

# ONE-PASS CHILLER



TYPICAL CHILLER SHOWN

## APPLICATIONS

Photo Developing  
Ingredient Make-up  
Poultry Cooling  
Bottling  
Dispensers  
Pharmaceuticals

Reverse Osmosis  
Ice Machines  
Spray Washes  
Beverages  
Eye Wash Water  
Boiler Feed Samples

## 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 range of 40°F to 90°F [5°C to 32°C] and will hold temperature within  $\pm 1.5^\circ\text{F}$  [ $1^\circ\text{C}$ ] of setting.

### Welded Stainless Steel Cooling Tank

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

Design the perfect cooling system for any application. Over 50 options to meet almost any special need. Refer to 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.

## MODEL.....PC-1500S-180

### DESCRIPTION

A completely packaged liquid chiller designed for applications where the liquid to be cooled passes through the chiller only once before either being added as an ingredient to a product or fouled by the product it is cooling. It is most important that a one-pass chiller be able to chill liquids at high and low flow rates without significant pressure drop or danger of freeze up, and yet have close, accurate temperature control.

Filtrine PC chillers are specifically designed for one-pass cooling. A high transfer immersion coil evaporator supplies maximum capacity at any flow rate with no pressure drop. Storage tank design permits close temperature control without short-cycling.

## SPECIFICATIONS

### COOLING CAPACITY

BTU/HR ..... 180,000

Watts ..... 52,755

#### Rating Conditions

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

Ambient Temperature ..... 90°F [32°C]

Flow rate ..... 15 gpm [57 lpm]

COMPRESSOR HP ..... 15

Field serviceable semi-hermetic type supplied with 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

- **W** Water cooled condenser for hookup to city or tower water

- **AR** Remote air cooled condenser for outdoor installation

- **A-WP** Air cooled, weather-resistant condenser for outdoor installation

### COOLING TANK & EVAPORATOR

Capacity ..... 100 gal [380 ltr]

Welded stainless steel shell and immersion coil evaporator.

Tank tested at 250# for 125# working pressure and insulated with closed cell thermo-elastomer with an R factor of 3.7 and enclosed in rust-proof steel jacket.

THERMOSTAT: Adjustable Range ..... 40° to 90°F [5° to 32°C]

Temperature Stability .....  $\pm 1.5^\circ\text{F}$  [ $1^\circ\text{C}$ ]

CABINET: Enameled aluminum panels and top with stainless steel corner legs. Panels removable for access to all components.

SUPPLY POWER: ..... 208-230/60/3 or 460/60/3

FULL LOAD AMPS - MAXIMUM		
208/60/3	230/60/3	460/60/3
72	66	32

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

PLUMBING CONNECTIONS IN & OUT ..... 1-1/2" [38 mm] FPT

SHIPPING WEIGHT ..... SEE CHART ON REVERSE

## CHILLER DIMENSIONS and WEIGHTS

FILTRINE Model No.	W		D		H		SHIP WT	
	in	cm	in	cm	in	cm	lb	kg
PC-1500S-180-A	104	264	52	132	80	203	3500	1575
PC-1500S-180-W	104	264	30	76	60	152		
PC-1500S-180-AR	104	264	30	76	60	152		
PC-1500S-180-A-WP*	104	264	52	132	80	203		

\*Weather-resistant for rooftop mounting

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

### LEGEND

- |                          |                                      |
|--------------------------|--------------------------------------|
| 1. Gauges                | 6. To Remote Condenser [AR Models]   |
| 2. Control Panel         | Condenser Water Out [W Models]       |
| 3. Coolant In            | 7. From Remote Condenser [AR Models] |
| 4. Coolant Discharge     | Condenser Water In [W Models]        |
| 5. Electrical Connection | 8. 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. Skids add 2" [5 cm] to overall height.

