

steel pressurized water system tanks



■ Use wherever pressurized tanks are needed in water systems applications.

SPECIFICATIONS

- Shell** – Heavy gauge steel
- Base** – High-impact composite; ABS
- Finish** – Electrostatically applied, baked-on polyester paint
- Water Cell** – One piece seamless PVC, made from FDA listed material
- Flange** – Reinforced polypropylene
- Service Connection** – Reinforced polypropylene integral to flange
- Air Valve** – Rubber stem/brass body Schrader valve assembly
- UV Valve Cover** – High density polyethylene

UL Classified to ANSI/NSF Standard 61, Drinking Water System Components – Health Effects



PRO-Source™ is a trademark of WICOR Industries. In order to provide the best products possible, specifications are subject to change.

ORDERING INFORMATION

Catalog Number	Maximum Capacity gal/liter	Diameter* inch/cm	Height* inch/cm	Length inch/cm	Precharge PSI/kPa	Connection Size Female	Drawdown in Gallons/Liter			Weight lbs/kg
							20-40	30-50	40-60	
VERTICAL MODELS										
PS15-S02	6.0 / 22.7	12 / 30.5	16.1 / 40.9	-	40 / 276	3/4" NPT	2.2 / 8.3	1.8 / 6.8	1.6 / 6.0	18 / 8.2
PS30-T01	14 / 53	16 / 40.6	23 / 54.4	-	40 / 276	1" NPT	4.8 / 18.2	4.1 / 15.5	3.6 / 13.6	37 / 16.8
PS42S-T02	19 / 72	20 / 51	21 / 53.3	-	40 / 276	1" NPT	6.9 / 26.1	5.8 / 21.9	5.0 / 18.9	45 / 20.4
PS42T-T02	19 / 72	16 / 40.6	27.5 / 70	-	40 / 276	1" NPT	6.9 / 26.1	5.8 / 21.9	5.0 / 18.9	40 / 18.1
PS75T-T03	32 / 121	16 / 40.6	43 / 109	-	40 / 276	1" NPT	11.6 / 43.9	9.8 / 37.1	8.5 / 32.2	56 / 25.4
PS82T-T05	35 / 133	20 / 51	33 / 84	-	40 / 276	1" NPT	12.7 / 48.1	10.7 / 40.5	9.3 / 35.2	66 / 29.9
PS120-T50	50 / 189	24 / 61	32.5 / 83	-	40 / 276	1-1/4" NPT	18.3 / 69.3	15.5 / 58.7	13.4 / 50.7	84 / 38.1
PS200-T51	62 / 235	24 / 61	39.5 / 100	-	40 / 276	1-1/4" NPT	21.4 / 81.0	18.3 / 69.3	16.0 / 60.6	112 / 50.8
PS220-T52	85 / 322	24 / 61	51 / 130	-	40 / 276	1-1/4" NPT	30 / 113.6	26 / 98.4	22 / 83.3	124 / 56.2
PS320-TR50	119 / 450	24 / 61	68 / 173	-	40 / 276	1-1/4" NPT	41.3 / 156.3	35.4 / 134.0	31.0 / 117.3	140 / 63.5
HORIZONTAL MODELS										
PS15H-S05	6.0 / 22.7	12 / 30.5	13.8 / 35.0	16 / 40.6	40 / 276	3/4" NPT	2.2 / 8.3	1.8 / 6.8	1.6 / 6.0	22 / 10
PS42H-S00	19 / 72	16 / 40.6	17.5 / 44.5	28 / 71.1	40 / 276	1" NPT	6.9 / 26.1	5.8 / 21.9	5.0 / 18.9	40 / 18

*Subject to change without notice.
 Maximum Operating Pressure = 100 PSI
 Maximum Liquid Temperature: 120°F (49°C) Maximum External (Ambient) Temperature: 125°F (52°C)



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FEATURES

Heavy Gauge Metal Construction – Sturdy “welded wrapper and head design.” Built to last.

Polyester Paint Finish – Electrostatically powder painted, then oven baked for a smooth high-gloss, appliance-quality finish. Resists corrosion.

Elongated, Seamless Water Cell – Controlled 2-dimensional cell expansion.

– Rugged, seamless “water cell” prevents the most common cause of pump failure – “waterlogging”

– Water never touches the steel tank material.

– Translucent bag material facilitates manufacturing quality control inspection.

Composite Sealing Flange – Corrosion-resistant.

– Integral o-ring groove better traps the water cell's sealing ring.

– Reinforcing ribs strengthen and maintain a flat smooth sealing surface.

