

# BATCH DRAW WATER CHILLER



## MODEL ..... PB-500 DESCRIPTION

A completely packaged water chiller designed for batch draw applications where a large volume of water is required intermittently. Filtrine PB chillers use a unique storage-type evaporator to chill water in batches thereby using less energy than continuous-draw water coolers. A large stainless steel cooling tank with internal evaporator automatically fills with water, which is constantly agitated and chilled to as cold as 34°F. When water is drawn off, a solenoid valve shuts off the make-up water, preventing the mixing of warm and chilled water, and ensuring a uniform batch temperature from first drop to last. After the batch is drawn, the cooling tank automatically refills and chills, to be ready for the next batch draw.

### SPECIFICATIONS

COOLING CAPACITY: ..... See Table  
Rating Conditions

Water Discharge Temperature ..... 34°F [1°C]  
Ambient Temperature ..... 90°F [32°C]

COMPRESSOR HP ..... 5

Lifetime lubricated, welded hermetic type supplied with condenser as specified below, mounted on vibration absorbers and provided with internal overload, adjustable thermostat, freeze control, expansion valve, refrigerant sight glass and dehydrator.

STANDARD CONDENSERS [Designated by suffix]

- **A** Fan cooled, located inside chiller housing
- **AR** Remote air cooled, for rooftop mounting
- **W** Water cooled for hookup to city or tower water

COOLING TANK & EVAPORATOR

Capacity..... 100 gal [380 ltr]  
Welded all stainless steel shell and immersion coil evaporator. Tank tested at 250# for 125# working pressure. Supplied with automatic air vent. Insulated with closed cell thermo-elastomer with an R factor of 3.7.

PUMP HP..... 1 1/2

Capacity..... 25 gpm @ 35 psi [95 lpm @ 2 Bar]  
Stainless steel centrifugal pump mounted on rubber pads over a stainless steel condensation tray. All piping Insulated with closed cell thermo-elastomer with an R factor of 3.7. Pump supplied with manual on/off switch, flow switch, make-up water solenoid valve and bypass for agitation.

THERMOSTAT

Adjustable Range ..... 34° to 90°F [1° to 32°C]  
Temperature Stability ..... ±1.5°F [±1°C]

CABINET

White enameled aluminum panels with stainless steel corner legs and top suitable for mounting on floor.

SUPPLY POWER ..... 208-230/60/1 or 460/60/3

FLA Amps Maximum ..... 20, 10

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

PLUMBING CONNECTIONS IN & OUT ..... 1" MPT [25 mm]

SHIPPING WEIGHT ..... 2100 lbs [945 kg]

**NOTE:** Chiller weight and dimensions may vary due to condenser and options specified.

### FEATURES

- **BATCH COOLING FOR BATCH MIXING**  
Insures uniform dough year round
- **WELDED STAINLESS STEEL COOLING TANK**  
Provides storage required for batch draw operation without temperature swing
- **COMPACT CHILLER**  
Mounts on floor with minimum footprint
- **USES HFC REFRIGERANT**  
Eliminates ozone-depleting refrigerants per the Montreal Protocol

### OPTIONS

- **FOOD GRADE MAKE-UP WATER**  
Pre-filtration reduces turbidity and improves UV efficiency. Purification removes organic odors and tastes. UV sterilization kills water-borne pathogens. No chemicals or harmful byproducts, easy to maintain.

PB-500: FOOD GRADE MAKE-UP WATER	
TASTE MASTER® PURIFIER	UV STERILIZER
IL20-PFTM	S-30

- **STAINLESS STEEL EXTERIOR**

### CHILLER SELECTION

To properly size a cooler for batch mixing application, determine the amount of ingredient water needed per batch and the number of batches per hour.

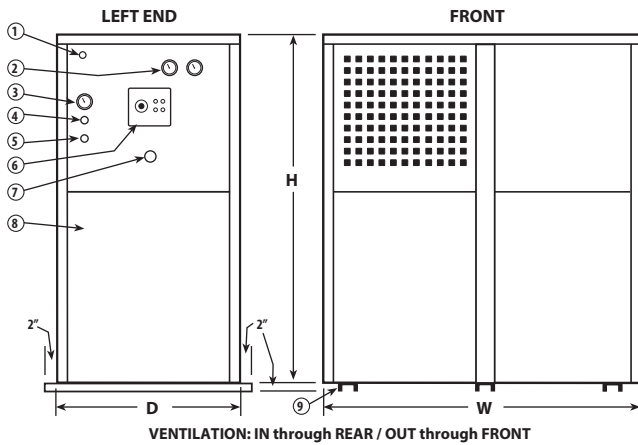
PB-500: CAPACITY TABLE*							
WATER PER BATCH	NUMBER OF BATCHES PER HOUR						
	1	2	3	4	5	6	7
gal/ltr	76/289	38/144	25/95	19/72	16/61	12/46	11/42
lb/kg	630/284	317/143	208/94	158/71	133/60	100/45	92/41

