

Pioneering for You

wilo

Wilo-Economy MHIE 1~



de Einbau- und Betriebsanleitung
en Installation and operating instructions
fr Notice de montage et de mise en service
nl Inbouw- en bedieningsvoorschriften

es Instrucciones de instalación y funcionamiento
it Istruzioni di montaggio, uso e manutenzione
pt Manual de Instalação e funcionamento
ru Инструкция по монтажу и эксплуатации

Fig. 1:

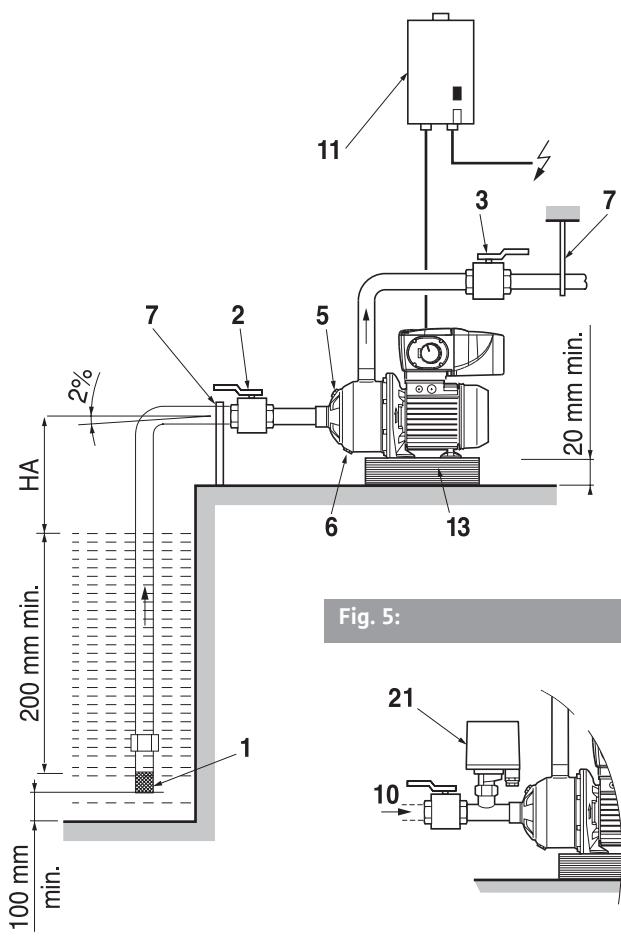


Fig. 5:

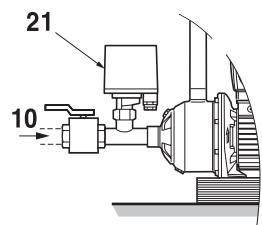


Fig. 2:

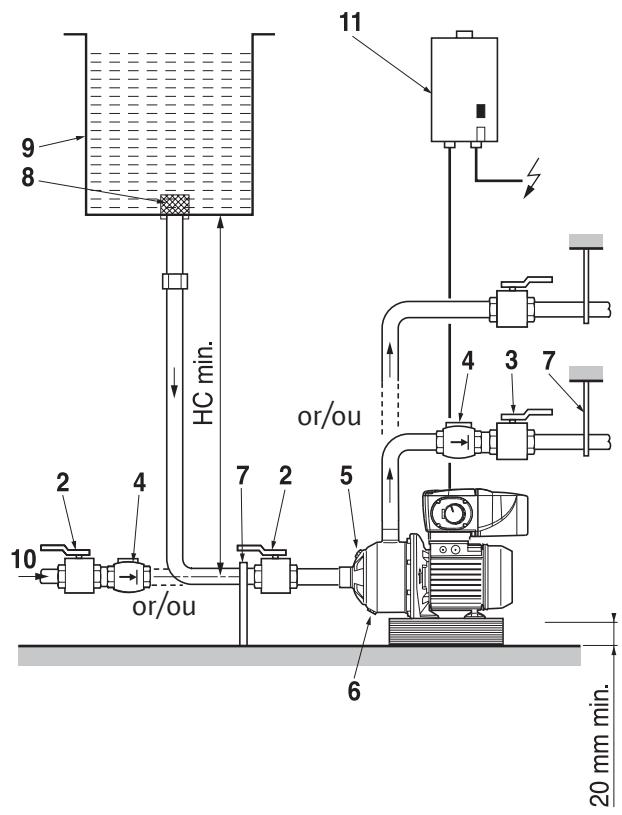


Fig. 3:

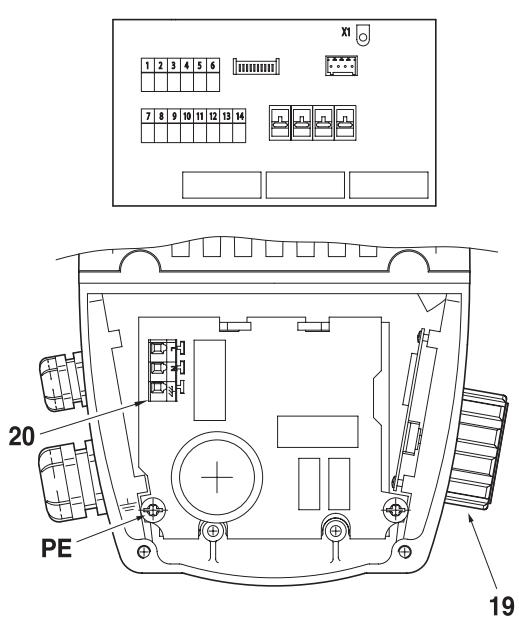


Fig. 4:

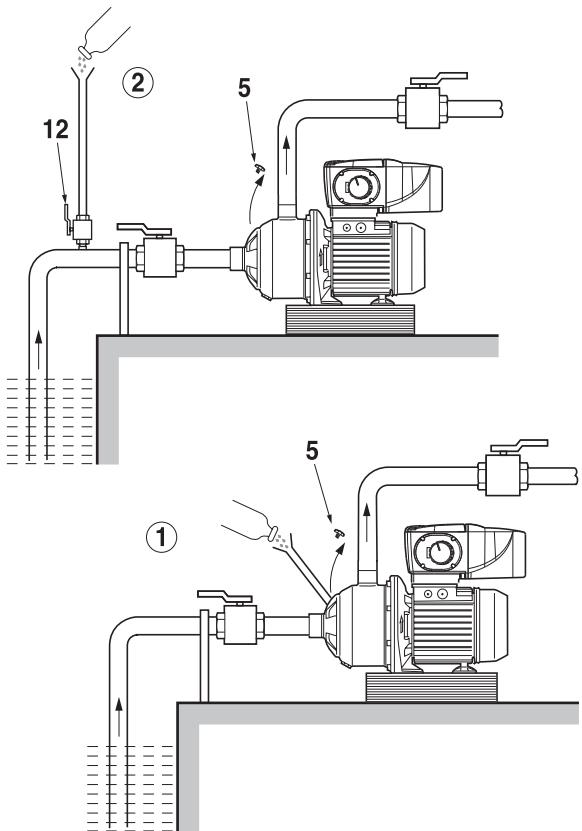


Fig. 6:

