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PS&W PUMPING SYSTEMS AND WORKS Dg-blu-1.5hp-230v

PS&W DG BLU PEDROLLO 1.5 HP Electronic Automatic Pressurization System User Manual

Model: Dg-blu-1.5hp-230v

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your PS&W DG BLU PEDROLLO 1.5 HP Electronic Automatic Pressurization System. This advanced self-priming pump is designed to deliver constant water pressure for residential, irrigation, and light commercial applications, featuring an integrated inverter and ultra-low noise operation. Please read this manual thoroughly before installation and use.

2. Safety Information

- **Electrical Safety:** Ensure the power supply matches the pump's requirements (230V 60Hz). All electrical connections must be performed by a qualified electrician and comply with local codes. Disconnect power before any maintenance or service.
- **Water Pressure:** The system operates under pressure. Ensure all plumbing connections are secure to prevent leaks.
- **Installation Environment:** Install the pump in a well-ventilated area, protected from freezing temperatures and direct sunlight.
- **Children and Pets:** Keep children and pets away from the pump during operation.
- **Intended Use:** This pump is designed for clean water applications. Do not use it for flammable, corrosive, or abrasive liquids.

3. Product Overview

3.1 Features

- **Intelligent Control:** Integrated inverter technology for automatic pressure control and constant water pressure maintenance.
- **Powerful Performance:** 1.5 HP self-priming pump operates at 230V 60Hz, delivering reliable water pressurization.
- **Noise Reduction:** Ultra-low noise operation design, suitable for indoor installation.
- **Automatic Operation:** Electronic system automatically starts and stops based on water demand.

- **Dry-Running Protection:** Integrated electronic system protects against dry running.
- **Self-Priming Capability:** Can draw water even when installed above the water source level.

3.2 Components

The DG BLU PEDROLLO system includes the main pump unit with integrated inverter, electronic controls, and clearly marked inlet and outlet ports. No external pressure tank is required.



Figure 1: PS&W DG BLU PEDROLLO 1.5 HP Electronic Automatic Pressurization System. This image shows the compact design of the pump unit with its blue and white housing and visible connection points.

4. Setup and Installation

Proper installation is crucial for the optimal performance and longevity of your pressurization system. Refer to the diagrams below for typical installation scenarios.

- **Location:** Choose a location that is dry, well-ventilated, and protected from frost. The pump should be easily accessible for maintenance.
- **Mounting:** Secure the pump on a stable, level surface to minimize vibration and noise.
- **Plumbing Connections:** Connect the inlet to your water source and the outlet to your distribution system. Ensure all connections are watertight. The pump features G1" connections, with NPT available on request.
- **Electrical Connection:** Connect the pump to a dedicated 230V 60Hz power supply. Ensure proper grounding. Consult a qualified electrician.
- **Priming:** Due to its self-priming capability, the pump can draw water even if installed above the water source. However, for initial startup, it is recommended to fill the pump body with water through the dedicated filling port to ensure immediate operation.

