

CT/CW SERIES



Single and Double Compartment Pump Tank Assemblies



ADVANCED TECHNOLOGY FOR ENHANCED PERFORMANCE

The CT/CW Series, single and double compartment, pump tank assemblies are the most complete, best constructed available. Our pump tanks' standard sizes range from 140 to 6,285 gallons, with pump sizes from 1.5 to 75 hp. Flow rates can be adjusted on each pump tank, depending on the customer's needs. These tanks can be custom made with multiple reservoirs, pump decks and ports for expansion, to name a few.

Chilled water tanks feature insulation and a cover to prevent sweating. Tower water tanks feature a stainless steel strainer basket. Both share these features: centrifugal pumps; full sized suction; discharge check; and throttling valves; thermometer for temperature monitoring; and overflow and valved drain fittings.

Features

- Stainless steel strainer basket (on tower tanks)
- 1/4" stainless steel construction
- 1 1/2" valved drain
- 1" automatic make-up valve
- Thermometers
- Diamond plate pump deck
- Overflow
- Thickest plate material in the industry
- Complete engineering, manufacturing and installation support

Options

- Mild steel tank
- Second pump ledge
- Support legs
- Sight glass
- Discharge manifolds

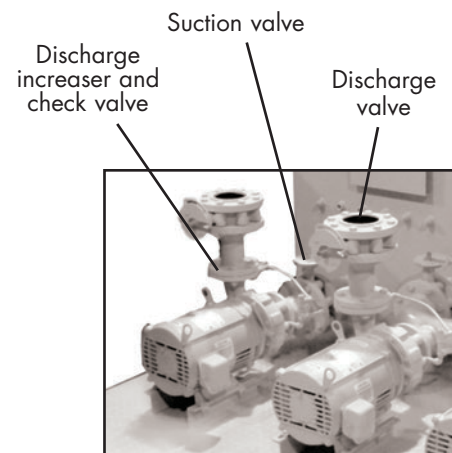
CT/CW SERIES

Single and Double Compartment Pump Tank Assemblies



Optional NEMA Control Panel

- Individual running lights for each motor
- Off/auto selector switch for each pump motor
- Inside: Individual 3-phase fuses for each motor, individual 3-phase power terminals with grounding lugs, control transformer fused on both primary and secondary, control circuit fusing

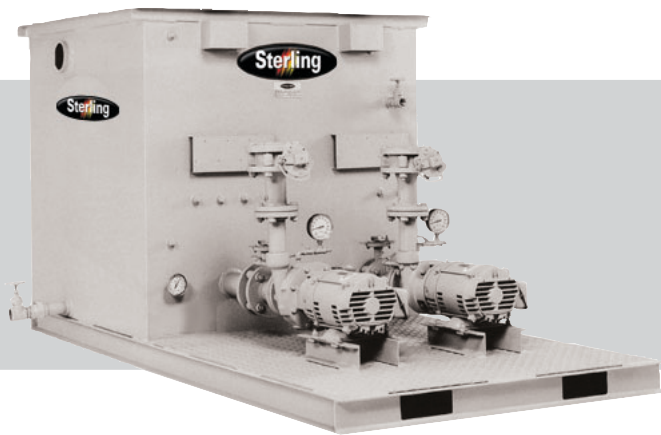


Design, Manufacture and Installation

We offer complete installation on both Chilled Water Tanks and Cooling Tower Tanks as shown

CT/CW SERIES

Single and Double Compartment Pump Tank Assemblies



Tower Management

The Sterling Tower Water Management System (STWM) is a complete system that control scale, corrosion, and microbiological fouling in both open and closed recirculating cooling water systems in one compact, fully automatic package, which is almost maintenance free.

Filtration and Separation Systems

Sterling Sand and Gravel Filters and Centrifugal Separation Systems are offered for use on cooling tower or chilled water systems requiring large capacity, heavy-duty suspended solids removal.