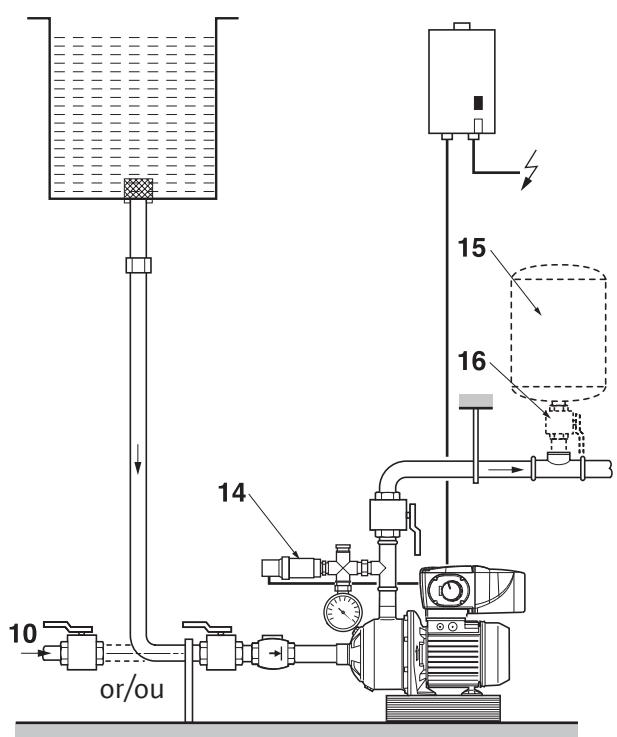


Fig. 7:

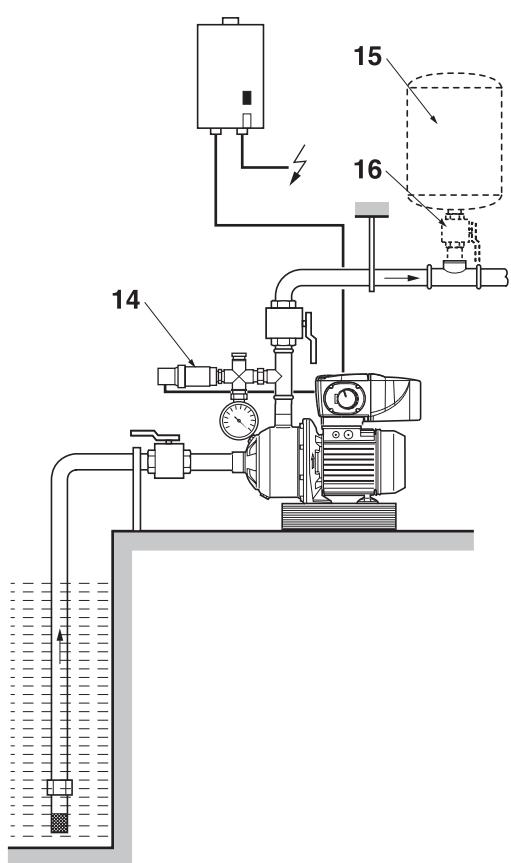


Fig. 8:

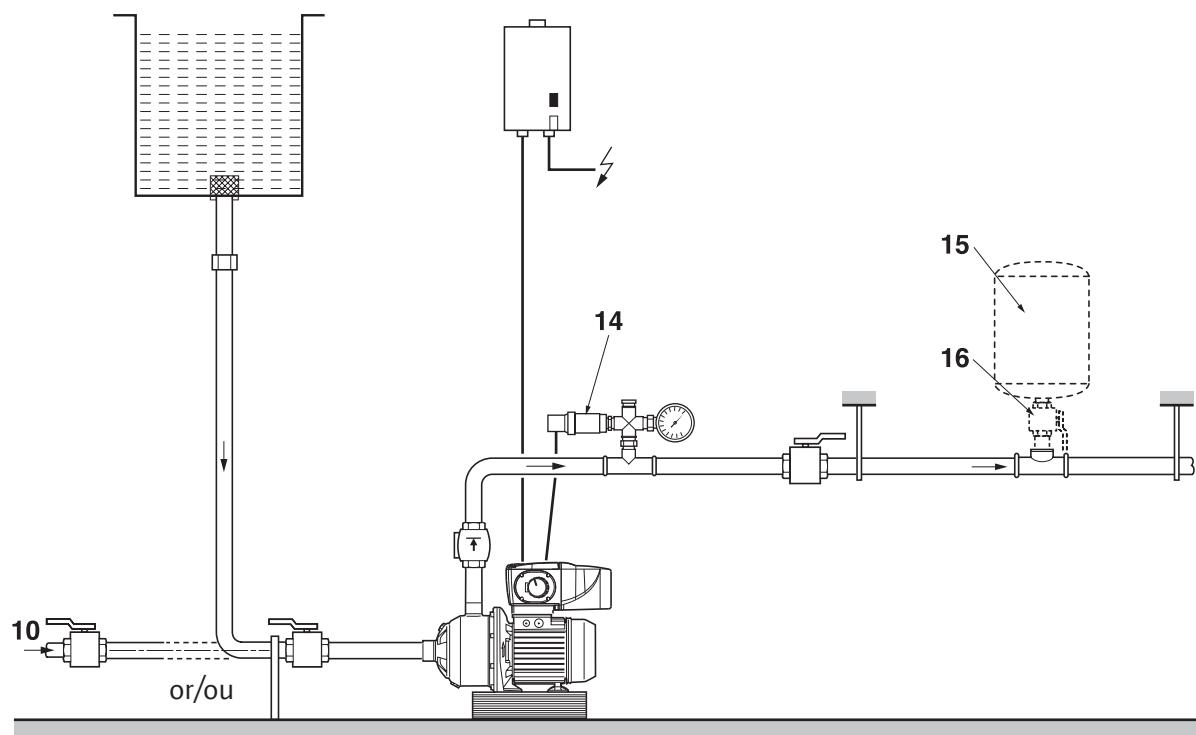


Fig. 9:

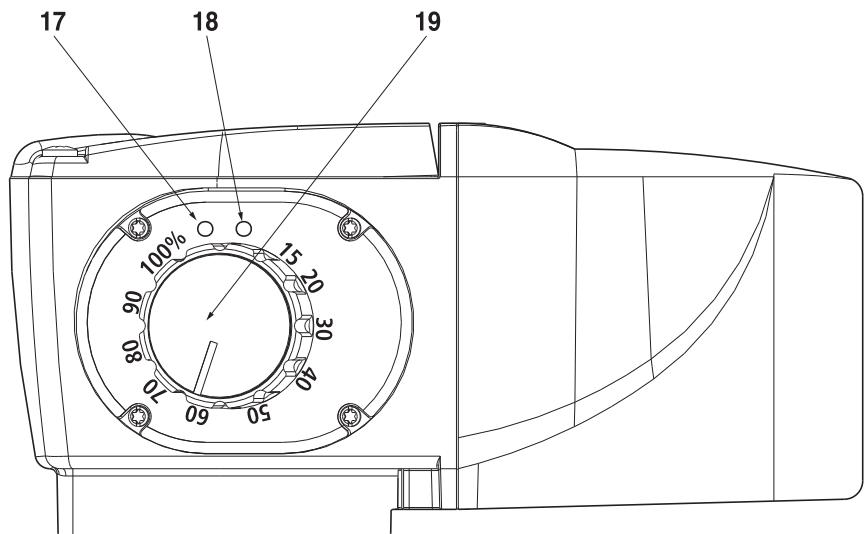
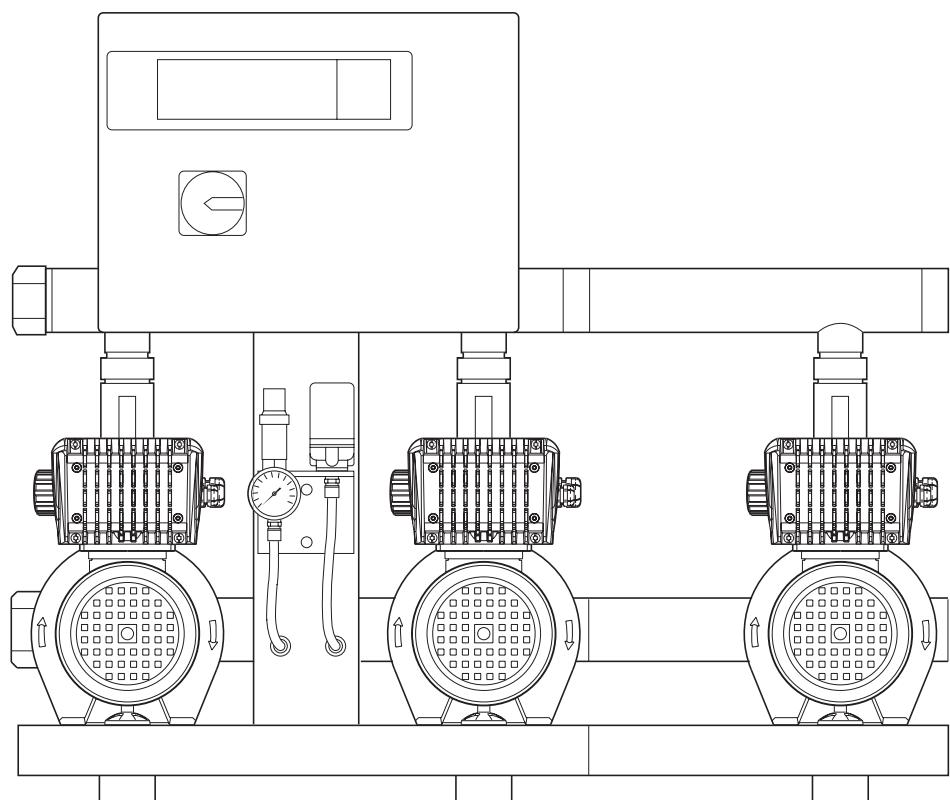


Fig. 10:



1 General

1.1 Applications

Pumps for pumping clear liquids in the residential sector, in agriculture and in industry. Intake from wells, springs, water streams, ponds ... not to be used with Abyssinian wells (driven wells).

1.2 Technical data

- Maximum operating pressure: 10 bar
- Minimum intake pressure: 6 bar
- Temperature range:
 - Version with seals and inserts made of EPDM*: -15° to +110°C
 - Version with seals and inserts made of VITON*:
 - 15° to +90°C
- Suction head:
 - depending on the Net Positive Suction Head (NPSH) of the pump
- Ambient temperature (standard):
 - +40°C (in cases of higher temperatures, please consult Wilo after-sales service)
- Sound pressure level 50/60Hz 0/+3 dB(A): 66

*Application in potable water sector: WRAS: English standard, KTW: German standard.

2 Safety

These Installation and operating instructions contain basic information which must be adhered to during installation and commissioning. For this reason, these Installation and operating instructions must, without fail, be read by the service technician and the responsible operator before installation and commissioning. It is not only the general safety instructions which are listed here under the main heading of Safety which must be complied with, but rather also the special safety instructions which are listed under the following main headings.

2.1 Identification of notes in the Installation and operating instructions

The safety instructions contained in these Installation and operating instructions which, if they are not observed, could endanger personnel, are specially marked with the General danger symbol,



and with



in cases of warnings against electrical voltage.

The word

ATTENTION!

is included with safety instructions which, if they are not observed, could endanger the installation and its function.

2.2 Personnel qualifications

The personnel responsible for installation must be in possession of the respective qualifications required for this work.

2.3 Danger in the event of nonobservance of the safety instructions

The failure to observe the safety instructions could result in dangers to personnel and pump/

installation. Nonobservance of the safety instructions can result in the loss of any claims to damages.

In particular, the failure to observe these instructions could lead to the following hazards:

- Failure of important functions of the pump/installation.
- Hazards to personnel resulting from electrical, mechanical or bacteriological actions.
- Property damage.

2.4 Safety instructions for the operator

The existing regulations regarding accident prevention are to be complied with.

Hazards connected with electrical energy are to be excluded. The regulations of the VDE (Verband der Elektrotechnik Elektronik und Informationstechnik e.V.) and of the local energy supply companies are to be complied with.

2.5 Safety instructions for inspection and installation work

It is the responsibility of the operator to ensure that all inspection and installation work is carried out by authorised and qualified professionals who have acquired sufficient information from a detailed study of the Installation and operating instructions.

As a fundamental principle, work may only be carried out on the pump/installation when it/they are at a standstill.

2.6 Customer's own conversions and spare parts manufacture

Modifications to the pump/installation are not permitted except after consultation with the manufacturer. The use of original spare parts and manufacturer-authorised accessories promotes safety. The use of other parts could lead to the cancellation of liability for the results of such substitutions.

2.7 Improper use

The operating safety of the supplied pump/installation is only guaranteed for conventional use in accordance with Section 1 of the Installation and operating instructions. It is not permitted to exceed or fail to meet the limit values specified in the catalogue/data sheet under any circumstances.

3 Transport, handling and storage

The pump/installation is to be checked at once upon delivery for any damage that may have occurred in transit. If any damages are found, then they are to be reported to the transport company immediately within the time periods specified.

ATTENTION!

If the material is to be installed later, then it must be stored in a dry location. The material must be protected against impact shocks and all external influences (moisture, frost, etc.).

Handle the pump carefully so that the geometry and alignment of the installation are not altered.

ATTENTION!

The pump is not permitted under any circumstances to be raised on the frequency converter.

