PT ProMax®

DIAPHRAGM TANKS

PROMAX® FREE-STANDING SERIES

- Butyl Rubber Parabolic Diaphragm
- Projection Welded Air Valve
- Lightweight Double Drawn-Steel Construction
- Corrosion-Resistant Polymer Base
- Maximum Working Pressure 100 psi
- NSF 61G/372 Galvanized Lead Free Elbow
- 5 Year Limited Warranty

DESIGNED • ENGINEERED & ASSEMBLED IN THE USA

WATER SYSTEMS
An A. O. Smith Company

For more information on ProMax Elite or other products, contact:
Water Systems - An A. O. Smith Company
500 Tennessee Waltz Parkway Ashland City, TN 37015
800-365-4300 www.wstanks.com

Diaphragm Tanks

Pre-pressurized • Lightweight drawn-steel construction • Plastic base • 100 psi maximum working pressure

Features and Benefits

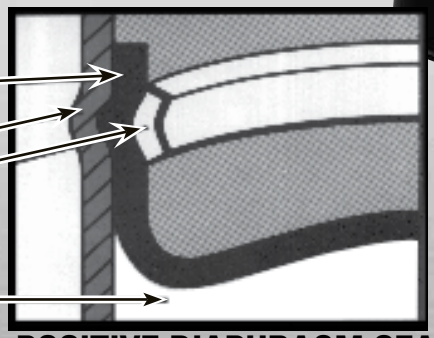
AIR CHARGE VALVE
- Conveniently located for easy pressure adjustment
- Projection Welded for Durability

DESIGNER FINISH
- High gloss exterior powder coat
- Provides positive protection against corrosion and UV Rays

BUTYL RUBBER PARABOLIC DIAPHRAGM
- Eliminates rubbing on the tank wall or rolling over on itself

FUSED INTERIOR WATER CHAMBER
- Proven protection against internal corrosion

CORROSION-RESISTANT BASE
- High-impact polymer material
- Strong and stable for long life
- Base rotates for easy alignment to pipe connection
- Slotted and notched for air flow, reduced condensation build-up



POSITIVE DIAPHRAGM SEAL

On PMX (free-standing) and (in-line) models.
Seals diaphragm directly to shell, insures permanent separation of air and water.

NSF
Certified to NSF / ANSI 61

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Sizing

The charts below allow you to easily select the right ProMax® PMX Series tank for standard-size pumps between 2-1/2 and 30 gallons in capacity and for 20-40 psi, 30-50 psi and 40-60 psi pressure ranges. Minimum run times shown (from start-up) are 1 minute, 1-1/2 minutes and 2 minutes. For example, for a system that delivers 10 GPM at 30-50 psi, with a minimum run time of 1 minute, Chart 1 indicates that the proper tank is the PMX-36.

Chart 1 – PMX Series Free-Standing Tank Selection Chart

PUMP GPM	SYSTEM PRESSURE RANGES (PSI)								
	20-40			30-50			40-60		
	MINIMUM RUN TIMES (MINUTES)								
	1	1.5	2	1	1.5	2	1	1.5	2
2.5	PMX-14	PMX-14	PMX-14	PMX-14	PMX-14	PMX-20	PMX-14	PMX-20	PMX-20
5	PMX-14	PMX-20	PMX-36S	PMX-20	PMX-36S	PMX-36S	PMX-20	PMX-36S	PMX-52
7	PMX-20	PMX-36S	PMX-52	PMX-36S	PMX-36S	PMX-52	PMX-36S	PMX-52	PMX-86
10	PMX-36S	PMX-52	PMX-86	PMX-36S	PMX-52	PMX-86	PMX-52	PMX-86	PMX-86
12	PMX-36S	PMX-52	PMX-86	PMX-52	PMX-86	PMX-86	PMX-52	PMX-86	PMX-96
15	PMX-52	PMX-86	PMX-86	PMX-52	PMX-86	PMX-119	PMX-86	PMX-96	PMX-119
20	PMX-86	PMX-86	PMX-119	PMX-86	PMX-119	(2)PMX-86	PMX-86	PMX-119	(2)PMX-86
25	PMX-86	PMX-119	(2)PMX-86	PMX-86	(2)PMX-86	(2)PMX-86	PMX-96	(2)PAD-86	(2)PMX-96
30	PMX-86	(2)PMX-86	(2)PMX-86	PMX-119	(2)PMX-86	(2)PMX-119	PMX-119	(2)PMX-96	(2)PMX-119

Chart 2 – Drawdown Volume Multiplier (Approximate)

PUMP SHUTOFF PRESSURE (PSI)	PUMP START-UP PRESSURE (PSI)							
	10	20	30	40	50	60	70	80
20	.26							
30	.41	.22						
40		.37	.18					
50		.46	.31	.15				
60			.40	.27	.13			
70			.47	.35	.24	.12		
80				.42	.32	.21	.11	
90				.48	.38	.29	.19	.10
100					.44	.35	.26	.17

If proper tank selection cannot be made using Chart 1, follow this procedure. First, find the "drawdown multiplier" by matching the pump start-up and shut-off pressures on Chart 2. For example, the multiplier for a 30-50 psi pressure range is .31.
Next, insert the pump GPM capacity and desired minimum run time into this formula:

$$\frac{\text{Pump GPM x Min. Run Time}}{\text{Multiplier}} = \text{Minimum Tank Volume Required}$$

To assume dependable drawdown volumes, and in keeping with present industry practice, drawdowns are based on Boyle's Law.

