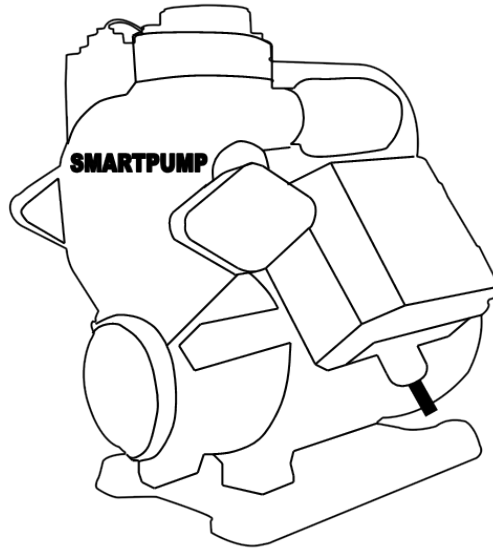


X-POWER



SMARTPUMP

**Single-phase Electric Pump
with automatic flow-pressure switch,
Flow sensor
And
Adjustable restart pressure**

Handbook

www.xpowerwaterpumps.com

Index

Cautions	Pag. 01/02
Product Overview	Pag. 03/04
Product Benefits	Pag. 05
Possible Installations	Pag. 06
Examples of Installations	Pag. 06/07
Pump Start	Pag. 08
Calibrations	Pag. 09
Power and Performance Data	Pag. 10
Curves	Pag. 10
Dimensions and Weights	Pag. 11
Problems Solving	Pag. 12
Warranty	Pag. 13

1 SMARTPUMP

Cautions

- 1) Read and understand this user manual before installation and operation of the product.
- 2) SMARTPUMP is an electrical device. It cannot be used by children and/or people with physical, sensory and mental disabilities. Also people without experience cannot use the pump; except under close supervision.
- 3) The warning sign marks notes whose non-observance will endanger your health or the functioning of the device.
- 4) Cleaning and user maintenance shall not be made by children and/or by inexperienced people, without supervision.

The pump should be installed in dry and ventilated area, away from water splashing, to avoid short circuit.

- 6) For easy maintenance, shut-off valves should be installed in both suction and discharge lines.
- 7) It is strictly forbidden to start the pump without pumping liquid.
- 8) Before carry out any intervention on the pump, disconnect power supply.
- 9) Always shut down the pump before touching or proceeding with any intervention on it. Allow all system and pump components to cool, before you handle them.
- 10) Please pay attention to ventilation in case of moisture condensation, causing electrical fault.
- 11) At low temperatures, we recommend to remove the liquid inside the pipelines to avoid cracking.
- 12) In the perspective of long periods of inactivity, make sure to close the intake and outlet valves.
- 13) If the supply cord or the plug are damaged, please ask a qualified centre to replace them.
- 14) The network and relative outlets must be fitted with an efficient earthing connection following the laws in force on the matter of electrical systems.

SMARTPUMP

- 15) If the temperature of the pump is greater than the value of nameplate, remove the power, disconnect the pump through the valves on the pipeline, and please contact your local dealer or service.
- 16) If you are unable to find a solution to a potential problem, please contact your local support centre.
- 17) Keep out of reach of children.
- 18) Install the pump in a dry and well ventilated area.

3 SMARTPUMP

Product Overview

Applications:

Increase domestic water pressure - Technological Uses

SMARTPUMP DESCRIPTION

This innovative domestic pump is high-end engineering product that guarantees the best reliability.

It maintains the traditional constructive structure of a peripheral electric pump, but it guarantees high pressures

There are two models available:

- 1) SMARTPUMP 500 that takes 0,50HP;
- 2) SMARTPUMP 750 that takes 0.75 HP.

Both are automatic self-priming pumps powered at 230Vac, and both are designed to increase the domestic water pressure (of hot or cold water), with temperatures between 2 °C and 90 °C.

SMARTPUMP is characterized by technical features that make this pump unsurpassed in its kind.

SMARTPUMP is activated automatically when the tap opens and stops when it closes.

