



WELLMATE® WM01, WM02 IN-LINE PRESSURE TANKS

WATER STORAGE FOR PRIVATE WELLS

MADE IN THE
USA
OF FOREIGN & DOMESTIC PARTS



FEATURES/BENEFITS

Replaceable air charge valve is conveniently located for easy pressure adjustment; flexible stem for maximum resistance to mechanical damage

Lightweight drawn steel shell with epoxy finish for extra corrosion resistance

Durable butyl diaphragm for smooth operation and long life

Diaphragm seal for permanent air-water separation

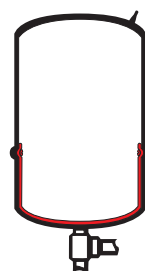
Plastic lining is permanently bonded to inner shell to protect against internal corrosion

NSF and ANSI approved



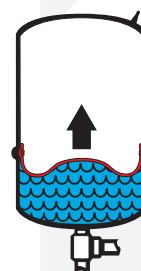
Pentair® Wellmate® WM01 and WM02 In-Line Pressure Tanks are covered by a five-year limited warranty

HOW WELLMATE® IN-LINE PRESSURE TANKS OPERATE



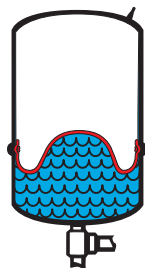
Start-Up Cycle

Diaphragm lies flat against the bottom of the chamber.



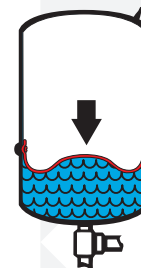
Fill Cycle

Water is pumped into the bottom, forcing the diaphragm up into the air chamber.



Hold Cycle

Pump cut-off pressure is reached. Diaphragm is at maximum height. Reservoir is filled to its rated capacity.



Delivery Cycle

Air pressure in top chamber forces diaphragm downward, delivering water to system. Pump remains shut off.

DRAWDOWN VOLUME MULTIPLIER CHART (APPROXIMATE)

TANK PRESSURE AT SHUT-OFF	TANK PRESSURE AT START-UP PSI (KPa)				
PSI (kPa)	10 (69)	20 (138)	30 (207)	40 (276)	50 (345)
20 (138)	.26	–	–	–	–
30 (207)	.41	.20	–	–	–
40 (276)	.51	.35	.17	–	–
50 (345)	.57	.42	.29	.14	–
60 (414)	.61	.49	.37	.25	.12
70 (483)	.65	.54	.43	.32	.22
80 (552)	.68	.58	.52	.39	.29
90 (621)	.70	.61	.56	.44	.35

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

TANK CONVERSION TABLE

TANK MODEL					
WELLMATE	WELL-X-TROL	A.O. SMITH	STA-RITE	WELL-RITE	GALVANIZED*
WM01	WX101	V-6P	CA-8	JR6-01	6 Gal.
WM02	WX102	V-15P	N/A	JR15-02	11 Gal.

*Standard Atmospheric Installation

DRAWDOWNS, DIMENSIONS & WEIGHT

MODEL	DRAWDOWN – GALLONS (LITRES)				PRECHARGE PRESSURE	DIMENSIONS – INCHES (CM)		WEIGHT
	VOLUME GAL. (LITRES)	20-40 PSI (138-276 kPa)	30-50 PSI (207-345 kPa)	40-60 PSI (276-414 kPa)	PSI (BAR)	DIAMETER	HEIGHT	LBS (KG)
WM01	2.0 (7.6)	0.7 (2.6)	0.6 (2.3)	–	20 (138)	8-3/8 (21)	12-9/16 (32)	5 (2.3)
WM02	4.6 (17.4)	1.7 (6.1)	1.4 (5.3)	–	20 (138)	11-3/8 (28)	14-11/16 (37)	9 (4.1)

PRESSURE TANK SIZING

To properly size a diaphragm pressure tank, this formula should be used:

$$\frac{\text{Pump GPM} \times \text{Min. Run Time}}{\text{Drawdown Multiplier}} = \text{Diaphragm Tank Size}$$

PUMP GPM is the rated GPM of a pump. MINIMUM RUN TIME is the minimum length of time you want the pump to run while refilling the pressure tank. WELLMATE recommends at least 1 minute run time. DRAWDOWN MULTIPLIER is a number that is obtained from the DRAWDOWN VOLUME MULTIPLIER CHART

by matching the pressure tank start-up and shut-off pressure. For example, if your system starts the pump when the tank pressure drops to 20 psi, and shuts off the pump when it reaches 40 psi, then the DRAWDOWN MULTIPLIER is .35.

To select a tank for a 1 GPM pump with a 1 minute run time and a 20-40 tank pressure range, the formula would look like this:

$$\frac{1 \text{ GPM} \times 1 \text{ Min. Run Time}}{.35 \text{ Drawdown Multiplier}} = 2.86 \text{ Gal. Diaphragm Tank Size}$$

Using the chart above, you would select the tank that is closest in size (usually the next largest size.) In this case the WM02, a 4.6 gallon tank with a 1.7 drawdown would be the correct choice. The 1.7 gallon drawdown means that when the tank is full, you have

that amount of water available before the tank pressure drops to 20 psi and turns on the pump to refill the tank.

As you can see, a larger tank gives you more drawdown, which means that you would have more water available before the pump is needed. This can be especially important if you live in an area that is subject to frequent power outages. A larger tank also means the pump will cycle fewer times and will run for longer periods of time, which adds to pump life.

WM Series Connection 3/4" male.

NOTE: All tanks may be used up to 90° F. MAXIMUM WORKING PRESSURE 100 PSI.

NOTE: Install a pressure relief valve on any installation where the pump pressure can exceed the tank's maximum pressure.



FILTRATION & PROCESS

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