GLOBAL WATER SOLUTIONS LTD.

Global Water Solutions

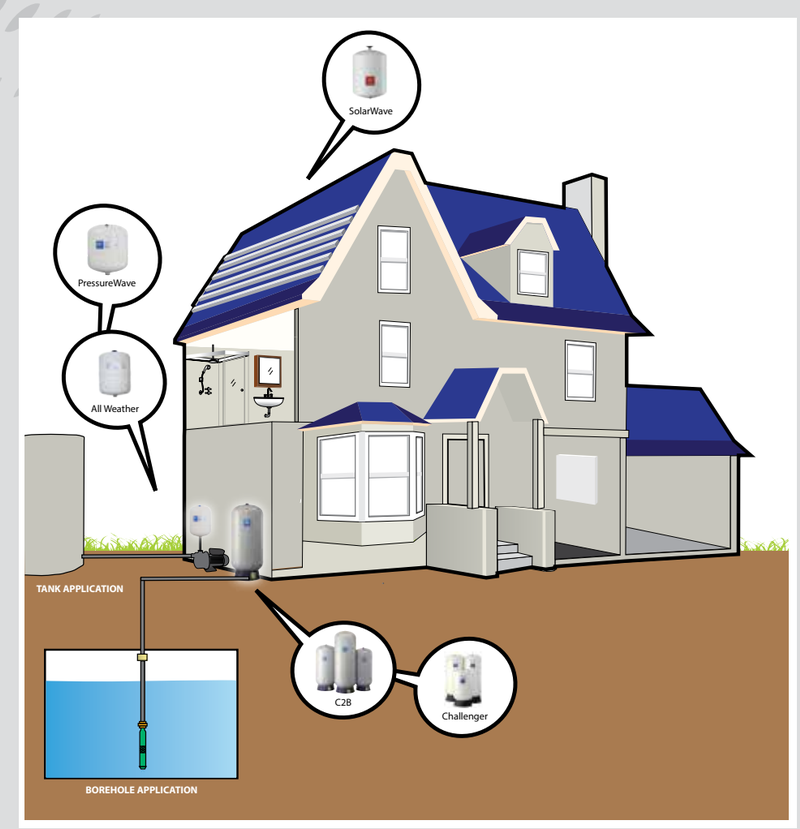
PRESSURE TANKS

WHITE INTERNATIONAL

Global Water Solutions
Pressure Tanks

Product Applications:

- PressureWave™ Series: Booster systems, water well systems, sprinklers, HVAC, thermal expansion, irrigation systems, water hammer arresting
- Max™ and UltraMax™ Series: High Pressure applications (16 and 25 Bar)
- Challenger™ Series: Booster systems, water well systems, sprinklers, HVAC, thermal expansion, irrigation systems, water hammer arresting
- C2B™ Series: Booster systems, water well systems, sprinklers, HVAC, thermal expansion, irrigation systems, water hammer arresting
- All-Weather™ Series: Marine and mining applications, harsh environmental conditions, highly durable
- SolarWave™ Series: Closed loop solar systems, solar hot water expansion



PressureWave™ Series

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

FLE-PWS20H

Features:

- Virgin polypropelene liner
- Stainless steel water connection
- Corrosion resistant for longer life
- Controlled action diaphragm
- Brass air stem with sealing cap eliminates air leaks
- Condensation reducing design
- Food grade approved high-grade butyl membrane WSF, WRC, CE FDA/ACS, AS/NZS4020
- Maximum Working Temperature: 90°C
- Maximum Working Pressure: 150 psi / 10 bar
- Tank Precharge: 28 psi / 1.9 bar
- ***5 Year Tank Replacement Guarantee***

Model	Actual Capacity (Litres)	Nominal Draw-off (Litres)	Recommended Max. Working Pressure	Connection BSP (Inches)	Dimensions (mm x mm)
FLE-PWB2V	2	0.6	10 Bar	1	126 x 209
FLE-PWB8V*	8	3	10 Bar	1	202 x 313
FLE-PWB18V*	18	6	10 Bar	1	279 x 367
FLE-PWB20H*	20	8	10 Bar	1	294 x 447
FLE-PWB24V	24	8	10 Bar	1	290 x 447
FLE-PWB35V*	35	11	10 Bar	1	318 x 555
FLE-PWB60V*	60	22	10 Bar	1	389 x 620
FLE-PWB60H*	60	22	10 Bar	1	424 x 530
FLE-PWB80V	80	29	10 Bar	1	389 x 815
FLE-PWB100V	100	36	10 Bar	1	430 x 804
FLE-PWB150V	150	54	10 Bar	1	530 x 818