SMARTPUMP delays the start of three (3) seconds after a sudden blackout. This technical measure helps to avoid motor overload, damage of relay and simultaneously, extends the life of the product.

NOISE OF SMARTPUMP

SMARTPUMP reduces the noise level down to 10% (compared to standard peripheral pumps), thanks to the some technical-constructive measures:

- 1) the ENAMEL coating of the pump housing;
- 2) the use of a plastic base, placed under the pump;
- 3) the fixing with stainless steel, of the brass impeller on the motor axis.

SMARTPUMP **4**

HEIGHTS OF SMARTPUMP

The quota (in other words, the difference between the pump and the farthest point) is a dimensional problem for many presscontrols on the market.

SMARTPUMP is able to cover up to 25 meters, with only two models, thanks to the electromechanical pressure switch.

SMARTPUMP 500 can reach up to 15 meters; and SMART-PUMP 750 can reach up to 25 meters.

SMARTPUMP AND WATER LEAKS

SMARTPUMP is equipped with a buffer tank from 600 grams, which decreases the frequent starts, produced by small water extractions and/or small losses. The relay (that opens and closes the power supply contacts) is guaranteed to 390,000 Start/Stop for SMARTPUMP 500, and 490,000 Start/Stop for SMARTPUMP 750.

The buffer tank is directly mounted on the pump. It extends the life of the product and ensures a reduced power consumption.

SMARTPUMP AND THE DRY RUNNING; it means, running without no liquid in the pump

1) PROTECTION FROM DRY RUNNING, WITH MOUNTING ON TANK OR WELL

SMARTPUMP is characterized by a timed flow control.

If the water flow is interrupted during the operation, SMART-PUMP will turn off automatically, after six (6) minutes of inaction. Just disconnect the power supply to restart the pump: it will resume a normal operation cycle.

2) PROTECTION FROM DRY RUNNING, WITH MOUNTING ON WATER LINE

SMARTPUMP turns off automatically after six (6) minutes of dry running. It only restarts when the inlet water flow generates a pressure difference of 0.2 bar (between the pump and the water system).

5 SMARTPUMP

Product Benefits

SELF-PRIMING

SMARTPUMP is a self-priming pump. But, in order to self-prime, the housing pump must always be full of water.

The table shows, the circuit filling time, if the pump draws from a negative suction tube.

Model	Negative suction of the pump (Mpa)	Negative suction of the pump (Bar)	Negative suction of the pump (Metri)	Time of self-priming of the pump
SMARTPUMP 500	- 0,093	- 0,93	- 9,3	4 min. and 50 sec.
SMARTPU MP750	- 0,095	- 0,95	-9,5	3 min. and 55 sec.

DELAYED START

Delay starting after the first installation, or after a sudden black-out.

ANTI-GALLING FUNCTION

The pump makes an automatic function test after 3 days of non-use. With this feature, you can prevent the pump blocks due to impurities or scales.

PROTECTION FROM DRY RUNNING

After six (6) minutes, the pump sets automatically the block-protection in case of dry run situations.

FLOW SWITCH FUNCTION

SMARTPUMP starts again automatically when the water comes back; this takes place, thanks to the flow switch that detects even a minimal flow.

SMARTPUMP

6

REDUCING FREQUENT LY STARTUPS

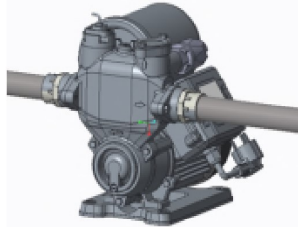
SMARTPUMP is equipped with a buffer tank of 600 grams, which avoids the frequent and/or sudden starts of the pump (due to small losses or withdrawals of water).

IMPROVED COOLING

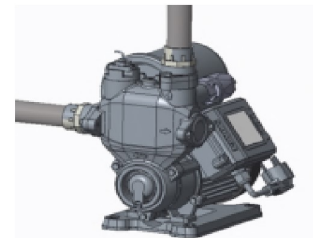
The special shape of the patented fan-cooling-cover, ensures a better engine cooling.

