



PH-DELTA FIRE FIGHTING PUMP

Instructions for Use



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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 – DELTA petrol-engine driven pump:

- Professional two-cylinder air-cooled, four-stroke OHV petrol engine 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
- Manual start (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
- 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 "Vanguard Briggs & Stratton user manual" is 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.



Do not operate it in enclosed areas.



Stop the engine and allow it to cool before refueling.



Engine produces toxic carbon monoxide gas.



Petrol is extremely flammable.



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



Noise level label.



Nameplate – specifications.



Pump type designation.



Warning - DO NOT REFUEL DURING OPERATION.

DEVICE DESCRIPTION AND CONFIGURATION

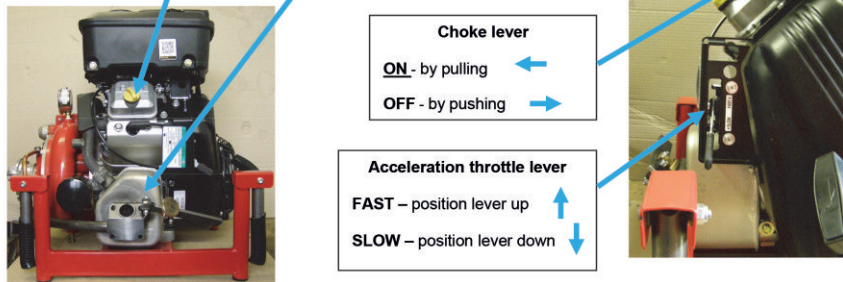
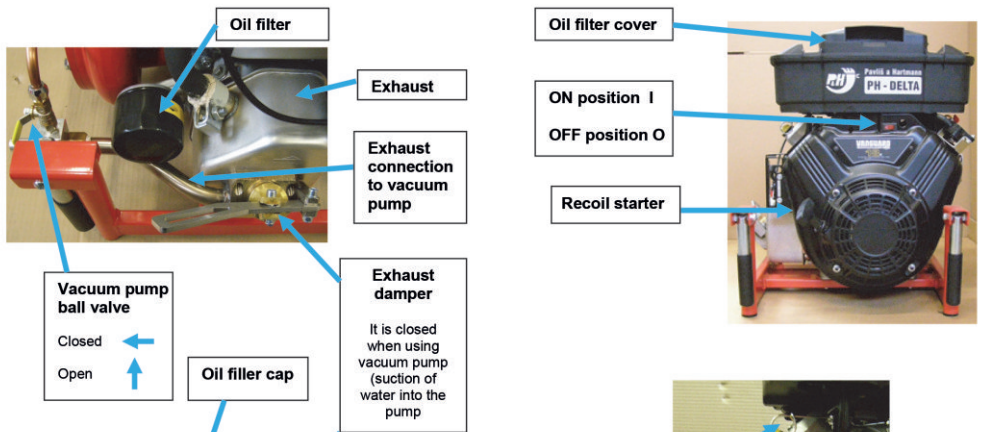
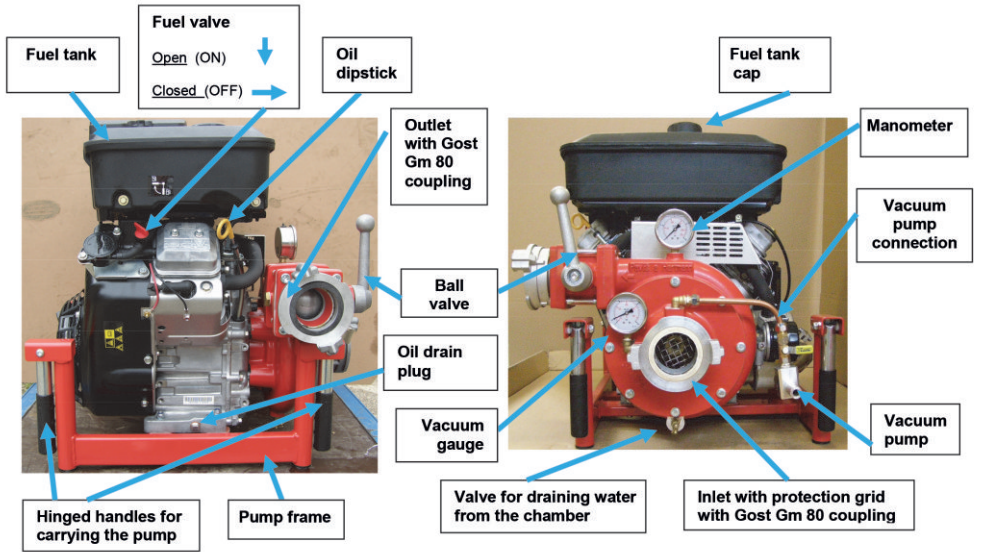
Basic configuration: Engine: Briggs & Stratton
Pump casing: High-strength aluminium alloy (hydronal)
Pump cover: high-strength aluminium alloy (hydronal)
Impeller: bronze
Frame: welded steel

