

GLOBAL WATER SOLUTIONS PRESSURE TANK RANGE



- PressureWave™
- Max™
- Challenger™
- UltraMax™
- C2Lite CAD™
- All-Weather™



• PressureWave™ • Challenger™ • C2Lite CAD™
 • Max™ • UltraMax™ • All-Weather™

Premium Pressure Tanks by Global Water Solutions

Our wide product range offers a full line of pressure tanks for different applications, pressure vessels in sizes from 2 litres to 450 litres.



Global Water Solutions Pressure Tanks require NO maintenance (does not require regular air charge checks) and has the longest warranty for guaranteed reliability.

Ideal for applications including:

- Booster systems
- Well systems
- Irrigation systems
- Thermal expansion
- High-rise buildings
- High pressure flushing
- Large scale irrigation systems
- Industrial applications
- Hydronic heating expansion
- Hydraulic hammer arresting

Ultimate Construction
 From epoxy coated steel to fiberglass, from Super Thick steel to patented PLASTEEL All Weather shell, long life is guaranteed

Fully Approved
 CE/PED, WRAS, ACS, ISO:9001 Approved



Large Size Range
 Options from 2 litres to 450 litres

High Pressure
 Options from 8.6 bar/125psi to 25 bar/362 psi

Configuration Options
 From inline to horizontal, from vertical to free-standing, your options are covered.

Long Life Base
 Plastic tank base or feet eliminating rust and corrosion

5 Year Maintenance Free
 Leak free, O-ring sealed air valve cap

Reinforced Connections
 Inline models equipped with reinforced connection plate (RCP)

Premium Liner
 Virgin reinforced polypropylene liner.

Stainless Steel
 Patented stainless steel water connection

Long Life Diaphragm
 Single FDA approved high grade reinforced butyl diaphragm

Strong Pump Base
 Nylon Plastic Pump Stand



PRESSURE TANK RANGE MATRIX

Our wide product range offers a full-line of pressure tanks for different applications, pressure vessels in sizes from 2 litres to 450 litres and in 10, 16 and 25 bar pressure ratings are available to accommodate all your requirements.

