

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.

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

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° 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 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

CHILLER DIMENSIONS and WEIGHTS

FILTRINE MODEL NUMBER	W		D		H		SHIP WT	
	in	cm	in	cm	in	cm	lb	kg
PCP or POC 1000S-A	104	264	39	99	70	178	3000	1350
PCP or POC 1000S-W	94	238	33	84	70	178		
PCP or POC 1000S-AR	94	238	33	84	70	178		
PCP or POC 1000S-A-WP	104	264	49	124	70	178		
PCP or POC 1000S-A-WP-LP*	94	238	87	221	44	112		
PCP or POC 1000S-W-SSD**	52	132	32	81	80	203		
PCP or POC 1000S-AR-SSD**	52	132	32	81	80	203		
* 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]
Condenser Water Out [W Models]
8. From Remote Condenser [AR Models]
Condenser Water In [W 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° 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.

NOTE

Connections for remote condenser are at right end of chiller cabinet.

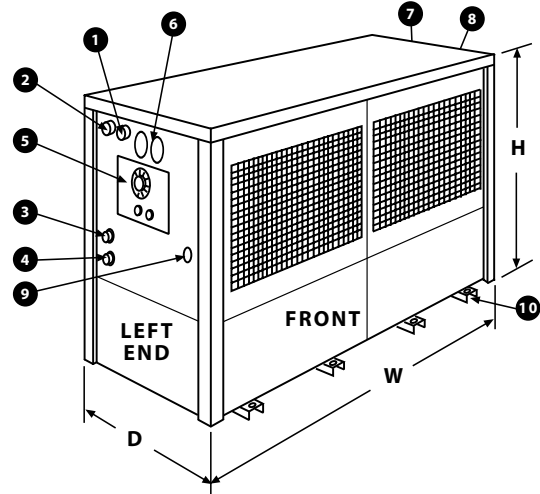
REMOTE CONDENSER

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.

STANDARD MODELS: Suffix A, AR, W & AWP

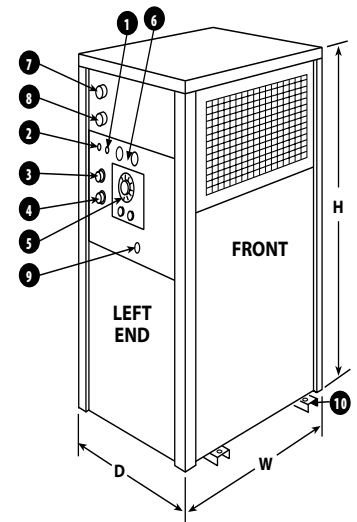


NOTE: Manufacturer recommends 36 in. clearance at front for service and 18 in. clear space opposite all ventilation panels.

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.

NEW -SSD MODEL: SPACE SAVING DESIGN Suffix A, AR & W [AWP not available in SSD model]



NOTE: Manufacturer recommends 36 in. 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.

PUMP CAPACITY CHART								
PUMP MODEL	GPM at PRESSURE SHOWN							
	psi	10	20	30	40	60	80	100
	ft	23	46	69	92	138	184	231
STD-1.5C	55	45	32	24	—	—	—	—
OP-2C	65	57	46	30	—	—	—	—
OP-0.5T	8	8	8	8	8	7	6	—
OP-0.75T	13	13	12	12	11	10	8	—

* 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.