Integral Stand Pipe – Keeps the water cell standing erect, promoting complete flushing of the water entering/exiting the tank.

Nitrogen-Rich Precharge – Decreases air permeation three to four times over straight air precharge.

40 PSI Precharge – Ready for use with 40/60 pressure range systems. Enables installer to reduce pressure depending on pressure switch setting.

Sturdy Base – Tested-tough composite construction.

Five Year Warranty – Managed and provided by WICOR Industries, the only US pump manufacturer to design and manufacture fibre-wound and steel tanks!

PRO-Source™ Tank Sizing Rule:
Size tank for one gallon of drawdown for each gallon per minute of pump capacity.

Example:
For a 1 HP 20 GPM unit pumping 20 gallons per minute on a 30-50 pressure switch setting, the properly sized PRO-Source™ tank is a PS220-T52 which has a 26 gallon drawdown.

CHART A – TANK SELECTION CHART

Pump GPM	System Pressure Switch Setting – PSI					
	20-40		30-50		40-60	
	Run Times					
	1 Minute	2 Minute	1 Minute	2 Minute	1 Minute	2 Minute
5	PS42T	PS75T	PS42T	PS82T	PS42T	PS82T
7-1/2	PS75T	PS82T	PS75T	PS120	PS75T	PS200
10	PS75T	PS200	PS82T	PS200	PS82T	PS220
12-1/2	PS82T	PS200	PS120	PS220	PS120	PS220
15	PS120	PS220	PS120	PS120 (2)	PS200	PS200 (2)
20	PS200	PS200 (2)	PS200	PS200 (2)	PS220	PS220 (2)
30	PS220	PS220 (2)	PS120 (2)	PS220 (2)	PS200 (2)	PS220 (3)
30	-	-	PS320	PS320 + PS220	PS320	PS320 (2)
50	PS200 + PS220	PS220 (3)	PS220 (2)	PS220 (4)	PS220 (2)	PS220 (5)
50	-	PS320 (2) + PS200	-	PS320 (3)	PS320 (2)	PS320 (4)

NOTE: Drawdown will be affected by operating temperature of the system, accuracy of the pressure switch and gauge, the actual precharge pressure, and rate of fill. Pumps installed with a PRO-Source™ tank require a 100 PSI relief valve. Relief valve must be capable of relieving entire flow of pump at relief pressure.

CHART B – DRAWDOWN VOLUME MULTIPLIER* (APPROX.)

Pump Off Pressure PSI	Pump Start Pressure – PSI							
	10	20	30	40	50	60	70	80
20	0.26							
30	0.41	0.22						
40		0.37	0.18					
50		0.46	0.31	0.15				
60			0.40	0.27	0.13			
70			0.47	0.35	0.24	0.12		
80				0.42	0.32	0.21	0.11	
90				0.48	0.38	0.29	0.19	0.10
100					0.44	0.35	0.26	0.17

*Utilize this chart if proper selection cannot be made using Chart A. Drawdown based on Boyle's Law.

Procedure: 1. Identify drawdown multiplier relating to specific application.
2. Insert multiplier (X) into the following formula:

$$\frac{\text{Pump GPM} \times \text{Min Run Time}}{\text{Multiplier (X)}} = \text{Minimum Tank Capacity Required}$$

Example: An example of a 20 GPM pump with a minimum run time of 1 minute, installed on a 50 - 70 PSIG system pressure range:

$$\frac{20 \text{ GPM} \times 1 \text{ minute}}{.24 \text{ (factor) from Chart B}} = 83.3 \text{ minimum U.S. gallon tank capacity}$$

Referring to “Ordering Information” chart, the model PS220-T52 has the closest U.S. gallon capacity that is greater or equal to the minimum volume requirement of 83.3 U.S. gallons.

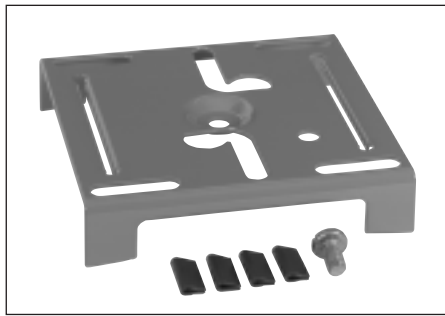
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PRO-Source™ PROFESSIONAL PERFORMANCE TIPS

- ① Size tank to one gallon drawdown for each GPM capacity.
- ② Adjust factory precharge at installation, if needed.
- ③ Securely tighten sealing cap on air valve.
- ④ Check precharge every 6 months.