\* Based on 80°F make-up water and 34°F ingredient water

### ENERGY SAVING OPTIONS

**Reduce chiller energy consumption and lower operating costs.  
Contact Filtrine for complete details.**

## CHILLER SCHEMATIC



### LEGEND

- 1 ..... Air vent
- 2 ..... Refrigerant gauges
- 3 ..... Thermometer
- 4 ..... Make-up water
- 5 ..... Cold water out
- 6 ..... Control panel
- 7 ..... Electrical connection
- 8 ..... Removable access panel
- 9 ..... Channel skids - 3"W x 2"H

MODEL	W		D		H	
	in	cm	in	cm	in	cm
PB-500-A	90	229	35	89	60	152
PB-500-AR	90	229	30	76	60	152
PB-500-W	90	229	30	76	60	152

### VENTILATION PANELS

Standard model air intake at right end and air discharge at rear. Allow 12" clearance opposite.

### SERVICE PANELS

Removable - front and rear on all models. Allow 16" at left end and 22" at front for service.

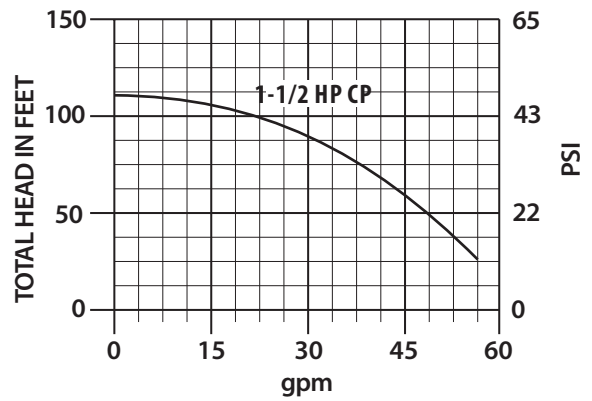
### OPTIONS and ACCESSORIES

- DT **DIAL THERMOMETER:** Specify for make-up and/or discharge
- PG **PRESSURE GAUGE:** Specify for make-up and/or discharge
- WR **WATER-RESISTANT DESIGN:** Cabinet built as a water-resistant model; permits complete wash down
- RFS **REMOTE FLOW SWITCH:** For closed loop operation
- DUP **DUAL PUMPS:** Provide complete backup. Available with automatic switchover in case of failure
- ADJ **ADJUSTABLE LEGS:** Stainless steel, up to 6" high
- DISC **FUSED DISCONNECT SWITCH:** On power supply
- SSC **STAINLESS STEEL CABINET:** Panel, corner legs and top constructed of #304 stainless steel

### FOOD GRADE MAKE-UP WATER

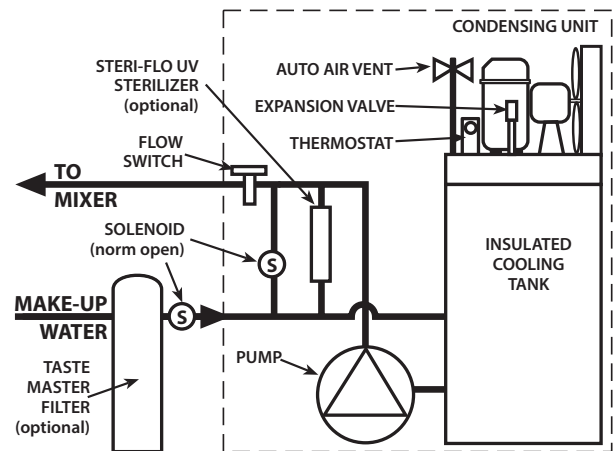
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## PUMP CAPACITY



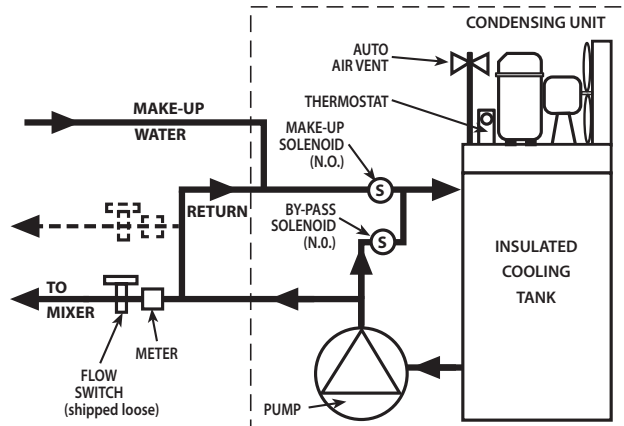
## PLUMBING SCHEMATIC

Showing optional Taste Master® sediment/taste/odor filter and Steri Flo® UV Sterilizer.



## OPTIONAL CLOSED LOOP SYSTEM

Where the mixer outlet[s] are a long distance from the chiller, a recirculating loop may be installed to keep the water in the piping cold. The flow switch[es] are shipped loose for installation at the meter[s].



## WARRANTY

All parts are covered F.O.B. factory for 15 months from date of shipment.