Installation positions

SMARTPUMP
with horizontal
intake and out-
let



SMARTPUMP
with intake and
outlet at 90°



Examples of Installations

Applications:

Increase of domestic water pressure - Technological Uses:

INSTALLATION OF SMARTPUMP

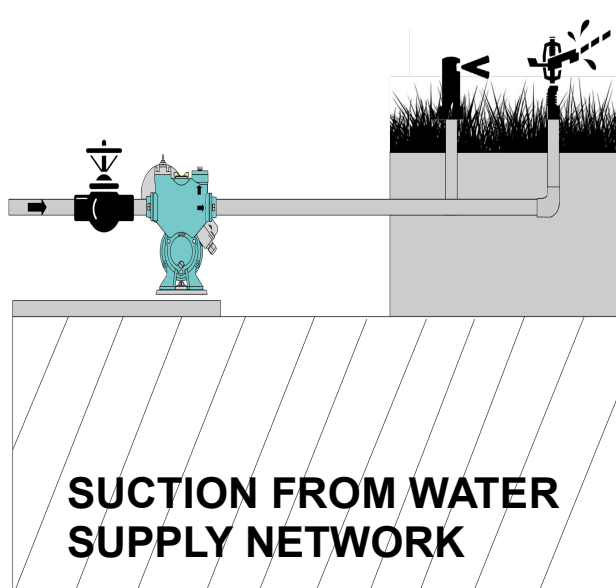
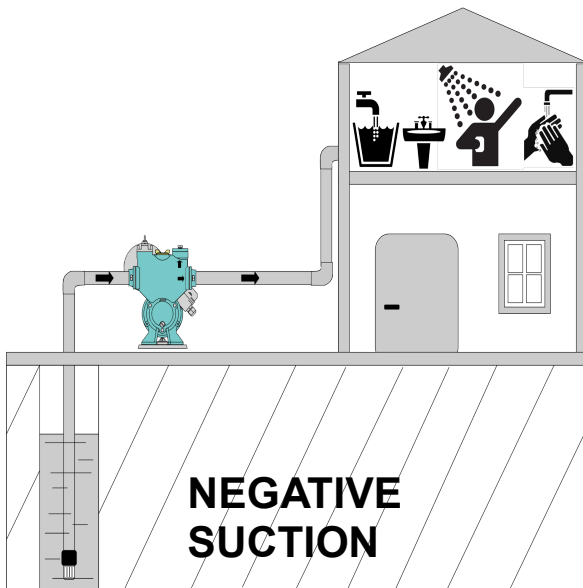
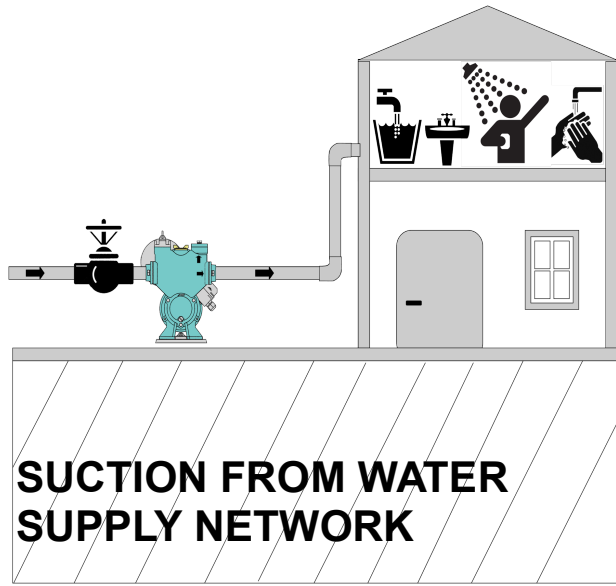
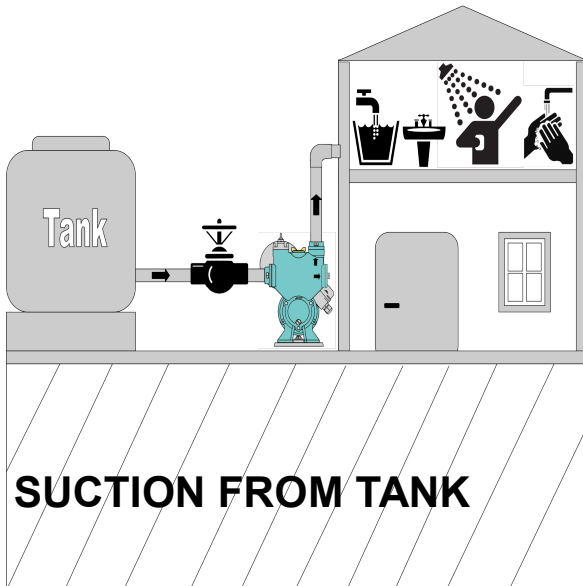
The traditional autoclaves, or/and the normal water pressure pumps, have a presscontrol and they are characterized by the indispensable installation of preparatory components. Instead, SMARTPUMP is compact and ready to use. The pump has a double outlet. It can be installed horizontally or at 90°, without the use of any connecting nipple.