ACCESSORIES



PKG 198
Universal Jet
Mounting
Bracket



PKG 111,
PKG 112 or
PKG 207
Jet Pump-
to-Tank
Mounting Pkg.

ORDERING INFORMATION

PKG 198 – Jet Pump Mounting Bracket
PKG 111 – Pump to Tank Fitting Package for PL and PN Series jet pumps
PKG 112 – Pump to Tank Fitting Package for HN, SN, FN, HL, SL, and FL Series jet pumps
PKG 207 – Pump to Tank Fitting Package for HN, SN, FN, HL, SL and FL Series jet pumps, with galvanized fittings

MULTIPLE TANK INSTALLATIONS

PRO-Source™ tanks can be connected together to increase the supply of usable water (drawdown). Two tanks of the same size will double the supply and three tanks will triple the supply. See Figures No. 1 and 2 for the typical installations of this kind.

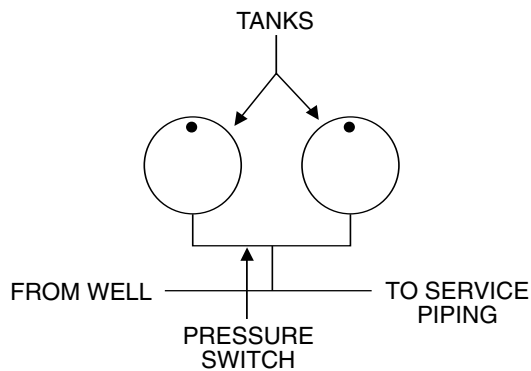


Figure 1

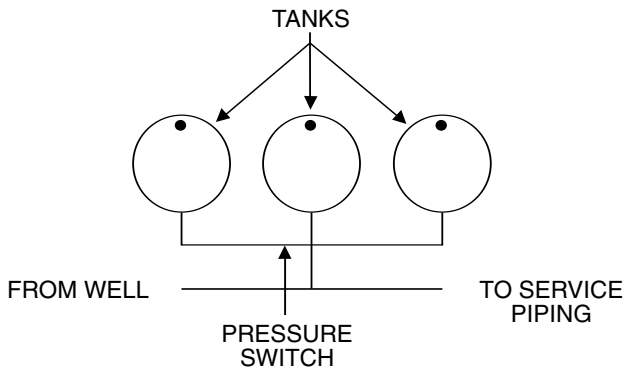
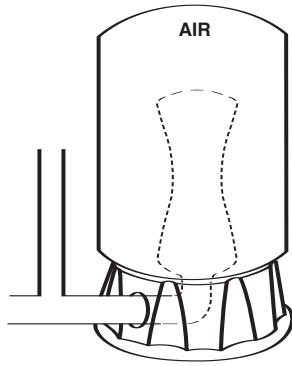


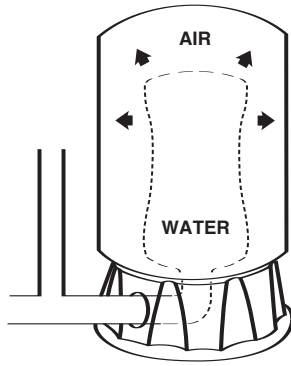
Figure 2

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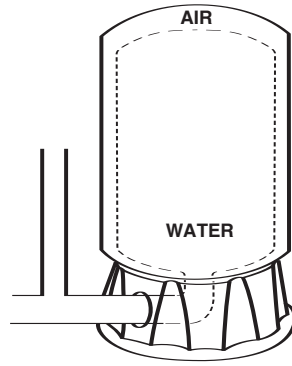
SEQUENCE OF OPERATION



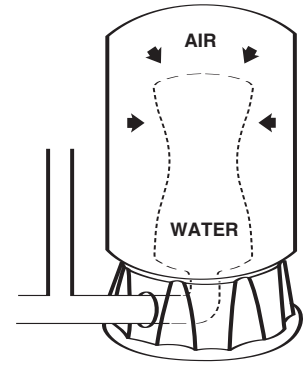
WATER CELL IS COMPLETELY EMPTY:
A new cycle is ready to begin. Simple, positive action produces maximum drawdown on every cycle.



WATER BEGINS TO ENTER THE TANK:
Air is compressed around the water cell as it fills with water.



PUMP-UP CYCLE COMPLETED:
Air is now compressed to the cut-off setting of pressure switch.



WATER IS BEING DRAWN FROM THE TANK: Compressed air in the tank forces water out of the water cell.