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› Kärcher BP 4 Well Pump (1.645-421.0) Submersible Pump User Manual

Kärcher 1.645-421.0

Kärcher BP 4 Well Pump (1.645-421.0) Submersible Pump User Manual

Model: 1.645-421.0 | Brand: Kärcher

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Kärcher BP 4 Well Pump. The BP 4 is a robust submersible pump designed for extracting water from wells, boreholes, and other deep water sources. It features a durable pump housing and stainless steel threaded fitting, ensuring reliable performance for various water supply needs.

Key features include:

- On/off switch at the end of the cable for convenient control.
- Safe and comfortable pump handling.
- Includes a 15-meter fixing cable for secure pump support.
- Built-in pre-filter to protect the pump from dirt, increasing service life and operating safety.
- Integrated check valve.
- Pump housing and stainless steel threaded fitting for durability.

2. SAFETY INSTRUCTIONS

Always observe the following safety instructions to prevent injury and damage to the pump:

- **Electrical Safety:** Ensure the power supply matches the pump's voltage (230 Volts AC). Do not operate the pump with damaged cables or plugs. Always use a residual current device (RCD) for added protection.
- **Water Quality:** This pump is designed for clear water. Do not use it for pumping flammable, corrosive, or explosive liquids, or water containing large abrasive particles.
- **Installation:** Securely fasten the pump using the provided fixing cable. Ensure the pump is fully submerged during operation to prevent overheating.
- **Maintenance:** Disconnect the pump from the power supply before performing any maintenance or cleaning.
- **Children and Pets:** Keep children and pets away from the operating area.
- **Temperature:** Do not operate the pump in water exceeding 35°C (95°F).

3. SETUP

Proper setup is crucial for the optimal performance and longevity of your Kärcher BP 4 Well Pump. Follow these steps carefully:

1. **Unpacking:** Carefully remove the pump and all accessories from the packaging. Check for any visible damage.
2. **Connecting the Discharge Hose:** Attach a suitable discharge hose to the pump's threaded fitting. Ensure a tight, leak-free connection. The pump features a 1" threaded connection.
3. **Attaching the Fixing Cable:** Securely attach the provided 15-meter fixing cable to the designated attachment point on the pump. This cable is essential for lowering and retrieving the pump and for providing secure support once installed.
4. **Lowering the Pump:** Carefully lower the pump into the well or water source using the fixing cable. Ensure the pump is fully submerged and positioned vertically. Avoid letting the pump rest directly on the bottom to prevent drawing in sediment.
5. **Electrical Connection:** Connect the pump's power cable to a suitable power outlet (230V AC) equipped with a residual current device (RCD). The pump's control box includes an on/off switch and internal capacitor.



Figure 3.1: Kärcher BP 4 Well Pump with its control box, fixing cable, and various hose connection accessories.



Figure 3.2: Example of a Kärcher pump installation, showing a hose connected to a garden sprinkler system, indicating its use for irrigation.

4. OPERATING THE PUMP

Once the pump is properly installed and connected, follow these steps for operation:

1. **Power On:** Locate the on/off switch on the control box (typically at the end of the cable) and switch it to the 'ON' position. The pump will begin to operate.
2. **Monitoring Flow:** Observe the water flow from the discharge hose. The pump has a maximum flow rate of 4600 Liters Per Hour.
3. **Continuous Operation:** The pump is designed for continuous operation as long as it is fully submerged and the water level is sufficient.
4. **Power Off:** To stop the pump, switch the on/off switch on the control box to the 'OFF' position.
5. **Automatic Shut-off (Optional):** For automatic operation, an external pressure switch can be installed, as the pump does not have one internally. This allows for automatic activation and deactivation based on water demand.

5. MAINTENANCE

Regular maintenance ensures the longevity and efficient performance of your Kärcher BP 4 Well Pump:

- **Pre-filter Cleaning:** The built-in pre-filter protects the pump from dirt. Periodically inspect and clean the pre-filter to prevent clogging and maintain optimal flow. Refer to the pump's diagram for filter access.
- **Check Valve Inspection:** The integrated check valve prevents backflow. If you notice issues with water pressure or inconsistent flow, inspect the check valve for debris or damage.
- **General Cleaning:** Clean the exterior of the pump regularly, especially if it operates in environments prone to sediment buildup.
- **Winter Storage:** If storing the pump during freezing temperatures, ensure all water is drained from the pump and hoses to prevent damage from ice expansion. Store in a dry, frost-free location.

6. TROUBLESHOOTING

If you encounter issues with your Kärcher BP 4 Well Pump, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Pump does not start.	No power supply; On/off switch is off; Thermal overload protection activated.	Check power connection and outlet; Ensure switch is 'ON'; Allow pump to cool down if overheated.
Pump runs but no water or low flow.	Water level too low; Suction filter clogged; Hose kinked or blocked; Air in the system; Damaged check valve.	Ensure pump is fully submerged; Clean pre-filter; Check hose for obstructions; Bleed air from system; Inspect and replace check valve if damaged.
Pump cycles on and off frequently.	Integrated check valve issue; External pressure switch malfunction (if installed).	Inspect check valve for debris or damage; Check external pressure switch settings and function.
Unusual noise during operation.	Debris in pump; Pump not fully submerged; Bearing wear.	Disconnect power and inspect for debris; Ensure adequate water level; Contact Kärcher service if noise persists.

If the problem persists after attempting these solutions, please contact Kärcher customer support.

7. SPECIFICATIONS

Attribute	Value
Brand	Kärcher
Model Number	1.645-421.0
Style	Submersible Pump
Power Source	Corded Electric
Voltage	230 Volts (AC)
Wattage	700 watts
Maximum Flow Rate	4600 Liters Per Hour

Attribute	Value
Item Weight	10.45 Kilograms (approx. 23 pounds)
Product Dimensions	4.13 x 4.13 x 27.95 inches
Material	Steel
Color	Black, Metallic

8. WARRANTY AND SUPPORT

Kärcher products are manufactured to high-quality standards and come with a manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Kärcher website.

For technical support, spare parts, or service inquiries, please contact Kärcher customer service. You can find contact information on the Kärcher official website or through your local Kärcher dealer.

Online Resources:

- Kärcher Official Website: www.kaercher.com
- Kärcher Store on Amazon: [Visit the Kärcher Store](#)

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