



# PORTABLE FLOATING PUMP PH - Mammoth - 2400

POWERED by **HONDA**™

User Manual (original)  
Operation Instructions



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VAT No.: CZ 60934000, Id. No.: 60934000

Registered with Regional Court in Hradec Králové, section C, entry 6042, on 22/03/1994

The design of the product complies with the provisions of Act No. 22/1997 Coll.

The manufacturer reserves the right to carry out modifications and upgrade to the product which will not affect the function of the device according to the specified textual and visual information in this Operation Manual without previous notification and without being subject to any liabilities.

## CAUTION

**The user is obliged to read and understand this manual and follow all instructions for operation to avoid danger to health and property of the user or other persons. Safety precautions in this manual do not describe all the possibilities, conditions and situations which may occur in practical application.**

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

**The manufacturer does not accept liability for any damage caused by unauthorized use, improper operation and for damage in consequence of any changes to the device carried out without the manufacturer's approval.**

**For professional use, the owner is obliged to ensure that the persons handling the device shall be trained in safety precautions and instructions for operation.**

**Contact the manufacturer if some information in the Manual is unclear; see address and contact information on the cover page of this manual.**

**User Manual enclosed to this device is an inseparable part of the device and must always be available. When selling the device to another person, the Manual must be passed to the new owner.**

**During the work, it is especially necessary to adhere to the safety precautions to avoid danger of injury to yourself or other persons in the vicinity. These instructions are marked with a safety warning symbol in the User Manual.**

## INTRODUCTION

Dear customer!

By buying this device, you have become an owner of one part of the wide range of Pavliš & Hartmann s.r.o. products. Please read carefully this user manual. If you adhere to the instructions specified here, the device will provide you reliable operation for many years. At the moment of sale, the device is ready for immediate use, i.e. it comes with operation fills and has been successfully tested.

## SAFETY PRECAUTIONS

You will find the safety precautions and operation instructions for the engine in self-contained instructions for use of the engine which come with the device.

- The device may only be operated by an 18-year-old person and over.
- Neither start nor use the engine in enclosed areas. The fumes contain poisonous carbon monoxide.
- Exhaust pipe silencer is hot during the pump run which may cause burns.
- Exhaust pipe silencer stays hot after switching the engine off. Pay special attention when handling or re-fuelling.
- The engine must be off when re-fuelling. Make sure that no fuel escapes and avoid spilling it onto the engine during re-fuelling. Before restarting, check that the engine is dry.
- Pay special attention when exchanging oil in the engine. Adhere to the environmental laws and regulations when handling fuel and oil.
- Do not run the device unattended.
- It is not allowed to remove guards and protection devices.
- When cleaning or adjusting the device, switch off the engine and disconnect the sparkplug cap.
- It is forbidden to clean the suction opening when the pump is running.
- It is forbidden to insert fingers in the suction opening. (RISK OF INJURY)
- Use only original manufacturer parts.
- Never tilt the pump by more than 20° from its horizontal position. (Risk of damage to the engine by oil escape.)

## TECHNICAL DESCRIPTION

engine:	HONDA GXV 390
pump casing:	centrifugal type – Al casting
float:	polyethylene / polyurethane
support plate:	AlMg5Si1Mn
runner:	AlMg5Si1Mn
suction cover:	AlMg5Si1Mn

The pump is firmly connected with the engine in one unit. Therefore, the pump cannot be used independently. The engine shaft passes through the pump casing with no seal. The pump casing is bolted to the engine flange. The pump cannot be coupled to another type of engine. The bottom side of the casing houses a cover preventing access of dirt and debris exceeding 20 mm in diameter.

The pump outlet is fitted with hose coupling A110.

The float body is made of polyethylene by centrifugal casting as one whole. The inner wall is coated with approx. 20 mm layer of rigid polyurethane foam in order to increase the resistance to holing which guarantees unsinkability of the device. The float design provides extraordinary stability on water surface. The pump frame is used to handle and carry about the device as well as to fix a rope to prevent it from floating away.