**These tanks are WaterMark approved to ATS 5200.485 - Lic. No. AGA60044*

FLE-PWB18V

FLE-PWB60V

GWS PressureWave™ Tanks - Energy Saving Device

• Extends pump life • Reduces noise • Stores energy • Eliminates pump starts • Protects against heat expansion • Stops water wastage from hot water heaters

ATS 5200.485-2006 License No: 60044 Watermark Level 1
Water mark logo only applies to the GWS Energy Saver Tanks. The Watermark does not apply to pumps.
Watermark applies to PressureWave Tank sizes 8, 18, 20, 35 & 60 Litres. Watermark applies to models FLE-PWSA3, FLE-PWB2V, FLE-PWB8V, FLE-PWB18V, FLE-PWS20H, FLE-PWB35V, FLE-PWB60V, FLE-PWS60H, FLE-PWB80V, FLE-PWB100V, FLE-AWB18V, FLE-AWB24V.

All-Weather™ Series

NEW

The All-Weather™ Tank is ideal for marine and mining applications and harsh environmental conditions.

Features:

- Rugged Polypropelene outer shell
- 10 Bar pressure rating
- Single diaphragm design
- Comprehensive testing
- Virgin Polypropelene liner
- Patented stainless steel water connection
- Leak free O-Ring sealed air valve
- Maintenance free
- Maximum Working Temperature: 90°C
- Maximum Working Pressure: 10 bar / 150 psi
- Tank Precharge: 1.9 bar / 28 psi
- ***5 Year Tank Replacement Guarantee***

Model	Actual Capacity (Litres)	Nominal Draw-off (Litres)	Recommended Max. Working Pressure	Connection BSP (Inches)	Dimensions (mm x mm)
FLE-AWB18V*	18	6	10 Bar	1	276 x 425
FLE-AWB24V*	24	8	10 Bar	1	301 x 454

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WaterMark

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The GWS All Weather Pressure Tank is constructed with a high grade steel tank encased in a rugged polypropelene outer shell. The patented PLASTEEL shell creates an impenetrable layer of protection that shields against the harshest of elements.

Max™ & UltraMax™ Series

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

Features:

- Suitable for many high pressure applications
- Super thick steel construction
- Patented water connection
- Virgin polypropelene liner
- Two part polyurethane, epoxy primed paint finish
- Leak free O-Ring sealed air valve cap
- Comprehensive testing
- No maintenance
- Single diaphragm design
- NSF Standard 61, CE/PED, WRAS, AS/NZS4020 approved
- All connections are stainless steel unless stated otherwise
- Maximum Working Temperature: 90°C
- Maximum Working Pressure: 235 psi 16 bar/ 362 psi 25 bar
- Tank Precharge: 60 psi/ 4 bar
- ***5 Year Tank Replacement Guarantee***

Model	Actual Capacity (Litres)	Nominal Draw-off (Litres)	Recommended Max. Working Pressure	Connection BSP (Inches)	Dimensions (mm x mm)
FLE-PWB8V-16*	8	3	16 Bar	1	202 x 313
FLE-PWB18V-16*	18	6	16 Bar	1	279 x 367
FLE-PWB80V-16	80	29	16 Bar	1	390 x 815
FLE-PWB8V-25*	8	3	25 Bar	1	203 x 313
FLE-PWB24V-25*	24	9	25 Bar	1	293 x 447
FLE-PWB100V-25	100	36	25 Bar	1	435 x 823

**These tanks are WaterMark approved to ATS 5200.485 - Lic. No. AGA60044*

GWS PressureWave™ Tanks - Energy Saving Device

• Extends pump life • Reduces noise • Stores energy • Eliminates pump starts • Protects against heat expansion • Stops water wastage from hot water heaters

WaterMark

ATS 5200.485-2006 License No: 60044 Watermark Level 1
Water mark logo only applies to the GWS Energy Saver Tanks. The Watermark does not apply to pumps. Watermark applies to PressureWave Tank sizes 8, 18, 20, 35 & 60 Litres. Watermark applies to models FLE-PWSA3, FLE-PWB2V, FLE-PWB8V, FLE-PWB18V, FLE-PWS20H, FLE-PWB35V, FLE-PWB60V, FLE-PWS60H, FLE-PWB80V, FLE-PWB100V, FLE-AWB18V, FLE-AWB24V.

