RECRYCLATING LOOP CHILLERS

MODELS ................. PCP or POC-1000S-140
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 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 ................................................................. 140,000
Watts ........................................................................................................ 41,020
Rating Conditions:
Coolant Discharge Temperature .................................................. 68°F [20°C]
Ambient Temperature .............................................................. 90°F [32°C]

COMPRESSOR: HP .......................................................................................... 10
Field serviceable semi-hermetic type supplied with 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 Weather-resistant for outdoor installation.

COOLING TANK & EVAPORATOR: Capacity ............................ 100 Gal. [380 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-elastomer with an R factor of 3.7.

PUMP: HP ................................................................................................. 1-1/2
Capacity ......................................................................................... 35 GPM [133 LPM] @ 25 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-elastomer with an R factor of 3.7.

THERMOSTAT: Adjustable Range ......................... 40°C to 90°C [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.

SUPPORT POWER: ................................................................. 230/60/3 or 460/60/3
FLA Amps Maximum ................................................................. 53 or 27
NOTE: FLA may vary depending on options. See MCA and MOP ratings on as-built unit.

PLUMBING CONNECTIONS IN & OUT ............................ 1-1/4" [31mm] MPT

APPLICATIONS
Jacket Cooling
Lasers
Induction Heaters
Machine Tools
Welders
MRI Equipment
CAT Scans

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 and WEIGHTS

<table>
<thead>
<tr>
<th>FILTRINE MODEL NUMBER</th>
<th>W</th>
<th>D</th>
<th>H</th>
<th>SHIP WT</th>
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<tbody>
<tr>
<td>PCP or POC 10005-A</td>
<td>104</td>
<td>264</td>
<td>39</td>
<td>99</td>
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<tr>
<td>PCP or POC 10005-W</td>
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<tr>
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<td>132</td>
<td>32</td>
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</tbody>
</table>

*Low Profile, weather-resistant unit for rooftop installation.
**Space Saving Design

Dimensions & weights may vary depending on options installed-consult factory.

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

### LEGEND
1. Air Vent
2. Fill Port
3. Coolant Return
4. Coolant Discharge
5. Control Panel
6. Gauges
7. To Remote Condenser [AR Models]
8. From Remote Condenser [AR Models]
9. Electrical Connection
10. Channel Skids

### VENTILATION PANELS
- Standard models: air intake at rear, air discharge at right end on A & WP models.
- REMOVABLE SERVICE PANELS
  - Front & rear on all models

### CHANNEL SKIDS
Channel skids project 2” [5 cm] front and rear. Center of mounting holes located 6” [15 cm] from chiller end and 1” [2.5 cm] from chiller edge front and rear.

### STANDARD OPERATING CONDITIONS

**OUTDOOR AMBIENT**
-20°F to 100°F [-29°C to 38°C]

**OPTIONAL OPERATING CONDITIONS**
- Up to 110°F [43°C] (if specified)
- Down to -30°F [-34°C] (if specified)

**NOTE:**
- Higher ambient options may affect unit dimensions.
- Connections for remote condenser are at right end of chiller cabinet.

### REMOTE CONDENSER
Use w/Standard or SSD 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.

**NOTE:** Information given in this bulletin for general use only. Confirm exact specs with factory for your specific requirements.

### PUMP CAPACITY CHART

<table>
<thead>
<tr>
<th>PUMP MODEL</th>
<th>GPM at PRESSURE SHOWN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>psi 10 20 30 40 60 80 100</td>
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<tr>
<td>STD-1.5C</td>
<td>55 45 32 24</td>
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<tr>
<td>OP-2C</td>
<td>65 57 46 30</td>
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<tr>
<td>OP-0.5T</td>
<td>8 8 8 8</td>
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<tr>
<td>OP-0.75T</td>
<td>13 13 12 12</td>
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</tbody>
</table>

* Standard pump is 1 1/2 HP, centrifugal [C]. Optional pumps [OP] include centrifugal or turbine [T] pumps. All turbine pumps include an adjustable pressure relief bypass in lieu of a manual bypass valve.

**NEW -SSD MODEL: SPACE SAVING DESIGN**

Suffix A, AR & W [AWP not available in SSD model]

- Manufacturer recommends 36 in. clearance at front for service and 18 in.clear space opposite all ventilation panels.
- Allow an additional 4" to depth for channel skids.
- Drawings are composites of various models to demonstrate plumbing locations. Confirm footprint with factory.

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**CHILLER CAPACITY**

<table>
<thead>
<tr>
<th>AMBIENT TEMP</th>
<th>CHILLER CAPACITY</th>
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<tbody>
<tr>
<td>108°F - 121°F</td>
<td></td>
</tr>
<tr>
<td>80°F - 100°F</td>
<td></td>
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<tr>
<td>40°F - 60°F</td>
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<tr>
<td>0°F - 32°F</td>
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</table>

* For outlet temperatures below 34°F - use appropriate antifreeze

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PRODUCT LINE APPROVED MARK AVAILABLE
LAVOR & PARTS

608-10S
(PCP-1000S-140)
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