The engine of the GXV 390 type is manufactured in the highest quality of the HONDA engines. The pump design allows the “dry” run without any damage.

Please read carefully the enclosed instructions for the engine operation and maintenance.

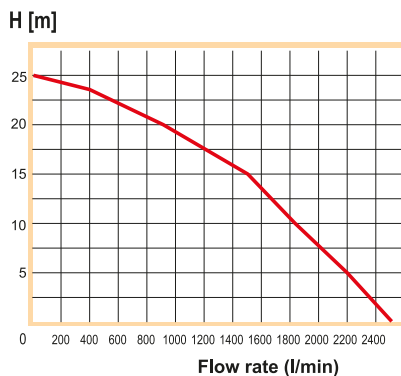
## USE

The device can be used by fire brigades to replenish fire engine tanks with water from outdoor natural water sources. It can also be used to pump out water from flooded areas and rooms. Other applications include e.g. agriculture, building sites, etc.

**WARNING:** The rooms must not be enclosed as there is a danger of carbon monoxide poisoning.

## MAIN TECHNICAL SPECIFICATIONS

• Max. flow	2512 l/min
• Total head	24 m
• Discharge connection	Storz A110 (4")
• Engine	Honda GXV 390
• Engine Power	7.6 kW/10,2 HP 13 HP /SAEJ 1995)
• Fuel tank capacity	2.1 l
• Fuel	unleaded petrol (BA 95)
• Float dimensions	980x710x200 mm
• Device dimensions	1080x730x500 mm
• Dry weight (empty)	55,9 kg



## MATERIALS OF MAIN ENGINE PARTS

Casing	AlMg5Si1Mn	Float	polyethylene / polyurethane
Runner	AlMg5Si1Mn	Support plate	AlMg5Si1Mn
Cover	AlMg5Si1Mn		

## WARNINGS ON THE USE OF DEVICE

Using a suitable rope, fix the device on the water surface by the handle not the hose.

Do not use the device in areas with the danger of explosion.

Do not use the device in enclosed rooms. (The exhausts and combustion products contain poisonous carbon monoxide whose inspiration can bring unconsciousness which may result even in death).

Fuel and oil may not be replenished on the water surface. (Clean the equipment if it has been spilled onto.)

If in danger, switch the device off quickly by pulling the acceleration lever to its STOP position.

During the device use there is danger of burns from the engine exhaust outlet. Use the handles to carry the device around. The device can only be carried in standstill.

The device is designed to pump service water. It pumps debris up to the particle size of approx. 20 mm. When the cover gets clogged, the device must be put out of operation and cleaned during the standstill.

Fuel and oil must be checked before every use.

The float is not abrasion resistant. (Broken or otherwise damaged float can be repaired by welding.)

If the device catches fire, use a CO2 or powder extinguisher.

## RECOMMENDED FUEL AND OIL

Petrol unleaded petrol, min. octane number 86

Oil according to the engine manufacturer's instructions

## STORAGE

- Keep the device in a dry area and always in horizontal position.
- Protect against climatic effects.
- Prevent access of and handling by unauthorized persons.
- If long-term storage is expected, drain petrol out of the tank and conserve the engine according to the manufacturer's instructions.
- Before storage clean the device from dirt.
- When cleaning the device using solvents or other chemical substances follow the applicable law and regulations on protection of the environment, waterways and water resources against pollution.

## MAINTENANCE

Before any repair, disconnect the high voltage cable from the spark plug to avoid accidental start-up.

The engine maintenance instructions can be found in the engine manufacturer's operation instructions. The operator of the device must become familiar with these instructions before putting the device into operation. Note: When exchanging oil follow instructions in the User Manual, page 9 (unscrew the filling neck cap, remove the drain plug) and place a catch vessel for the drained oil under the engine.