Series	Warranty	Maintenance Free	Litre	Max Operating Temperature	Connection (Stainless Steel)	Max Pressure	Configuration	Construction	Base Construction	Single Diaphragm	Patented CAD-2 diaphragm design	Booster Systems	Bore Pump Systems	Sprinklers	HVAC	Thermal Expansion	Water Hammer Damper	Irrigation Systems	High Pressure (16-25 bar)
PRESSUREWAVE™																			
445-1002	5	5	2	90°C	1" / 25mm	10 bar / 150psi	Inline	Epoxy-coated Steel	NA	●		●	●	●	●	●	●	●	●
445-1008	5	5	8	90°C	1" / 25mm	10 bar / 150psi	Inline	Epoxy-coated Steel	NA	●		●	●	●	●	●	●	●	●
445-1018	5	5	18	90°C	1" / 25mm	10 bar / 150psi	Inline	Epoxy-coated Steel	NA	●		●	●	●	●	●	●	●	●
445-2020	5	5	20	90°C	1" / 25mm	10 bar / 150psi	Horizontal	Epoxy-coated Steel	Plastic Feet	●		●	●	●	●	●	●	●	●
445-2060	5	5	60	90°C	1" / 25mm	10 bar / 150psi	Horizontal	Epoxy-coated Steel	Plastic Feet	●		●	●	●	●	●	●	●	●
445-3035	5	5	35	90°C	1" / 25mm	10 bar / 150psi	Vertical	Epoxy-coated Steel	Plastic	●		●	●	●	●	●	●	●	●
445-3060	5	5	60	90°C	1" / 25mm	10 bar / 150psi	Vertical	Epoxy-coated Steel	Plastic	●		●	●	●	●	●	●	●	●
445-3080	5	5	80	90°C	1" / 25mm	10 bar / 150psi	Vertical	Epoxy-coated Steel	Plastic	●		●	●	●	●	●	●	●	●
445-3100	5	5	100	90°C	1" / 25mm	10 bar / 150psi	Vertical	Epoxy-coated Steel	Plastic	●		●	●	●	●	●	●	●	●
445-3150	5	5	150	90°C	1" / 25mm	10 bar / 150psi	Vertical	Epoxy-coated Steel	Plastic	●		●	●	●	●	●	●	●	●
CHALLENGER™																			
445-4200	5	5	200	90°C	1 1/4" / 32mm	10 bar / 150psi	Free Standing	Epoxy-coated Steel	Plastic		●	●	●	●	●	●	●	●	●
445-4250	5	5	250	90°C	1 1/4" / 32mm	10 bar / 150psi	Free Standing	Epoxy-coated Steel	Plastic		●	●	●	●	●	●	●	●	●
445-4300	5	5	300	90°C	1 1/4" / 32mm	10 bar / 150psi	Free Standing	Epoxy-coated Steel	Plastic		●	●	●	●	●	●	●	●	●
445-4450	5	5	450	90°C	1 1/4" / 32mm	10 bar / 150psi	Free Standing	Epoxy-coated Steel	Plastic		●	●	●	●	●	●	●	●	●
C2-LITE CAD™																			
445-5080	5	5	80	49°C	1" / 25mm	8.6 bar / 125psi	Free Standing	Fibreglass	Plastic		●	●	●	●	●	●	●	●	●
445-5130	5	5	130	49°C	1" / 25mm	8.6 bar / 125psi	Free Standing	Fibreglass	Plastic		●	●	●	●	●	●	●	●	●
445-5200	5	5	200	49°C	1 1/4" / 32mm	8.6 bar / 125psi	Free Standing	Fibreglass	Plastic		●	●	●	●	●	●	●	●	●
445-5300	5	5	300	49°C	1 1/4" / 32mm	8.6 bar / 125psi	Free Standing	Fibreglass	Plastic		●	●	●	●	●	●	●	●	●
445-5450	5	5	450	49°C	1 1/4" / 32mm	8.6 bar / 125psi	Free Standing	Fibreglass	Plastic		●	●	●	●	●	●	●	●	●
MAX™ & ULTRAMAX™																			
445-6008	5	5	8	90°C	1" / 25mm	16 bar / 232psi	Inline	Super-thick Epoxy-coated Steel	Plastic	●									●
445-6018	5	5	18	90°C	1" / 25mm	16 bar / 232psi	Inline	Super-thick Epoxy-coated Steel	NA	●									●
445-6100	5	5	100	90°C	1" / 25mm	16 bar / 232psi	Free Standing	Super-thick Epoxy-coated Steel	Plastic	●									●
445-7024	5	5	24	90°C	1" / 25mm	25 bar / 362psi	Inline	Super-thick Epoxy-coated Steel	NA	●									●
445-7100	5	5	100	90°C	1" / 25mm	25 bar / 362psi	Free Standing	Super-thick Epoxy-coated Steel	Plastic	●									●

Oversize your pressure tank and get the following benefits

WHY YOU NEED A PRESSURE TANK FOR PUMPS

- Substantially reduces electric power consumption by reducing small draw off pump starts, i.e. evaporative coolers, toilet flushes, leaks, drip irrigation, etc.
- Extends pump life by dramatically reducing wear on moving parts
- Protects against heat expansion damage to pump bodies
- Reduces noise from unnecessary pump starts
- Eliminates motor burn outs and low flow cycling
- No maintenance
- Does not require regular air charge checks
- Eliminates pump body failures due to water hammer

All this with a tank that..... requires NO maintenance (does not require regular air charge checks) and... has the longest warranty for guaranteed reliability.

ENERGY SAVING SOLUTIONS



Fully Approved
CE/PED, WRAS, ACS, ISO:9001 Approved





PRESSUREWAVE™ SERIES MODELS



FEATURES

- Single diaphragm design
- CE/PED, WRAS, ACS, ISO:9001 approved
- Patented stainless steel water connection
- Virgin polypropylene liner
- Two part polyurethane, epoxy primed paint finish
- Leak free, o-ring sealed air valve cap
- Comprehensive testing
- No maintenance

PressureWave™ tanks are ideally suited for a wide range of applications, including booster systems, thermal expansion, irrigation systems, and hydraulic hammer arresting.

