

# RECIRCULATING LOOP CHILLERS



TYPICAL CHILLER

## APPLICATIONS

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

## MODEL ..... PCP or POC-500G HERMETIC SCROLL 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 @ 68°F [20°C] discharge & 90°F [32°C] ambient

MODEL	BTU/HR	WATTS	FLA @ 230 / 460
PCP or POC 500G-48	48,000	14,064	24 / 12
PCP or POC 500G-60	60,000	17,580	26 / 13
PCP or POC 500G-70	70,000	20,510	28 / 14

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

COMPRESSOR: HP ..... 5

Lifetime lubricated, hermetic scroll type supplied with high/low pressure stat, freeze control, head and suction gauges, 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 ..... 50 gal [190 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

Capacity ..... 20 GPM [76 LPM] @ 30 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 ..... ±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

PLUMBING CONNECTIONS IN & OUT ..... 1" [13mm] MPT

### CHILLER DIMENSIONS & WEIGHTS

FILTRINE MODEL NUMBER	W		D		H		SHIP WT	
	in	cm	in	cm	in	cm	lb	kg
PCP or POC-500G-A	72	183	35	89	60	152	1800	810
PCP or POC-500G-W	72	183	30	76	60	152		
PCP or POC-500G-AR	72	183	30	76	60	152		
PCP or POC-500G-WP	82	208	35	88	70	178		
PCP or POC-500G-WP-LP*	82	208	68	173	40	102		
PCP or POC-500G-A-SSD**	48	122	35	88	90	229		
PCP or POC-500G-W-SSD**	40	102	30	76	84	213		
PCP or POC-500G-AR-SSD**	40	102	30	76	84	213		

\* Low profile, weather-resistant unit for installation on roof  
 \*\* Space saving design

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

#### 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.

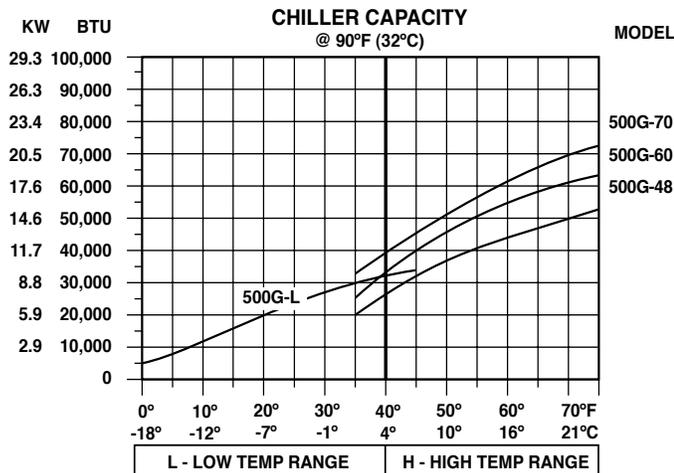
#### REMOTE CONDENSER

Use w/Standard 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.

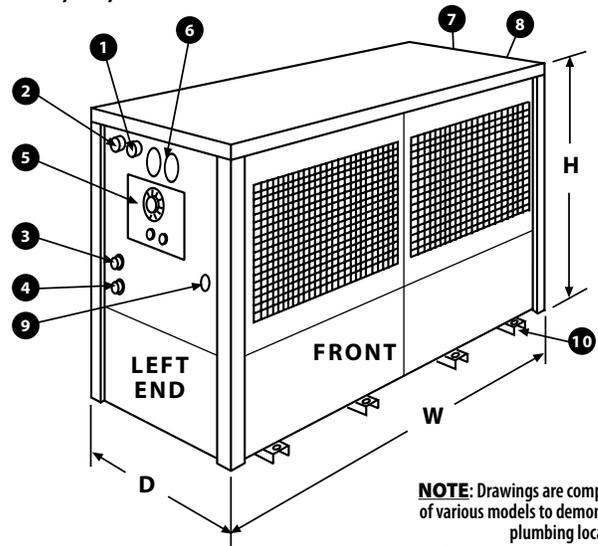
### PUMP CAPACITY

MODEL*	GPM @ PRESSURE SHOWN							
	psi	10	20	30	40	60	80	100
	ft	23	46	69	92	138	184	231
STD-1C		52	40	20	■	■	■	■
OP-3/4C		19	16	12	■	■	■	■
OP-1-1/2C		55	45	30	24	■	■	■
OP-1/2T		8	8	8	8	8	7	6
OP-3/4T		13	13	12	12	11	10	8

\* Standard pump is 1HP, 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.

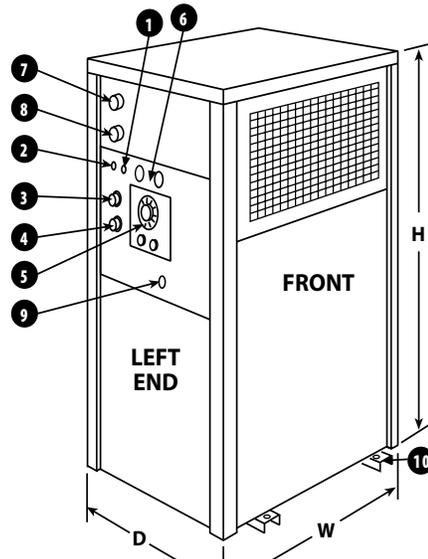


### STANDARD MODELS: Suffix A, AR, W & A-WP



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

### SSD - SPACE SAVING DESIGN MODELS: Suffix A, AR & W [A-WP not available in SSD model]



#### LEGEND

- Air Vent
- Fill Port
- Coolant Return
- Coolant Discharge
- Control Panel
- Gauges
- To Remote Condenser [AR Models] Condenser Water Out [W Models]
- From Remote Condenser [AR Models] Condenser Water In [W Models]
- Electrical Connection
- Channel Skids

#### VENTILATION PANELS

Standard models — air intake at rear, air discharge at right end and front on A & WP models. Manufacturer recommends 12 inch minimum clear space opposite all ventilation panels.

#### REMOVABLE SERVICE PANELS

Front & rear on all models. Manufacturer recommends 36 inch clearance at front for service.

#### CHANNEL SKIDS

Channel skids project 2" [5cm] front and rear. Allow additional 2" [5cm] to height for channel skids. Center of 5/8" [16mm] mounting holes located 6" [15cm] from chiller end and 1" [2.5cm] from chiller edge front and rear.

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

