

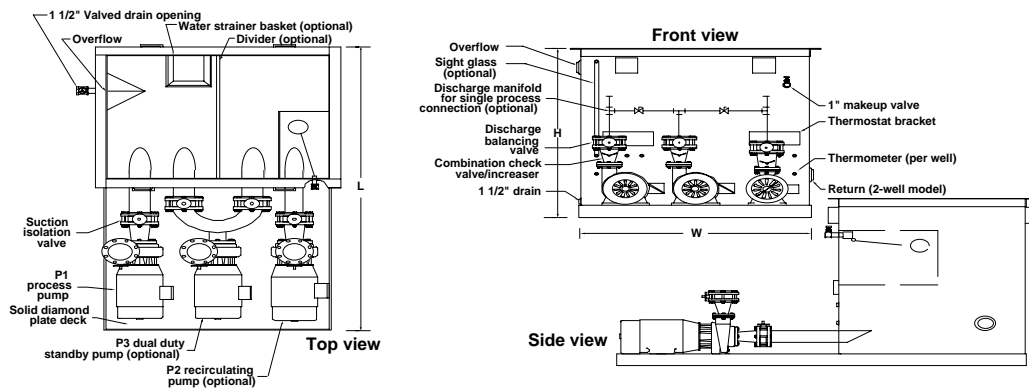
**Brief Description**

**Application**

All pump tank systems come standard with:

- Centrifugal close-coupled pump, featuring cast iron impellers with 230/ or 460/3/60 ODP motor; other voltages and motor designs are available
- Tank, sides, bottom, and baffles are **stainless steel**
- Tanks come with standard insulation and composite covers
- Lug-mount butterfly valves
- Standard hardware includes thermometer (s), pump pressure gauge (s), drain valve
- #304 stainless steel tank side walls 3/16" from C150 to C2000; 1/4" from C2700 to C5100D
- Full-size pump trim for maximum efficiency; includes isolation, throttling, and check valves
- Automatic level control makeup valve
- Solid diamond-plate pump ledge
- 1 year warranty on parts

All pumps are close-coupled centrifugal types and include a compound pressure gauge and ODP-type motors. TEFC motors are available as an option. Trim is full size, including butterfly valve (and reducer if necessary) on the suction side, combination increaser/check valve, and butterfly valve on the discharge side.



Pump horsepower ①	1.5	3	5	7.5	10	15	20	25	30	40	50	60	
Amp draw 460/3/60	2.6	4.8	7.6	11	14	21	27	34	40	52	65	77	
Shipping wt. (lbs.) ②	P1	—	9.5	115	125	165	180	300	310	400	465	710	730
	P2	60	90	115	275	320	425	510	630	670	—	—	—

① To convert to kW, multiply by **0.746**.

② To convert to shipping Kg, multiply by **0.454** and round up to the next whole number.

**American Standards**

Trim size (inches)	2"	2.5"	3"	4"	6"	8"
Maximum flow (gpm)	50	90	160	320	900	2,000
Shipping weight (lbs.)	25	35	50	75	120	165

**Metric Standards**

Trim size (mm) ①	51 mm	64 mm	76 mm	102 mm	152 mm	203 mm
Maximum flow (lpm)	189	340	624	1,211	3,406	7,570
Shipping weight	12	16	23	35	55	75

① Trim size is approximate; trim fittings are based on American standards. Customer is responsible to convert to metric.



**Selection**  
**American Standards**

Model number	Maximum tower tons ①		Capacity gallons		Maximum pumps/ ledge	Return water connections inches NPT	Dimensions inches			Tank weight (less pumps) pounds	
	Single well	dual well	Overflow	Operating			L	W	H	Shipping	Operating
C150 (D)	56	16	135	100	3	3	72	36	40	600	1,800
PC400 (D)	162	81	390	350	3	5	95	56	64	500	3,500
C500 (D)	200	100	480	360	3	4	102	48	52	2,000	6,000
C700 (D)	300	150	720	540	4	4	114	72	52	2,600	8,600
C1100 (D)	448	224	1,075	825	4	6	114	72	77	3,400	12,400
C1600 (D)	672	336	1,615	1,240	4	6	138	72	77	4,000	17,500
C2000 (D)	850	425	2,040	1,565	5	6	150	92	78	5,000	22,100
C2700 (D)	1,125	562	2,700	2,065	6	6	150	120	78	6,000	28,500
C3700 (D)	1,527	763	3,665	2,830	6	6	162	120	90	7,000	37,600
C5100 (D)	2,138	1,069	5,130	3,960	7	8	162	168	92	7,800	50,700

