



Wilo-Fluidcontrol / - EK

- D** Montageanleitung
- GB** Assembly Instructions
- F** Notice de montage
- NL** Inbouw- en gebruikshandleiding
- E** Instrucciones de instalación y funcionamiento
- I** Istruzioni di montaggio, uso e manutenzione
- H** Beépítési és üzemeltetési útmutató
- GR** Οδηγίες εγκατάστασης και λειτουργίας

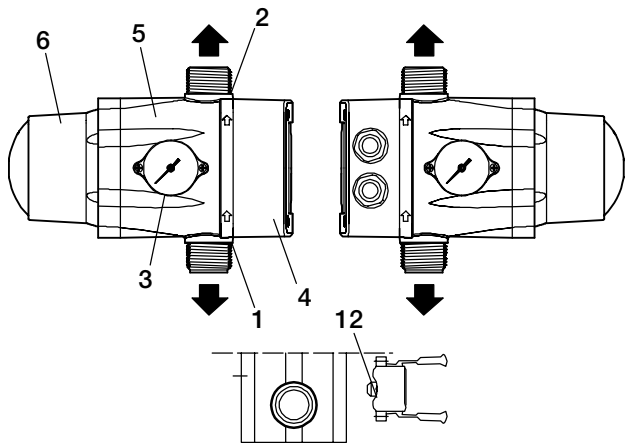


Fig. 1

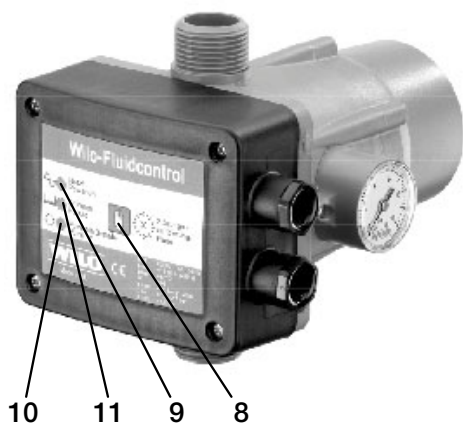


Fig. 2

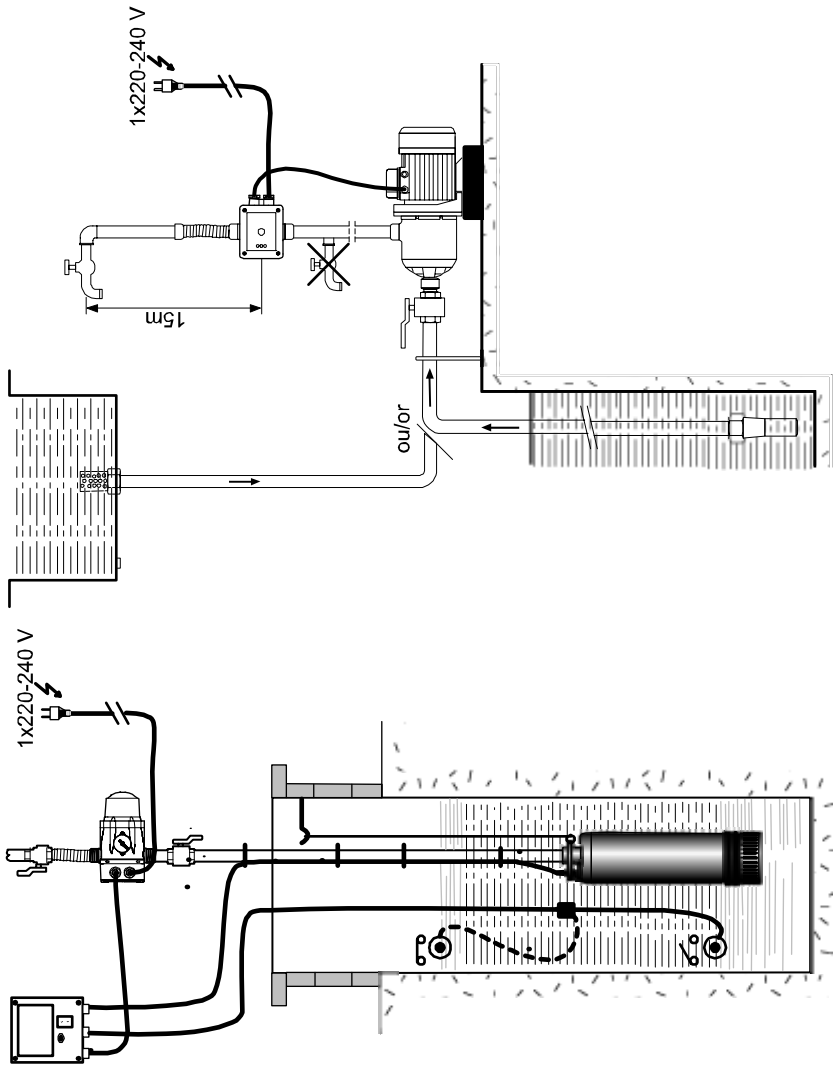


Fig. 2

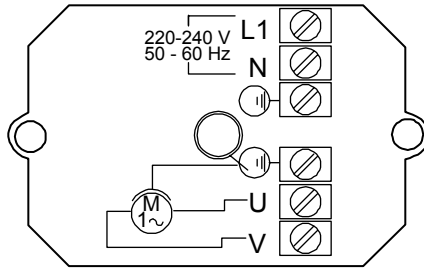


Fig. 4

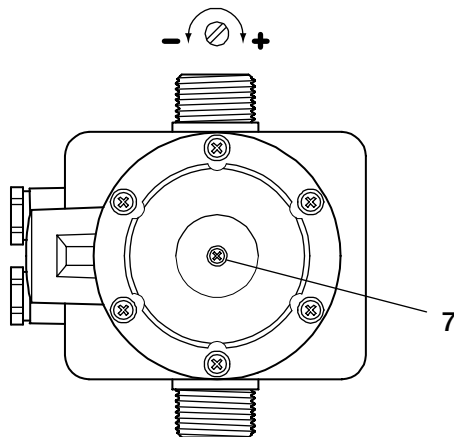


Fig. 5

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1 General

Installation and service by qualified personnel only!

1.1 Application

The electronic control system Wilo-Fluidcontrol (... EK) can be screw-attached to water supply and pressure booster pumps. It enables the automatic operation of these pumps without use of a separate pressure vessel.

1.2 Product Information

1.2.1 Technical Data

Flow medium	clean water free of suspended matter	
Max. capacity	10 m ³ /h	
Max. working pressure	10 bar	
Switch on pressure	1.5 - 2.7 bar	
Max. water temperature:	60° C	
Power supply:	Single phase	1 ~ 220-250V, 50-60 Hz
F.L.C.	max. 10 A	
Enclosure:	IP 65	
Connections suction/discharge	1" BSP	

The shut-off head generated by the applicable pump must be approx. 0.5 bar higher than the 2.2 bar switch-off pressure.

State all name plate data when ordering spare parts.

2 Safety Notes

These instructions contain basic rules on safety which must be strictly adhered to on installation and operation. It is therefore imperative for the Installer and the Operator to read these instructions prior to installation and commissioning. Please observe, not only the general safety references listed under the main heading SAFETY NOTES, but also those added to and specially highlighted under the ensuing headers.

2.1 Safety symbols contained herein

Safety notes contained herein which, if not strictly adhered to, may cause injury to persons are specially highlighted by general danger symbol:



Warnings from electrical causes by the special symbol:



Safety references which, if not complied with, may result in damage to the plant or its function are marked by the word:

ATTENTION!

2.2 Trade Qualifications

Only suitably qualified personnel may work on this equipment.

2.3 Hazards arising from non-compliance with safety notes