SMARTPUMP is equipped with 60 cm of wire and Schuko plug. It is ready to be connected to the power grid and to the water supply network.

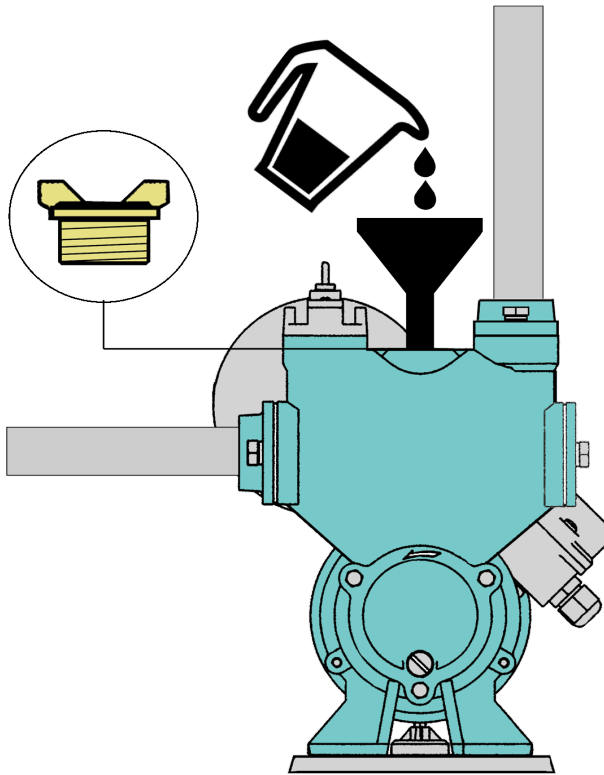
There are three (3) Steps required for proper installation:

- 1) Mounting the pipe;
- 2) Filling the pump with water by unscrewing the butterfly screw;
- 3) Insert the plug into the outlet.

