

Wilo-COF-2B



en Installation and operating instructions



Wilo-COF-2B
<https://qr.wilo.com/700>

Fig. 1:

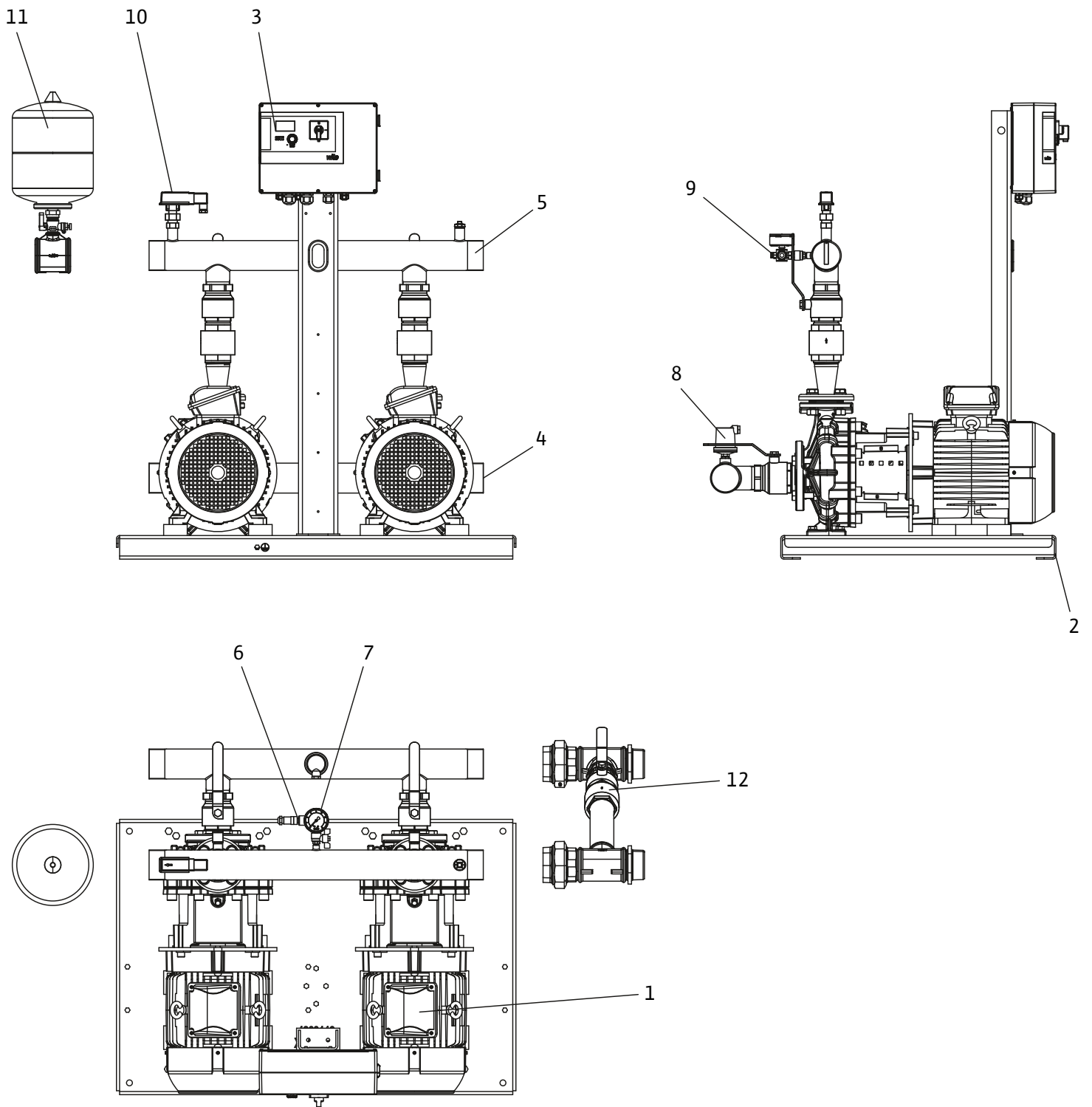


Fig. 2

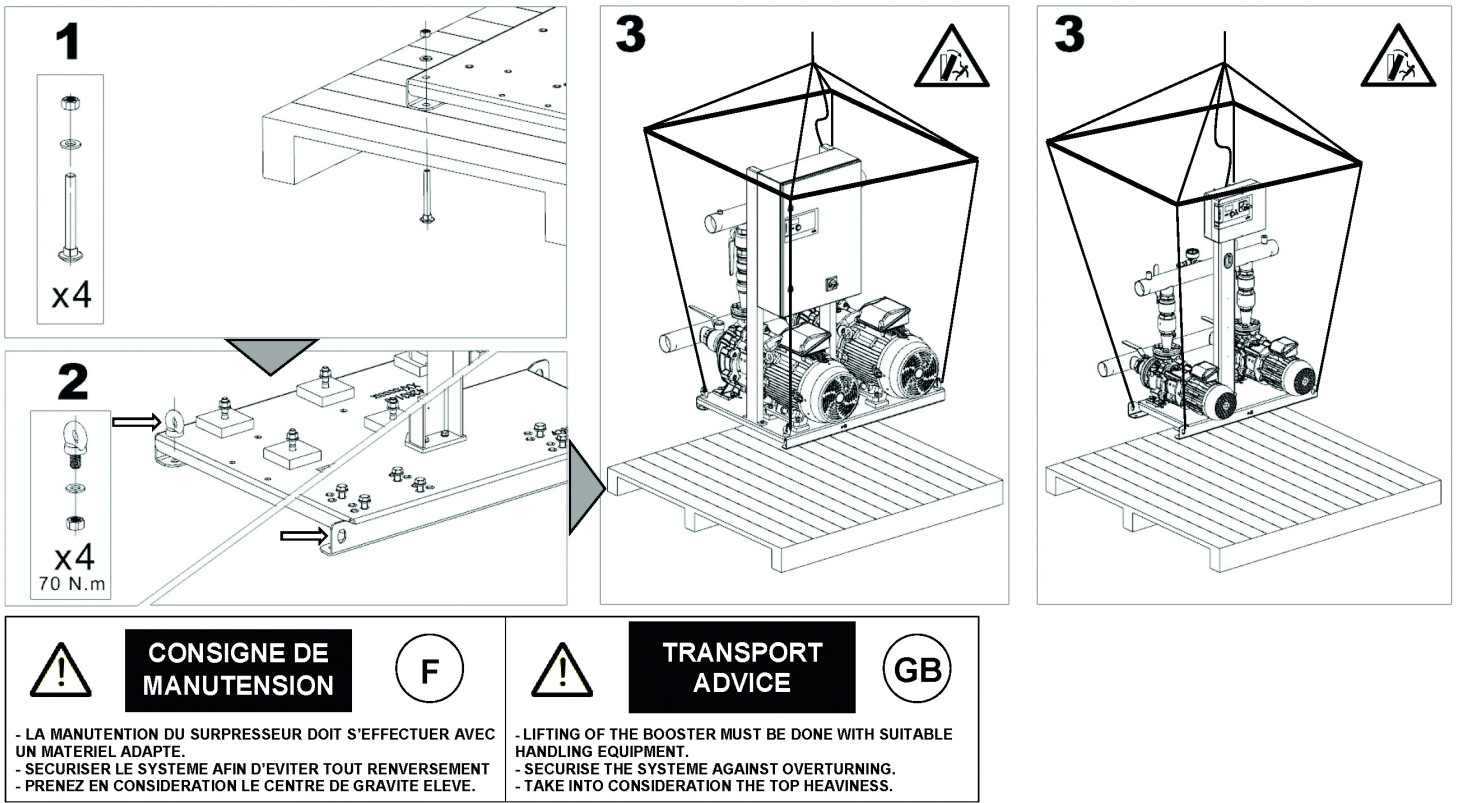


Fig. 3



Fig. 4a

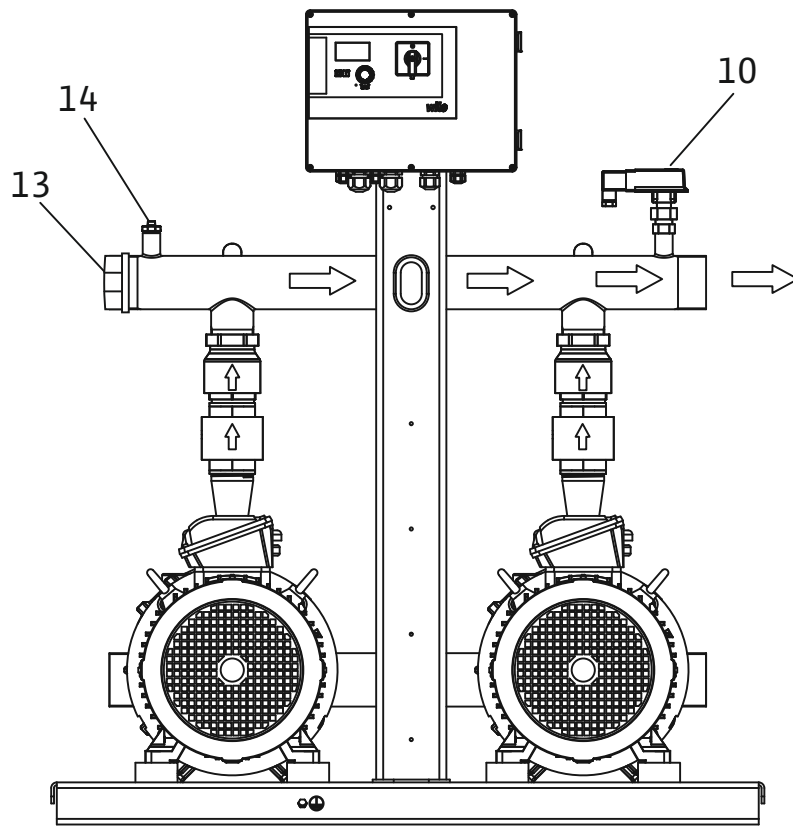
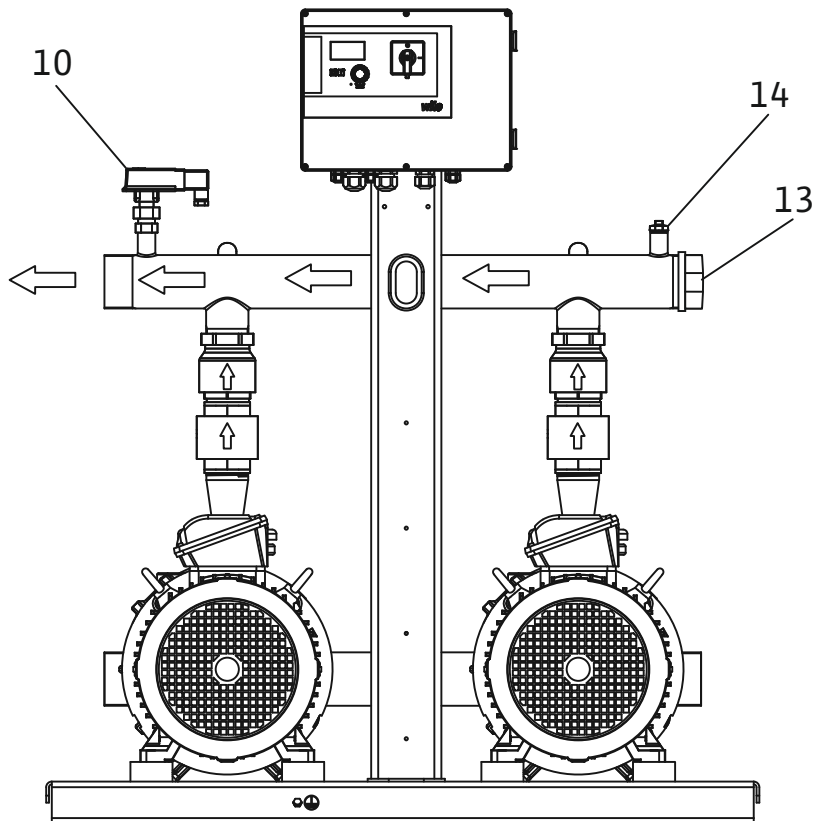


Fig. 4b



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1 General

About this document

The language of the original operating instructions is French. All other languages of these instructions are translations of the original operating instructions.

These installation and operating instructions are an integral part of the product. They must be kept readily available close by the product. Strict adherence to these instructions is a precondition for the proper use and correct operation of the product. These installation and operating instructions correspond to the relevant version of the product and the underlying safety standards valid at the time of going to print.