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 Vanguard 18HP 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.



SPECIFICATIONS

• Length x width x height:	600 x 570 x 595 mm
• Total weight:	69,7 kg (with full tanks)
• Dry weight	62,2 kg
• Suction connection:	2 1/2"
• Discharge connection:	2 1/2"
• Max. delivery head:	76,5 m
• Max. suction depth:	8 m
• Max. flow rate:	1703 lpm
• Engine – output:	Briggs & Stratton 13,4 kW (18 HP) / 3600 rpm
• Fuel:	Unleaded petrol (BA95)
• Fuel tank capacity:	8 l
• Average consumption:	5,3 l/hr

OPERATION

Procedure for first start

- Read carefully these instructions for use.
- Read carefully the Vanguard 18HP, Briggs & Stratton user manual.
- 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 equipment for any damage.
- Make sure all safety devices and guards are fitted and securely fastened.

Procedure before any further run

- Check the engine - see the Vanguard 18HP, Briggs & Stratton user manual.
- Check the the overall 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.

Start of the device

- Place the pump on a firm, stable surface at a maximum angle of 15° from the horizontal position.
- Connect a suction hose (fitted with a strainer) on the suction port.
- Connect a hose on the discharge port.
- Plunge the suction hose into the water.
- Start the engine – see the Briggs & Stratton user manual and let it idle.
- Make sure that the drain valve for draining water from the pump chamber is closed.
- Close the ball valve on the discharge side of the pump.
- Open the vacuum pump ball valve.
- Using the exhaust damper, close the exhaust pipe
- 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, close the vacuum pump valve and open the ball valve on the discharge port.
- Set the speed to the desired output.

Note: When starting the device, do not run the pump without water for more than 2 minutes.

Shutdown

- Switch off the engine - see 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

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. Suck in water into the pump.
Check the suction hose.	The hose is collapsed, cut or leaking. Strainer not completely submerged. Air leak at the coupling. Strainer is clogged.	Replace the suction hose. 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. Strainer is clogged.	Replace the suction hose. 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 - see 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. The engine warranty is 24 months from the date of sale and claims can also be made to Briggs & Stratton authorised service centers.

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

Device:

name PH-DELTA Fire-Fighting Pump
 type DELTA
 series DELTA

Description of the device:

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

• Suction port diameter	2 1/2 "
• Discharge port diameter	2 1/2 "
• Max. delivery head	76,5 m
• Max. suction depth	8 m
• Max. capacity	1703 l/min
• Engine	4-stroke, OHV, forced air cooled, petrol
• Max. output	13,4 (18 HP) / 3600 rpm
• Fuel	Unleaded petrol (BA 95)
• Fuel tank capacity	8 l
• Total weight	69,7 kg (with full tanks)
• Dry weight	62,2 kg
• Dimensions (LxWxH)	600 x 570 x 595 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