The PressureWave™ Series is constructed of a virgin polypropylene liner combined with an FDA approved high grade butyl diaphragm. This is held against the wall of the tank with a steel clench ring. The brass air valve, sealed by a threaded o-ring valve cap, prevents air leaks. Water enters the tank through a patented stainless steel water connection. The diaphragm and liner are both reinforced in specific wear areas for longer life. All internal parts including the air valve are rounded to prevent piercing of the diaphragm in extreme conditions. The water connection uniquely provides a dual water/air seal ensuring a complete leak free and maintenance free pressure vessel. On the exterior the almond colored two-part polyurethane paint finish over an epoxy undercoating provides hundreds of hours of UV and salt spray protection.

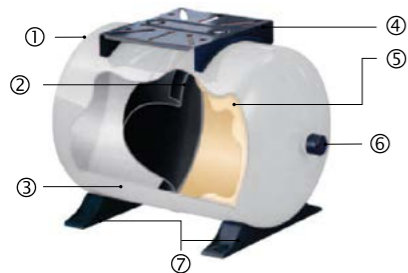
PressureWave™ tanks are quality tested at several stages on the production line to insure the structural integrity of every tank. PressureWave™ tanks represent the best value for the investment and are the best quality pressure vessels available today.

PRESSUREWAVE™ SERIES

Part No.	Litre	Thread	Max Pressure	Description	DIMENSIONS (mm)		
					A	B	C
445-1002	2	1" / 25mm	10 Bar	Inline	209	126	-
445-1008	8	1" / 25mm	10 Bar	Inline	316	202	-
445-1018	18	1" / 25mm	10 Bar	Inline	367	279	-
445-2020	20	1" / 25mm	10 Bar	Horizontal	447	292	145
445-2060	60	1" / 25mm	10 Bar	Horizontal	530	424	215
445-3035	35	1" / 25mm	10 Bar	Vertical	556	318	120
445-3060	60	1" / 25mm	10 Bar	Vertical	620	389	127
445-3080	80	1" / 25mm	10 Bar	Vertical	815	389	127
445-3100	100	1" / 25mm	10 Bar	Vertical	804	430	129
445-3150	150	1" / 25mm	10 Bar	Vertical	938	530	139

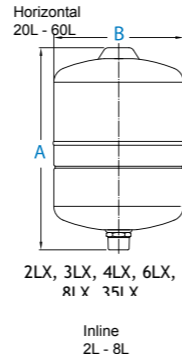
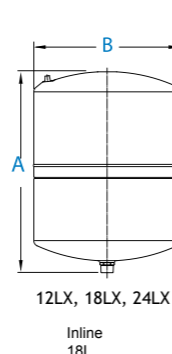
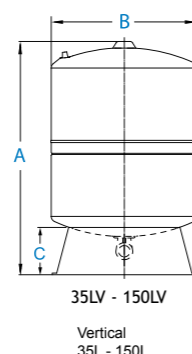
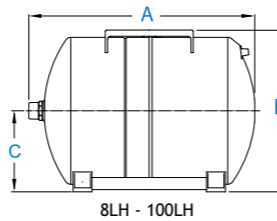
Standard System Connection: 1"

All connections are Stainless Steel unless stated otherwise. Tank Precharge: 1.9 bar / 28 psi
Maximum Working Pressure: 10 bar / 150 psi Maximum Working Temperature: 90°C / 194°F
Available in 16 and 25 bar as Max™ and UltraMax™ Series.



- 1 Leak free, o-ring sealed air valve cap
- 2 Single diaphragm design
- 3 Two part polyurethane, epoxy primed paint finish
- 4 Nylon Plastic Pump Stand
- 5 Virgin polypropylene liner
- 6 Patented stainless steel water connection
- 7 Plastic Tank Feet

Note: Minor dimensional variation may occur



CHALLENGER™ SERIES MODELS



FEATURES

- Patented CAD-2 diaphragm technology
- CE/PED, WRAS, ACS, ISO-9001, Gost,
- Evrazes approved
- Stainless steel water connection
- Condensation reducing design
- Two part polyurethane, epoxy primed paint finish
- Leak free air valve cap sealed with closed cell foam
- Comprehensive testing
- No maintenance

Challenger™ tanks are ideally suited for a wide range of applications, including booster systems, thermal expansion, heating expansion, irrigation systems, and hydraulic hammer arresting.