Challenger™ Series

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

Features:

- Efficient and cost effective
- Patented controlled action - CAD2 diaphragm technology
- Threaded nut for easy installation of pump stand
- Welded stainless steel elbow
- Appliance quality paint finish over epoxy primer coat for durability and high luster
- Suitable for drinking water: bacteria resistant
- Condensation reducing design reduces corrosion and increases life
- Adjustable air charge
- Diaphragm's positive lock internal clench ring cannot slip
- Stainless steel port diffuser directs water flow upward and outward while locking the lower diaphragm in place
- Maximum Working Temperature: 90°C
- Maximum Working Pressure: 150 psi/ 10 bar
- Tank Precharge: 20 psi/ 1.4 bar
- ***5 Year Tank Replacement Guarantee***

Model	Actual Capacity (Litres)	Nominal Draw-off (Litres)	Recommended Max. Working Pressure	Connection BSP (Inches)	Dimensions (mm x mm)
FLE-C200V	200	73	10 Bar	1 - 1/4	534 x 1041
FLE-C240V	240	86	10 Bar	1 - 1/4	534 x 1224
FLE-C310V	310	113	10 Bar	1 - 1/4	534 x 1511
FLE-C450V	450	165	10 Bar	1 - 1/4	660 x 1539

GWS PressureWave™ Tanks - Energy Saving Device

- Extends pump life
- Reduces noise
- Stores energy
- Eliminates pump starts
- Protects against heat expansion
- Stops water wastage from hot water heaters

ENERGY SAVING SOLUTIONS

GLOBAL WATER SOLUTIONS LTD.

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

5 Year GWS Tank Warranty for guaranteed reliability.
Supplied with easy to follow installation instructions.

I'M AN ENERGY SAVING DEVICE

- ✓ **Extends pump life**
- ✓ **Reduces noise**
- ✓ **Protects against heat expansion**
- ✓ **Stops water wastage from hot water heaters**
- ✓ **Stores energy**
- ✓ **Eliminates pump starts**

Different applications of Pressure Tanks:

Option 1 Fitted to PUMP

FLE-PWB20H

Option 2 FREE STANDING

FLE-PWB60V

Option 3 WALL MOUNTED

FLE-PWB8V

C2B™ Series

Features:

- Lightweight non-corroding scratch resistant construction
- Precision injection moulded copolymer polypropelene domes
- Reinforced with durable continuous strand fibreglass
- Sealed with epoxy resin
- Rugged injection moulded ABS base
- Patented CAD-2 controlled action diaphragm, 100% portable quality butyl
- Internal clench ring becomes even more positive at higher pressures
- Reduces condensation due to 'air buffer' design
- Reinforced base mounted plastic flow-through connection to prevent solids build up
- Maximum Working Temperature: 50°C
- Maximum Working Pressure: 125 psi/ 8.6 bar
- Tank Precharge: 20 psi/ 1.4 bar
- ***5 Year Tank Replacement Guarantee***

Model	Actual Capacity (Litres)	Nominal Draw-off (Litres)	Recommended Max. Working Pressure	Connection BSP (Inches)	Dimensions (mm x mm)
FLE-C2B80V	80	29	8.6 Bar	1	852 x 418
FLE-C2B100V	100	36	8.6 Bar	1	967 x 418
FLE-C2B130V	130	46	8.6 Bar	1	1227 x 418
FLE-C2B200V	200	72	8.6 Bar	1 - 1/4	1098 x 542
FLE-C2B250V	250	90	8.6 Bar	1 - 1/4	1303 x 542

GWS Pressure Tank Calculator App

Available now on the iTunes App Store for iPad and iPhone.

SolarWave™ Series

NEW

SolarWave™ Tanks are designed to control the expansion and contraction of solar thermal transfer fluids in solar heating systems. The SolarWave Series in intended for use in closed loop solar hot water systems.

