

# PROMAX<sup>®</sup>

## ELITE

# **PROMAX® ELITE**

## **DIAPHRAGM PUMP TANKS**

- Up to 150 PSI Working Pressure
- 304 Stainless Steel Connection
- Butyl Rubber Parabolic Diaphragm - Prevents rubbing on tank wall or rolling over on itself.
- The best finish in the tank industry. The durable powder coated finish is designed for harsh environments and tested beyond ASTM automotive standards.
- Exclusive no-weld **Rust-Guard**  airflow base design eliminates condensate buildup.
- Uniweld design - two-piece construction (on most models) creates only one weld on the tank.
- 5-year warranty



**DESIGNED • ENGINEERED  
& ASSEMBLED IN THE  
USA**

The logo for AO Smith Water Systems. It features a green circle on the left containing the letters 'AO'. To the right of the circle, the word 'Smith' is written in a large, bold, black sans-serif font. A registered trademark symbol (®) is located at the top right of 'Smith'. Below 'Smith', the words 'Water Systems' are written in a smaller, bold, green sans-serif font.

# PROMAX® ELITE

## DIAPHRAGM PUMP TANKS

Pre-pressurized • Lightweight drawn-steel construction • Steel base • Up to 150 psi max working pressure

### FEATURES AND BENEFITS

#### Air Charge Valve

- Metal air valve with "O" ring cap seal for added protection
- Projection Welded

#### Powder Coated Exterior

- Provides positive protection against corrosion
- High UV resistance
- Certified to ASTM Automotive Salt Test Standards

#### Butyl Rubber Parabolic Diaphragm

- Strong and flexible with smooth operation for long life
- Eliminates rubbing the tank wall or rolling over on itself

#### Double Draw Uniweld Design

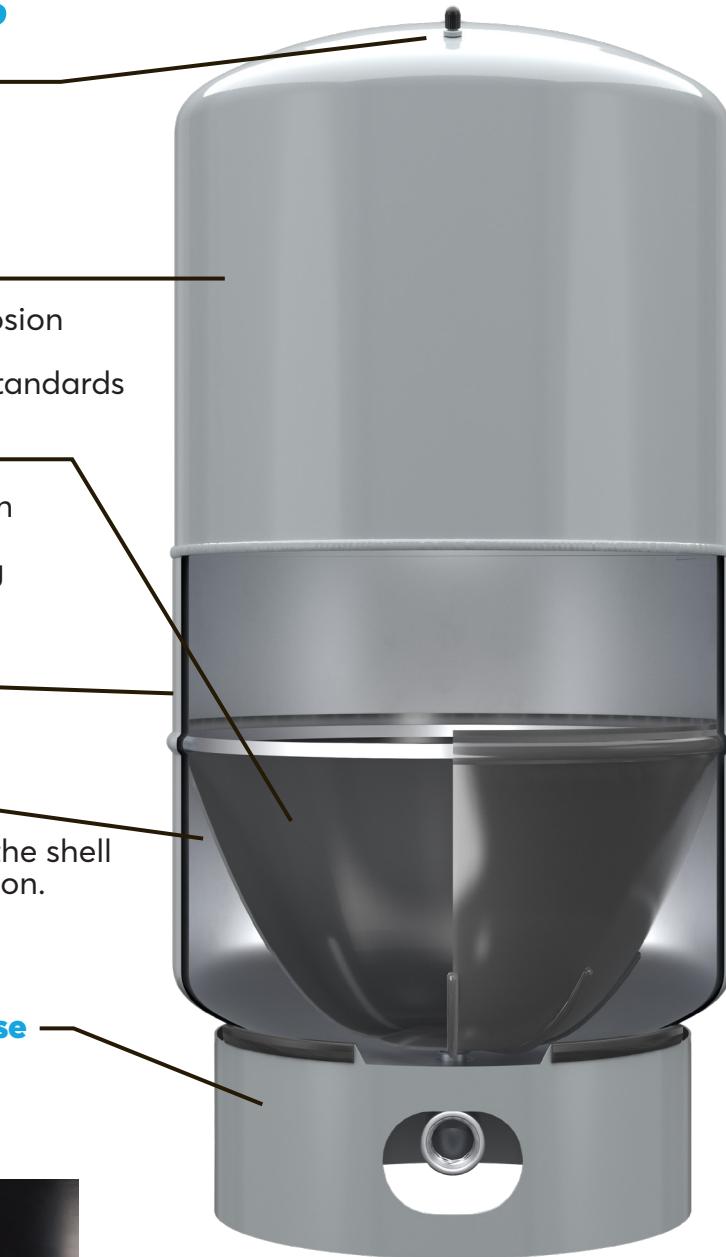
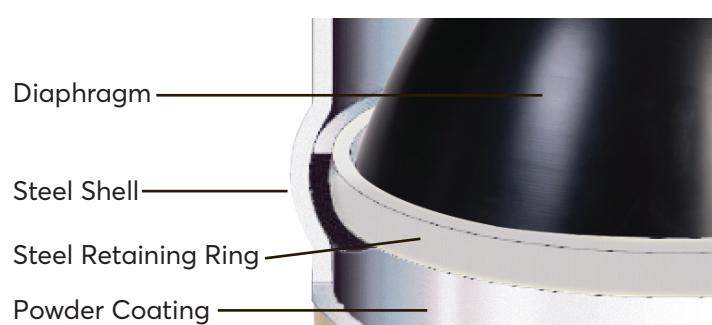
- Allows two piece construction