7 SMARTPUMP



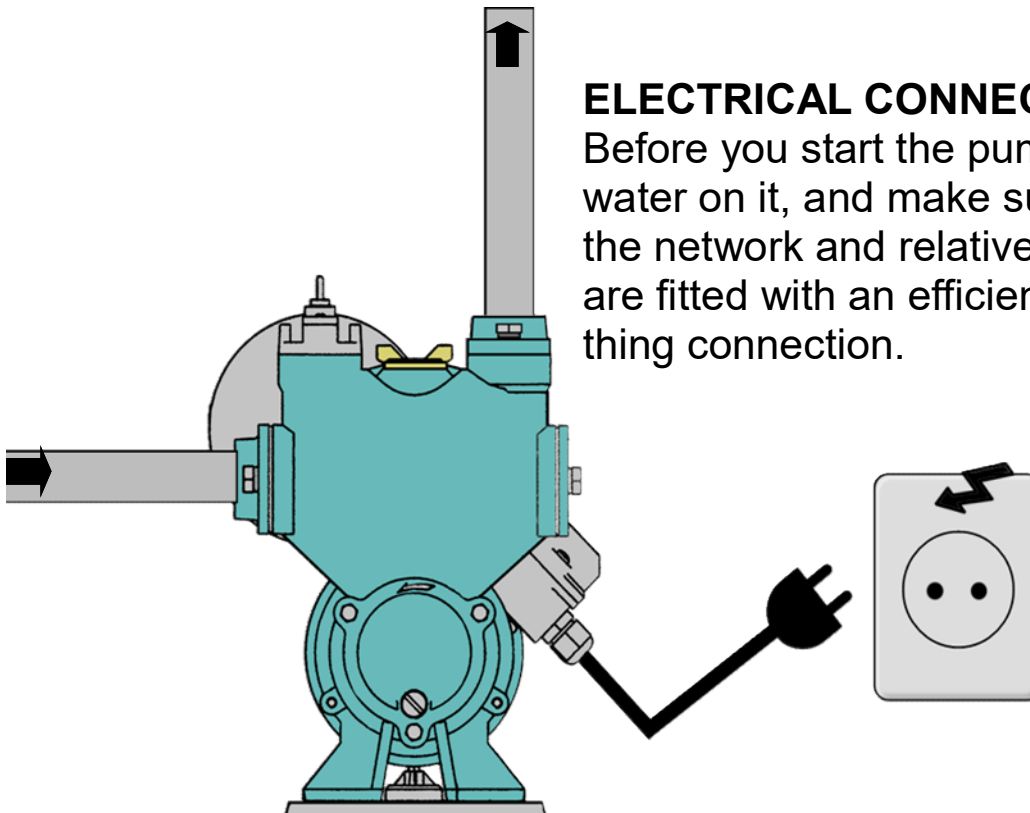
Pump Start



TOP UP THE PUMP

Before starting:

Unscrew the butterfly screw located on the top of the pump, and fill SMARTPUMP with clean water, until the water does not overflow from the pump.



ELECTRICAL CONNECTION

Before you start the pump, add water on it, and make sure that the network and relative outlets are fitted with an efficient earthing connection.

9 SMARTPUMP

Adjustments

SMARTPUMP ADJUSTMENTS

Normally, you do not need any adjustments before the first use.

SMARTPUMP has the following factory settings:

SMARTPUMP 500 = 2,5Bar

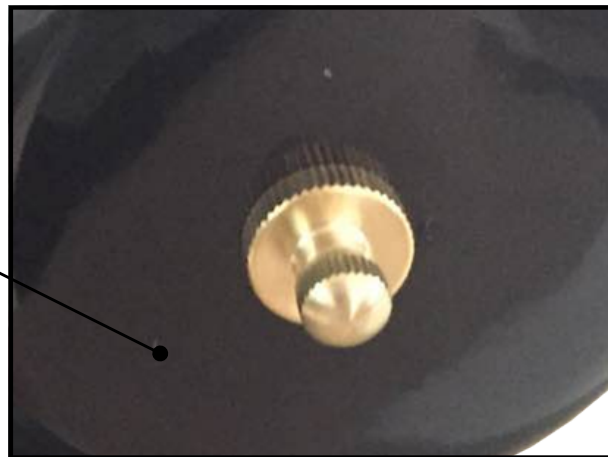
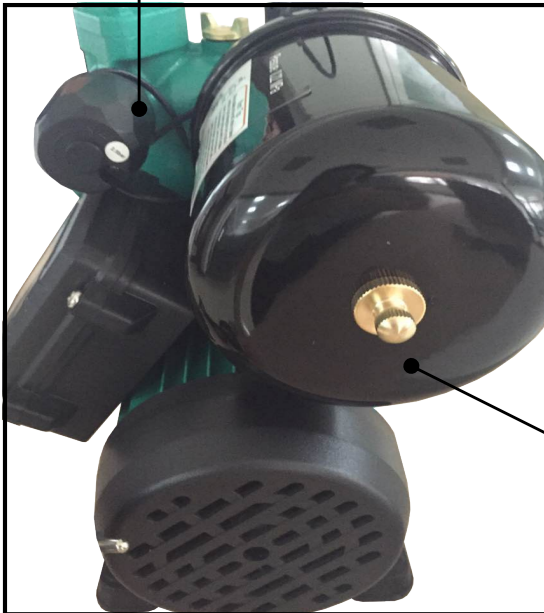
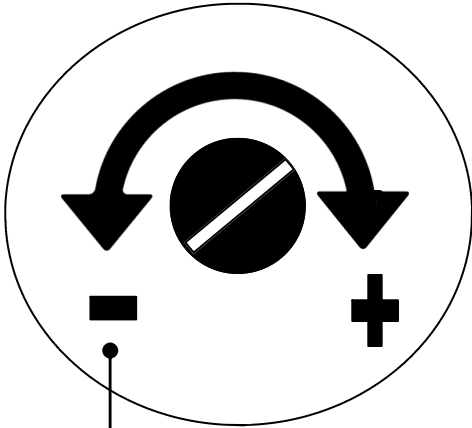
SMARTPUMP 750 = 2,8Bar