Non compliance with safety notes may cause bodily harm to persons or damage to the plant. Failure to comply with safety notes may invalidate any damage claims. Non-compliance may, for example, lead to the following hazardous consequences:

- failure of vital plant functions,
- hazards to persons due to electrical and/or mechanical causes.

2.4 Safety notes for the Operator

Local regulations regarding the prevention of accidents must be observed. Hazards from electrical energy must be excluded (conforming to local or general regulations such as EC, BSI, UL, VDE, etc.).

2.5 Safety rules for inspections and installation work.

It is the Operator's responsibility to ensure that inspection and installation works are carried out by authorized and qualified personnel only, after having made themselves fully conversant with these instructions.

Work on this plant must on principle be carried out with the plant switched off and completely pressure-relieved.

The safety valve must not be removed.

2.6 Arbitrary alterations and spare part procurement

Any alterations to the plant are only permitted with the manufacturers' consent. Original and manufacturer authorized spare parts serve safety. The use of other parts can invalidate any claims for consequential damages.

2.7 Non-permissible operating conditions

Operational safety of the plant is conditional on it being used in accordance with Chapter 1 of these instructions. Operational criteria must not exceed or fall short of the limits stated in catalogue/data sheets.

3 Transport and Storage

ATTENTION!

During transport and intermediate storage it is necessary to protect the WILO-Fluidcontrol from moisture and mechanical damage.

The stock location must be dry and be frost-free.

4 Description of the Product

4.1 Description of the Device (Fig. 1 & 2)

1. Suction port with integrated non-return valve
2. Delivery port
3. Pressure gauge (0-10 bars) for control – possible mounting on right or left side.
4. Electric box with electronic board including a protection against dry running with motor stop and connection box for pump and network.
5. Hydraulic chamber with diaphragm.
6. Compensating chamber with spring.
7. Adjusting screw for starting pressure of the pump.
8. Reset button (Störungs-quittierung/Reset).
9. Indicator light of the voltage (Netz/Power on).
10. Indicator light for pump running (Pumpe in Betrieb/Pump on).
11. Indicator light for activating the safety device (Störung/Failure)
12. Pressure gauge axis

The WILO-Fluidcontrol is offered as ancillary equipment for WILO water supply pumps.

