



# FIRE FIGHTING PUMP PH-ALFA BS 23HP

Instructions for Use  
(original)



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## INTRODUCTION

### Dear Customer

By buying this device, you have become the owner of one of the wide range of Pavliš and Hartmann products. This device is used to pump water. The device is designed for heavy-duty applications and it is made using the highest quality components under a strict quality management system certified to DIN EN ISO 9001. With a combination of professional drive unit, mechanical design and careful craftsmanship and assembly process, you have gained a device which is ready for a long, heavy-duty and dynamic operation, both in general and challenging working conditions.

Please read carefully these Instructions for Use. If you follow these guidelines, the device will serve you for many years without any defects.

### Benefits of the PH-ALFA BS 23HP petrol-engine driven pump:

- Professional two-cylinder air-cooled, four-stroke OHV petrol engines with automatic mechanical speed control
- Powerful pump chamber
- Fixed mounted motor-pump in one construction block
- Anti-vibration support of the aggregate
- Robust, ergonomically designed tubular frame
- Electric and manual (recoil) starter
- Conventional fuel
- Allows long-term full load
- Speed control
- Gas vacuum pump
- Pressure gauge at the outlet from the chamber
- Ball valve at discharge
- Ceramic mechanical seal
- Service support
- Equipped with lighting
- Bronze impeller

## SAFETY

### Safety Precautions:

Please read carefully the following information to ensure safe operation. Safety precautions must always be observed in handling the equipment and its operation. Failure to observe WARNINGS may result in personal injury or property damage. Ignoring NOTES may result in equipment damage, reduction in its power output or impaired operation.

WARNING symbols are used to indicate risks which, if ignored, will cause or may cause minor or severe injury or death of the operator(s) or bystanders and damage to property.

NOTES - are used to highlight important information for the installation, operation and maintenance of the device.

The "Briggs & Stratton - Operating Instructions" and the battery's manual are an INTEGRAL and complementary part of the "Instructions for use"

## **SAFETY INFORMATION**

For the sake of your safety and safety of others, please read and understand the following safety information.

The manufacturer is not liable for damage caused by unauthorized use, misuse and damage caused by any modifications to the equipment without the manufacturer's consent.

This device may only be operated by mentally and physically healthy persons.

The operator must be at least 18 years of age.

It is forbidden to remove any covers and protective equipment.

Never tilt the pump by more than 15° from the horizontal position (risk of damage to the engine by pouring out oil).

NEVER operate the pump without water. It may cause damage to the pump.

**DO NOT HANDLE OR CARRY THE DEVICE WHILE THE ENGINE IS RUNNING!**

### **Operator's responsibilities**

Know how to stop the pump quickly in case of emergency. Always turn the engine off if you are going to leave the pump for any reason. Learn how to use all controls and connections.

Make sure that anyone who operates the pump receives proper training. If you allow other persons, especially children, operate the pump without proper training, it can lead to serious injury.

Do not carry or handle the equipment during its operation.

### **Pump operation**

Pump only water that is not intended for human consumption. Pumping flammable liquids, such as gasoline or fuel oils, can result in a fire or explosion. Pumping beverages, chemical solutions, or any other liquids that promote corrosion can damage the pump.

### **Fire and burn hazards**

Petrol is extremely flammable and petrol vapour may cause explosion. Use extreme care when handling gasoline. **KEEP OUT OF REACH OF CHILDREN.**

Refuel in well-ventilated areas with the engine stopped. Do not handle in areas with open fire or sparks and avoid smoking.

Refuel carefully to avoid spilling fuel. Do not overfill the fuel tank (there should be no fuel in the filling port]. Tighten the filler cap well after refueling. If any fuel has been spilled, make sure the surfaces are dry before starting the engine.

After use, turn off the fuel valve (lever to the right) and store the pump on a flat surface. Ensure that storage areas are well ventilated and no appliances such as water heaters and clothes dryers should be located in the vicinity of the pump.

### **Hot exhaust**

The engine and exhaust system become very hot during operation and remain hot for some time after shutting the device down. Contact with hot engine components may cause burns and may lead to ignition of some materials.

Avoid touching hot engine or exhaust system.