Water Chamber, Patented Controlled Action Design:

Efficient and cost effective, Challenger™ tanks are designed with a patented controlled action CAD-2 diaphragm assembly. It features a chlorine resistant 100% butyl diaphragm with a precision molded copolymer polypropylene liner for superior air and water separation. The CAD-2 diaphragm assembly is clenched together with a positive lock internal clench ring which contains drawdown water in a pre-charged air atmosphere, thus providing separation between the diaphragm and tank wall. This "air buffer" design means few problems with condensation. Constructed with an FDA approved high grade butyl, the diaphragm assembly seals water in a true non-corrosive chamber.

On the exterior, the almond colored two part polyurethane paint finish over an epoxy undercoating provides hundreds of hours of UV and salt spray protection.

The air chamber is sealed with a fixed o-ring and closed cell foam and will provide many years of leak free and service free life.

Challenger™ tanks are quality tested at several stages on the production line to insure the structural integrity of every tank.

Challenger™ tanks are the best steel pressure vessels in the market today and represent the best value for the investment.

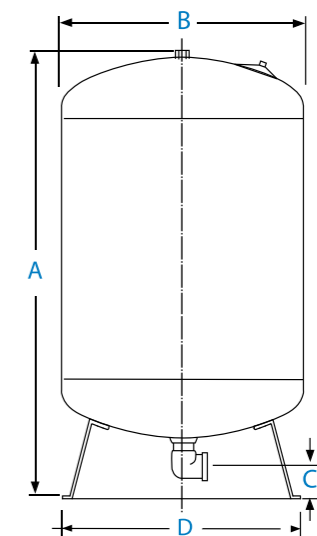
CHALLENGER™ SERIES

Part No.	Litre	Thread	Max Pressure	DIMENSIONS (mm)			
				A	B	C	D
445-4200	200	1 1/4" / 32mm	10 bar / 150psi	1056	533	57	447
445-4250	250	1 1/4" / 32mm	10 bar / 150psi	1228	534	57	447
445-4300	300	1 1/4" / 32mm	10 bar / 150psi	1513	534	54	447
445-4450	450	1 1/4" / 32mm	10 bar / 150psi	1551	661	65	543



- 1 Leak free, o-ring sealed air valve cap
- 2 Carbon Steel tank with two part polyurethane, epoxy primed paint finish
- 3 Patented CAD-2 diaphragm design
- 4 Condensation reducing design
- 5 Stainless steel water connection
- 6 Virgin polypropylene liner

System Connection:
Models 445-4200 - 445-4450: 1 1/4" BSP stainless steel elbow



Please refer to tank packaging for correct factory set pre-charge information
Maximum working temperature 90°C / 194°F
Maximum working pressure 10 bar / 150 psi



C2-LITE CAD™ SERIES MODELS



MAX™ & ULTRAMAX™ SERIES



FEATURES

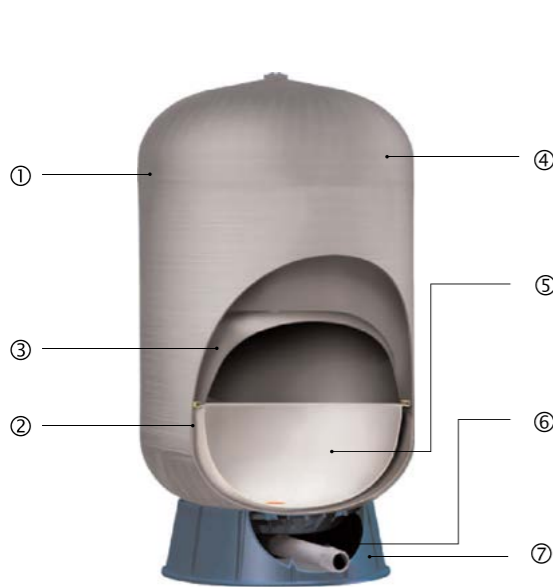
- Patented CAD-2 diaphragm technology
- Unique 3 piece construction
- Reinforced Plastic Connection
- Durable continuous strand fibreglass sealed with epoxy
- CE/PED, WRAS, ACS, ISO:9001 approved
- Rugged copolymer polypropylene base
- Quality brass air stem with o-ring seal
- No sweat design
- Comprehensive testing
- No maintenance



