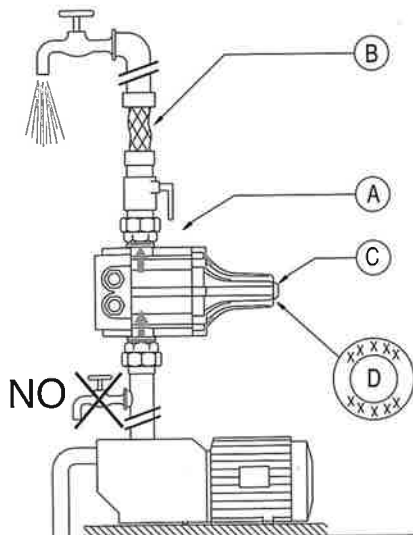


1



GB

INSTALLATION AND OPERATING INSTRUCTIONS

Carefully read the instructions before installing and using the device. The installer and final service must scrupulously follow the instructions while observing all relevant local regulations, standards and laws. The device is built in compliance with the Community laws in force and the Manufacturer declines all responsibility in the case of improper use or use under conditions differing from those indicated on the nameplate and contained in these instructions.

In case of removal of the device or the electrical box, cut off the power supply before opening the casing.

FEATURES AND ADVANTAGES

Can be energized with either 115 Vac or 230 Vac.

Starts and stops the pump depending on opening and closing of the taps.

It has 1"1/4 male connectors to guarantee a higher flow rate.

Stops the pump in case of a water shortage and protects it against dry running.

Is equipped with automatic restart in case of failure and anti-jamming function.

No need for an expansion tank, check valve, filter or fittings.

Can be installed on surface and submersible pumps up to 3 HP.

Maintenance free.

TECHNICAL FEATURES

| | |
|---------------------------------|-------------------------------------|
| Monophase power supply voltage | 115Vac-230Vac |
| Acceptable voltage fluctuations | +/- 10% |
| Frequency | 50-60 Hz |
| Maximum Current | 30 (16) A |
| Maximum | Max 1,1 kW (1.5 HP) - 2,2 kW (3 HP) |
| Protection degree | IP 65 |

| | |
|-----------------------------|--------------------|
| Insulation class | I |
| Device | Tipo 1B |
| Maximum working pressure | 10 bar (1 MPa) |
| Maximum working temperature | 65 °C |
| Minimum flow | ~1 l/min |
| Male connections | Gc 1" or Gc 1 1/4" |

Standard non-adjustable restart pressure 1.5 bar (0,15 MPa).

On request devices can also be supplied calibrated at 1.2 bar (0.12 MPa) or at 2.2 bar (0.22 MPa).

Safety valve that prevents any water spillage in the case of a faulty membrane (fig. 1/C).

INSTALLATION

(figures 1 and 2)

Attention: before installing check that the technical features of the device, the pump and the system are all compatible.

As a rule the pressure generated by the pump must be at least 1 bar (0.1 MPa) higher than the restart pressure of the device indicated on the rear of the same. (fig. 1/D).

More specifically, the effective pressure of the pump and the height of the water column of the system that influences the device must be checked in relation to the restart pressure:

Restart pressure 1.2 bar (0.12 MPa) (figure 2/A)

The pressure of the pump must be a minimum of 2.5 bar (0.25 MPa), and a maximum of 10 bar (1 MPa). The water column between the device and the highest service must not exceed 10 metres.

Restart pressure 1.5 bar (0.15 MPa) (figure 2/B)

The pressure of the pump must be a minimum of 3.0 bar (0.30 MPa), and a maximum of 10 bar (1 MPa). The water column between the device and the highest service must not exceed 15 metres.

Restart pressure 2.2 bar (0.22 MPa) (figure 2/C)

The pressure of the pump must be a minimum of 3.5 bar (0.35 MPa), and a maximum of 10 bar (1 MPa). The water column between the device and the highest service must not exceed 22 metres.

In the event that the pump pressure does not reach the value stated above, the pump jams.

In the event of the height of the water column exceeding the level indicated, the pump will be enabled without starting up. To overcome these problems install the device at a higher level in order to recreate the above-mentioned conditions, otherwise use devices with higher restarting values.

The device may be installed directly onto the pump or between the pump and the first service (fig. 1). **If the input pressure of the device exceeds 10 bar (1 MPa), install a pressure reducer between the pump and the device itself.**

No service must be installed between the pump and the device (fig. 1).

It is indispensable to install the device with the flow direction arrows pointing upwards (fig. 1/A). **It is recommended to install a ball valve and a manometer at the output of the device to control the operation of the pump and the device excluding the system by means of the valve, and checking the effective extraction of the pump with the manometer.**

It is also recommended to connect the output of the device to the system by means of a flexible tube (fig. 1/B).