4 Products and accessories

4.1 Description (see Fig. 1-9):

- 1 : Foot valve with suction strainer (maximum free-flowing cross-section 1 mm)
- 2 : Stop valve; on suction side
- 3 : Stop valve; on the pressure side
- 4 : Non-return valve
- 5 : Inlet/bleeder screw
- 6 : Drainage screw
- 7 : Pipe bracket
- 8 : Suction strainer
- 9 : Replenishment reservoir
- 10 : Tap water network
- 11 : Switch, switch amplifier with fuses
- 12 : Cock
- 13 : Pedestal
- 14 : Pressure sensor
- 15 : Diaphragm pressure vessel
- 16 : Gate valve for diaphragm pressure vessel
- 17 : Red LED
- 18 : Green LED
- 19 : Potentiometer
- 20 : Connection terminal
- 21 : Protection against low water level
- HA** : Maximum suction head
- HC** : Minimum suction head

4.2 The pump

Horizontal centrifugal pump.
Multistage, not self-priming.
Suction/outlet openings with thread.
Axial suction, radial outlet upwards.
Sealing on shaft passage by means of standard mechanical seal.

4.3 The motor with frequency converter

Three-phase AC motor, two-pole, with frequency converter.
Protection class: IP 54.
Insulation class: F

Operational voltages and frequencies

Frequency	50 Hz	60 Hz
Voltages	1~230 V (±10%)	1~220 V (±6%)

4.4 Accessories (optional)

- Suction kit
- Shut-off device
- Diaphragm pressure vessel
- Tank
- Non-return valve
- Foot valve with suction strainer
- Compensator
- Protection against low water level (potable water network) (see Fig. 5, Pos. 21)
- Pressure sensor control kit (sensor precision: ≤ 1%; utilisation between 30% and 100% of the reading range).

5 Installation

Two types:

- see Fig 1: Suction mode.
- see Fig. 2: Pressure operation from replenishment vessel (Pos. 9) or potable water network (Pos. 10).

5.1 Installation

Install the pump at a readily accessible location which is protected against external influences (excessive rain or sunlight, frost) and which is as near as possible to the extraction point. Place the pump on a pedestal (Pos. 13) or directly on a smooth, level base. Fixation of the pump with 2 holes for Ø M8 bolts.

ATTENTION!

Note that the height of the installation location and the temperature of the fluid will diminish the suction capacity of the pump.

Height meter	Height loss	Temperature	Height loss
0 m	0.00 mCL	20°C	0.20 mCL
500 m	0.60 mCL	30°C	0.40 mCL
1000 m	1.15 mCL	40°C	0.70 mCL
		50°C	1.20 mCL
		60°C	1.90 mCL
		70°C	3.10 mCL
		80°C	4.70 mCL
		90°C	7.10 mCL
		100°C	10.30 mCL
		110°C	14.70 mCL
		120°C	20.50 mCL

ATTENTION!

Installation should be carried out in pressure operation when temperatures exceed 80°C.

5.2 Pipe connections

ATTENTION!

The installation must be sufficient for the pressure that the pump generates at maximum frequency and zero flow volume.

Pipe connections			
Pump type	MHIE 200	400	800
Suction opening	1"1/4 – 1" – (26-34)	1"1/2 – (33-42)	(40-49)
Outlet opening	1" – 1" – (26-34)	1"1/4 – (26-34)	(33-42)

- Connection with spiral-reinforced flexible hoses or rigid pipe.
- Seal the pipe connections well with suitable products. No air is permitted to enter the suction line; lay the suction line with a continuous rise (2%) (see Fig. 1).
- In the case of rigid pipes, take care to ensure that the weight of the lines is not borne by the pump alone. Utilise supports and/or pipe brackets (see Figs. 1 + 2, Pos. 7).

- The diameter of the suction line is never permitted to be smaller than the suction/pumping opening of the pump.
- Limit the horizontal length of the suction line and avoid all possible sources of pressure losses (elbows, valves, neckings, etc.).

ATTENTION!

Possible damage to the pump!
In order to protect the pump against fluid hammers, install the non-return valve on the pressure side.



In the frequency converter, the testing current circuits are shielded from the performance circuits with the aid of a simple insulation (CEI664-1).

The installer must ensure that the external testing current circuits (e.g.: pressure sensors, external control of the setpoint...) are shielded against any possible contact with people. If the testing current circuits are to be connected to the electric circuits corresponding to the safety specifications of the SELV (TBTS), then an additional insulation must be installed in order to comply with the SELV (TBTS) classification.

5.3 Electrical connections



The electrical connections and testing must be carried out by a licensed electrician and in accordance with locally applicable standard specifications.

The electrical properties (frequency, voltage, nominal current) of the motor frequency converter are indicated on the name plate of the motor/ of the pump. A check is to be made as to whether the motor frequency converter matches the current supply network to which it is intended to be attached.

The frequency converter is equipped with a motor protection feature. Constant protection of the motor and of the pump are ensured by a continuous nominal/actual comparison of the current and stored data.

In the event of excessively great resistance on the part of the neutral conductor, a corresponding protection device must be installed upstream from the motor frequency converter.

As a basic rule, provide switch amplifiers with fuses (Type GF) for the protection of the network (see Figs. 1 + 2, Pos. 11).



If a residual-current-operated protection switch needs to be installed for personnel protection, then use a selective universal-current-sensitive residual-current-operated protection switch with VDE certificate!

Adjust the safety switch in accordance with the data specified on the name plate of the frequency converter.

Use connecting cables that meet applicable standards.



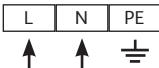
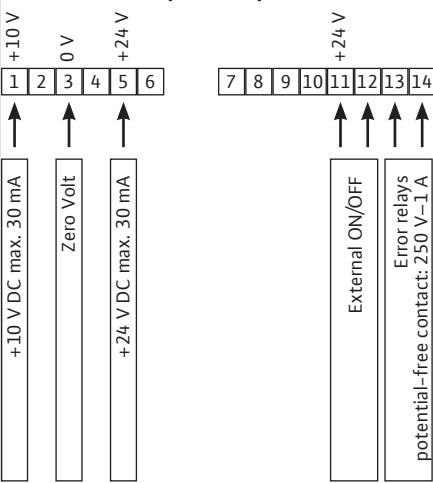
Earth the pump/installation in accordance with regulations.

The electrical connection of the frequency converter must correspond to the diagrams contained in the following table:

ATTENTION! The frequency converter could be damaged if connected incorrectly.

 The electric cable is never to be allowed to come into contact with either the pipe or the pump. Furthermore, it must be completely shielded against moisture.

Details concerning the electrical connections – loosen screws and remove upper cover of the frequency converter.