FLE-SWB18V

Features:

- Ideal for closed loop solar and heating systems
- High grade and high temperature butyl diaphragm
- High expansion volume factor
- Two part polyurethane, epoxy primed paint finish
- Leak free O-Ring sealed air valve cap
- Patented stainless steel connection
- Comprehensive testing
- Maximum Working Temperature: 130°C
- Maximum Working Pressure: 150 psi/ 10 bar
- Tank Precharge: 28 psi/ 1.9 bar
- ***3 Year Tank Replacement Guarantee***

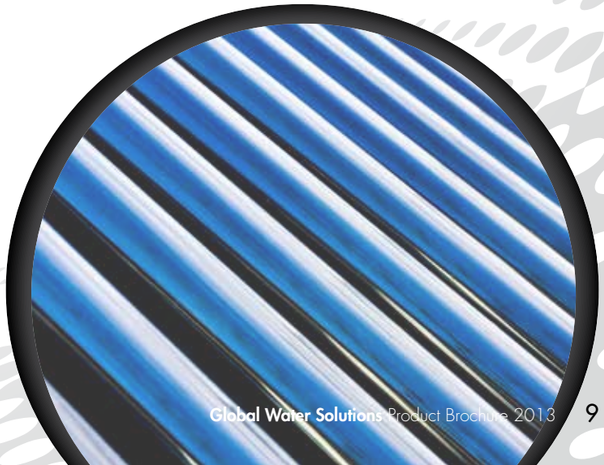
Model	Actual Capacity (Litres)	Nominal Draw-off (Litres)	Recommended Max. Working Pressure	Connection BSP (Inches)	Dimensions (mm x mm)
FLE-SWB8V	8	3	10 Bar	3/4	310 x 202
FLE-SWB18V	18	6	10 Bar	1	364 x 279

FLE-SWB8V

GWS PressureWave™ Tanks - Energy Saving Device

• Extends pump life • Reduces noise • Stores energy
• Eliminates pump starts • Protects against heat expansion
• Stops water wastage from hot water heaters

Ideal for closed loop solar and heating systems.



Tank Sizing & Installation

Use these tanks with domestic water well systems

Information required:

1. Pump capacity in litres per minute (L/m) or storage volume required _____ Litres
2. Pump cut-in pressure _____ Bar/psi
3. Pump cut-out pressure _____ Bar/psi

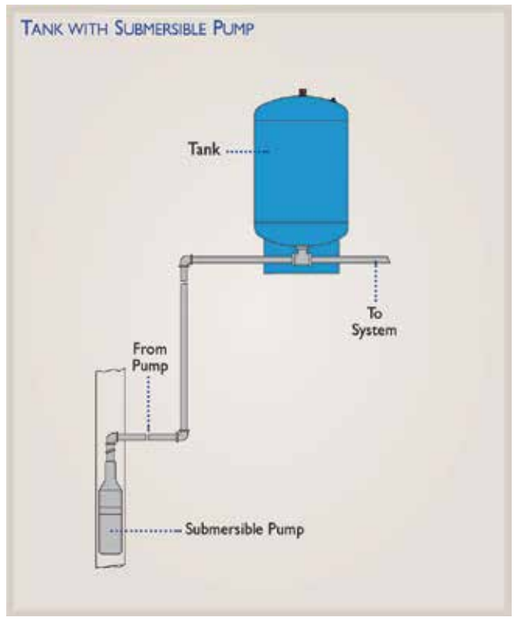
Tank Selection:

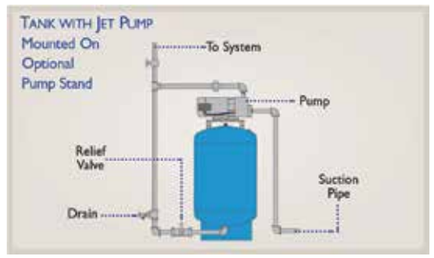
4. Enter drawdown factor from Table 1 _____
5. Divide storage volume (Line 1) by drawdown factor (Line 4) _____

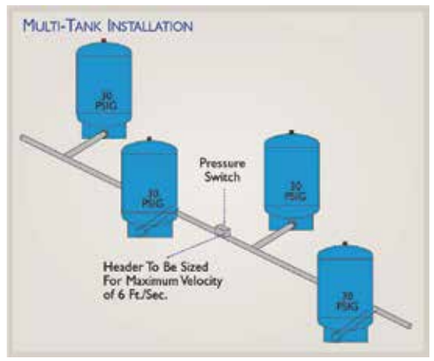
Select Challenger or PressureWave model which satisfies the total volume determined in Line 5 or use the chart on the following page.