#### Interior Powder Coating

- Powder coating permanently bonded to the shell
- Proven protection against internal corrosion.
- Eliminates clinch rings and plastic liners

#### Exclusive No-Weld Rust-Guard® Steel Base

- No-weld RUST-GUARD® base eliminates condensate



#### Universal Pump Mounting Bracket

Standard on horizontal models.  
Optional on other models



#### Positive Diaphragm Seal

Seals diaphragm directly to shell, ensuring permanent separation of water and air. No liners needed.



# PROMAX® ELITE

## DIAPHRAGM PUMP TANKS

### SIZING

The charts below allow you to easily select the right ProMax® ELITE PMXE 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 PMXE-36S.

**CHART 1 – PMXE 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	PMXE-20	PMXE-36S	PMXE-52	PMXE-36S	PMXE-36S	PMXE-52	PMXE-36S	PMXE-52	PMXE-86*
10	PMXE-36S	PMXE-52	PMXE-86*	PMXE-36S	PMXE-52	PMXE-86*	PMXE-52	PMXE-86*	PMXE-86*
12	PMXE-36S	PMXE-52	PMXE-65	PMXE-52	PMXE-65	PMXE-86*	PMXE-52	PMXE-65	PMXE-119
15	PMXE-52	PMXE-65	PMXE-86*	PMXE-52	PMXE-65	PMXE-119	PMXE-65	PMXE-65	PMXE-119
20	PMXE-65	PMXE-86*	PMXE-119	PMXE-65	PMXE-119	(2)PMXE-86*	PMXE-86*	PMXE-119	(2)PMXE-86*
25	PMXE-86*	PMXE-119	(2)PMXE-86*	PMXE-86*	(2)PMXE-86*	(2)PMXE-86*	PMXE-119	(2)PMXE-86*	(2)PMXE-119
30	PMXE-86*	(2)PMXE-86*	(2)PMXE-86*	PMXE-119	(2)PMXE-86*	(2)PMXE-119	PMXE-119	(2)PMXE-119	PMXE-119

\*Also available in PMXE-86S (low profile).