Let the engine cool before performing maintenance, as well as before transporting or storing the pump indoors.

### **Carbon Monoxide Poisoning Hazard**

Exhaust gas contains poisonous carbon monoxide.

Breathing exhaust can cause loss of consciousness and may lead to death.

If the engine runs in closed or partially closed areas, it may contaminate the air with dangerous amount of exhaust gases.

Provide sufficient ventilation to avoid accumulation of exhaust gases.

## LABEL INSTRUCTIONS



Refer to the User Manual before starting any work



Petrol is extremely flammable



Stop the engine and allow it to cool before refueling



Engine produces toxic carbon monoxide gas



Do not operate it in enclosed areas



Petrol is extremely flammable, and petrol vapour may cause explosion. Use extreme care when handling petrol



Noise level label.

PAVLÍŠ A HARTMANN, spol. s r.o.  
typ: ALFA BS PH - ALFA BS 22007  
výřez: .....  
výřez: 2007 .....  
výřez: 17.2.2007 - 1.000.000.000  
výřez: 17.2.2007 - 1.000.000.000



Nameplate - specifications



Pavliš a Hartmann  
PH - ALFA BS

Pump type designation



NEDOPLŇUJTE PALIVO  
BĚHEM PROVOZU !

Warning - DO NOT REFUEL DURING OPERATION

## DEVICE DESCRIPTION AND CONFIGURATION

Basic configuration: Engine: Briggs & Stratton Vanguard 23 hp  
Pump casing: high-strength aluminium alloy (hydronal)  
Pump cover: high-strength aluminium alloy (hydronal)  
Impeller: bronze  
Frame: welded steel

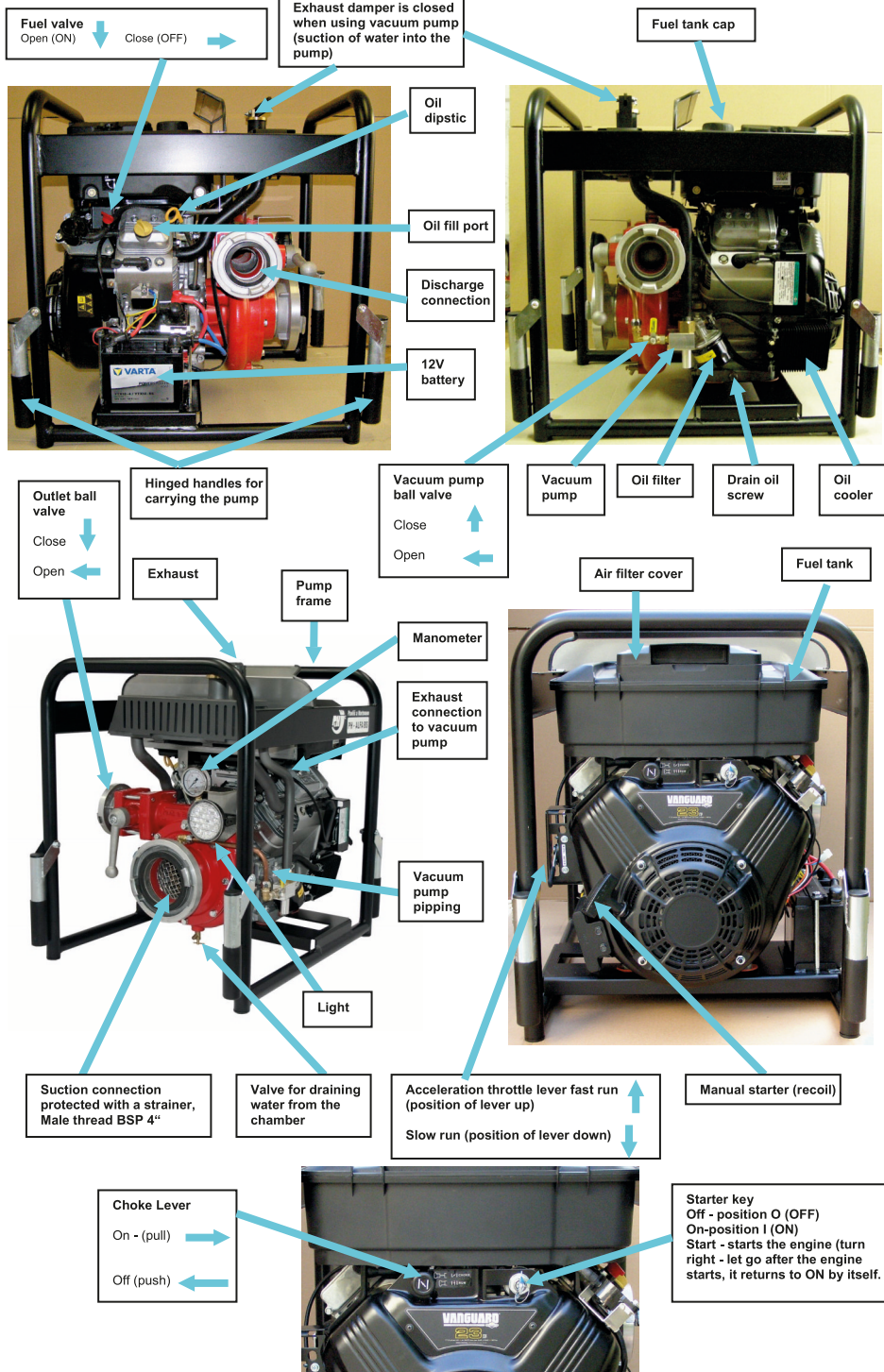
The pump is fixed to the motor to form one unit. Therefore, it cannot be used separately. The motor shaft passes through the pump casing equipped with a seal. The pump housing has a cover with a suction port and discharge port with a ball valve. Never operate the pump without water as this may cause overheating leading to damage to the pump.