A copy of the EC-Declaration of conformity is a key component of these installation and operating instructions.

If a technical modification is made on the designs named therein without our prior approval, or if the declarations made in these installation and operating instructions on product/personnel safety are not observed, this declaration loses its validity.

2 Safety

These installation and operating instructions contain important instructions which must be adhered to during installation, operation and maintenance. These instructions must therefore, without fail, be read by the service technician and the qualified personnel/operator before installation and commissioning.

It is not only the chapter on general safety instructions that must be adhered to, but also the special safety instructions from the following chapters with an accompanying danger symbol.

2.1 Symbols and signal words in the operating instructions



Symbols:

General danger symbol



Danger due to voltage



NOTICE:

Signal words:

DANGER!

Acutely dangerous situation.

Non-observance will result in death or the most serious of injuries.

WARNING!

The user may suffer (serious) injuries. "Warning" signifies that (serious) personal injury is probable if this instruction is not observed.

CAUTION!

There is a risk of damaging the product/system. "Caution" signifies that damage to the product and its functioning is likely if this instruction is not observed.

NOTICE:

Useful notice on handling the product. It also highlights any potential difficulties.

Information that appears directly on the product, such as

- the symbol indicating direction of flow/direction of rotation,
 - identifiers for connections,
 - the rating plate and
 - warning stickers
- must be strictly complied with and kept in legible condition.

