Uses HFC Refrigerant
Eliminates use of ozone-depleting refrigerant as per Montreal Protocol.

Unlimited Options for Any Application
50+ options to meet any special need. See bulletin O & A.

LIFETIME WARRANTY Consult factory for details.

ONE YEAR WARRANTY All parts covered FOB jobsite for [12] months from start-up date or [15] months from date of shipment, whichever comes first. Consult factory for details.

START-UP and FIRST YEAR SERVICE Filtrine can arrange start-up and first year service on all parts and labor. Regular maintenance, to help prevent costly down-time, is available on a contractual basis. Consult factory for details.

ENERGY SAVINGS OPTIONS
ENGINEERED TO REDUCE CHILLER OPERATING COSTS
Contact Filtrine For Details
**CHILLER DIMENSIONS & WEIGHTS**

<table>
<thead>
<tr>
<th>FILTRINE MODEL NUMBER</th>
<th>W</th>
<th>D</th>
<th>H</th>
<th>SHIPPING WT</th>
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<tbody>
<tr>
<td></td>
<td>in</td>
<td>cm</td>
<td>in</td>
<td>cm</td>
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<tr>
<td>PCP or POC 2000S-230-A</td>
<td>116</td>
<td>294</td>
<td>52</td>
<td>132</td>
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<td>116</td>
<td>294</td>
<td>52</td>
<td>132</td>
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</tbody>
</table>

**NOTE:** Chiller dimensions and shipping wts. may vary depending on options - confirm with factory.

**STANDARD OPERATING CONDITIONS**

OUTDOOR AMBIENT

-20°F to 100°F (-29°C to 38°C)

**OPTIONAL OPERATING CONDITIONS**

OUTDOOR AMBIENT

Up to 110°F (43°C)
Up to 120°F (49°C)
Down to -30°F (-34°C)

**NOTE:** Higher ambient options may affect unit dimensions.

**REMOTE CONDENSER**

Use w/Standard Models - Furnished complete w/controls for operating in ambient temperatures to minus 20°F (-29°C), consult factory for specs. Connections for remote condenser are at right end of chiller cabinet.

**PUMP CAPACITY**

<table>
<thead>
<tr>
<th>MODEL*</th>
<th>GPM @ PRESSURE SHOWN</th>
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<tbody>
<tr>
<td></td>
<td>psi 10</td>
</tr>
<tr>
<td></td>
<td>ft 23</td>
</tr>
<tr>
<td>STD-2C</td>
<td>65</td>
</tr>
<tr>
<td>OP-3C</td>
<td></td>
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</table>

* Standard pump is 2HP, centrifugal (C). Optional pumps (OP) are available.

**CHILLER CAPACITY**

<table>
<thead>
<tr>
<th>Kw</th>
<th>BTU/Hr</th>
</tr>
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<tbody>
<tr>
<td>73.2</td>
<td>250,000</td>
</tr>
<tr>
<td>65.9</td>
<td>225,000</td>
</tr>
<tr>
<td>58.6</td>
<td>200,000</td>
</tr>
<tr>
<td>51.3</td>
<td>175,000</td>
</tr>
<tr>
<td>44.0</td>
<td>150,000</td>
</tr>
<tr>
<td>36.6</td>
<td>125,000</td>
</tr>
<tr>
<td>29.3</td>
<td>100,000</td>
</tr>
<tr>
<td>22.2</td>
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<td>14.7</td>
<td>50,000</td>
</tr>
<tr>
<td>7.3</td>
<td>25,000</td>
</tr>
</tbody>
</table>

**AMBIENT TEMP**

-80°F 27°C
-90°F 32°C
-100°F 38°C
-110°F 43°C

**NOTE:** Drawing is a composite of various models to demonstrate plumbing locations. Confirm footprint with factory.