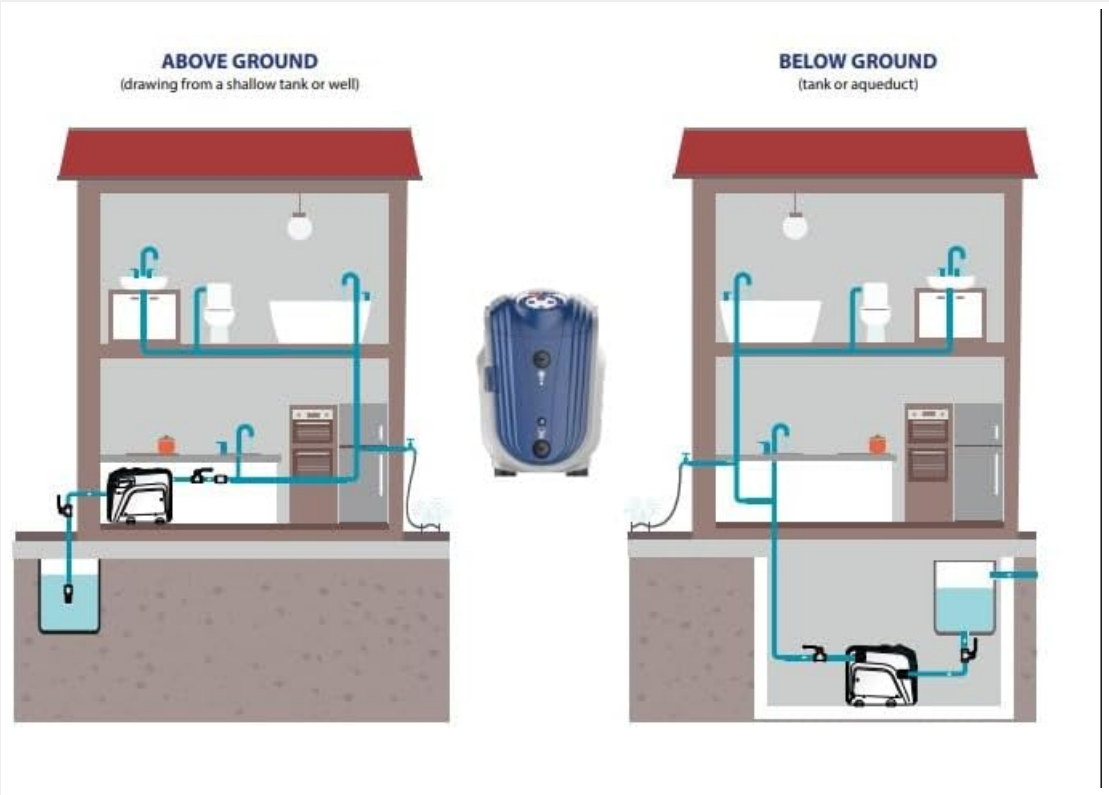


Figure 2: Typical Installation Scenarios. This diagram illustrates two common installation methods: drawing water from an above-ground shallow tank or well, and drawing from a below-ground tank or aqueduct, demonstrating the pump's versatility.

5. Operating Instructions

The DG BLU PEDROLLO system is designed for automatic operation, maintaining a constant pressure in your water system.

- **Initial Start-up:** After installation and ensuring the pump is filled with water, switch on the power. The pump will automatically start and pressurize the system to the factory-set pressure (e.g., 45 psi for DG-BLU 5).
- **Automatic Operation:** The integrated inverter continuously monitors water demand. When a tap is opened, the pump will automatically adjust its speed to maintain a constant water pressure. When all taps are closed, the pump will stop after a short delay.
- **Dry-Running Protection:** If the water source runs dry, the pump's electronic system will detect the absence of water and shut down to prevent damage. It will attempt to restart periodically to check for water availability.
- **Pressure Adjustment:** The system typically comes with a standard set point (e.g., 3.0 bar / 43.5 psi). Refer to the technical specifications for the adjustable range and consult a qualified technician for any set point calibration.