2.2 Personnel qualifications

- Personnel have been instructed on locally applicable regulations governing accident prevention.
- Personnel have read and understood the installation and operating instructions.
- Electrical work: qualified electrician Person with appropriate technical training (according to EN 50110-1), knowledge and experience who can identify and prevent electrical hazards.
- Lifting work: trained specialist for the operation of lifting devices Lifting equipment, lifting gear, attachment points
- Installation/dismantling must be carried out by a qualified technician who is trained in the use of the necessary tools and fixation materials.
- Operation/control: Operating personnel, instructed in the functioning of the complete system

2.3 Danger in the event of non-observance of the safety instructions

Non-observance of the safety instructions may constitute a danger to persons, the environment and the product/system. It also results in the invalidation of any warranty claims. In detail, non-observance can, for example, result in the following risks:

- Danger to persons due to electrical, mechanical and bacteriological factors.
- Damage to the environment due to leakage of hazardous materials.
- Damage to the installation.
- Failure of important product/system functions.
- Failure of required maintenance and repair processes.

2.4 Safety consciousness on the job

The safety instructions included in these installation and operating instructions, the existing national regulations for accident prevention together with any internal working, operating and safety instructions of the operator must be complied with.

2.5 Safety instructions for the operator

This device is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or a lack of experience or knowledge, unless they are monitored or have been given detailed instructions concerning use of the device by a person responsible for their safety. Children must be supervised to ensure that they do not play with the device.

- If hot or cold components of the product or system pose a danger, it is the customer's responsibility to guard them against being touched.
- Guards which protect personnel from coming into contact with moving components (e.g. couplings)

must not be removed while the product is in operation.

- Hazardous fluids (e.g. from the shaft seals) which have leaked (which are explosive, toxic or hot) must be eliminated so that no danger to persons or to the environment arises. National statutory provisions must be respected.
- Highly flammable materials are always to be kept at a safe distance from the product.
- Danger from electrical current must be eliminated. Local directives or general directives (e.g. IEC, VDE etc.) and instructions from energy supply companies must be adhered to.

2.6 Safety instructions for installation and maintenance work

The operator must ensure that all maintenance and installation work is carried out by authorised and qualified personnel, who are sufficiently informed from their own detailed study of the installation and operating instructions. Work on the product or system must only be carried out when it is at a standstill. Compliance with the procedures described in the installation and operating instructions for shutting down the product/system is mandatory. Immediately on conclusion of the work, all safety and protective devices must be put back in position and recommissioned.

2.7 Unauthorised modification and manufacture of spare parts

Unauthorised modification of components and use of unauthorised spare parts will impair the safety of the product/personnel, and will render the manufacturer's declarations regarding safety void. Modifications to the product are only permissible following consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer ensure safety. The use of other parts absolves the manufacturing company of any and all liability.

2.8 Improper use

The operational reliability of the supplied product is only guaranteed if the requirements set out in Chapter 4 of the installation and operating instructions are complied with. The limit values must on no account fall below or exceed the values specified in the catalogue or data sheet.

2.9 Operator responsibilities

- Provide installation and operating instructions in a language which the personnel can understand.
- Make sure that the personnel have received the required training for the specified work.
- Provide protective equipment. Ensure that the protective equipment is worn by personnel.
- Ensure that safety and information signs mounted on the device are always legible.
- Train the personnel on how the system operates.
- Eliminate any risk from electrical current.
- Demarcate and cordon off the working area.
- Define a personnel work plan for safe workflow.

- Carry out a sound pressure measurement. From a sound-pressure level of 85 dB(A) upward, wear hearing protection. Include a note in the work regulations!
- Observe the following points when handling the device:
 - Use is not permitted for persons under the age of 16.
 - Persons under the age of 18 must be supervised by a technician!
 - Use is not permitted for persons with limited physical, sensory or mental capacities!

3 Transport and temporary storage

Once the product has been delivered, it must be checked for damage occasioned during transport. If a malfunction is found, the delivery company (transporter) must be informed. The equipment must be transported using authorised loading equipment. Upon arrival, immediately inspect the product to check for any damage that occurred during transport. If any damage is found, the appropriate procedure involving the transporter must be followed in the timeframe provided. Before installation, the product must be kept dry and protected from frost and mechanical damage.



CAUTION! Risk of damage to the installation! Inappropriate transport and preliminary storage may damage the product.

- **The product must not be exposed to temperatures lower than -10 °C or higher than +40 °C.**

3.1 Transport for installation/dismantling purposes



WARNING! Risk of personal injury! Non-compliant transportation may result in physical injury.