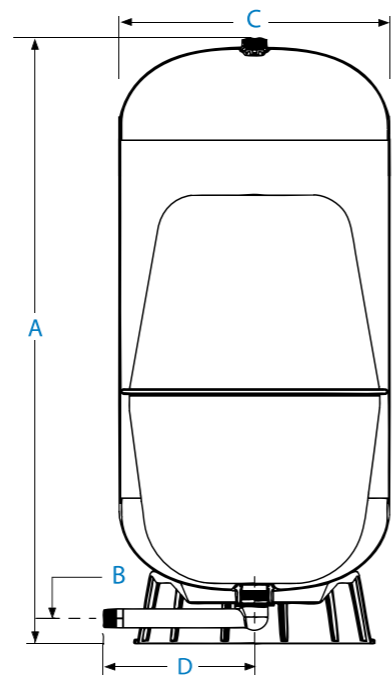
If you are looking for the proven performance of a GWS steel tank in a lightweight composite design, C2-Lite CAD™ series is the answer. Efficient and cost effective, C2-Lite CAD™ tanks are designed with the patented controlled action diaphragm design of GWS Challenger™ tanks. Unlike other composite tanks that hide tired old bag technology in a plastic shell, the patented CAD-2 diaphragm design is stronger and will not crease and wear out. It features a chlorine resistant 100% butyl diaphragm with a precision molded copolymer polypropylene liner for superior air and water separation. This patented design allows each size tank to have a properly sized water chamber matched to the drawdown performance of that tank. C2-Lite CAD™ tanks are easy to install, weather resistant and engineered to withstand even extreme environmental conditions. When it comes to performance and durability, the GWS C2-Lite CAD™ design cannot be beat. C2-Lite CAD™ tanks are quality tested at several stages on the production line to insure the structural integrity of every tank. C2-Lite CAD™ tanks represent the best value for the investment and are the best quality composite vessels available today.

C2-LITE CAD™ SERIES

Part No.	Litre	Thread	Max Pressure	DIMENSIONS (mm)			
				A	B	C	D
445-5130	130	1" / 25mm	8.6 bar / 125psi	1240	45	430	240
445-5200	200	1¼" / 32mm	8.6 bar / 125psi	1090	57	550	310
445-5300	300	1¼" / 32mm	8.6 bar / 125psi	1640	57	550	310
445-5450	450	1¼" / 32mm	8.6 bar / 125psi	1830	57	610	340



- ① Precision injection molded domes
- ② High-tech spin welding process
- ③ Patented CAD-2 controlled action diaphragm design
- ④ Durable continuous strand fibreglass sealed with epoxy resin
- ⑤ Virgin polypropylene liner
- ⑥ Reinforced plastic connection
- ⑦ Rugged Base



Please refer to tank packaging for correct factory set pre-charge information
 Maximum working temperature 49°C / 120°F
 Maximum working pressure 8.6 bar / 125 psi



FEATURES

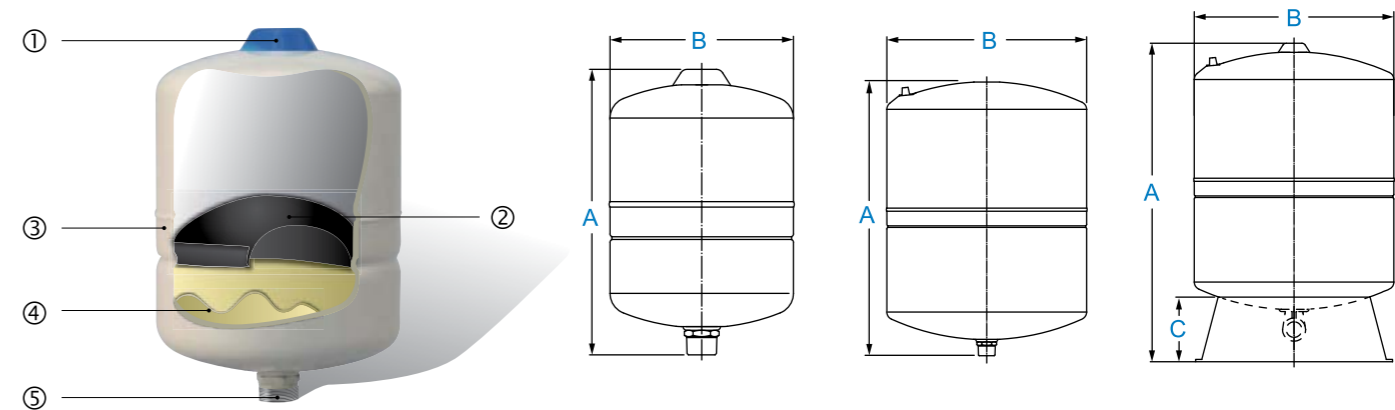
- Suitable for many high-pressure applications
- Super thick steel construction
- Patented stainless steel water connection
- Virgin polypropylene liner
- Two part polyurethane, epoxy primed paint finish
- Leak free, o-ring sealed air valve cap
- Comprehensive testing
- No maintenance
- Single diaphragm design
- Available in 16 bar and 25 bar maximum pressure