Make sure that the connecting area (A-110 coupling) is clean. If the device is to be shut off for a long period, conserve the sealing sleeve of the coupling.

Oil the accelerator Bowden cable of the engine with a few drops of oil approximately twice annually.

## PREPARATION, START-UP AND OPERATION OF THE DEVICE

Put the device on the water surface. Connect the 4" Pavliš & Hartmann hose (A-type) to the delivery outlet using a hose coupling. Straighten the hose to avoid motion during its filling which could result in knocking over the device or water penetrating into the air filter of the engine. Fix a suitable rope to the handle to secure the device against floating away. Shift the accelerator lever to the choke position to start the engine (the last arrested position with the throttle symbol). Pull the starting rope slowly until you feel resistance and then give it a quick pull up to its end position. Release it slowly to let it move back. After the engine has started shift the accelerator lever from the choke position to the operation position which is suitable for the necessary engine output during pumping. We recommend that the speed should be set to the level which does not require flow regulation at the end of the outlet hose. Shift the accelerator lever to the Stop position to stop the device. Disconnect the hose and bring the device out of the water source. The pump does not require drainage – the remaining water will run away through the pump cover.



**CHOKE position(throttle)**



**OPERATION position (hare)**



**IDLE RUN position (turtle)**



**STOP position (zero)**

## **WARRANTY TERMS**

The manufacturer only takes liability for the design, function, quality and completeness of the device providing that the device has been handled and operated in compliance with the Operation Instructions which are inseparable part of each device.

Warranty does not cover any damage resulting from natural wear, improper storage or unprofessional operation, or any damage caused by the purchaser or a third person.

Warranty is void in the case of the device accident not caused by a fault on the manufacturer's side, or in consequence of any intervention in the device design without the manufacturer's approval.

The warranty period for the complete device is 24 months after the day of sale and may only be made to Pavliš & Hartmann. The engine warranty period is 24 months after the day of sale and it can also be applied to authorized HONDA service centres.

Pavliš & Hartmann also provides after-sales service and inspection (exchange of oil and air filter).



## FAULTS, THEIR CAUSES AND REPAIR

1. Faults of the engine and instructions for their repair are listed in the HONDA engine manual. Besides the engine operation instructions, also increased danger of potential intrusion of water into the engine must be taken into account during operation. If water enters the suction filter and further into the engine, it is necessary to remove the water immediately. Never try to start up the engine immediately after the water entered the engine!

### PROCEDURE OF RESTARTING THE ENGINE AFTER THE WATER PENETRATION INTO THE ENGINE FILTER OR INTO THE ENGINE ITSELF:

Disconnect the high voltage cable from the spark plug and drain out the petrol and oil (dispose of the used petrol and oil in compliance with the relevant regulations).

Remove the air filter, clean it and dry the filter insert, replace if necessary.

Remove the spark plug and clean it.

Drain the water from the cylinder (tilt the cylinder head downwards and run the engine using the rope). Screw up the spark plug back.

Replenish new petrol and oil (if the water penetrated into the oil casing, use the flushing oil first). Start the engine and fit the air filter while the engine is running (if the engine "chokes", the air filter must be replaced with a new one).

2. If a foreign body gets into the pump and the runner gets stuck during the run, or after a shutdown during the reverse flow by the bodies which have already gone through the pump, it is necessary to dismantle the suction cover and clean the inner room of the pump.

Before removal of the pump cover it is necessary, for safety reasons, to disconnect the high voltage cable on the spark plug. This is a safeguard against accidental start-up.

### WARNING!!!

If the pump is not expected to be used at least once a fortnight before its shutdown, close the petrol supply to the carburettor while running and let the engine stop running by itself. This action will exclude problems when putting the device into operation (starting) again which could be caused by sediment from evaporated petrol in the carburettor.