Chart 3 – Drawdown in Gallons

MODEL NUMBER	VOLUME (GALS)	20-40	30-50	40-60
PMX-2	2.0	0.7	0.6	0.5
PMX-5	4.6	1.7	1.4	1.2
PMX-7	7.3	2.7	2.3	2.0
PMX-14	14.0	5.2	4.3	3.8
PMX-20	20.0	7.4	6.2	5.4
PMX-32	32.0	11.5	9.6	8.4
PMX-36	36.0	13.3	11.2	9.7
PMX-52	52.0	19.2	16.1	14.0
PMX-65	65.0	24.0	20.0	17.5
PMX-86	86.0	31.8	26.7	23.2
PMX-96	96.0	35.5	29.8	25.9
PMX-119	119.5	44.2	37.0	32.3

For example, using a 10 GPM pump, a one minute minimum run time, and a 30-50 psi pressure range, the formula is as follows:

$$\frac{10 \times 1}{.31} = 32.26 \quad \text{Minimum Tank Volume}$$

Then, using Chart 3, select the tank that has a minimum volume that meets or exceeds your minimum volume requirement and supplies adequate drawdown at the required pressure range. Minimum drawdown equals Pump GPM X Minimum Run Time. Therefore, in the above example, select the PMX-36 36-gallon tank. It provides adequate drawdown at 30-50 psi.

Diaphragm Tanks

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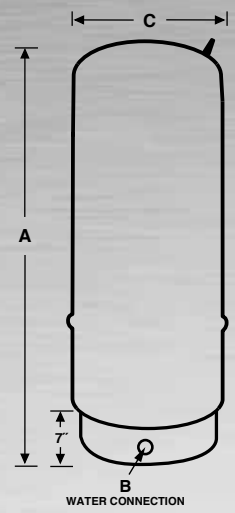
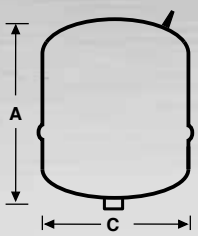


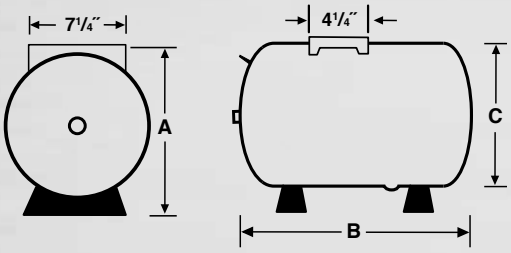
In-Line Model (PMX)



Volume, Dimension and Weight Specifications

MODEL NUMBER	VOLUME (GALS)	"A" OVERALL HEIGHT (INCHES)	"B" CENTER OF WATER INLET TO BOTTOM OF TANK (INCHES)	"C" DIAMETER (INCHES)	WEIGHT (LBS.)
PMX Series (In-Line)					
PMX-2	2	10 3/16	-	8 1/4	5
PMX-5	4.6	14 3/4	-	11	9
PMX-7	7.3	21 1/16	-	11	14
PMX Series (Free-Standing)					
PMX-14	14.0	23 3/4	2 1/4	15 3/8	25.5
PMX-20	20.0	32 3/4	2 1/4	15 3/8	30
PMX-32	32.0	45 1/2	2 1/4	15 3/8	40
PMX-36	36.0	32 3/8	2 1/4	20	45
PMX-52	52.0	38 5/8	2 1/4	23 3/8	77
PMX-65	65.0	46 3/5	2 1/4	23 3/8	87
PMX-86	86.0	59	2 1/4	23 3/8	105
PMX-96	96.0	63 3/8	2 1/4	23 3/8	111
PMX-119	119.5	61 1/4	2 1/2	26	165

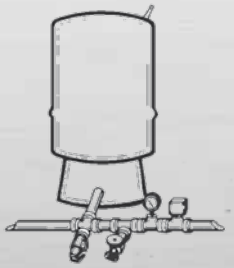
PMX connection 3/4" Male connection
PMX-14, PMX-20. PMX-32 amd PMX-36 1" female connection.
PMX-52, PMX-65, PMX-86, PMX-96, PMX 119 connection 1-1/4" female connection



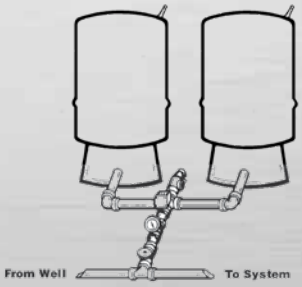
MODEL NUMBER	VOLUME (GALS)	DIMENSIONS IN INCHES			WEIGHT (LBS.)
		A	B	C	
PMX-H Series					
PMX-7H	7.3	12 7/8	21 1/8	11	16
PMX-14H	14	17 3/8	21 3/4	15 3/8	25 1/2
PMX-20H	20	17 3/8	27 1/8	15 3/8	30

PMX Free-Standing Series

The standard front-entry installation. Gauge, relief valve and pressure switch are installed in front of tank.

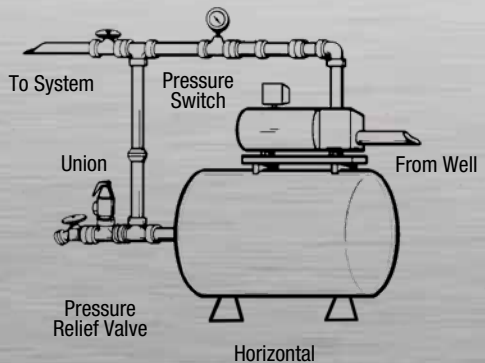


Single Installation



Multiple Installation

PMX Free-Standing Series with Pump Mounted on Tank*



Horizontal

The pump can be mounted on the tank using a universal mounting base. The pump can be attached to the top of either a vertical or horizontal tank. For installation convenience, the horizontal series is available with pump mount and legs factory installed.

*Pump mount bracket available. (Part # 100290594)

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For more information on all of our products, contact:
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