Mains connection	(see Fig. 3, Pos. 20)	Connection terminal	Cores Ø 2.5 mm ²
Connect three lines of the cable to the 3 connection terminals of the board. (Phase + Neutral+ Earth).		 Main fuse 20 A	
Connecting the inputs/outputs	Connection terminals inputs/outputs		
3 operating modes exist: (see Chapter 6: Commissioning) manual mode: Pressure regulation: Operation by external control:	(see Fig. 3) Mode 1 Mode 2 Mode 3		Cores Ø 2.5 mm ² External ON/OFF Error relays potential-free contact: 250 V-1 A

ATTENTION!

Property damage is possible!
Because of operational settings, an incorrectly disconnected core in the connection area could damage the frequency converter.

- Disconnect the core at both of its end points from electrical connection
- Pull it off

1 – Connection of the pressure sensor

Connection of the inputs/outputs

Pressure sensor 4–20 mA (*)

- 2 cores (4–20 mA / +24 V)
- 3 cores (0 V / 4–20 mA / +24 V)

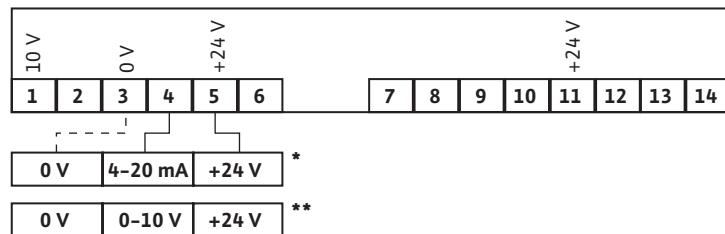
or

Pressure sensor 0–10 V (**)

- 3 cores (0 V / 0–10 V / +24 V)

Connection terminals Inputs/outputs of the frequency converter Diagram

(1)

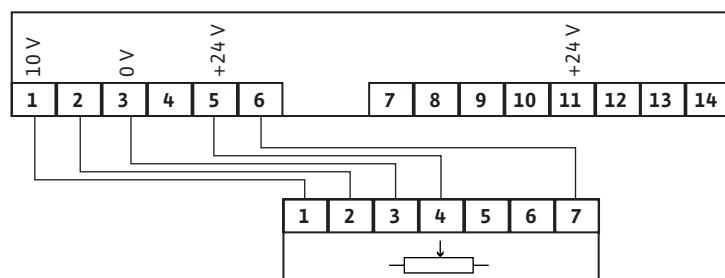


2 – Connection of the potentiometer

Connection terminals Inputs/outputs of the frequency converter Diagram

Adjusting the setpoint with the aid of the potentiometer

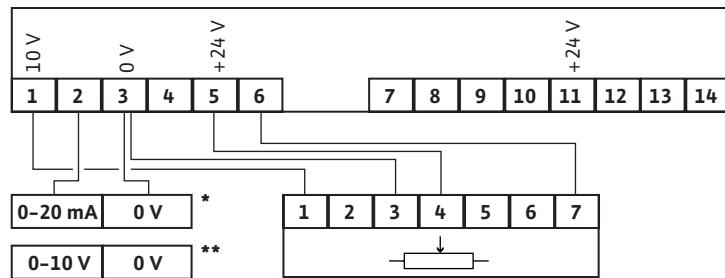
(2)



Adjusting the setpoint via external control

- 0–20 mA (*)
- or
- 0–10 V (**)

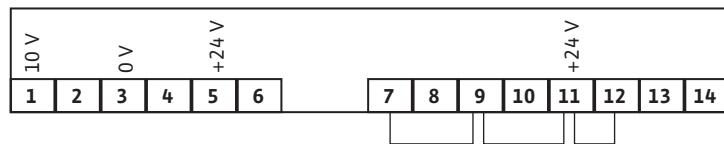
(3)



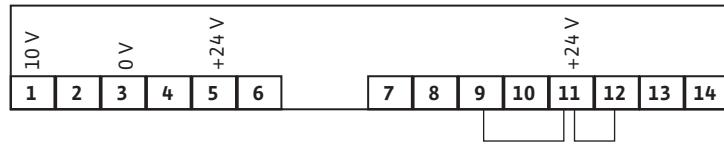
3 – Settings of the control terminals (Terminals 7 to 14)

**Connection terminals of the inputs/outputs of the frequency converter
Diagram**

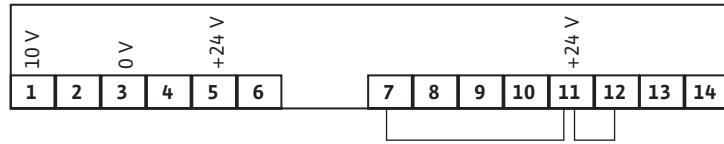
(4)



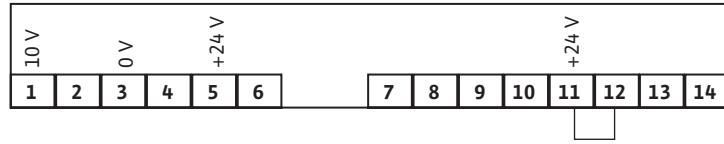
(5)



(6)



(7)

**4 – Possible connections**

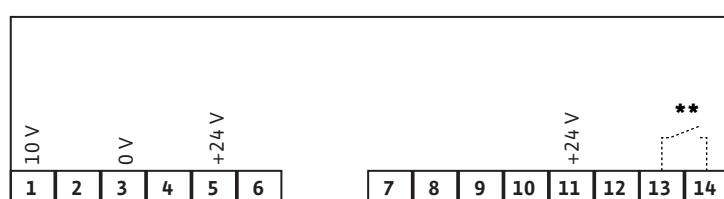
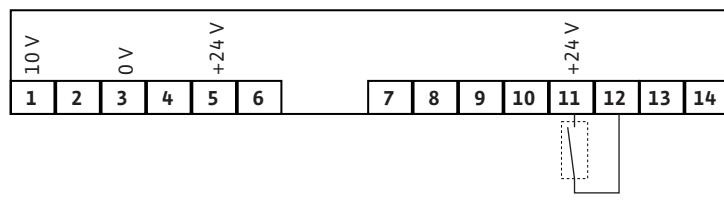
It is possible to start or stop the pump with the external control(*) (potential-free contact); this function takes precedence over the other functions.

This external control can be removed by bridging the terminals (11 and 12).

Examples: Float switches,
low water pressure switches, etc.