Tower Water Management System



Ion Exchanger



Sand and Gravel Filter



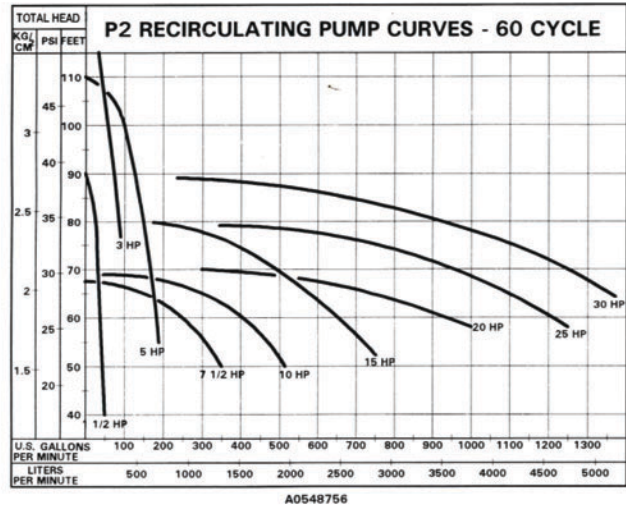
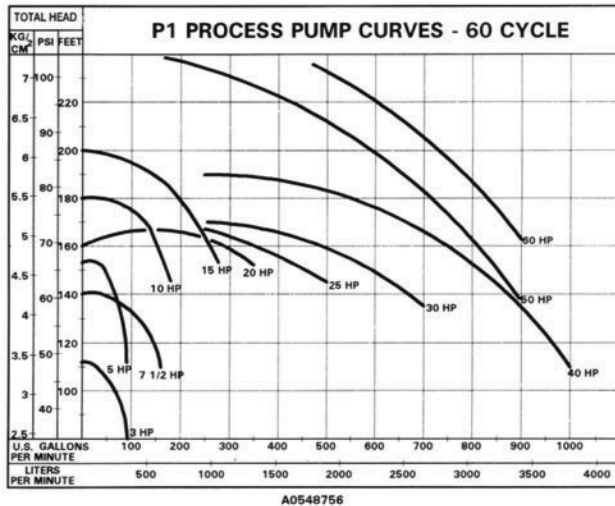
Full Flow Bag Filter

CT/CW SERIES

Single and Double Compartment Pump Tank Assemblies

1-Well		2-Well		Capacity (gal)	2-Well	Maximum Pumps/ Ledge	Return Water and Overflow Connect. (in)	Thermo. Brackets and 1/2" Plugged Openings (qty)	Dimensions (in)			Weight (lbs)	
Model Number	Capacity (tons)	Model Number	Capacity (tons)	Overflow	Operating				L	W	H	Shipping	Operating
CT/CW140	30	CT/CW140D	15	135	100	3	3	3	72	36	40	600	1,800
CT/CW480	100	CT/CW480D	50	480	360	3	4	3	102	48	52	2,000	6,000
CT/CW720	150	CT/CW720D	75	720	540	4	4	6	114	72	52	2,600	8,400
CT/CW1080	230	CT/CW1080D	115	1,075	825	4	6	6	114	72	77	3,400	12,400
CT/CW1620	340	CT/CW1620D	170	1,615	1,240	4	6	6	138	72	77	4,000	17,500
CT/CW2040	430	CT/CW2040D	215	2,040	1,565	5	6	6	150	92	78	5,000	22,100
CT/CW2700	570	CT/CW2700D	285	2,700	2,065	6	6	6	150	120	78	6,000	28,500
CT/CW3670	780	CT/CW3670D	390	3,665	2,830	6	6	6	162	120	90	7,000	37,600
CT/CW5130	1,100	CT/CW5130D	550	5,130	3,960	7	8	6	162	168	92	7,800	50,700

Pump Horsepower	1 1/2	3	5	7 1/2	10	15	20	25	30	40	50	60	
Amp Draw 460/3/60	2	3	7	10	13	18	25	30	35	49	60	72	
Shipping Weight (lbs) - P1	-	95	115	125	165	180	300	310	400	465	710	730	
Shipping Weight (lbs) - P2	60	90	115	275	320	425	510	630	670	-	-	-	
Trim Size (in)	2		2 1/2		3		4		6			8	
Maximum Flow (gpm)	50		90		165		320		900			2,000	
Shipping Weight (lbs)	25		35		50		75		120			165	



PRODUCT. PERFORMANCE. EXCELLENCE.