## DELIVERY

The device is supplied completed and tested – see the Test and Measurement report on the back cover page. It comes with a delivery hose of 30cm fitted with a A-110 coupling, a copy of the user manual for the PH-Mammoth-2400 pump, instructions for operation and maintenance of the Honda GXV 390 engine and a guarantee certificate.

## DISPOSAL

After the end of the device's lifetime, have a specialist company to dispose of the floating pump.

## EC DECLARATION OF CONFORMITY

The equipment is in compliance with all applicable provisions

- of government regulations (directives):
  1. Government Regulation No. 176/2008 Coll., specifying technical requirements for machinery (European Parliament and Council Directive 2006/42/EC of 17 May, 2006 on machinery and on the amendment to Directive 95/16/EC (revised version))
  2. Government Regulation No. 616/2006 Coll. (of 20 December, 2006) on technical requirements for electromagnetic compatibility of products (European Parliament and Council Directive 2004/108/EC of 15 December, 2004 on approximation of legal regulations of the member states pertaining to EMC and on revocation of Directive 89/336/EEC)
- of harmonized norms: ČSN EN ISO 12100-1:2004; ČSN EN ISO 12100-2:2004; ČSN EN 349+A1:2008; ČSN EN 614-1+A1:2009; ČSN EN ISO 13857:2008; ČSN EN 1037+A1:2008; ČSN ISO 3864:1995

## Test and Measurement Report

No.:..../..../....

Place: Chvaletice, Czech Republic

**Tested and measured:** Floating pump PH-Mammoth-2400

Serial No.: .....

Delivery test made:

Delivery to a height of 2 m ..... l/min

Test:

Engine accelerator control - .....

Starting and switching-off the engine - .....

Run of the engine at both low and high speeds - .....

The pump behaviour on the water surface when in standstill. Connection to hoses - .....

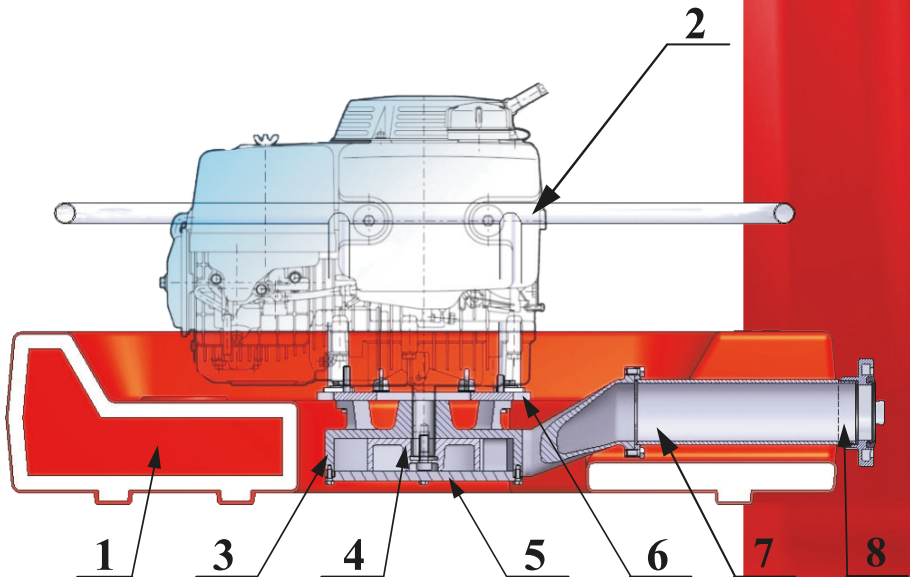
Inspector's signature: .....

Date:

Report issued by: .....

Report concluded: yes no

PH 81



1. Pavliš & Hartmann float
2. HONDA GXV 390 engine
3. Pavliš & Hartmann pump casing
4. Pavliš & Hartmann runner

5. Pavliš & Hartmann cover
6. Support plate
7. Delivery pipe
8. A-110 coupling