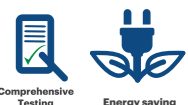
MAX™ & ULTRAMAX™ SERIES

Part No.	Litre	Thread	Max Pressure	DIMENSIONS (mm)		
				A	B	C
445-6008	8	1" / 25mm	16 bar / 232psi	313	202	-
445-6018	18	1" / 25mm	16 bar / 232psi	368	279	-
445-6100	100	1" / 25mm	16 bar / 232psi	813	435	129
445-7024	24	1" / 25mm	25 bar / 362psi	447	293	-
445-7100	100	1" / 25mm	25 bar / 362psi	813	435	129

All connections are made of stainless steel. Tank pre-charge: 4.0 bar / 58 psi
 Maximum working pressure 16 bar / 232 psi. Maximum working temperature 90°C / 194°F
 Maximum working pressure: 25 bar / 362 psi. Maximum working Temperature: 90°C / 194°F



- ① Leak free, o-ring sealed air valve cap
- ② Single diaphragm design
- ③ Two part polyurethane, epoxy primed paint finish
- ④ Virgin polypropylene liner
- ⑤ Patented stainless steel water connection



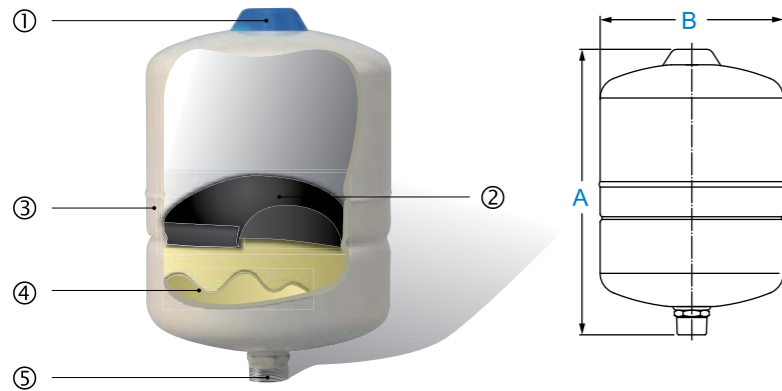


ALL-WEATHER™ SERIES

FREQUENTLY ASKED QUESTIONS

Global Water Solutions Pressure Tanks All-Weather™ Series

- Capable of resisting all weather conditions such as wind, rain, snow and sun
- The perfect solution for marine or mining applications.
- 1" / 25mm S/S Connection
- Rugged polypropylene outer shell
- Max pressure 10 bar/150 psi 25 bar/362psi



- ① Leak free, o-ring sealed air valve cap
- ② Single diaphragm design
- ③ Two part polyurethane, epoxy primed paint finish
- ④ Virgin polypropylene liner
- ⑤ Patented stainless steel water connection



Part No.	Litre	Thread	Max Pressure	DIMENSIONS (mm)		
				A	B	C
445-1018-AW	8	1" / 25mm	10 bar / 150 psi	426	276	-

Global Water Solutions FlowThru Inline Adaptor™ Series

- Prevents stagnant water on booster sets.
- Suited for constant pressure systems, hot/cold booster systems controlled by variable frequency or variable speed drives (VFD/VSD).
- Reduces the risk of water borne diseases like Legionnaires disease
- Conforms to UK HSG274pt2 & European Centre for Disease Prevention and Control (ECDC) standards
- Built in drain valve to allow full service and maintenance of the expansion tank without disruption to water supply
- Flexible installation orientation
- Max pressure 10 bar/145psi

Part No. 229-IFP 100B



Frequently Asked Questions

Q: Can I use glycol (anti freeze) in a GWS tank?