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Granulate



Regulate



Automate



Integrate

CT/CW SERIES

Sterling

Chilled Water Pump Tank Systems

ENHANCED TECHNOLOGY FOR ENHANCED PERFORMANCE

The CT/CW Series, single and double compartment, pump tank assemblies are the most complete, best constructed available. Our pump tanks' standard sizes range from 140 to 6,285 gallons, with pump sizes from 1.5 to 75 hp. Flow rates can be adjusted on each pump tank, depending on the customer's needs. These tanks can be custom made with multiple reservoirs, pump decks and ports for expansion, to name a few.

Chilled water tanks feature insulation and a cover to prevent sweating. Tower water tanks feature a stainless steel strainer basket. Both share these features: centrifugal pumps; full sized suction; discharge check; and throttling valves; thermometer for temperature monitoring; and overflow and valved drain fittings.



Features

- 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
- Insulation and composite covers
- Lug-mount butterfly valves
- #304 stainless steel tank side walls 3/16" from 480 to 2040; 1/4" from 2700 to 5130D
- Standard hardware includes thermometer(s), pump pressure gauge(s), drain valve
- Full-size pump trim for maximum efficiency; includes isolation, throttling, and check valves
- Automatic level control makeup valve
- Butterfly valve handles
- Solid diamond-plate pump ledge
- 1 year warranty on parts and labor

Options

- Second pump ledge
- 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 or double suction trim
- Discharge manifold: process/recirculation standby
- Plugged or valved opening, mild or stainless steel
- Digital temperature display
- Amp meter, hour meter, digital flow meter
- UL Panel
- NEMA 12 enclosure with fused transformer
- Through-the-door disconnect
- Panel mounted on tank and wired
- 8-foot support legs

CT/CW SERIES

Chilled Water Pump Tank Systems

SELECTION

Model	Max. chiller, tons (Kcal/hr)		Capacity, gallons (l)		Max. pumps/ledge	Return water conn., in. (mm) NPT
	1 well	2 wells	Overflow	Operating		
CW140 (D)	56 (170,300)	28 (85,100)	135 (511)	100 (378)	3	3 (76)
PCW390 (D)	162 (492,000)	81 (246,000)	390 (1476)	350 (1325)	3	5 (127)
CW480 (D)	200 (605,700)	100 (302,800)	480 (1817)	360 (1362)	3	4 (102)
CW720 (D)	300 (908,300)	150 (454,200)	720 (2725)	540 (2044)	4	4 (102)
CW1080 (D)	448 (1,356,300)	224 (678,200)	1075 (4069)	825 (3122)	4	6 (152)
CW1620 (D)	672 (2,037,700)	336 (1,018,800)	1615 (6113)	1240 (4693)	4	6 (152)
CW2040 (D)	850 (2,572,700)	425 (1,286,800)	2040 (7721)	1565 (5923)	5	6 (152)
CW2700 (D)	1125 (3,406,700)	562 (1,703,300)	2700 (10,219)	2065 (7816)	6	6 (152)
CW3670 (D)	1527 (4,624,000)	763 (2,312,000)	3665 (13,872)	2830 (10711)	6	6 (152)
CW5130 (D)	2138 (6,472,300)	1069 (3,236,200)	5130 (19,417)	3960 (14988)	7	8 (203)

Calculated for chiller volume capacity based upon 2.4 gpm per ton with the chiller within 25 ft. of the tank