Table 1
Drawdown Factors

Cut-out or final tank Pressure (Bar/psi)	Cut-in or Initial Tank Pressure			
	1.4/20	2.1/30	2.7/40	3.4/50
2.7/40	.366	.183		
3.4/50	.464	.309	.155	
4.1/60	.535	.402	.268	.134
4.8/70	.590	.472	.354	.236
5.5/80	.634	.528	.422	.317







GWS Energy Savers

Model	Draw Down (PSI)			Capacity (Litres)	Connection Size (BSP)	Precharge (Bar/PSI)	Length x Diameter (cm)	Style
	20/40	30/50	40/60					
PRESSUREWAVE 10 BAR - Diaphragm Tank - Steel/Butyl								
PWB2V	0.73	0.63	0.54	2	1"	1.9 / 28	20.9 x 12.6	Free Mount
PWB8V	2.9	2.5	2.1	8	1"	1.9 / 28	31.7 x 20.2	Free Mount
PWB18V	6.6	5.6	4.8	18	1"	1.9 / 28	36.7 x 27.9	Free Mount
PWS20H	7.3	6.2	5.4	20	1"	1.9 / 28	44.7 x 29.4	Horizontal
PWB24V	8.8	7.4	6.4	24	1"	1.9 / 28	44.7 x 29.0	Free Mount
PWB35V	12.8	10.8	9.4	35	1"	1.9 / 28	55.5 x 31.8	Vertical
PWB60V	22.0	18.6	16.1	60	1"	1.9 / 28	62.0 x 38.9	Vertical
PWS60H	22.0	18.6	16.1	60	1"	1.9 / 28	53.0 x 42.4	Horizontal
PWB80V	29.3	24.8	21.5	80	1"	1.9 / 28	81.5 x 38.9	Vertical
PWB100V	36.7	31.0	26.8	100	1"	1.9 / 28	80.4 x 43.0	Vertical
PWB150V	55.0	46.5	40.2	150	1"	1.9 / 28	81.8 x 53.0	Vertical
PRESSUREWAVE 16 BAR - DIAPHRAGM TANK - STEEL/BUTYL								
PWB8V	2.9	2.5	3.1	8	1"	4 / 60	31.3 x 20.2	Free Mount
PWB18V	6.6	5.6	4.8	18	1"	4 / 60	36.7 x 27.9	Free Mount
PWB80V	29.3	24.8	20.8	80	1"	4 / 60	81.5 x 39.0	Vertical
CHALLENGER 10 BAR - DIAPHRAGM TANK - STEEL/BUTYL								
C200V	73.4	62.0	33.7	200	1-¼"	1.4 / 20	104.1 x 53.4	Vertical
C240V	86.7	72.7	63.2	240	1-¼"	1.4 / 20	122.4 x 53.4	Vertical
C310V	113.6	95	82.9	310	1-¼"	1.4 / 20	151.1 x 53.4	Vertical
C450V	165	139.3	121.5	450	1-¼"	1.4 / 20	153.9 x 66.0	Vertical
C2 CAD 8.6 BAR - DIAPHRAGM TANK - FIBREGLASS/BUTYL								
C2B-80	28.8	23.5	20.4	80	1"	1.4 / 20	85.2 x 41.8	Vertical
C2B-100	36.3	30.7	26.5	100	1"	1.4 / 20	96.7 x 41.8	Vertical
C2B-130	46.6	39	34	130	1"	1.4 / 20	122.7 x 41.8	Vertical
C2B-200	69	59	51.6	200	1-¼"	1.4 / 20	109.8 x 54.2	Vertical
C2B-250	86.5	73.9	64.5	250	1-¼"	1.4 / 20	130.3 x 54.2	Vertical

Precharge Instructions

1. Turn the water and power supply off, then open a tap to drain the tank before adjusting precharge.
2. For a pressure switch controlled pump with a differential set up to 20psi (1.4 bar), the precharge should be set to 2psi (0.2 bar) below the cut-in pressure.
3. For a pump controlled by a pressure switch with a pressure differential greater than 20psi (1.4 bar) or electronic controls, precharge should be set to 65% of cut-out or max system pressure
4. For hot water expansion applications, the tank precharge should be set equal to the system fill pressure or the main pressure.

Available from:

WHITE INTERNATIONAL PTY LTD
52-60 Ashford Ave Milperra NSW 2214
PO Box 304 Milperra LPO NSW 2214
Phone 02 9783 6000 Fax 02 9783 6001
Customer Service Hotline 1300 783 601
Email Sales: sales@whiteint.com.au
General info: info@whiteint.com.au
www.whiteint.com.au

WHITE INTERNATIONAL NZ LTD
15G Kerwyn Avenue,
East Tamaki, Auckland 2013, New Zealand
Phone 09 579 9777 Fax 09 579 7775
Customer Service Hotline 0800 509 506
Customer Service Faxline 0800 804 344
Email Sales: sales@whiteint.co.nz
General info: info@whiteint.co.nz
www.whiteint.co.nz

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