A: We recommend not using over a 50/50 mix. of propylene glycol. Ethylene glycol shall not be used. Under no circumstances can the product contain a petroleum base.

Q: Can I use petroleum base products in my GWS tanks?

A: No. The material in our diaphragm will not tolerate petroleum based products.

Q: Can I install my GWS tank on its side?

A: Tanks larger than 100 liters are not recommended for installation on their side since it may cause diaphragm damage and failure.

Q: Does the warranty cover labor?

A: No, unfortunately there are number of factors that can contribute to a failed tank and the only factor that GWS can insure is the tank.

Q: My tank was just installed and the water has a funny taste what should I do?

A: Flush the new tank by allowing water to flow through three or four pump cycles. If the taste continues, you should probably have the source water tested.

Q: Can I use chlorinated water with my GWS tank?

A: Of course. GWS tanks are designed in the knowledge that chlorine is often used to periodically treat a well.

Q: What is a cycle?

A: A cycle refers to the pump run time. A cycle starts when the pump starts and a cycle is completed when the pump stops. Pump starts and stops are determined by the pressure settings of the system.

Q: How does a pressure switch control the pump and tank?

A: The pressure switch communicates with the tank and the pump. The pressure switch monitors the pressure inside the tank and activates and de activates the pump when cut in and cut out pressures are reached inside the tank.

Q: What is the maximum chlorine tolerance of the diaphragms?

A: We recommend 550 ppm for flowing treatment and a maximum of 250 ppm for system disinfection.

Q: How do I check or change my pre charge?

A: You must completely drain the tank to check pre charge. To do this, shut the power off to the pump and open (turn on) a faucet in the house. This will drain the tank and not allow it to refill. On the top of the tank you will find an air valve similar to the air valve on your tires) use a tire pressure gauge to check the air pressure.

Q: How much pressure (pre charge) should be in my tank?

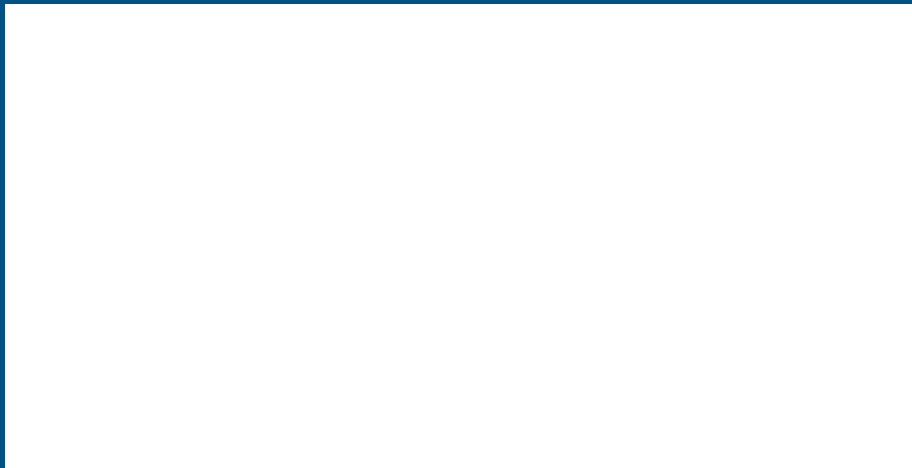
A: Your tanks should be pressurized to 2 psi less than the cut in pressure setting (for example, if your pressure settings are 30/50, then your cut in pressure setting is 30 psi and your tank should have a 28 psi pre charge).

Q: How to connect a FlowThru tank to a bigger or smaller diameter pipe?

A: The pipe diameter should be changed to the connection diameter 50cm before and after the tank.

Proven solutions through experience

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