PUMP TANK CAPACITIES

Capacity		Trim size, in. NPT (mm)	Process pump, hp (kW)	Recirculating pump, hp (kW)
Nominal refrigeration, tower water, tons (Kcal/hr)	Nominal flow, gal. (l)			
25 (75,600)	60 (227)	2.5 (64)	5 (3.73)	3 (2.24)
35 (105,840)	84 (318)	2.5 (64)	7.5 (5.59)	3 (2.24)
50 (151,200)	120 (454)	3 (76)	7.5 (5.59)	5 (3.73)
60 (181,440)	144 (545)	3 (76)	10 (7.5)	5 (3.73)
75 (226,800)	180 (682)	4 (102)	10 (7.5)	5 (3.73)
90 (272,160)	216 (818)	4 (102)	15 (11.19)	7.5 (5.59)
100 (302,400)	240 (909)	4 (102)	15 (11.19)	7.5 (5.59)
125 (378,000)	300 (1135)	4 (102)	20 (14.91)	7.5 (5.59)
155 (468,720)	372 (1408)	6 (152)	20 (14.91)	10 (7.5)
185 (559,440)	444 (1680)	6 (152)	25 (18.64)	10 (7.5)
220 (665,280)	528 (1998)	6 (152)	30 (22.37)	15 (11.19)
250 (756,000)	600 (2271)	6 (152)	30 (22.37)	15 (11.19)
310 (937,440)	744 (2816)	6 (152)	40 (29.93)	20 (14.91)
375 (1,134,000)	900 (3406)	6 (152)	50 (37.29)	20 (14.91)

DIMENSIONS

Model	Length, in. (cm)	Width, in. (cm)	Height, in. (cm)	Ship. weight, lbs.	Operating weight, lbs.
CW140 (D)	72 (183)	36 (91)	40 (102)	600 (273)	1800 (817)
PCW390 (D)	95 (241)	56 (142)	64 (162)	500 (227)	3500 (1588)
CW480 (D)	102 (259)	48 (122)	52 (132)	2000 (908)	6000 (2722)
CW720 (D)	114 (289)	72 (183)	52 (132)	2600 (1180)	8600 (3901)
CW1080 (D)	114 (289)	72 (183)	77 (195)	3400 (1543)	12400 (5625)
CW1620 (D)	138 (350)	72 (183)	77 (195)	4000 (1815)	17500 (7938)
CW2040 (D)	150 (381)	92 (234)	78 (198)	5000 (2268)	22100 (10025)
CW2700 (D)	150 (381)	120 (305)	78 (198)	6000 (2722)	28500 (12928)
CW3670 (D)	162 (411)	120 (305)	90 (229)	7000 (3176)	37600 (17056)
CW5130 (D)	162 (411)	168 (427)	92 (234)	7800 (3539)	50700 (22998)

CT/CW SERIES

Chilled Water Pump Tank Systems

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 are based on a flow rate entering the tank at 2.4 gallons per minute per ton (3 lpm per 1,000 Kcal/hr) of refrigeration.