Before starting the device check that the pump is correctly primed.

START-UP AND OPERATION

(figure 3)

A panel is mounted on the front of the device that displays all the operating phases of the system by means of pilot lights: green pilot light **Power on**, yellow pilot light **Pump on**, red pilot light **Failure**. At the moment of connection to the electrical mains the green light turns on together with the yellow light indicating the start-up of the pump (fig. 3/A) which remains in operation for a few seconds in order to allow the system to build up pressure. If this time is not sufficient, the red light will turn on (fig. 3/C); in this case keep the red **Restart** (rearm) button pressed and wait with a service open for the red pilot light to turn off. After the service is closed, the device stops the pump and goes into standby mode, the green pilot light lit, ready to carry out in complete autonomy all the subsequent command and control operations (fig. 3/B).

On opening a service, the device starts the pump which remains in operation for as long as the service itself is open (fig. 3/A). After the service has been closed, the device restores maximum pressure to the system, then stops the pump and returns to the standby mode (fig. 3/B). In the event of water shortage during aspiration, the device stops the pump (fig. 3/C) protecting it from dry running. Once the causes of a blockage have been removed, it is sufficient to press the red **Restart** (rearm) button to restore normal operation.

AUTOMATIC RESTART AND ANTI-JAMMING FUNCTION

In case of stopping due to an water shortage, the device will automatically make 10 double attempts to rearm over the 24 hours following the failure, each lasting approximately 5 seconds to allow the pump and the system to reload if possible.

After the last failed rearming attempt, the device will remain permanently in alarm (red Failure LED blinking) pending manual rearming by pressing the "Restart" button.

The user can always try to rearm the device at any time by pressing the Restart button.

If for any reason the pump remains idle for 24 consecutive hours, the device will carry out a start up of the pump motor for about 5 seconds (**anti-jamming function**).

In case of a temporary blackout, the device will automatically rearm once the electricity returns.

The electrical wiring must be carried out by qualified personnel in compliance with local regulations. Observe all the safety standards and make sure the device is connected to an earthing system. Install a multiple-pole switch upstream from the device with a minimum aperture of the contacts equal to 3 mm. Follow all the indications on the electrical diagrams (figures 4).

| Voltage | Motor | Power kW | Electrical diagram |
|--------------|---------|-------------------|--------------------|
| Single-phase | 115 Vac | Not more than 1.1 | See Figure 4 A |
| | 230 Vac | Not more than 2.2 | |
| Single-phase | 115 Vac | Over 1.1 | See Figure 4 B |
| | 230 Vac | Over 2.2 | |
| Three-phase | 400 Vac | — | See Figure 4 C |

PROBLEMS**MAIN CAUSES**

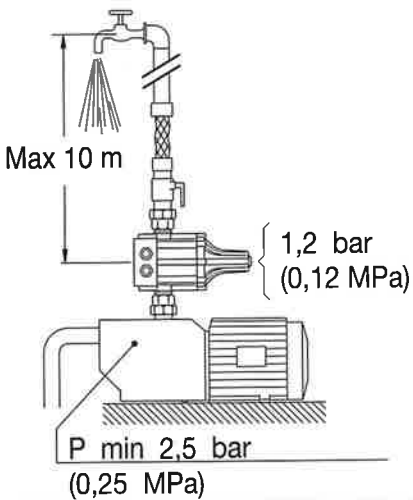
- The pump fails to start
- The pump starts but fails to restart
- The pump works intermittently
- The pump fails to stop
- The pump jams

check the electrical connections
 water column too high
 leak in system lower than minimum flow
 leak in system higher than minimum flow
 lack of water when in aspiration

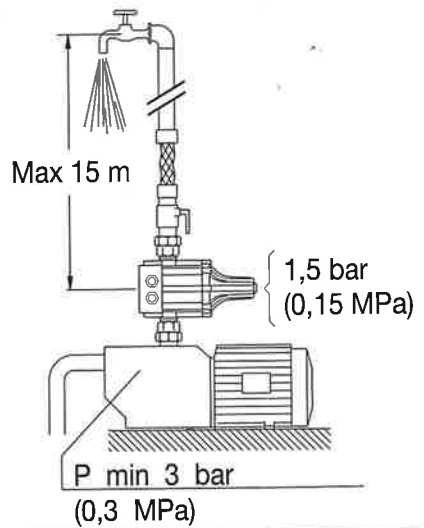
In the case of a breakdown of the electrical box it is possible to replace this without removing the device as the box is interchangeable and can be supplied on request.