But the start setting is also adjustable.

Through a screw, placed on the pressure switch (which is protected by a rubber bulb that must be removed manually), you can adjust the pump in the following ways:

SMARTPUMP500 = Min. 0,5Bar Max. 2,8 Bar;

SMARTPUMP750 = Min. 0,5Bar Max. 3,6Bar.



SMARTPUMP is already set at the factory.

BUFFER TANK

SMARTPUMP is equipped with a buffer tank from 600 grams.

Factory settings:

SMARTPUMP 500 = 2,2Bar

SMARTPUMP 750 = 2,8Bar

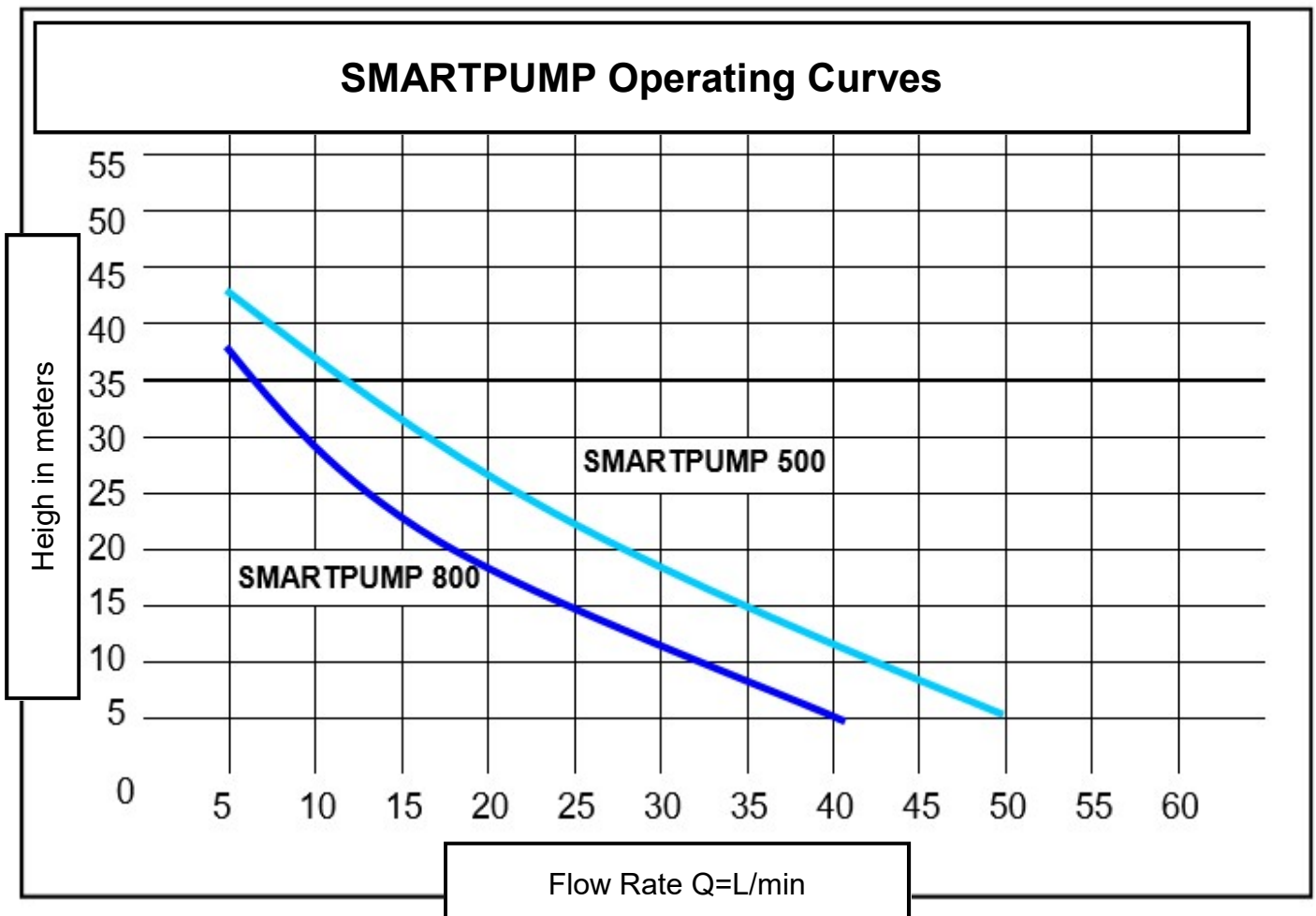
SMARTPUMP 10

Power and Performance Data

Single-phase Model -230Vac	Electrical Data			
	Protection	Absorbed power	Absorbed current	Capacitor
SMARTPUMP 500	IPX4	0,50HP	2,2	10 MF
SMARTPUMP750	IPX4	0,75HP	3	12 MF

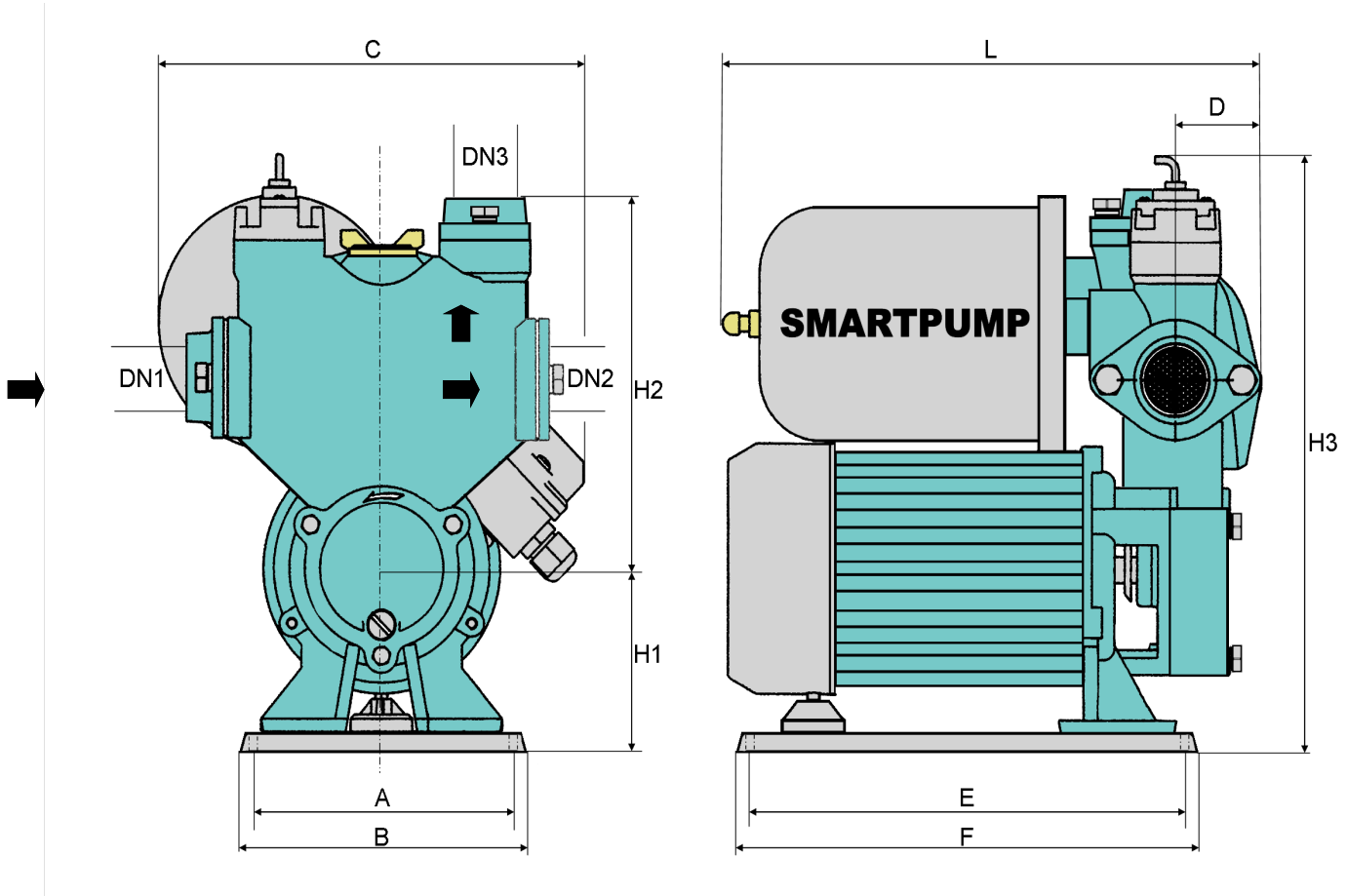
Single-phase Model - 230Vac	Hydraulics Data										
	Flow Rate in l/min	0	5	10	15	20	25	30	40	45	50
SMARTPUMP 500	Height in meters	36	35	28	23	18	15	12	5	-	-
SMARTPUMP 750		43	41	37	33	26	22	20	17	9	5