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

Sizing Example

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

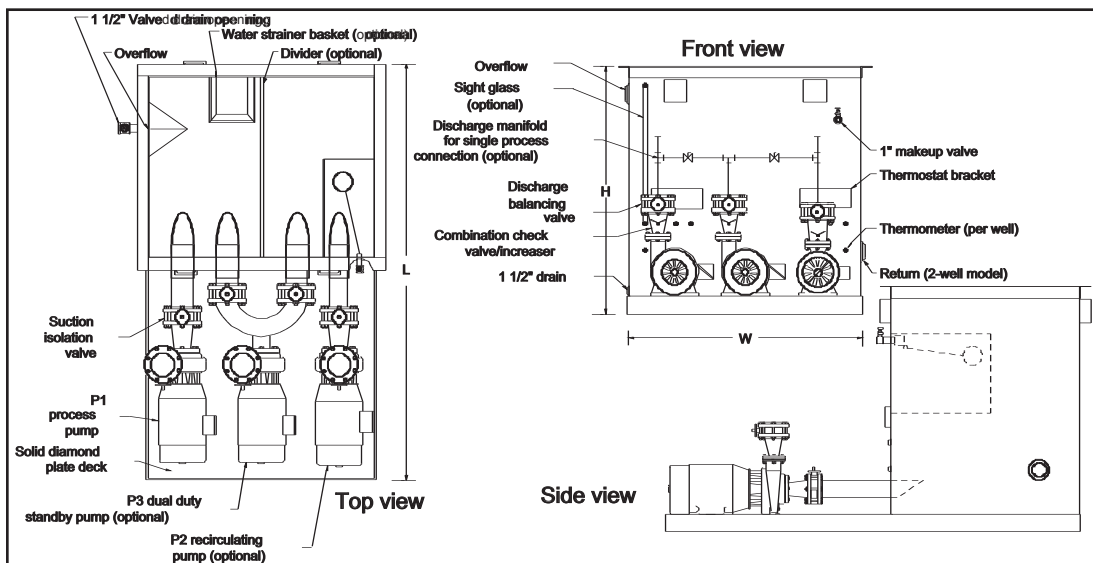
Minimum tank volume to overflow = 720 gallons

Result: Select a CW720D 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

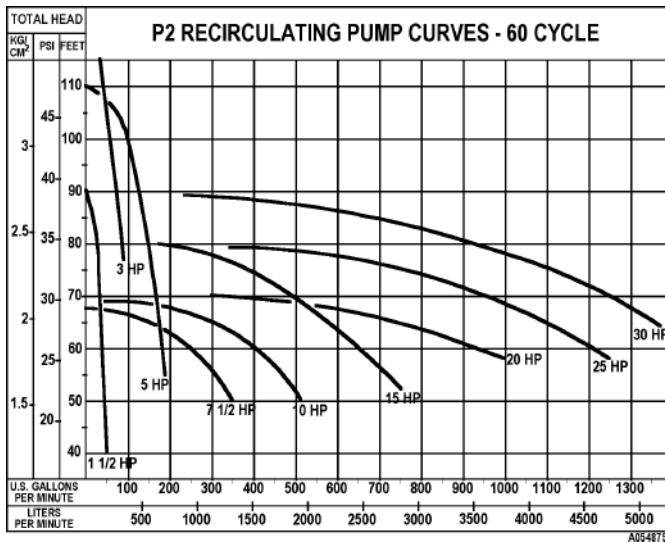
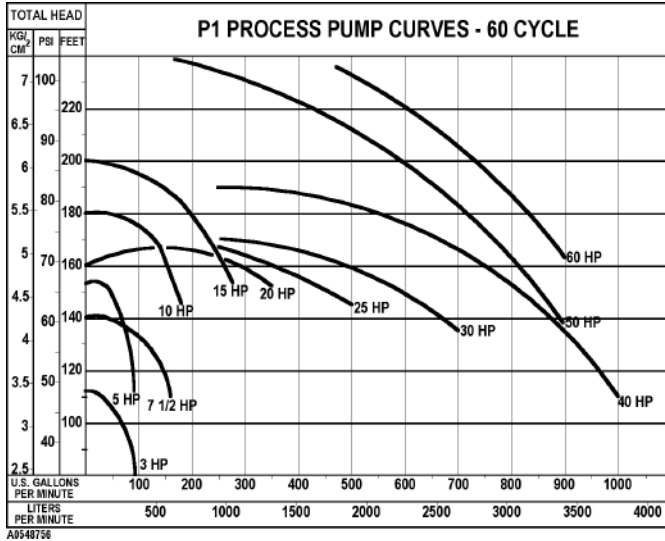


All pumps are close-coupled centrifugal types and include a compound pressure gauge and ODP-type motors. TEFC motors are available as an option. Trim is full size, including butterfly valve (and reducer if necessary) on the suction side, combination increaser/check valve, and butterfly valve on the discharge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

CT/CW SERIES

Chilled Water Pump Tank Systems

PUMP CURVES



Note: For 50 Hz operation, derate by multiplying pressures by 0.69

NEMA 1 STARTERS

2-60 hp pumps are available with 460/3/60 or 230/3/60 individual NEMA 1 starters. (230/3/60 voltage not available on 50 and 60 hp pumps).