- **Load stability should be ensured.**
- **It must be handled by qualified, competent personnel using authorised equipment.**
- **Lifting straps must be fastened to the eye bolts designed for this purpose or placed around the steel baseplate. A sticker on the plastic shrink-wrap contains the safety instructions (Fig. 2).**
- **The collector tanks are not suitable for handling the pressure-boosting system and must not be used to fix loads.**
The stickers attached to the collector tanks provide a reminder of these instructions (Fig. 3).

4 Intended use

The primary function of the pressure-boosting system is to keep a fire hose cabinet pressurised and supply it with water in order to protect buildings (hospitals, apartment buildings, schools, industrial premises, commercial centres, etc.). The water supply to the pressure-boosting system may be taken from the municipal water supply or from a replenishment reservoir.

5 Technical information

5.1 Type key

COF-2B32-105-2.2-T-V-CPI	
COF	= Version
2	= Number of pumps
B	Pump type
32	= Nominal diameter of the pump discharge outlet (in mm)
105	= Nominal diameter of the impeller (in mm)
2.2	= Motor power (in kW)
T	= Power supply voltage - 3~ 400 V
V	Protection against low water level depending on the type of water supply of the pressure-boosting system: V = Municipal water supply B = Reservoir
CPI	CPI = Switchgear with insulation monitoring device blank = Switchgear without an insulation monitoring device

5.2 Technical data

- Maximum operating pressure: 10 bar
 - Permitted water temperature: +0 °C to +45 °C
 - Permitted ambient temperature: +0 °C to +40 °C
 - Supply voltage: 3~ 400 V ±10 %
 - Frequency: 50 Hz
- Ensure that the general installation complies with safety standard NF-C 15-100.

5.3 Scope of delivery

It is crucial that, prior to installation, you are aware of all main components that make up the pressure-boosting system.

See the pressure-boosting system illustration in Fig. 1:

1. Horizontal monoblock pumps
2. Baseplate for support and fixation
3. Switch cabinet and automation control
4. Suction manifold
5. Discharge manifold
6. Pressure sensor
7. Pressure gauge
8. Low water cut-out switch (version using municipal water supply)
9. Drain cock
10. Flow switch: to be positioned according to the direction of flow
11. Diaphragm expansion tank (not supplied, must be ordered separately)
12. By-pass option: provides a direct water supply without using pumps when the municipal water pressure is sufficient.
13. Female cap (dimensions depending on the model)
14. Male cap ½"



NOTICE:

Each pump is equipped with:
Suction-side gate valve
Discharge-side non-return valve and gate valve
Each collector tank is also fitted with a plug.

5.4 Variants

During the technical product definition, the pressure-boosting system can be configured according to 2 different variants:

Variant 1: Protection against low water levels

- Version "V" (municipal water supply): The pressure-boosting system is supplied with a cut-out switch connected to the suction manifold.



NOTICE: Minimum permissible pressure: 1 bar

- Version "B" (reservoir): The pressure-boosting system is supplied with a float switch to install in the suction reservoir.

Variant 2: Insulation monitoring device

- With CPI: The switchgear contains CPI for the pump and monitors the motor insulation and earthing.



NOTICE:

This equipment is mandatory for energy-related products (ErP).

- Without CPI

5.5 Switchgear

The switchgear (Fig. 1, pos. 3) protects and controls the pressure-boosting system.

Refer to the switchgear instructions for more detailed information.

5.6 Accessories

The following accessories are available for purchase:

- Gate valves
- Vibration damping hoses
- Pressure reducer
- Pressure tank
- Strainer foot valve
- Warning light
- Start-up tank

Accessories must be ordered separately.

6 Description and function

6.1 Description of the product

The pressure-boosting system is supplied with its pipework ready for connection. The customer must connect the suction and discharge manifolds correctly.

The customer must also connect the switchgear to the mains power supply.

When making the connection to the municipal water supply, regulations and currently valid standards must be observed and, as necessary, fulfilled pursuant to the regulations of water distribution companies.

In addition, local specificities must be taken into account: for example, if the suction pressure is too high or variable, a pressure reducer must be installed.

6.2 Operation

The pressure-boosting system is equipped with 2 non self-priming monoblock pumps.

The pumps are activated when low pressure is detected (Fig. 1, pos. 6) and deactivated when the flow rate is detected as zero (Fig. 1, pos. 10).

Zero-flow detection is ensured using the provided flow switch. It consists of a sensor with a vane that is inserted in the discharge manifold. When a hose station is activated, flow is generated and the flow switch is triggered.

The flow switch must be installed on the inlet on the side of the hose system, either on the right (Fig. 4a) or on the left (Fig. 4b), depending on the configuration of the system.

Consult the installation and operating instructions for the switchgear for more detailed information regarding the control process.

The pumps alternate on each activation so as to balance their operating time.

7 Installation and connection

7.1 Delivery and installation

Unwrap the product and remove the packaging in an environmentally responsible manner.