Any other failures or causes not mentioned above can be avoided and removed by carefully checking the characteristics of the device, pump and system with the warnings indicated in the installation paragraph.

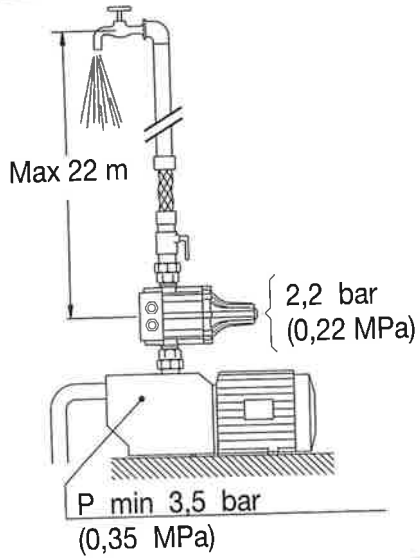
2 A



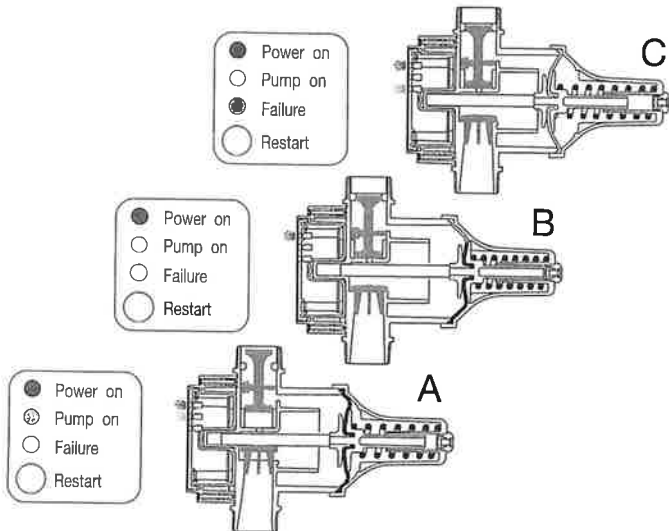
2 B



2 C



3





IT

Solo per l'Italia UE.
Non gettare le apparecchiature elettriche tra i rifiuti domestici.
Secondo la Direttiva Europea 2002/96/CE, per rifiuti di apparecchiature elettriche ed elettroniche e la sua attuazione nazionale alle norme nazionali, le apparecchiature elettriche e elettroniche devono essere raccolte separatamente, al fine di essere riciclate in modo eco-compatibile.

GB

Only for EU countries.
Do not dispose of electric tools together with household waste material.
In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

FR

Pour le pays européens uniquement

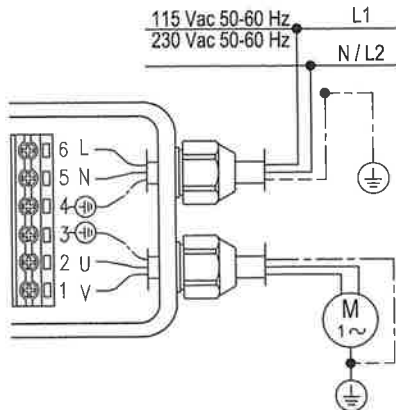
Ne pas jeter les appareils électriques dans les ordures ménagères.
Conformément à la directive européenne 2002/96/CE relative aux déchets d'équipements électriques et électroniques (DEEE), et à sa transposition dans la législation nationale, les appareils électriques doivent être collectés séparément et être recyclés respectueusement.

DE

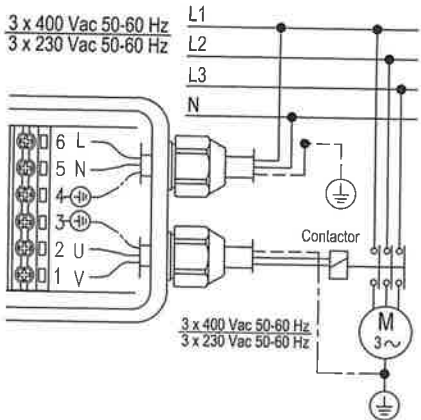
Nur für EU-Länder

Warten Sie Elektrowerkzeuge nur
Gemeinsam separieren und
Elektronik-Altgeräte und
umweltschonend
entsorgen lassen.
Gemäß der europäischen
Richtlinie 2002/96/EG
über Abfall aus
elektronischen
Geräten (WEEE) und
ihre Umsetzung in
nationalen
Gesetzen, müssen
elektronische
Geräte
getrennt
gesammelt
und
umweltgerecht
recycelt werden.

4 A



C



4 B