Curves



11 SMARTPUMP

Dimensions and Weights



Single-phase Model 230Vac	Openings			Dimensions (mm)										Weight Kg
	DN1	DN2	DN3	A	B	C	D	E	F	L	H1	H2	H3	
SMARTPUMP 500	1"	1"	1"	80	120	206	42	190	208	252	85	160	245	8,5
SMARTPUMP750	1"	1"	1"	100	135	206	48	200	222	280	95	178	273	12

SMARTPUMP 12

Problems Solving

Problem	Possible causes	Solution
The pump does not start	Damaged wiring, interrupted cable, lack of electric power	Restore the wiring, the power cord or power supply
	Faulty capacitor	Replace the capacitor
	Impurities in the impeller	Dismantle the pump and clean the impeller
	Switch off	Turn the switch on
	Pump outlet pressure too high	Increase start pressure from the pressure switch
The pump vibrates too much or does excessive noise	Solid material inside the pump	Dismantle pump and remove dirt
The pump runs but does not send water	Air within the pump	Pour water into the pump housing
	Dirty water filter	Remove the filter and clean it
	Dirty impeller	Clean the impeller
It trips the circuit breaker	Water in the electrical board	Dry water
	Shorted motor	Replace the circulator
The pump does not deactivate	Pressure switch calibration too high	Adjust the lower pressure until the pump is able to detach

13

SMARTPUMP

Warranty

SMARTPUMP Warranty certificate

Thank you for purchasing this pump, designed and manufactured to exacting high standards, and to confer safety and high quality performance.

For warranty, fill out the following form.

The legal guarantee starts from the date of purchase and does not cover damage caused by improper use and/or tampering not expressly indicated in this manual.

Model

Number

Invoice numb. or receipt (staple here the sales receipt)

Date of purchase

Place of purchase

Problem

UE - Correct Disposal Of This Product



This symbol identifies important notes regarding the correct disposal of the device.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling, and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling. For more information concerning the correct disposal of these products, please contact your reseller.