① Calculated for **chilled water**, based on 2.4 gpm per ton

**Metric Standards**

Model number	Maximum tower tons ①		Capacity liters		Maximum pumps/ ledge	Return water connections mm dia.	Dimensions cm			Tank weight (less pumps) pounds	
	Single well	dual well	Overflow	Operating			L	W	H	Shipping	Operating
C150 (D)	170,300	85,100	511	378	3	76 mm	183	91	102	273	817
PC400 (D)	492,000	246,000	1,476	1,325	3	127 mm	241	142	162	227	1,588
C500 (D)	605,700	302,800	1,817	1,362	3	102 mm	259	122	132	908	2,722
C700 (D)	908,300	454,200	2,725	2,044	4	102 mm	289	183	132	1,180	3,901
C1100 (D)	1,356,300	678,200	4,069	3,122	4	152 mm	289	183	195	1,543	5,625
1600 (D)	2,037,700	1,018,800	6,113	4,693	4	152 mm	350	183	195	1,815	7,938
C2000 (D)	2,573,700	1,286,800	7,721	5,923	5	152 mm	381	234	198	2,268	10,025
C2700 (D)	3,406,700	1,703,300	10,219	7,816	6	152 mm	381	305	198	2,722	12,928
C3700 (D)	4,624,000	2,312,000	13,872	10,711	6	152 mm	411	305	229	3,176	17,056
C5100 (D)	6,472,300	3,236,200	19,417	14,988	7	203 mm	411	427	234	3,539	22,998

① In Kcal/hr, calculated for **chilled water**, based on *three* (3) lpm per 1,000 Kcal/hr

**Capacities**

Nominal refrigeration Tower water tons	Capacity		Nominal flow gallons	Nominal flow liters	Trim size		Process Pump		Recirculating pump	
	Kcal/hr				In. NPT	mm dia	hp	kW	hp	kW
25	75,600	60	227	2.5"	64 mm	5	3.73	3	2.24	
35	105,840	84	318	2.5"	64 mm	7.5	5.59	3	2.24	
50	151,200	120	454	3"	76 mm	7.5	5.59	5	3.73	
60	181,440	144	545	3"	64 mm	10	7.50	5	3.73	
75	226,800	180	681	4"	64 mm	10	7.50	5	3.73	
90	272,160	216	818	4"	102 mm	15	11.19	7.5	5.59	
100	302,400	240	908	4"	102 mm	15	11.19	7.5	5.59	
125	378,000	300	1,136	4"	102 mm	20	14.91	7.5	5.59	
155	468,720	372	1,408	6"	152 mm	20	14.91	10	7.50	
185	559,440	444	1,680	6"	152 mm	25	18.64	10	7.50	
220	665,280	528	1,998	6"	152 mm	30	22.37	15	11.19	
250	756,000	600	2,271	6"	152 mm	30	22.37	15	11.19	
310	945,000	744	2,816	6"	152 mm	40	29.93	20	14.91	
375	1,134,000	900	3,407	6"	152 mm	50	37.29	20	14.91	

### Chilled Water Pump Tank System Sizing Considerations

In sizing a chilled water pump tank system, make sure you have enough volume to avoid unacceptable levels of turbulence in the tank. Typically, you can accomplish this by allowing one gallon of capacity for each gallon per minute (gpm [*liters per minute; lpm*]) of flow entering the tank. Standard tank selections in this specification are based on a flow rate entering the tank at 2.4 gallons per minute per ton (3lpm per 1,000 Kcal/hr) of refrigeration.

For flow rates other than the standard tank selection specification, perform the procedure listed below.

#### Sizing Examples

##### American Standards

**What tank size is required for a 100-ton system with standard flow through the chiller and double flow to process?**

Flow entering the tank = Flow through the chiller (100 ton x 2.4 gpm/ton) + Flow through process (100 tons x 4.8 gpm/ton) = 720 gpm

Minimum tank volume to overflow = 720 gallons

*Result:* Select a C700D model pump tank.

**Standard tank selections are based on flow rates being equal to 2.4 gpm per ton of cooling. Therefore, standard volumes are as follows:**

**Single well volume = 2.4 x tons**

**Dual well volume = 4.8 x tons**

##### Metric Standards

**What tank size is required for a 302,400 Kcal/hr system with standard flow through the chiller and double flow to process?**

Flow entering the tank = Flow through the chiller (302,400 Kcal/hr x 3 lpm per 1,000 Kcal/hr) + Flow through process (302,400 Kcal/hr x 6 lpm per 1,000 Kcal/hr) = 2,722 lpm

Minimum tank volume to overflow = 2,722

*Result:* Select a C700D model pump tank.

**Standard tank selections are based on flow rates being equal to 6 lpm per 1,000 Kcal/hr cooling. Therefore, standard volumes are as follows:**

**Single well volume = 3 lpm x Kcal/hr ÷ 1,000**

**Dual well volume = 6 lpm x Kcal/hr ÷ 1,000**

##### NEMA 1 Starters

Starters are shipped loose

✓ denotes availability

Starters by pump hp ①	2	3	5	7	10	15	20	25	30	40	50	60
Individual NEMA 1 starters: ② ③												
230/3/60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
460/3/60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

① To calculate *pump kW*, multiply pump hp by **0.746**

② Thermostat, well, On/Off switch for cycling tower fans, and P2 recirculating pumps available at extra cost.