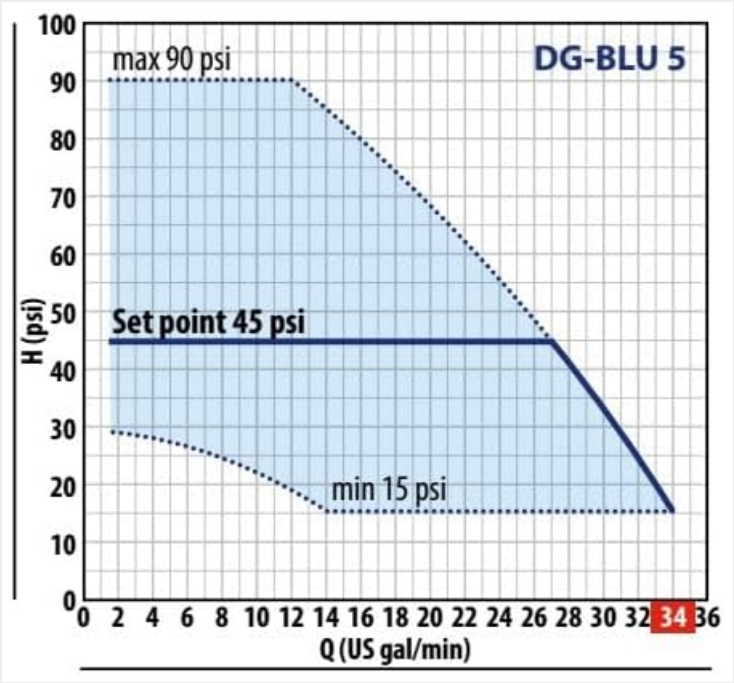


Figure 3: DG BLU 5 Performance Graph. This graph illustrates the relationship between head (H in psi) and flow rate (Q in US gal/min) for the DG-BLU 5 model, showing the operating range with a set point of 45 psi, a maximum of 90 psi, and a minimum of 15 psi.

6. Maintenance

Regular maintenance ensures the long-term reliability and efficiency of your pump. Always disconnect power before performing any maintenance.

- **Regular Inspection:** Periodically check for any visible leaks, unusual noises, or vibrations.
- **Cleanliness:** Keep the pump exterior clean and free from dust and debris to ensure proper cooling.
- **Winterization:** If the pump is installed in an area prone to freezing, drain the pump completely or protect it from frost to prevent damage.
- **Professional Service:** For any complex issues or internal component checks, contact a qualified service technician.

7. Troubleshooting

This section provides solutions to common issues. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Pump does not start	No power; Dry running protection activated; Motor overload.	Check power supply; Ensure water source is available and pump is primed; Check for obstructions or motor issues.
Low water pressure	Insufficient water supply; Air in the system; Clogged filter/impeller.	Verify water source; Bleed air from the system; Inspect and clean filter/impeller.
Pump runs continuously	Leak in the system; Sensor malfunction.	Check all plumbing for leaks; Contact service technician if sensor is suspected.
Excessive noise/vibration	Loose mounting; Air in the system; Foreign object in pump.	Tighten mounting bolts; Bleed air; Disconnect power and inspect pump for obstructions.

8. Specifications

Specification	Detail
Brand	PS&W PUMPING SYSTEMS AND WORKS
Model Number	Dg-blu-1.5hp-230v
Horsepower	1.5 HP
Voltage	230V
Frequency	60Hz
Maximum Flow Rate	26 Gallons Per Minute (GPM)
Maximum Lifting Height	138 Feet
Material	Stainless Steel
Product Dimensions (L x W x H)	20"L x 4"W x 24"H
Item Weight	36 Pounds
UPC	633710687850
Specific Uses For Product	Septic System, Residential, Irrigation, Light Commercial

8.1 Performance Data

TYPE		POWER P2			PERFORMANCE Q	PERFORMANCE H	PERFORMANCE (ADJUSTABLE SET POINT) Set Point Min		Set Point Calibration Std		Set Point Max	
Single-phase		kW	HP	▲	l/min	metres	bar	l/min	bar	l/min	bar	l/min
DG-BLU 3	230 V	0.75	1	IE3	5 – **110**	50 – 10	1.0	45 – **110**	**3.0**	5 – **80**	5.0	5 – 40
DG-BLU 5	230 V	1.1	1.5		5 – **130**	60 – 10	1.0	55 – **130**	**3.0**	5 – **102**	6.0	5 – 45
DG-BLU 3 115/230 V	115 V	0.55	0.75		5 – **65**	50 – 10	1.0	20 – **65**	**3.0**	5 – **39**	5.0	5 – 18
	230 V	0.75	1		5 – **80**	50 – 10	1.0	20 – **80**	**3.0**	5 – **54**	5.0	5 – 30

Q = Flow rate **H** = Total manometric head ▲Efficiency three-phase motor (IEC 60034-30-1)

Figure 4: Performance Data Table for DG BLU Models. This table provides detailed performance specifications including power, flow rate (Q), head (H), and adjustable set point ranges for various DG BLU models, including DG-BLU 3 and DG-BLU 5.

