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> GLOBAL WATER PWB-20LH Horizontal Pressure Tank User Manual

## GLOBAL WATER PWB-20LH

# GLOBAL WATER PWB-20LH Horizontal Pressure Tank User Manual

Model: PWB-20LH

## 1. INTRODUCTION

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This manual provides comprehensive instructions for the safe installation, efficient operation, and proper maintenance of the GLOBAL WATER PWB-20LH Horizontal Pressure Tank. This tank is engineered for a wide range of applications, including booster systems, thermal expansion, irrigation systems, and hydraulic hammer arresting. Please read this manual thoroughly before installation and operation to ensure optimal performance and longevity of your pressure tank.

## 2. SAFETY INFORMATION

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Adherence to these safety guidelines is crucial for preventing injury and damage to the equipment.

- Always read and understand this entire manual before attempting installation, operation, or maintenance.
- Installation should be performed by a qualified professional in accordance with local codes and regulations.
- Ensure the system is depressurized and isolated from power before performing any service or maintenance.
- Do not exceed the maximum working pressure of 10 bar (150 psi) or maximum working temperature of 90°C (194°F).
- Protect the tank from freezing temperatures.
- Do not tamper with the air valve or attempt to modify the tank structure.

## 3. PRODUCT OVERVIEW

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### 3.1. Features

The GLOBAL WATER PWB-20LH Pressure Wave tank incorporates advanced design and materials for reliable performance:

- Constructed with a virgin polypropylene liner and an FDA approved high-grade butyl diaphragm.

- Water enters the tank through a patented stainless steel water connection.
- Diaphragm and liner are reinforced in specific wear areas for extended life.
- Internal parts, including the air valve, are rounded to prevent diaphragm piercing.
- Exterior features an almond-colored two-part polyurethane paint finish over an epoxy undercoating for UV and salt spray protection.
- Quality tested at multiple stages during production to ensure structural integrity.

### 3.2. Components

The PWB-20LH tank is a horizontal pressure vessel designed to maintain system pressure. Key components include the steel shell, internal butyl diaphragm, and water connection.

	Nominal Volume		Shipping (box) Volume		Shipping (box) weight	Dimensions					
	liter	gal	m3	ft3		A		B		C	
					kg	cm	inches	cm	inches	cm	inches
PWB-8LH	8	2.1	0.013	0.46	2.46	31.3	12.32	23.2	9.13	11.6	4.57
PWB-12LH	12	3.2	0.024	0.85	3.56	36.7	14.45	26	10.24	13.25	5.12
PWB-20LH	20	5.3	0.04	1.41	4.99	44.7	17.6	29.2	11.57	14.5	5.79
PWB-24LH	24	6.3	0.047	1.65	6	44.7	17.6	32.1	12.64	16.1	6.34
PWB-35LH	35	9.3	0.061	2.15	7.8	48.1	18.94	35.3	13.9	17.9	7.05
PWB-60LH	60	15.9	0.09	3.18	11.51	53	20.87	42.4	16.69	21.5	8.46
PWB-80LH	80	21.1	0.13	4.59	16.22	72.6	28.58	42.4	16.69	21.5	8.46
PWB-100LH	100	26.4	0.16	5.65	19.84	72	28.35	47.5	18.7	24.5	9.65

Figure 1: Front view of the GLOBAL WATER PWB-20LH Horizontal Pressure Tank. This image displays the tank's almond-colored exterior and general horizontal orientation.

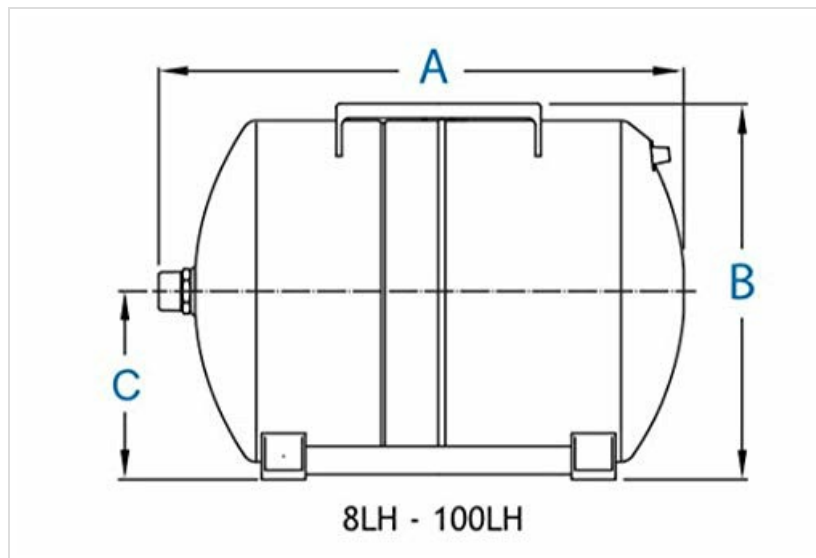


Figure 2: Detail view of a GLOBAL WATER pressure tank, likely showing the water connection point or a specific component. This image highlights the robust construction and connection area.

