

# ONE-PASS CHILLER



## APPLICATIONS

- |                    |                     |
|--------------------|---------------------|
| Photo Developing   | Reverse Osmosis     |
| Ingredient Make-up | Ice Machines        |
| Poultry Cooling    | Spray Washes        |
| Bottling           | Beverages           |
| Dispensers         | Eye Wash Water      |
| Pharmaceuticals    | 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° to 90°F [5° to 32°C] and will hold temperature within ± 2°F [1°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-4000-430

### 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 ..... 430,000

Watts ..... 114,000

#### Rating Conditions

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

Ambient Temperature ..... 90°F [32°C]

Flow rate ..... 30 gpm [114 lpm]

COMPRESSOR HP ..... 40

Field servicable 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, dehydrator and oil separator.

#### STANDARD CONDENSERS [Designated by suffix]

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

-AR Remote air cooled condenser for outdoor installation

#### COOLING TANK & EVAPORATOR

Capacity ..... 260 gal [988 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 ..... ± 2°F [1°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

FLA Amps Maximum: ..... 175 or 88

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

PLUMBING CONNECTIONS IN & OUT ..... 2-1/2" [63 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-4000-430-AR	116	295	62	157	70	179	5000	2250
PC-4000-430-W	116	295	62	157	70	179		

**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

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" [5cm] to overall height.

### STANDARD OPERATING CONDITIONS

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

### OPTIONAL OPERATING CONDITIONS

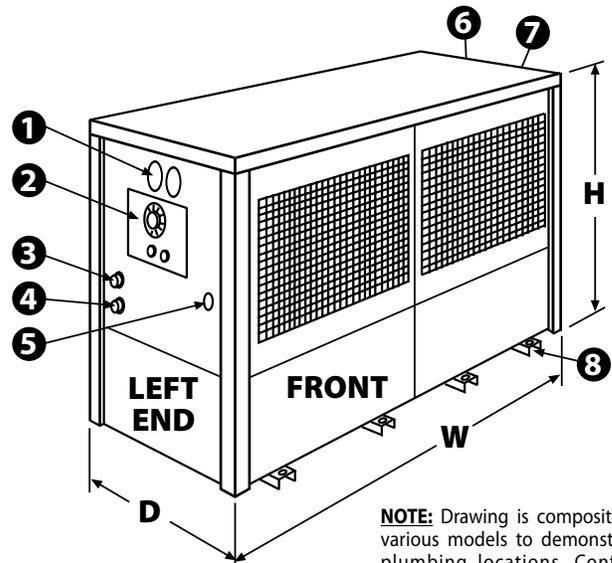
OUTDOOR AMBIENT  
Up to 110°F [43°C]  
Up to 120°F [49°C]  
Down to -30°F [-34°C]

**NOTE:** Higher ambient options may affect unit dimensions.

### REMOTE CONDENSER

AR model furnished complete w/controls for operating in ambient temperatures to minus 20°F [-29°C]. Connections for remote condenser are at right end of chiller cabinet.

## STANDARD MODELS: Suffix AR and W



**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-4000-430	90°F	180	88	43	27	18
	80°F	172	86	40	24	15
	70°F	170	81	36	20	13*
	60°F	154	72	30	17*	10*
	50°F	132	60*	26*	14*	—
	40°F	114*	52*	21*	—	—

\* Agitation pump required