Mounting the starter on the pump tank and wiring to the motor is also available at extra cost.

Starters are shipped loose.

GRAVITY RETURN PUMP TANKS

Whatever your small pump tank needs, Sterling has the solution. Whether your application is to recover cooling water from a trough, bearing, clutch, furnace, die casting line, or numerous other processes, Sterling has a gravity return tank circulating system to meet your requirements.

Gravity return pump tanks are available with 0.33, 0.5, 0.75, 1, 1.5, 3, or 5 hp pumps (0.25, 0.37, 0.56, 0.75, 1.12, 2.24, or 3.73 kW). Available tank sizes are 15, 30, 45, 60, 95, or 120 gallons (56, 114, 170, 227, 360, 454 liters). 5 hp pump is not available on 15 gallon tanks.

Features

- Flow ratings from 3 to 90 gpm (11 to 340 lpm)
- Voltages from 115/1/60 to 575/3/60
- Automatic seal venting and flush
- Permanently-lubricated pump motors through 3 hp (2.24 kW) with stainless steel shaft
- Available in one- or two-pump configurations
- Brass inlet strainer through 3 hp (2.24 kW) protects pump from foreign materials
- Cast iron bronze-fitted pumps with ceramic seals rated for operation up to 250°F (121°C)
- Low-level pump protection provided by an adjustable float and rod; includes double-break silver-to-silver contacts
- Internal overload protection on single-phase motors
- Heavy-duty 3/16" (5 mm) steel reservoirs available from 8 to 120 gallons (30 to 454 liters)
- Factory-assembled and tested prior to shipment
- 1 year warranty on parts and labor

Options

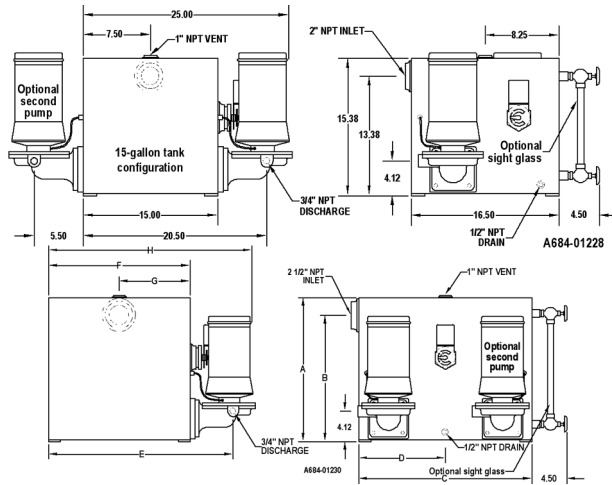
- Stainless steel tank construction
- Second pump
- Available in one- or two-pump configurations NEMA 1 starters, sent loose for field installation, single phase manual starter or three phase magnetic starter
- 115/1/60, 208/1/60, 230/1/60, 208/3/60, 230/3/60, 460/3/60, or 575/3/60
- Additional openings, 0.5" to 6"
- Armaflex insulation
- Sight glass
- Isolation valve
- 15-120 gallons (56 to 454 liters)
- Pressure gauge
- NEMA 4 float switch
- X-proof float switch
- Discharge trim with check valve, throttling valve, and fittings, 0.5", 1", 1.25", 1.5", 2", 2.5", shipped loose
- Motor options: TEFC, X-proof, 575/3/60 (ODP only), or tropical (not available on 5 hp motors; TEFC, Xproof, and 575/3/60 options not available on 0.33 pumps)