### STANDARD OPERATING CONDITIONS

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

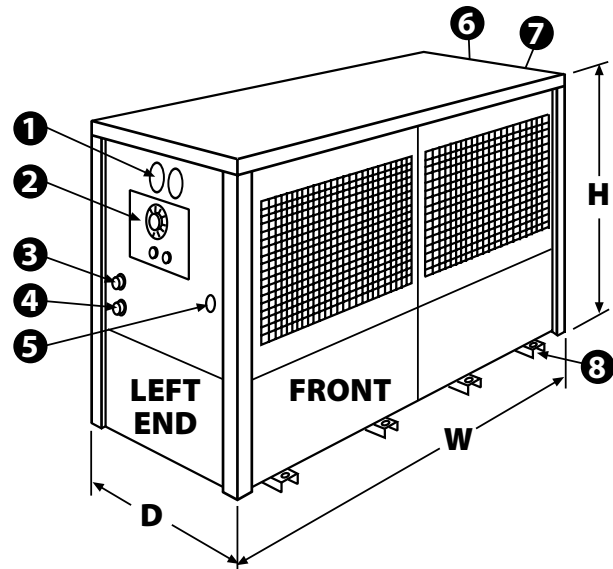
### OPTIONAL OPERATING CONDITIONS

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

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.

## STANDARD MODELS: Suffix A, AR, W and WP

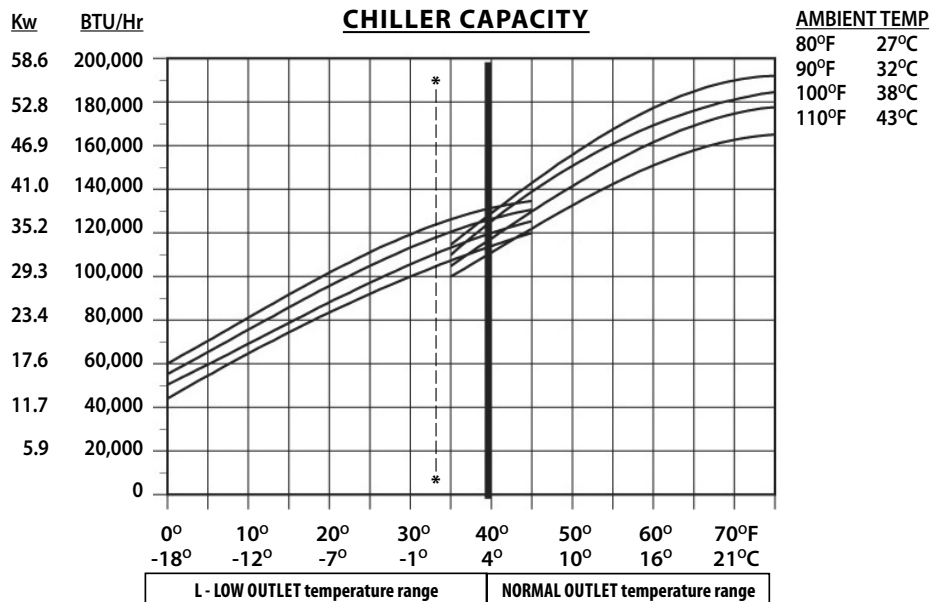


**NOTE:** Drawing is composite of various models to demonstrate plumbing locations. Confirm footprint with factory.

## GPM - CHILLER COOLING CAPACITY

CHILLER MODEL NUMBER	MAKE UP WATER	CHANGE IN TEMPERATURE THROUGH CHILLER				
		5°F	10°F	20°F	30°F	40°F
PC-1500S-180	90°F	70	35	17	10	6.8
	80°F	68	34	16	9	5.8*
	70°F	64	31	14	7.7*	4.7*
	60°F	56	27	12*	6.2*	4.2*
	50°F	50	23*	9.4*	5.4*	3.6*
	40°F	42*	19*	7.2*	4.2*	2.8*

\* Agitation pump required



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