Install the pressure-boosting system in an easily accessible room which is well ventilated and is insulated against frost. Access routes to the room must be kept clear of obstructions.

The pressure-boosting system's design enables floor-mounted installation on a flat concrete surface.

If the system is to be further fixed to the ground on-site, appropriate measures must be taken to prevent the transmission of sound through such structures.

7.2 Electrical connection



WARNING! Risk of electric shock!

Electrical connection must be performed by an electrician approved by the local energy supplier and in accordance with current local regulations.

When making the electrical connection, it is crucial that the corresponding installation and operating instructions and the circuit diagram supplied with the switchgear are referred to accordingly.

In general, the following aspects must be observed:

- The mains connection voltage must correspond to the characteristics detailed on the rating plate and the wiring diagram for the control device,
- The electrical connection cable for the switchgear must be correctly dimensioned in terms of the total power of the pressure-boosting system (see the rating plate and the technical data),
- The pressure-boosting system must be earthed in accordance with regulations (i.e. in accordance with local regulations and conditions); the connections for this purpose are marked accordingly (see also the wiring diagram).



NOTICE:

Do not forget to connect the baseplate of the pressure-boosting system to the ground where the system is installed.

Connection for the float switch (Version "B")

The float switch, supplied separately, must be installed in the reservoir and must be connected to the switchgear by a cable with two conductors.

7.3 Hydraulic connection

The water supply to the pressure-boosting system may be taken from the municipal water supply (version "V") or from a replenishment reservoir (version "B") below the water load.

The following specifications must be complied with to ensure proper functioning:

1. The diameter of the suction piping must never be less than that of the pump or the manifold,
2. The suction piping must permit underpressure,
3. The system must not feature:
 - Air intake upstream of the pressure-boosting system,
 - Water outflow close to the pump suction manifold (if necessary, put in place an anti-vortex strainer),
4. The system must be equipped with a low water cut-out safety system:
 - Using a sensor, float or electrode for systems connected to reservoirs,
 - Using a cut-out switch for systems connected to a municipal water supply.
5. Do not install an automatic drain cock to the suction side of the pressure-boosting system,
6. Limit friction loss as far as possible at the suction side that may be generated by:
 - Horizontal lengths of piping that are too long,
 - Hydraulic components such as shrinkage, pipe elbows, valves, filters, softeners and shutoff valves.
7. Avoid any inclined plane that could lead to the formation of an air pocket at the high point.
8. Check that the water meter is compatible with the booster's flow rate.

The diameter of the connection to the collector tanks is detailed in the following table:

COF	Number of pumps	Ø collector tanks
COF-2B40-95	2	3"
COF-2B40-105	2	3"
COF-2B40-115	2	3"
COF-2B40-140	2	3"
COF-2B40-150	2	3"
COF-2B40-190	2	3"
COF-2B40-220	2	3"
COF-2B32-105	2	2"½
COF-2B32-115	2	2"½
COF-2B32-150	2	2"½

COF	Number of pumps	Ø collector tanks
COF-2B32-190	2	2"½
COF-2B32-200	2	2"½
COF-2B32-250	2	2"½

The suction and discharge manifolds can be connected either to the left or the right. The openings that are not used are then blocked using the plugs supplied (Fig. 4a and Fig. 4b, pos. 13). To detect flow during operation, the flow switch must be positioned on the ½" inlet, on the top of the discharge manifold, on the side of the hose system. Before connecting the pressure-boosting system, fit valves to the 2 collector tanks to isolate them when performing work on the system.

When connecting the flow switch, the following criteria must be observed:

- Pipework must run horizontally.
- The flow switch must be oriented in the direction of fluid flow (see arrow on sensor housing).
- The flow switch sensor must be positioned vertically.
- Use the provided plug (Fig. 4a and Fig. 4b, pos. 14) to obstruct the second inlet on the top of the discharge manifold.



CAUTION!

- **If the pressure-boosting system is connected to a pressurised municipal water supply, ensure that the system can withstand the maximum pump pressure at zero flow rate plus the pressure of the municipal water supply. If this is not the case, a pressure reducer must be fitted to the output of the pressure-boosting system.**
- **We strongly recommend installation of a differential pressure control device on the water inlet pipe to avoid pressure fluctuations at the input to the pressure-boosting system.**



CAUTION!