The unit must be screwed onto the pump or into the discharge pipe. It is of Inline design, with both connections axially in line.

On ready standby, with all outlet fitting closed and under max. system pressure, the **yellow LED** is on (pos. 9).

The unit contains a small buffer space filled with water which can be varied by means of a spring-tensioned **diaphragm**. If an outlet tap in the system is opened water will flow out of the small buffer volume into the discharge pipe, lifting the **float**.

The green diode (pos. 10) indicates normal pump operation.

The switch unit contains the electronic as well as the terminal block for power supply and pump motor. The signal/operating elements at the switchbox cover are (Fig. 2)

- Yellow LED: Mains power is on, the pump is on ready standby, (pos. 9)
- Green LED: Pump runs, (pos. 10)
- Red LED: Any fault leading to pressure loss in the pipe system, (pos. 11)
- Reset button: After fault rectification the reset button (pos. 8) must be kept pushed until the system is fully pressurized. This is also valid for renewed start-up, otherwise the pump will again fail due to insufficient system pressure.

4.2 Scope of Supply

- Wilo-Fluidcontrol (EK-series + integrated socket + 1.5 m connecting cable).
- Installation and Operating Instructions.

5 Siting/Installation

5.1 Installation

For installation and mounting requirements refer to the pump installation and operating instructions.

The arrow at the housing indicates direction of flow.

The WILO-Fluidcontrol must only be mounted into a vertically run discharge pipe.

- The WILO-Fluidcontrol to be screwed onto the discharge port of the pump using suitable connecting fittings, to be sealed with hemp or Teflon band.
- If the water column between pump and highest outlet tap exceeds 15 m, the unit must be installed at a higher level in the discharge pipe ensuring a maximum vertical head onto the unit of not more than 15 m. In such case no outlet tap must be located at a level below that of the WILO-Fluidcontrol (Fig. 3).
- In order to avoid noise transmission from the pump onto the pipe system it is recommended to provide and install a flexible connector at the discharge side of the WILO-Fluidcontrol.

5.2 Electrical Wiring



All electrical site works to be carried out by qualified and locally licenced electricians strictly in accordance with locally ruling regulations.

- Check available power supply,
- take note of pump name plate data requirements,
- power wiring 3 x 1.5 mm". (Minimum cable size 6 mm, maximum 9 mm OD).
- To ensure water tightness and pull-force relief from the cable glands the power cable must be of sufficient outside diameter (e.g. 05 VV-F 3 (7) G 1,5 oder AVMH-I 3 (7) x 1,5).
- All electrical wiring to be executed according to Fig.4.
- Supply side fuse: see as for pump; maximum however 10 A, inert.
- Strictly adhere to local earthing regulations.
- If required (see VDE 0100), a ground fault circuit interruptor (GFCI) switch must be provided and installed by others.

6 Commissioning

For possibly required prestart and commissioning procedures for the pump refer to the separate installation and Operating Instruction for the pump.

Before initial start-up it must be ensured that sufficient suction capability is available and that the pump is primed and filled.

On initial start-up the pump will run for 8 seconds, after that a renewed start-up can be effected by keeping the reset button pushed.

7 Maintenance



Warning!
Electrical Shock Hazard!

Prior to maintenance or repair work turn off the pump and ensure that it is not turned on by unauthorised personnel.

8 Faults, Causes

Fault	Unit-related Cause	Unit-unrelated Cause
Pump does not start	<ul style="list-style-type: none"> - defect printed circuit board - defect diaphragm 	<ul style="list-style-type: none"> - Power failure - Pump capacity too low - Pump mechanically jammed - WILCO-Fluidcontrol wrongly connected - Lack of water at suction side
Pump does not stop	<ul style="list-style-type: none"> - defect printed circuit board - jammed flow controller - stuck reset button - Pump does not generate sufficient pressure 	<ul style="list-style-type: none"> - Leakage loss greater than 0.6 l/min
Pump runs irregularly	<ul style="list-style-type: none"> - defect printed circuit board - Pump does not generate sufficient pressure (air) 	<ul style="list-style-type: none"> - Leakage loss greater than 0.6 l/min
Pump is jammed	<ul style="list-style-type: none"> - defect printed circuit board - pump generates pressure < start pressure - defect diaphragm - refer to Installation & Maintenance Instr. of the pump 	<ul style="list-style-type: none"> - Lack of water at suction side - Pump capacity too low

If the fault cannot be located or rectified, please contact your nearest Wilo representative.

Technical modifications reserved!

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