**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:

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

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
PMXE-20	20.0	7.4	6.2	5.4
PMXE-32	32.0	11.5	9.6	8.4
PMXE-36S	36.0	13.3	11.2	9.7
PMXE-52	52.0	19.2	16.1	14.0
PMXE-65	65.0	24.0	20.0	17.5
PMXE-86	86.0	31.8	26.7	23.2
PMXE-86S	86.0	30.9	25.9	22.5
PMXE-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:

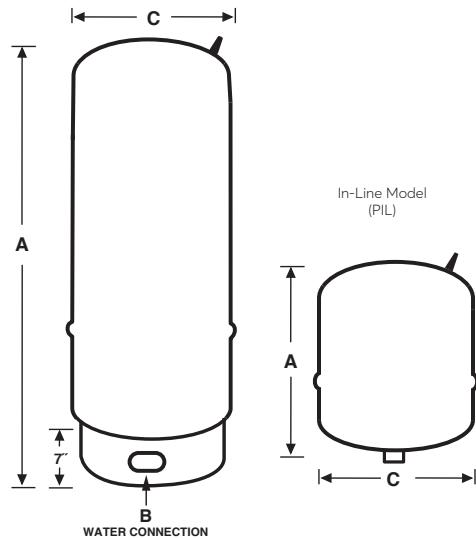
$$\frac{10 \times 1}{.31} = 32.26 \quad \text{Minimum Tank Volume}$$

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 PMXE-36 36-gallon tank. It provides adequate drawdown at 30-50 psi.

# PROMAX® PLUS

## DIAPHRAGM PUMP TANKS

### VOLUME, DIMENSION AND WEIGHT SPECIFICATIONS

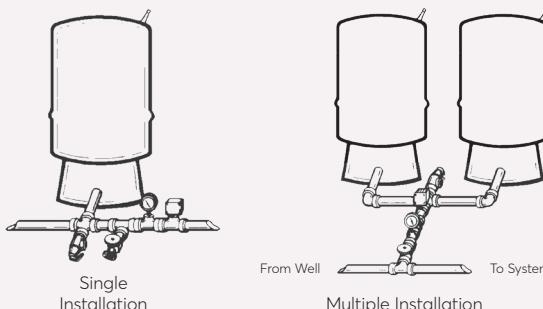
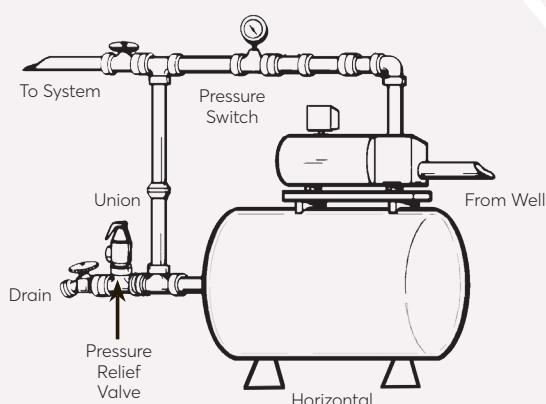


MODEL NUMBER	MAXIMUM WORKING PRESSURE	"A" OVER-ALL HEIGHT (INCHES)	"B" CENTER OF WATER INLET TO BOTTOM OF TANK (INCHES)	"C" DIAMETER (INCHES)	WEIGHT (LBS.)
<b>PMXE Series (Free-Standing)</b>					
<b>PMXE-20</b>	140 PSI	32 3/4	2 1/4	15 3/8	30
<b>PMXE-32</b>	140 PSI	45 1/2	2 1/4	15 3/8	40
<b>PMXE-36S</b>	150 PSI	32 5/8	2 1/4	20	45
<b>PMXE-52</b>	150 PSI	38 5/8	2 1/4	23 3/8	77
<b>PMXE-65</b>	150 PSI	46.6	2 1/4	23 3/8	87
<b>PMXE-86</b>	140 PSI	59	2 1/4	23 3/8	105
<b>PMXE-86S</b>	125 PSI	46	2 1/4	26	116
<b>PMXE-119</b>	125 PSI	61 1/4	2 1/4	26	165

PMXE-20, PMXE-32 and PMXE-36S 1" female connection.  
PMXE-52, PMXE-65, PMXE-86 1 1/4" female connection

#### PMXE FREE-STANDING SERIES

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



#### PMXE FREE-STANDING SERIES WITH PUMP MOUNTED ON TANK\*

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

\*Pump mount bracket available. (Part # 100290594)

A. O. Smith reserves the right to make product changes or improvements at any time without notice.



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