③ Mounting the starter on a pump tank and wire to the motor available at extra cost.

---

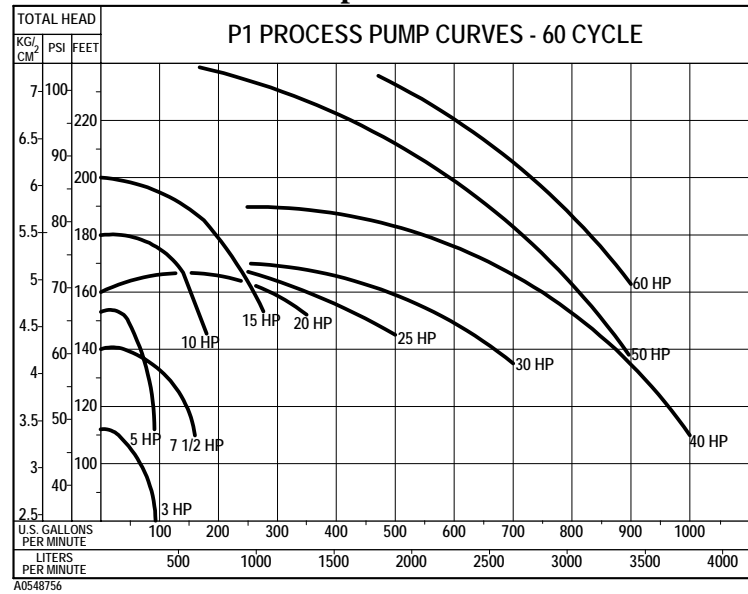
**Note:** Consult factory for 208- and 575-volt applications.

---

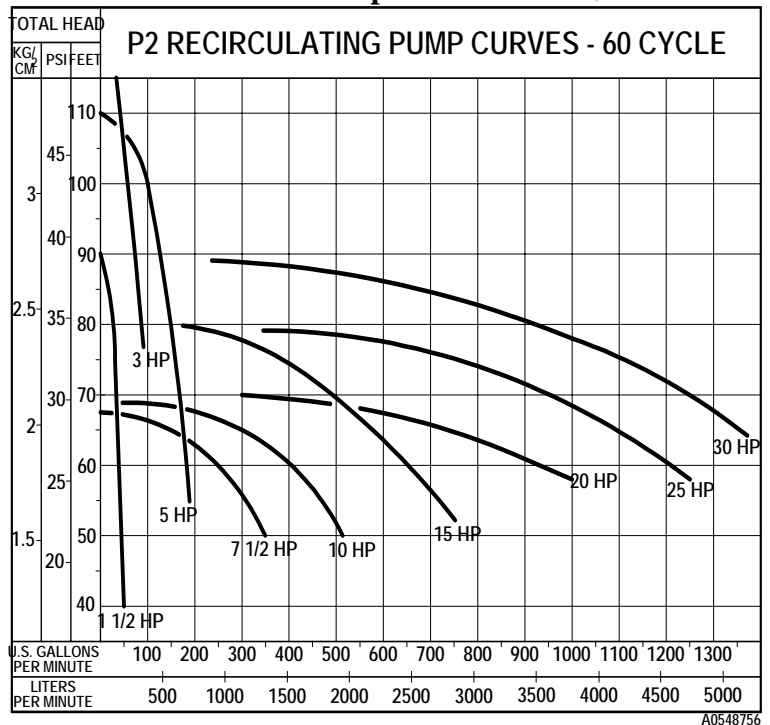
**Options**

- Armaflex insulation
- Composite cover
- Second pump ledge
- 7-foot support legs
- OSHA handrail and ladder
- Sight glass
- 1" Clayton float valve (claval makeup valve)
- Well reinforcement
- P1 process pump
- P2 recirculating pump
- TEFC motor (in lieu of ODP motor)
- Bronze impeller
- Single suction trim
- Double suction trim
- Butterfly valve handles
- Discharge manifold, process/recirculation standby
- Stainless steel opening, plugged or valved
- Digital temperature display
- Amp meter
- Hour meter
- Digital flow meter
- UL panel includes enclosure and fused control transformer
- Through-the-door disconnect
- Mount panel on tank and wire, (panel installation on tank, pump wiring, and/or alarm wiring)

**P1 Process Pump Curves • 60 Hz**



**P2 Process Pump Curves • 60 Hz**



*Note:* For 50 Hz operation, derate by multiply in

[www.colortronicna.com](http://www.colortronicna.com)

**Corporate Headquarters:**  
Colortronic North America, Inc.  
4100 Market Place  
Flint, MI 48507  
PH: 810-720-7300  
FX: 810-720-2598  
colortronicweb@corpemail.com

Dimensions and data not binding. Copyright by Colortronic 2004.