## 4. SETUP AND INSTALLATION

### 4.1. Pre-Installation Checks

- Inspect the tank for any signs of shipping damage. Do not install a damaged tank.
- Verify that the model number (PWB-20LH) matches your requirements.
- Ensure the installation site is suitable, providing adequate space for maintenance and protection from

environmental extremes.

## 4.2. Installation Steps

1. **Location:** Choose a location that is dry, protected from freezing, and easily accessible for service. The tank must be installed horizontally.
2. **Mounting:** Secure the tank firmly to a stable surface using appropriate mounting hardware.
3. **Connection:** Connect the tank to the water system using the patented stainless steel water connection. Use appropriate plumbing fittings and sealants to ensure leak-free connections.
4. **Pre-charge Check:** Before filling the system, verify the tank's air pre-charge pressure. The factory pre-charge is 1.9 bar (28 psi). Adjust if necessary to match your system's cut-in pressure.
5. **Leak Test:** After installation, slowly fill the system with water and check all connections for leaks.

## 5. OPERATING INSTRUCTIONS

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### 5.1. Initial Start-up

1. Ensure all connections are secure and leak-free.
2. Slowly open the main water supply valve to fill the system.
3. Bleed air from the system by opening faucets until water flows smoothly.
4. Activate the pump (if applicable) and allow the system to reach its operating pressure.
5. Verify that the pump cycles correctly and the pressure tank is functioning as expected.

### 5.2. Normal Operation

Once installed and started, the pressure tank operates automatically, maintaining system pressure and reducing pump cycling. Monitor your system's pressure gauge periodically to ensure it operates within the expected range.

## 6. MAINTENANCE

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Regular maintenance ensures the longevity and efficiency of your GLOBAL WATER PWB-20LH pressure tank.

- **Annual Air Pre-charge Check:** At least once a year, check the air pre-charge pressure. Depressurize the system completely before checking the air valve. The recommended pre-charge is 1.9 bar (28 psi). Adjust with an air pump if necessary.
- **Visual Inspection:** Periodically inspect the tank for any signs of corrosion, leaks, or physical damage.
- **Connection Integrity:** Check all plumbing connections for tightness and signs of leaks.
- **Cleaning:** Keep the exterior of the tank clean and free from debris.

## 7. TROUBLESHOOTING

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This section addresses common issues you might encounter with your pressure tank.

- **Frequent Pump Cycling:** This often indicates a low air pre-charge in the tank or a waterlogged tank. Depressurize the system and check the air pre-charge. If water comes out of the air valve, the diaphragm may be compromised, requiring tank replacement.
- **Low System Pressure:** Check the pump operation, system leaks, and ensure the tank's pre-charge is correct.
- **Water Leaking from Tank:** Immediately depressurize the system and identify the source of the leak. If the tank shell is leaking, the tank must be replaced. If from connections, tighten or reseal.

- **No Water Flow:** This is typically a pump issue or a severe system blockage, not directly related to the pressure tank itself.

## 8. SPECIFICATIONS

### 8.1. Technical Data

Specification	Value
Brand	GLOBAL WATER
Model	PWB-20LH
Nominal Volume	20 Liters (5.3 Gallons)
Tank Pre-charge	1.9 bar / 28 psi
Maximum Working Pressure	10 bar / 150 psi
Maximum Working Temperature	90°C / 194°F
Material	Polypropylene, Stainless Steel
Colour	Stainless steel (Almond exterior paint)
Item Weight	5.1 kg (5100 Grams)
Product Dimensions (LxWxH)	48 x 35 x 31 cm
Manufacturer	Global Water Solutions Ltd

### 8.2. Dimensional Data



**Figure 3:** Table detailing nominal volume, shipping volume, shipping weight, and dimensions (A, B, C in cm and inches) for various PWB-LH series pressure tanks, including the PWB-20LH model.



**Figure 4:** Line drawing illustrating the dimensions A, B, and C for the PWB-LH series horizontal pressure tanks (8LH - 100LH). Dimension A represents the overall length, B the overall height, and C the height to the center of the connection.

## 9. WARRANTY INFORMATION

The GLOBAL WATER PWB-20LH Horizontal Pressure Tank is backed by a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects under normal use and service. Please retain your proof of purchase. For full terms, conditions, and exclusions, refer to the warranty card included with your product or contact GLOBAL WATER customer support.

## 10. CUSTOMER SUPPORT

For technical assistance, troubleshooting guidance, or to inquire about replacement parts, please contact your authorized GLOBAL WATER distributor. You may also visit the official GLOBAL WATER website for additional resources and contact information.