Roll bar frame is welded from steel tubes coated with paint finish. The device is provided with hinged handles for handling of the pump. The device is equipped with a plastic built-in fuel tank.

The Vanguard 23 hp engine is manufactured in the highest quality of Briggs & Stratton engines.

PLEASE READ AND UNDERSTAND THE ECLOSED MANUAL FOR USE AND MAINTENANCE OF THE ENGINE.

## Built-in fuel tank



## SPECIFICATIONS

- Length x width x height: 750 x 560 x 670 mm
- Dry weight of the PH-Alfa BS pump: 76,2 kg
- Complete weight of the PH Alfa BS pump: 88 kg
- Suction connection: 4"
- Discharge connection: 2,5"
- Flow rate: 50 m = 1072 l/min
- Flow rate: 60 m = 864 l/min
- Max. delivery head: 92 m
- Max. suction depth: 8 m
- Max. volume of supplied water: 2005 l/min
- Engine – output: Briggs & Stratton 17,2kW/ 23HP/ 3600 rpm
- Fuel: Unleaded petrol BA 95
- Fuel capacity built-in tank: 8 liters
- Average fuel consumption: 6,7 lt/h / 3600 rpm

## OPERATION

### Procedure for first start

- Read carefully these Instructions for use.
- Read carefully the Briggs & Stratton user manual.
- Carefully read the instructions for using the battery.
- Remove any shipping packaging material from the device.
- Check oil level, refill if necessary.
- Fill up the fuel tank.
- Visually check the grille of cooling air supply to the engine and surfaces of the device; check the equipment for any damage.
- Make sure all safety devices and guards are fitted and securely fastened.
- Connect the battery.

### Procedure before any further run

- Check the engine - refer to the Briggs & Stratton user manual.
- Check the battery, follow the instructions for use of the battery.
- Check the general condition of the pump.
- Examine and look underneath the pump for signs of oil or gasoline leaks.
- Remove any excessive dirt or debris, especially around the engine muffler, and recoil starter. Look for signs of damage.
- Check that all nuts, bolts, screws, hose connectors and clamps are tightened.
- Check the suction and discharge hoses.
- Check the general condition of the hoses. Be sure hoses are in serviceable condition before connecting them to the pump. Remember that the suction hose must be of reinforced construction to prevent hose collapse.
- Check that the sealing gasket in the suction hose is in good condition.
- Check that the hose couplings and clamps are securely installed.
- Check that the strainer is in good condition and that it is installed on the suction hose.
- Check whether the draining valve is closed.