The frequency converter is equipped with an error relay with normally open contact (**):

Contact open = frequency converter is receiving no voltage or is defective



Operating modes and diagrams	
Operating modes	Diagrams
Mode 1	(2) + (4)
Mode 3 – 0-20 mA	(3) + (6)
Mode 3 – 0-10 V	(3) + (4)
Mode 2 – PI control – sensor: 4-20 mA	(1) + (2) + (4)
Mode 2 – PI control – sensor: 0-10 V	(1) + (2) + (5)
Mode 2 – PI control – sensor: 4-20 mA – External control of the setpoint: 0-20 mA	(1) + (3) + (6)
Mode 2 – PI control – sensor: 4-20 mA – External control of the setpoint: 0-10 V	(1) + (3) + (4)
Mode 2 – PI control – sensor: 0-10 V – External control of the setpoint: 0-20 mA	(1) + (3) + (7)
Mode 2 – PI control – sensor: 0-10 V – External control of the setpoint: 0-10 V	(1) + (3) + (5)

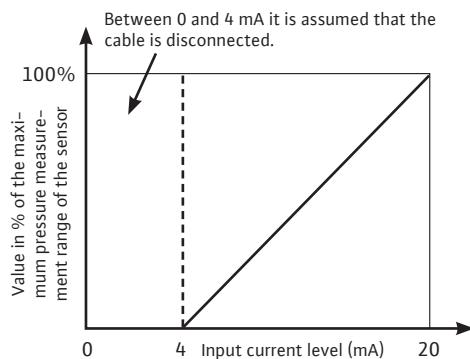
ATTENTION!**Property damage is possible!**

The cover of the frequency converter
must be easy to close.

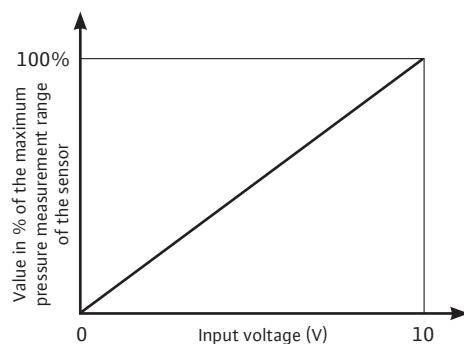
- Put plug connections carefully in place
in the interior of the frequency con-
verter before sealing it.

Control regulations in Mode 2

Sensor 4-20 mA

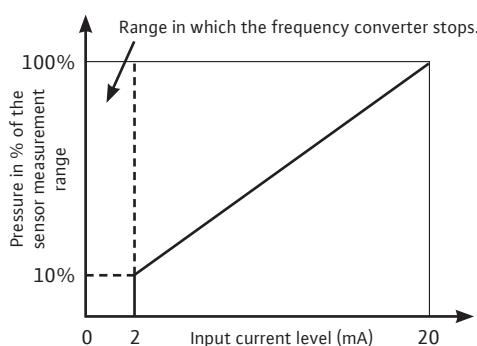


Sensor 0-10 V

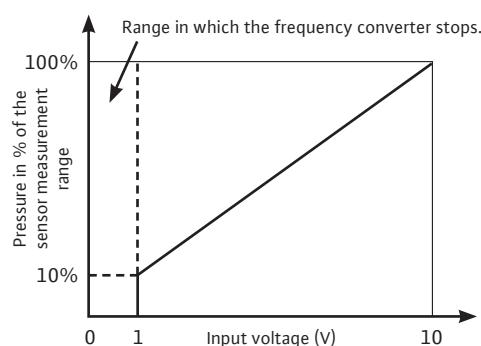


External control of the setpoint in Mode 2

Setpoint 0-20 mA

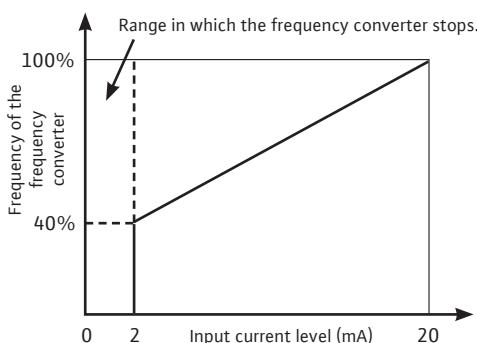


Setpoint 0-10 V

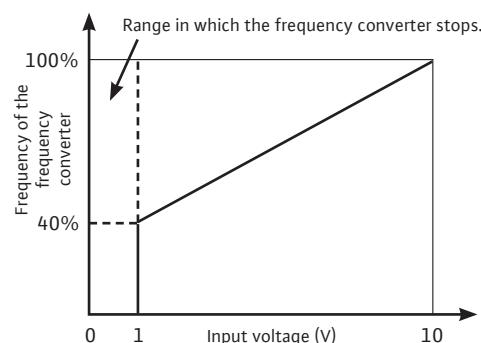


External control of the frequency in Mode 3

External signal 0-20 mA



External signal 0-10 V



6 Commissioning

ATTENTION!

If the pump is supplied separately, i.e. if it is not integrated in a system that has been mounted by us, then the configuration type at the time of delivery is either Mode 1-3 or Mode 2, depending on the type of pump control desired. As a reminder: A programming key is used to switch from **Mode 1-3 to Mode 2** (or vice-versa); an after-sales service employee must be called in.

6.1 Settings

- In manual mode: **Mode 1** (see Figs. 1, 2). The duty point of the pump is reached with the aid of the potentiometer (see Fig. 9, Pos. 19) by setting the speed of the motor between 40% and 100% of the maximum speed. We recommend that the motor speed be set to 70 % for commissioning.
- The pump can be brought to a standstill (frequency converter under tension) with the remote control unit (switch).
- In pressure regulation operating mode: **Mode 2** (see Figs. 6, 7, 8). It is possible to regulate the pressure of the pump through the addition of a pressure sensor and a diaphragm pressure vessel. The sensor must exhibit an accuracy of <1% and be used in a range between 30% and 100% of its measurement range; the reservoir has a useable volume of at least 8 litres.

No water in the diaphragm pressure vessel.

Pump up the diaphragm pressure vessel to a pressure that is 0.3 bar less than the control pressure of the pump (diaphragm pressure vessel and sensor kit included as accessories in the scope of delivery).

The setpoint for the pressure regulation is specified in two types:

- The setting of the potentiometer indicates for the setpoint for a value between 0 and 100% of the measurement range of the sensor. We recommend that the potentiometer be set to 100% for commissioning.
- An external signal can be connected (0–10 V or 0–20 mA) for setting the setpoint by remote control (see Chapter 5.3 – Electrical connections).

NOTE: The function «Detection of zero volume flow» makes it possible to stop the pump.

- Via external control per frequency: **Mode 3** (see Fig. 10).

The potentiometer has no function in Mode 3, but it must nonetheless be set to 100%. The pump is controlled by an external signal.

Specifications concerning commissioning: see instruction manual for the pressure boosting system.

During normal operation, the status of the LEDs is as follows: (see Fig. 9, Pos. 17 + 18)

Status of the LEDs	green LED	red LED
Frequency converter voltage load/pump in operation	on	off
Frequency converter voltage load/pump in standstill	on	off

6.2 Preparatory flushing



Because our pumps are hydraulically tested in the factory, it is possible that there is still water in their interiors. For reasons of hygiene, it is therefore recommended that they be flushed out prior to use in a potable water network.

6.3 Filling – bleeding

ATTENTION!

Never permit the pump to run dry, not even for a brief moment.