- **If the pressure-boosting system is supplied with water by a suction reservoir, please contact the Wilo engineering and design department. To ensure the system functions in an optimum manner, specific provisions must be followed, such as:**
 - One suction tube per pump with a horizontal incline of at least 2% towards the pump,
 - The diameter of the suction tube must never be less than that of the pump,
 - The suction piping must permit underpressure,
 - Limit the horizontal length of the suction piping and avoid anything that may cause friction loss (shrinkage, pipe elbows, etc.),
 - No air intake upstream of the pressure-boosting system,
 - No water outflow close to the pump suction tubes (if necessary, put in place an anti-vortex strainer),
 - Safety against low water level probe or electrode,

- No automatic drain cock upstream of the pumps,
- Ensure there is no friction loss generated by accessories (strainer foot valve),
- Take care to avoid any inclined plane that could lead to the formation of an air pocket at the high point,
- A balancing pipe linking the discharge manifold to the suction pipes (pressurizing the pipes to close the valve),
- Install a start-up tank above the pumps to comply with the "NF S 62.201" standard.



NOTICE:

The system must always be equipped with a pressure tank.

8 Commissioning

We recommend that you arrange for initial commissioning of your pressure-boosting system to be conducted by your closest Wilo customer service agent or simply contact our central customer service.

8.1 General preparations and control measures

- Prior to initial commissioning, check the wiring installed by the customer, in particular the earth connection;
- check the source of the water supply (sufficiently full replenishment reservoir or appropriate municipal water supply);
- fill the system and ensure its impermeability by conducting a visual inspection;
- open the gate valves on the pumps and in the suction and discharge pipes;
- open the stoppers in the pumps' ventilation system and slowly fill the pumps with water so as to allow the air to escape entirely.



CAUTION! Risk of damage to the installation! Never let the pump run dry. Dry running destroys the mechanical seal and causes the motor to overload.

- Pressurise the diaphragm pressure vessel. The vessel's inflating pressure must be 0.3 bar below the pressure that activates the pumps (Menu 1.01 of the switchgear).



DANGER!

Do not exceed the vessel's maximum pre-inflation value.

- Check the pumps' direction of rotation: on a short start-up (Menu 3.02 and 3.03), check whether the pumps' direction of rotation corresponds to the arrow situated on the pump housing. If the direction of rotation is incorrect, swap two phases.



DANGER! Risk of electric shock!

Before swapping the phases, cut the power supply using the system's main on/off switch.

- On the switchgear, check and adjust the required service parameters in accordance with the installation and operating instructions supplied.

8.2 Commissioning the system

After completing all preparatory work and performing all checks detailed in Section 8.1, refer to the switchgear's commissioning instructions for its parameterisation.

At the discharge side of the pressure-boosting system, the pressure sensor immediately measures the pressure and the flow switch monitors the flow: corresponding signals are transmitted to the switchgear.

When a fire hose cabinet is opened, the pressure at the discharge side drops and falls below the activation level set in the switchgear, and the main pump activates automatically.

When a fire hose cabinet that was previously open is closed, the pressure-boosting system stops discharge. The flow switch at the discharge side activates and the pump stops automatically.



CAUTION!

Do not allow the pump to operate for more than one minute with the discharge valve closed.

8.3 Decommissioning the system

If the pressure-boosting system must be decommissioned to allow maintenance work, repairs or the like to be completed, proceed as follows:

- Switch off the main on/off switch and ensure that the system cannot be reactivated by unauthorised persons.
- Close the gate valves before and after installation.
- Isolate and drain the diaphragm pressure vessel.
- If necessary, drain the system entirely.

9 Maintenance

Maintenance and repair work must only be carried out by qualified personnel!



DANGER! Risk of death!

In case of work on electrical devices, there is a danger of death by electrocution.

Before performing any maintenance or repair work, disconnect the device or system from the power supply and make sure it cannot be reactivated by unauthorised persons. In general, only a qualified electrician/engineer should be allowed to repair damaged connecting cables.

To ensure optimal operational reliability and to keep operating costs at a minimum, it is advisable to conduct inspections and maintenance of the pressure-boosting system on a regular basis (refer to the pump's instructions and standard EN 806-5). To do so, the best solution is to subcontract maintenance work to a specialist firm or our customer service.

The following inspections must be conducted on a regular basis:

- Check that the pressure-boosting system is in good working order.
- Check the pumps' mechanical seals. The mechanical seals use water for lubrication, small quantities of which may therefore leak from the gasket. In case of more substantial leakage, the mechanical seal must be replaced.
- Check (ideally every 3 months) that the diaphragm pressure vessel (option or accessory) is kept at the correct pressure for initial compressing and that it is impermeable.



Caution! Risk of damage to the installation!

If the initial compressing pressure is poor, the functioning of the diaphragm pressure vessel cannot be ensured. This may lead to excessive wear of the diaphragm and technical failures.

When decommissioning the system for a long period, proceed as described in Section 8.3 and drain all pumps by opening the drainage plugs at the foot of the pump.

10 Faults, causes and remedies

Troubleshooting, particularly of problems relating to the pumps and switchgear, must be performed exclusively by a Wilo customer service agent or a specialist firm.



