

# RECIRCULATING LOOP CHILLERS



TYPICAL CHILLER

## 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° to 90°F [5° to 32°C] and will hold temperature within  $\pm 1.5^\circ\text{F}$  [1°C] of setting. [ $\pm 0.5^\circ\text{F}$  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.

## ENERGY SAVING OPTIONS AVAILABLE CONSULT FACTORY

### START-UP and FIRST YEAR SERVICE

FILTRINE Mfg. Co. provides start-up and first year service on all parts and labor. Regular maintenance on a yearly contract basis is a wise investment and will prevent costly downtime.

### WARRANTY

All parts are covered FOB jobsite for (12) months from the start date or (15) months from date of shipment or whichever comes first.

### SERVICE MAKES THE DIFFERENCE

Recognizing that downtime on critical medical equipment is unacceptable, Filtrine has established a national network of qualified service technicians, selected because of their extensive experience working on medical equipment chillers and their location within the "Emergency Response Zone" (approximately 40 miles). This expert and quick service is available on an 8/5 or 24/7 basis for all Filtrine medical chillers and heat exchangers.

## MODELS ..... PCP or POC-300S-38 FIELD SERVICEABLE HERMETIC MODELS

### DESCRIPTION

Filtrine's PCP and POC chillers recirculate a clean coolant at constant temperature and pressure to increase the stability and consistency of water cooled machines and instruments. Choose from different condenser configurations to match your specific site requirements.

- **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 ..... 38,000  
Watts ..... 11,134

Rating Conditions:

Coolant Discharge Temperature ..... 68°F [20°C]

Ambient Temperature ..... 90°F [32°C]

COMPRESSOR: HP ..... 3

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** Air cooled remote 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 ..... 30 Gal. [114 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 ..... 1/2

Capacity ..... 15 GPM [57 LPM] @ 20 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° to 90°F [5° to 32°C]

Temperature Stability .....  $\pm 1.5^\circ\text{F}$  [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: ..... 230/60/3 or 460/60/3

FLA Amps Maximum ..... 18 or 9

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

PLUMBING CONNECTIONS IN & OUT ..... 3/4" [19mm] MPT

SHIPPING WEIGHT ..... Chart on reverse

CHILLER DIMENSIONS and WEIGHTS								
MODEL	W		D		H		Shpg. Wt.	
	In.	cm	In.	cm	In.	cm	Lbs.	Kgs.
PCP or POC-300S-A	62	159	32	82	48	123	1400	630
PCP or POC-300S-W	62	159	32	82	48	123	1400	630
PCP or POC-300S-AR	62	159	32	82	48	123	1400	630
PCP or POC-300S-A-WP	78	200	32	82	60	152	1400	630
PCP or POC-300S-A-WP-LP*	82	205	62	155	30	76	1400	630
PCP or POC-300S-A-SSD**	34	87	28	72	78	200	1400	630
PCP or POC-300S-W-SSD**	34	87	26	67	72	184	1400	630
PCP or POC-300S-AR-SSD**	34	87	26	67	72	184	1400	630

\* Low profile, weatherproof unit for installation on rooftop  
 \*\* Space Saving Design

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

#### LEGEND

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

#### VENTILATION PANELS

Standard models: air intake at rear, air discharge at right end and front. Recommend 3 ft. clearance at front for service and 18 in. clear space opposite all ventilation panels.

#### 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° to 100°F [-29° 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

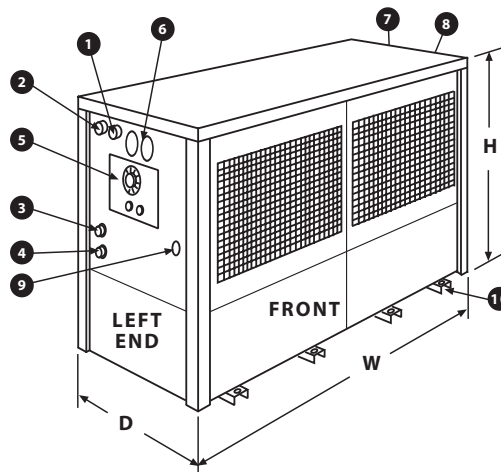
Use w/Standard or SSD Models - Furnished complete w/controls for operating in ambient temperatures to minus 20°F [-29°C]; consult factory for specs. Connections for remote condenser are at right end of chiller cabinet.

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

PUMP CAPACITY								
MODEL*	GPM @ PRESSURE SHOWN							
	psi	10	20	30	40	60	80	100
	ft	23	46	69	92	138	184	231
STD-1/2C	20	15	8	—	—	—	—	—
OP-3/4C	50	45	30	—	—	—	—	—
OP-1C	55	50	40	20	—	—	—	—
OP-1/2T	8	8	8	8	8	7	6	—
OP-3/4T	13	13	12	12	11	10	8	—

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

## STANDARD MODELS: Suffix A, AR, W & AWP



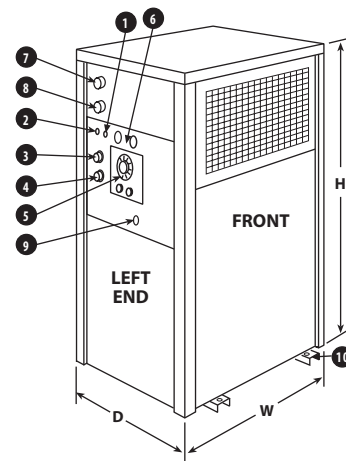
**NOTE:** Manufacturer recommends 36 inch clearance at front for service and 18 in. clear space opposite all ventilation panels.

**NOTE:** Allow an additional 4" to depth and 2" to height for channel skids.

**NOTE:** Drawings are composites of various models to demonstrate plumbing locations. Confirm footprint with factory.

## SSD MODEL: SPACE SAVING DESIGN

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



**NOTE:** Manufacturer recommends 36 inch clearance at front for service and 18 in. clear space opposite all ventilation panels.

**NOTE:** Allow an additional 4" to depth and 2" to height for channel skids.

**NOTE:** Drawings are composites of various models to demonstrate plumbing locations. Confirm footprint with factory.