8.2 Dimensions

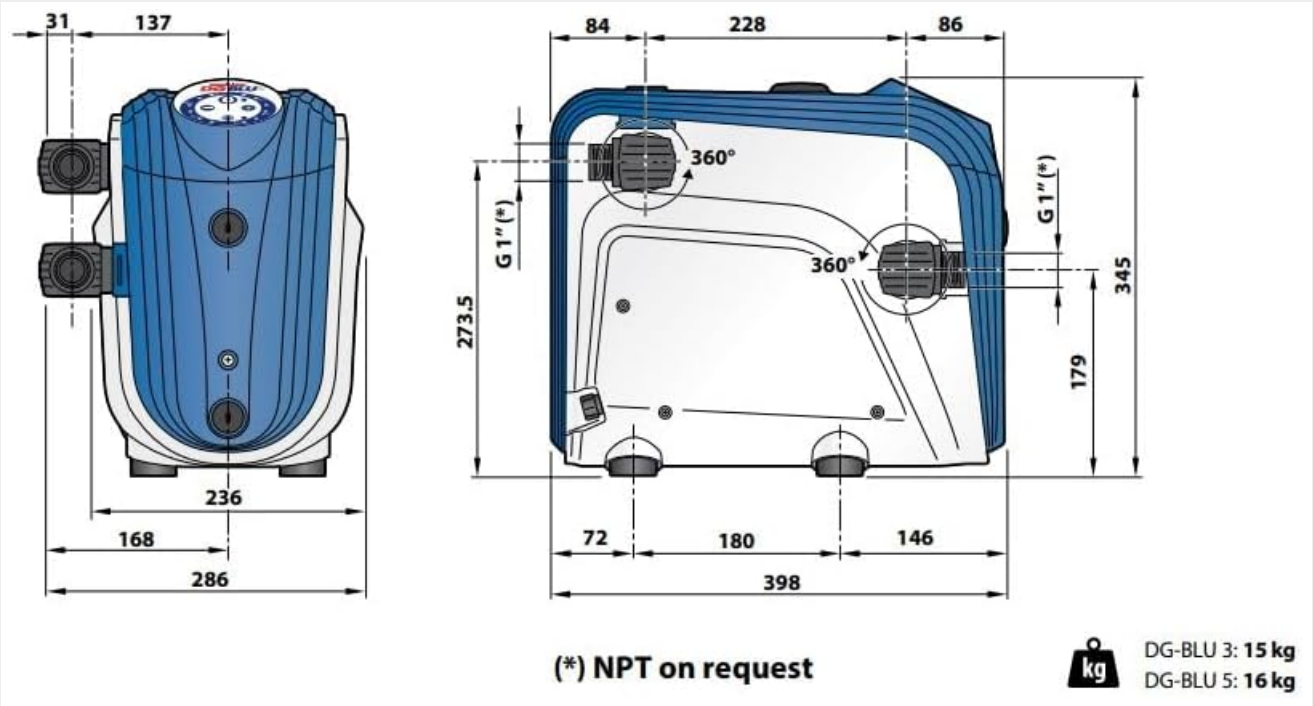


Figure 5: Dimensional Drawing of DG BLU PEDROLLO Pump. This technical drawing provides precise measurements in millimeters for the pump's length, width, and height, along with connection port sizes and orientations.

9. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact the manufacturer directly. For technical support, service, or replacement parts, please contact PS&W PUMPING SYSTEMS AND WORKS customer service.

Manufacturer: Ps&w

Brand: PS&W PUMPING SYSTEMS AND WORKS

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