## Start of the device

- Place the pump on a firm, stable surface at a maximum angle of 15° from the horizontal position.
- Connect an A110 suction hose (fitted with a strainer) on the suction port by connecting suction couplings A110.
- Connect B75 hoses on the discharge ports by connecting pressure couplings B75.
- Plunge the suction hose equipped with a suction strainer into the water.
- Start the engine - refer to the Briggs & Stratton User Manual and let it idle.
- Close the ball valve on the discharge side of the pump.
- Close the draining valve.
- Open the vacuum pump ball valve.
- Using the exhaust damper, close the exhaust pipe (hold firmly).
- Move the engine acceleration lever to maximum speed.
- After pressurising the chamber, when you see a spray of water from the vacuum pump outlet, release the exhaust damper, **(The exhaust outlet must be open while the pump is running!)** close the vacuum pump valve and open the ball valve on the discharge port.
- To prevent the combustion chamber of the engine and spark plugs from becoming clogged with carbon, the pump must be RUNNING FOR A MINIMUM of 5 minutes after any priming before another priming.
- Set the speed to the desired output.

**Note: When starting the device, do not run the pump without water for more than 2 minutes, otherwise the shaft seal may be damaged!!!**

## Shutdown of the device

- Switch off the engine - refer to the Briggs & Stratton user manual.
- Move the fuel valve from the ON position to the OFF position.
- Disconnect the suction hose and discharge hose.
- Drain water from the pump chamber by the drain valve.
- If necessary, clean the strainer in the suction hole.

**Note:** Important - rinse the chamber with clean water after each use.

**Note:** Always drain water from the pump chamber after finishing work.

## MAINTENANCE

- Guidelines for servicing, maintenance, safety during maintenance, maintenance schedule, troubleshooting, etc. - see the Briggs & Stratton User Manual.
- Keep the pump clean.
- Always rinse the pump chamber and drain any water from it.
- Check that all screws of the device are properly tightened.
- Apply grease on the connection points (suction, discharge), for the rubber seals of the couplings use silicone grease.
- Maintenance of the battery, refer to the User Manual.



### Faults, causes, their remedies

| PUMP HAS NO OUTPUT                      | POSSIBLE CAUSE                                                                                                                    | REMEDY                                                                                                                                                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Check the pump chamber                  | Pump has not sucked water                                                                                                         | Check and clean the vacuum pump.<br>Suck in water into the pump.                                                                                                                                                     |
| Check the suction hose.                 | The hose is collapsed, cut or leaking.<br>Strainer not completely submerged.<br>Air leak at the coupling.<br>Strainer is clogged. | Replace the suction hose.<br>Submerge completely the strainer and the end of the suction hose. Replace the sealing if it is damaged or missing. Tighten the hose coupling and clamp. Clean debris from the strainer. |
| Measure the suction and discharge head. | Excessive suction depth or head.                                                                                                  | Relocate the pump and/or hoses to reduce suction depth or head.                                                                                                                                                      |
| Check the engine.                       | Engine lacks power.                                                                                                               | See instructions for engine maintenance.                                                                                                                                                                             |

| LOW PUMP OUTPUT                     | POSSIBLE CAUSE                                                                                                    | REMEDY                                                                                                                                             |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Check pump chamber.                 | Excessive wear of the chamber, impeller or seal.                                                                  | Professional repair by the manufacturer.                                                                                                           |
| Check suction hose.                 | Hose is collapsed, damaged, too long, or its diameter is too small. Air leak at the port.<br>Strainer is clogged. | Replace the suction hose.<br>Replace the sealing if it is missing or damaged. Tighten the hose coupling and clamp. Clean debris from the strainer. |
| Check the discharge hose.           | Hose is damaged, too long, or its diameter is too small.                                                          | Replace the discharge hose.                                                                                                                        |
| Measure suction and discharge head. | Near the maximum suction depth/ head.                                                                             | Relocate the pump and/or hoses to reduce suction depth or head.                                                                                    |
| Check the engine.                   | Engine lacks power.                                                                                               | See the instructions for engine maintenance.                                                                                                       |

**Note:** Service, maintenance and repairs must be carried out by qualified service provider if you do not have the necessary tools and skills.

