Challenger™ Series

Maintenance-free pressure tanks

Features

- Patented CAD-2 diaphragm technology
- Stainless steel water connection
- Dual layer polyurethane paint finish
- Leak-free, air valve cap sealed and closed cell foam
- Replaceable tank base
- Comprehensive testing
- Maintenance-free

Certifications may vary by model. Check with your GWS sales representative for more detailed information.

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

Patented Controlled Action Diaphragm Water Chamber 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 compliant 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 ensure 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.

Construction of Challenger™ tank

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

Models

Model Number		Connection	Nominal Volume		Dimensions (mm)				Gross Weight [kg]	
BSP	NPT		Liters	Gallons	A	B	C	D	BSP	NPT
Vertical										
GCB-60LV	GCN-15GV	1" BSPP / NPT	60	15.8	573	407	48	369	12.2	12.3
GCB-80LV	GCN-20GV	1" BSPP / NPT	80	21.1	753	407	48	369	15.4	15.4
GCB-100LV	GCN-25GV	1" BSPP / NPT	100	26.4	897	407	48	369	19.5	18.1
GCB-130LV	GCN-35GV	1" BSPP / NPT	130	34.3	1109	407	48	369	24.9	22.7
GCB-200LV	GCN-50GV	1¼" BSPP / NPT	200	52.8	1056	533	57	446	38.6	38.6
GCB-250LV	GCN-60GV	1¼" BSPP / NPT	250	66.0	1228	534	57	446	44.0	39.5
GCB-300LV	GCN-80GV	1¼" BSPP / NPT	300	79.2	1513	534	57	446	52.6	47.2
GCB-325LV	GCN-85GV	1¼" BSPP / NPT	325	85.8	1167	662	64	542	59.0	54.8
GCB-450LV	GCN-120GV	1¼" BSPP / NPT	450	118.9	1551	662	64	542	80.7	69.9

Note: Minor dimensional variations may occur.

Specifications

Product Series Name	Challenger™
Nominal Volumes	60 - 450 L / 15.8 - 118.9 gal
Min. Operating Temperature	-10°C / 14°F (Avoid Freezing)
Max. Operating Temperature	90°C / 194°F
Max. Operating Pressure	GCB Models: 10 bar | 150 psi GCN Models: 8.6 bar | 125 psi
Factory Pre-charge	1.4 bar | 20 psi