NOTICE:

When carrying out all maintenance and repair work, it is crucial that the general safety instructions are observed! It is also important to follow the installation and operating instructions for the pumps and switchgear.



Danger! Risk of death!

Only specialist and appropriately qualified personnel may perform troubleshooting! Observe the safety instructions in Chapter 9.

Fault	Cause	Remedy
At least one of the two pumps does not start	If the reservoir is in suction mode, there is possible air intake upon suction	Check the impermeability of all connections in the suction pipework. Check that the suction strainer is properly submerged in water.
	If the reservoir is in suction mode, it is possible that the strainer foot valve is permeable or obstructed	Check the impermeability of the valve and replace it if necessary.
	Significant friction losses on the suction side	Check the friction losses and make sure that they are compatible with the NPSH of the pumps.
	Municipal water supply pressure too low or zero	Adjust the system to supply the pressure-boosting system from a reservoir.
	If the reservoir is in suction mode, then the negative suction head may be too great	Ensure that the minimum level of the reservoir is compatible with the pumps' NPSH.
	Suction pipework obstructed or valve on suction manifold closed	Check that the valve is open and clean pipework if necessary.

Fault	Cause	Remedy
One pump does not start	Thermal motor protection activated	The pump "malfunction" warning light on the switchgear must be illuminated. Check the thermal motor protection settings and reset.
	Magnetic circuit breaker activated	Check that the motor phases have not short circuited. Replace the motor if necessary. Reset the circuit breaker.
	Pump shaft blocked	Disconnect the switchgear power supply, then check that the pump shaft turns freely. If it is blocked, proceed to dismantle the pump.
	Winding malfunction	Disconnect the terminal of the motor concerned and check the resistor at the terminals and the stator's insulation to earth. Replace the motor if necessary.
No pressure on the discharge side	At least one of the pumps is deactivated	See the preceding chapter, fault "At least one of the two pumps does not start" and refer to the pump installation instructions.
	Municipal water supply pressure below minimum prescribed pressure	Contact the local water supplier or replace the pressure-boosting system. Contact us.
	One pump is obstructed by foreign bodies	Dismantle and clean the pump.
	The motors are supplied by insufficient power supply voltage	Check the voltage and the connection to motor terminals.
Random operation, pumps start frequently	Pressure sensor is defective	Check settings: if sensor is unstable, it must be replaced.
	Insufficient system capacity (or tank of insufficient capacity)	Install an additional storage tank or replace with a tank that has greater capacity.
	Tank pre-inflation level does not conform	Proceed to inflate the tank.
	Water storage vessel pierced	Replace the vessel.
In the case of the municipal water supply version of the pressure-boosting system, the low-water safety activates frequently	Low water cut-out switch is set too high	Adjust and correct the cut-out switch settings.
	Municipal water supply pressure drops when pumps activate.	Adjust the low water cut-out switch to a minimum. If the issue persists, the municipal water supply is insufficient; check the pressure gauge reading when the pumps start up, or consult the municipal water supplier.
Automated operation defective	Switchgear defective	Consult the switchgear instructions.
	Sensor defective	Check the contacts, replace the sensor in question if necessary.
	Wires disconnected	Check all connections to the switchgear terminal switch.
	Flow switch defective	Check the activation and deactivation of the flow switch. Replace if necessary.
Discharge valve not sealed	Valve diaphragm or gasket is destroyed	Replace the valves.
The pressure-boosting system does not stop or does not start	Pressure sensor gate valve is closed	Open the pressure sensor gate valve.
The pumps do not stop	Check the flow switch	Ensure that the flow switch is installed in the direction of fluid flow.

If the fault cannot be remedied, please consult a specialist technician or your closest Wilo customer service agent.

11 Spare parts

Spare parts may be ordered or repair work arranged via a specialist retailer and/or Wilo customer service.

To avoid queries and incorrect orders, all data on the rating plate should be submitted with each order.

12 Disposal

Information on the collection of used electrical and electronic products

Proper disposal and appropriate recycling of this product prevents damage to the environment and dangers to your personal health.



NOTICE

Disposal in domestic waste is forbidden!

In the European Union, this symbol can appear on the product, the packaging or the accompanying documentation. It means that the electrical and electronic products in question must not be disposed of along with domestic waste.

To ensure proper handling, recycling and disposal of the used products in question, please note the following points:

- Only hand over these products at designated, certified collecting points.
- Observe the locally applicable regulations! Please consult your local municipality, the nearest waste disposal site, or the dealer who sold the product to you for information on proper disposal. For further information on recycling, go to www.wilo-recycling.com.

For more information, visit www.wilo.com.

Subject to change without prior notice.









wilo



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