GRT SERIES

Gravity Return Pump Tanks

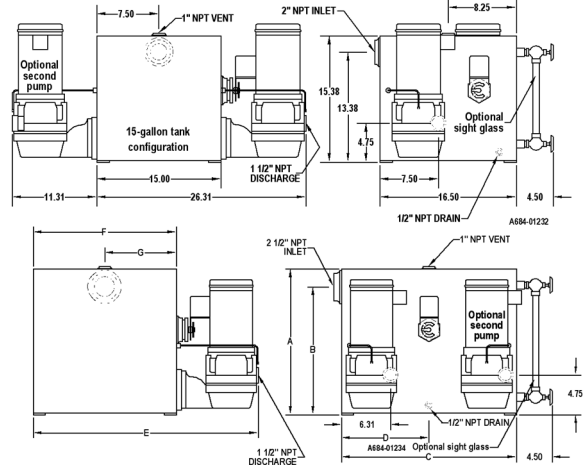
DIMENSIONS

0.33G, 0.50G, and 0.75G Pumps



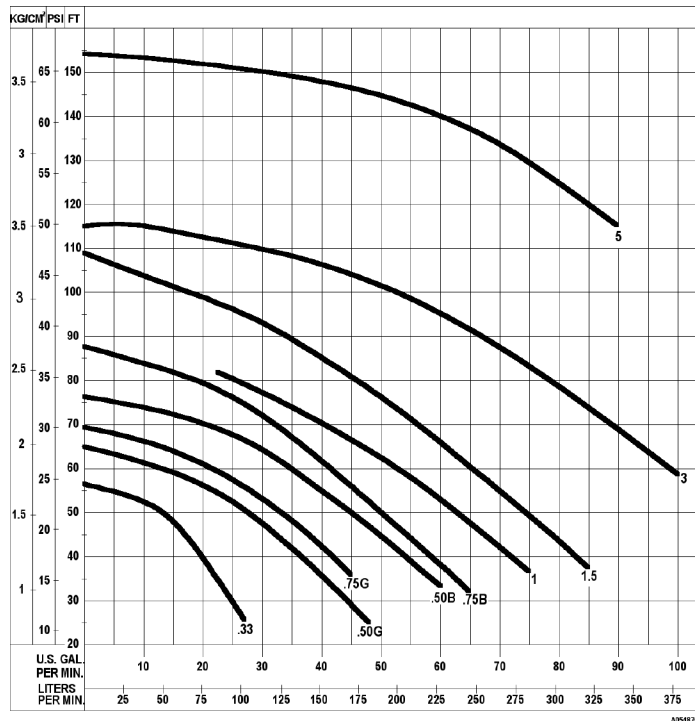
Ga.	A	B	C	D	E	F	G	H
30	18.38	16.12	22.00	11.00	23.50	18.00	9.00	28.00
45	26.38	24.12	22.00	11.00	23.50	18.00	9.00	28.00
60	28.38	26.12	28.00	14.00	23.50	18.00	9.00	28.00
95	28.38	26.12	28.00	14.00	33.50	28.00	14.00	38.00
120	36.38	34.12	28.00	14.00	33.50	28.00	14.00	38.00

0.50B, 0.75B, 1B, 1.5B, and 3B Pumps



Ga.	A	B	C	D	E	F	G
30	18.38	16.12	22.00	11.00	29.31	18.00	9.00
45	26.38	24.12	22.00	11.00	29.31	18.00	9.00
60	28.38	26.12	28.00	14.00	29.31	18.00	9.00
95	28.38	26.12	28.00	14.00	39.31	28.00	14.00
120	36.38	33.75	28.00	14.00	39.31	28.00	14.00

PUMP CURVES



Note: Second pump opening is supplied standard and blanked off. Additional blanked-off opening for 15 and 30 ga. tanks are available upon request.