Pump in intake mode (see Fig. 2)

- Close the stop valve on the pressure side (**Pos. 3**), open the inlet/bleeder screw (**Pos. 5**).
- Gradually open the valve that is located on the pipework at the entry to the pump (**Pos. 2**) and carry out the complete filling of the pump. Retighten the screw firmly after water begins to emerge and ventilation is complete.



Danger of injury to personnel!

A jet of water can escape from the ventilation opening when hot water is being pumped. Initiate all necessary precautionary measures to ensure that personnel and the motor/frequency converter are protected!

Pump in suction mode (see Fig. 1)

Two different cases are possible.

1st case (see Fig. 4.1)

- Close the stop valve on the pressure side (see Fig. 1, Pos. 3).
- Open the stop valve on suction side (see Fig. 1, Pos. 2).
- Unscrew the inlet/bleeder screw (see Fig. 1, Pos. 5), that is located on the pump housing.
- Fill the pump and suction line completely with the aid of a funnel inserted into the opening.
- The filling procedure is finished when water escapes and ventilation is complete.
- Screw the inlet/bleeder screw back on.

2nd case (see Fig. 4.2)

The filling can be made easier if a pipe equipped with a cock (**Pos. 12**) Ø 1/2» and a funnel is mounted perpendicularly on the suction line of the pump.

- Close the stop valve on the pressure side (see Fig. 1, Pos. 3).
- Open the stop valve on suction side (see Fig. 1, Pos. 2).
- Open cock (see Fig. 4, Pos. 12) and inlet/bleeder screw (see Fig. 1, Pos. 5).
- Fill pump and suction line completely, until bubble-free water escapes from the filling opening.
- Close the cock (see Fig. 4, Pos. 12) (it can remain mounted on the pipe), remove the pipe and screw the inlet/bleeder screw back in.

6.4 Starting



Depending on the temperature of the fluid and on the operating cycles of the pump, the surface temperature (pump, motor) may exceed 68°C: mount suitable personnel protection apparatus as needed.



The pump should not be permitted to be operated longer than ten minutes with zero flow when the gate valve is closed on the pressure side.

We recommend that a minimum flow level of approximately 10% of the nominal throughput of the pump be maintained in order to ensure that no blow hole forms in the upper part of the pump.

- Open the stop valve on the pressure side and start the pump.
- Check the uniformity of the pressure on the discharge side with the aid of a pressure gauge; bleed the pump again or refill it in the event of deviations.
- Check current consumption. The current consumption may not exceed the specification on the pump shield.

7 Maintenance



The pump(s) must be de-energised and all non-authorised restarts must be prevented before any maintenance work is done.

Never undertake maintenance work while the pump is running. Always keep pump and motor/frequency converter in clean condition.

When set up in frost-free locations, the pump should not be emptied, even with prolonged decommissioning.

To prevent blockage of the shaft and of the hydraulic apparatus, the pump is to be emptied during periods of potential frost by unscrewing the drainage and inlet/bleeding screw (**Fig. 1+2, Pos. 5+6**). Screw both screws back in without tightening them.

Replacement frequencies

NOTE: These can only be regarded as recommendations, because the frequency of replacement is dependent on operating conditions within the group involving

- Temperature, pressure and quality of the fluid for the mechanical seal.
- Pressure and ambient temperature for the motor and other components.
- Frequency of start-up: continuous or intermittent operation.

8 Operating faults

ATTENTION! De-energise the pump before each intervention and secure against non-authorised restarts!

All of the incidents listed below will lead to a switch-off via the error relay.

Display			Frequency converter behaviour		Fault/possible causes	Elimination
Green LED	Red LED	Reaction time up to standstill Frequency converter	Waiting time before switching back on	Relay status Contact		
Off	On	No standstill	/	Open	a) Frequency converter supply has undervoltage.	- Check voltage at the terminals of the frequency converter.
Off	On	Immediate	No switching back on	Open	b) Frequency converter supply has overvoltage.	- Check voltage at the terminals of the frequency converter.
Off	On	Immediate	No switching back on	Open	c) The motor has a short-circuit.	- Dismantle motor/frequency converter of the pump and have it checked or replace it.
Off	On	<10 s	No switching back on	Open	d) The pump is overloaded.	- excessive density and/or viscosity of the pumped fluid.
Off	On	<60 s	No switching back on	Open	e) The sensor cable (4–20 mA) is disconnected (only Mode 2).	- Check correct current supply and cabling of the sensor.

If the pump is at a complete standstill and an intervention is required, disconnect the power supply, wait until the LEDs have gone out completely, eliminate the fault and reconnect the power supply. If a major fault is present, then an after-sales service employee must be called in.



De-energise the pump before each intervention.
If the fluid is toxic, corrosive or hazardous for personnel, then WILO or the authorised repair company must be informed of the situation.
Clean the pump in such cases in order to ensure absolute safety for the craftsmen performing the repairs.

If the operating fault cannot be rectified, then please contact your local professional tradesmen or the Wilo after-sales service in your vicinity.

Other, pump-specific faults not detectable by the frequency converter.

Faults	Causes	Elimination
8.1 The pump is running but does not pump anything	<ul style="list-style-type: none"> a) The pump is not running fast enough: b) Interior parts are blocked by foreign matter: c) Suction line is blocked: d) Air intake through suction line: e) The pump has run empty: f) The suction pressure is too weak, cavitation noise is occurring generally: 	<ul style="list-style-type: none"> a) Check correct setting of the nominal values (setpoints) (matching of the nominal value points). b) Dismantle pump, replace defective parts, perform cleaning. c) Clean the entire pipework. d) Check the impermeability of the entire pipe up to the pump and seal. e) Refill the pump. Check the impermeability of the foot valve. f) Excessively large suction pressure losses or excessively large suction head. (check the Net Positive Suction Head of the installed pump and of the installation).
8.2 The pump is vibrating	<ul style="list-style-type: none"> a) Poorly mounted to the pedestal: b) Foreign matter is blocking the pump: c) Difficult pump rotation: 	<ul style="list-style-type: none"> a) Check and tighten the nuts on the pedestal bolts. b) Dismantle and clean the pump. c) Check whether the pump rotates freely without encountering abnormal resistance.
8.3 The pump does not provide sufficient pressure	<ul style="list-style-type: none"> a) Insufficient motor speed: b) The motor is defective: c) Insufficient pump filling: d) The drainage screw is not screwed in all the way: 	<ul style="list-style-type: none"> a) Check correct setting of the nominal values (setpoints) (matching of the nominal value points). b) Have the motor/frequency converter replaced. c) Open the drain cock of the pump and bleed until there is a complete absence of bubbles. d) Check drainage screw and screw in as needed.
8.4 The delivery rate is irregular	<ul style="list-style-type: none"> a) The suction head (H_a) has not been maintained: b) The suction line has a smaller circumference than that of the pump: c) Suction strainer and suction line are partially blocked: 	<ul style="list-style-type: none"> a) Consult the installation conditions and recommendations contained in these Installation and operating instructions. b) The suction line must have the same diameter as the suction inlet of the pump. c) Dismount and clean.