**Note:** Failure to follow instructions and maintenance schedules can cause faults which are not covered by the warranty.

**Note:** Follow the applicable legislation on environmental protection when working with oil and grease.

**Note:** Contact your service partner if further service is necessary.

**Note:** Keep a log book of pump operation and maintenance.

## STORAGE

- For storage of the engine, refer to the Briggs & Stratton user manual.
- Clean and dry the chamber and impeller, spray with a silicone grease.
- Apply grease to connection points.
- For longer storage, drain the petrol tank and carburetor, disconnect the battery.
- Store the device in a dry and well-ventilated area.
- Store in a horizontal position.
- Protect from weather.

## WARRANTY

For our customers, we hereby guarantee that the Pavliš and Hartmann original equipment is and will be free from manufacturing defects in materials and workmanship for the period of two years from the date of purchase, provided that it is operated in accordance with these Instructions for Use and other documentation provided with the product, under normal operating conditions and in normal use. Within this warranty, all service support will be provided free of charge, except for service for damage resulting from improper handling or operation in inappropriate operating conditions; and replacement parts, except for common consumables associated with the product (filters, plugs, fuel, oil, etc.). All warranty repairs must be performed by the manufacturer. Repair by other entities as well as any modifications to the equipment by the user outside periodic maintenance will constitute a breach of warranty and void of warranty. All rules applicable to the warranty for operation are related to the end consumer, and the issues not specified above will be governed by the Civil Code, as amended, and other applicable regulations. The warranty does not cover common wear and tear.

### **Warranty and post-warranty repairs**

Warranty for the entire unit is 24 months from the date of sale and warranty claims should be made to Pavliš and Hartmann.

## EC DECLARATION

### EC DECLARATION OF CONFORMITY

#### Manufacturer:

Company name PAVLIŠ a HARTMANN, spol. s r.o.  
Full address V Telčicích 249, 533 12 Chvaletice  
VAT Id. No. CZ60934000

#### Person in charge of completing technical documentation:

Company name PAVLIŠ a HARTMANN, spol. s r.o.  
Full address V Telčicích 249, 533 12 Chvaletice, Czech Republic

#### Device:

Name PH-ALFA BS 23HP Fire-Fighting Pump  
Type ALFA BS 23HP  
Series ALFA

#### Description of the device:

Petrol engine driven pump is designed to pump water not intended for human consumption.

Specifications:

|                           |                                          |
|---------------------------|------------------------------------------|
| • Suction port diameter   | 4 "                                      |
| • Discharge port diameter | 2 1/2 "                                  |
| • Max. delivery head      | 92 m                                     |
| • Max. suction depth      | 8 m                                      |
| • Max. capacity           | 2005 l/min                               |
| • Engine                  | 4-stroke, OHV, forced air cooled, petrol |
| • Max. output             | 17,2 kW / 23 HP / 3600 rpm               |
| • Fuel                    | Unleaded petrol (BA 95)                  |
| • Fuel tank capacity      | 8 l                                      |
| • Total weight            | 88 kg                                    |
| • Dimensions (LxWxH)      | 750 x 560 x 670 mm                       |

#### The device complies with all applicable provisions of

- government regulation (directive):
  - 1) Government Regulation No. 176/2008 Coll., on technical requirements for machinery, as amended by Government Regulation No. 170/2011 Coll. (European Parliament and Council Directive 2006/42/EC of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) as amended by European Parliament and Council Directive 2009/127/EC)
  - 2) Government Regulation No. 616/2006 Coll. (Dated 20 December 2006) on technical requirements for products relating to their electromagnetic compatibility (European Parliament and Council Directive 2004/108/EC of 15 December 2004 on the approximation of the laws of Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC)
- **harmonized standards:** ČSN EN ISO 12100:2011; ČSN EN 349+A1:2008; ČSN EN 614-1+A1:2009; ČSN EN ISO 13857:2008; ČSN EN 953+A1:2009; ČSN EN 1037+A1:2008; ČSN EN ISO 13732-1:2009; ČSN ISO 3864-1:2012

In Chvaletice on

Name and title of the person authorized to sign.....Signature .....

**NOTE**

[illegible]