9 Spare parts

Spare parts must be ordered from the local authorised dealer and/or from Wilo after-sales service. In order to avoid unnecessary inquiries or incorrect orders, specify at the time of your order all of the data listed on the name plate.

Subject to technical changes without prior notice!

**EU/EG KONFORMITÄTSERKLÄRUNG
EU/EC DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE UE/CE**

Als Hersteller erklären wir hiermit, dass die Pumpenbauarten der Baureihe

We, the manufacturer, declare that the pump types of the series

Nous, fabricant, déclarons que les types de pompes de la série

(Die Seriennummer ist auf dem Typenschild des Produktes nach Punkten b) & c) von §1.7.4.2 und §1.7.3 des Anhangs I der Maschinenrichtlinie angegeben. / The serial number is marked on the product site plate according to points b) & c) of §1.7.4.2 and §1.7.3 of the annex I of the Machinery directive. / Le numéro de série est inscrit sur la plaque signalétique du produit en accord avec les points b) & c) du §1.7.4.2 et du §1.7.3 de l'annexe I de la Directive Machines.)

MHIE.../M...

in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entsprechen :

In their delivered state comply with the following relevant directives :

dans leur état de livraison sont conformes aux dispositions des directives suivantes :

– Maschinenrichtlinie 2006/42/EG

– Machinery 2006/42/EC

– Machines 2006/42/CE

und gemäss Anhang 1, §1.5.1, werden die Schutzziele der Niederspannungsrichtlinie 2014/35/EU ab 20 April 2016 eingehalten
and according to the annex 1, §1.5.1, comply with the safety objectives of the Low Voltage Directive 2014/35/EU from April 20th 2016
et, suivant l'annexe 1, §1.5.1, respectent les objectifs de sécurité de la Directive Basse Tension 2014/35/EU à partir du 20/04/2016

– Elektromagnetische Verträglichkeit-Richtlinie 2014/30/EU ab 20 April 2016

– Electromagnetic compatibility 2014/30/EU from April 20th 2016

– Compabilité électromagnétique 2014/30/UE à partir du 20 avril 2016

und entsprechender nationaler Gesetzgebung,

and with the relevant national legislation,

et aux législations nationales les transposant,

sowie auch den Bestimmungen zu folgenden harmonisierten europäischen Normen :

comply also with the following relevant harmonized European standards :

sont également conformes aux dispositions des normes européennes harmonisées suivantes :

EN 809+A1

EN 60034-1

EN 60204-1

EN 61800-5-1

EN 61800-3+A1:2012

Bevollmächtigter für die Zusammenstellung der technischen Unterlagen ist:

Person authorized to compile the technical file is :

Personne autorisée à constituer le dossier technique est :

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Quality Manager - PBU Multistage
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44263 Dortmund - Germany

<p style="text-align: center;">(BG) - български език ДЕКЛАРАЦИЯ ЗА СЪОТЕСТВИЕ ЕО</p> <p>WILO SE декларираят, че продуктите посочени в настоящата декларация съответстват на разпоредбите на следните европейски директиви и приелите ги национални законодателства:</p> <p>Машини 2006/42/EO ; Електромагнитна съвместимост 2014/30/EO</p> <p>както и на хармонизираните европейски стандарти, упоменати на предишната страница.</p>	<p style="text-align: center;">(CS) - Čeština ES PROHLÁŠENÍ O SHODĚ</p> <p>WILO SE prohlašuje, že výrobky uvedené v tomto prohlášení odpovídají ustanovením níže uvedených evropských směrnic a národním právním předpisům, které je přejímají:</p> <p>Stroje 2006/42/ES ; Elektromagnetická Kompatibilita 2014/30/ES</p> <p>a rovněž splňují požadavky harmonizovaných evropských norem uvedených na předcházející stránce.</p>
<p style="text-align: center;">(DA) - Dansk EF-OVERENSSTEMMELSESERKLÆRING</p> <p>WILO SE erklærer, at produkterne, som beskrives i denne erklæring, er i overensstemmelse med bestemmelserne i følgende europæiske direktiver, samt de nationale lovgivninger, der gennemfører dem:</p> <p>Maskiner 2006/42/EU ; Elektromagnetisk Kompatibilitet 2014/30/EU</p> <p>De er ligeledes i overensstemmelse med de harmoniserede europæiske standarder, der er anført på forrige side.</p>	<p style="text-align: center;">(EL) - Ελληνικά ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΚ</p> <p>WILO SE δηλώνει ότι τα προϊόντα που ορίζονται στην παρούσα ευρωπαϊκά δήλωση είναι σύμφωνα με τις διατάξεις των παρακάτω οδηγιών και τις εθνικές νομοθεσίες στις οποίες έχει μεταφερθεί:</p> <p>Μηχανήματα 2006/42/EK ; Ηλεκτρομαγνητικής συμβατότητας 2014/30/EK</p> <p>και επίσης με τα εξής εναρμονισμένα ευρωπαϊκά πρότυπα που αναφέρονται στην προηγούμενη σελίδα.</p>
<p style="text-align: center;">(ES) - Español DECLARACIÓN CE DE CONFORMIDAD</p> <p>WILO SE declara que los productos citados en la presente declaración están conformes con las disposiciones de las siguientes directivas europeas y con las legislaciones nacionales que les son aplicables :</p> <p>Máquinas 2006/42/CE ; Compatibilidad Electromagnética 2014/30/CE</p> <p>Y igualmente están conformes con las disposiciones de las normas europeas armonizadas citadas en la página anterior.</p>	<p style="text-align: center;">(ET) - Eesti keel EÜ VASTAVUSDEKLARATSIOONI</p> <p>WILO SE kinnitab, et selles vastavustunnistuses kirjeldatud tooted on kooskõlas alljärgnevate Euroopa direktiivide säteteega ning riiklike seadusandlustega, mis nimetatud direktiivid üle on võtnud:</p> <p>Masinad 2006/42/EÜ ; Elektromagnetilist Ühilduvust 2014/30/EÜ</p> <p>Samuti on tooted kooskõlas eelmisel lehekülgel ära toodud harmoniseeritud Euroopa standarditega.</p>
<p style="text-align: center;">(FI) - Suomen kieli EY-VAATIMUSTENMUKAISUUSVAKUUTUS</p> <p>WILO SE vakuuttaa, että tässä vakuutuksessa kuvatut tuotteet ovat seuraavien eurooppalaisten direktiivien määräysten sekä niihin sovellettavien kansallisten lakiasetusten mukaisia:</p> <p>Koneet 2006/42/EY ; Sähkömagneettinen Yhteensopivuus 2014/30/EY</p> <p>Lisäksi ne ovat seuraavien edellisellä sivulla mainittujen yhdenmukaistettujen eurooppalaisten normien mukaisia.</p>	<p style="text-align: center;">(GA) - Gaeilge EC DEARBHÚ COMHLÍONTA</p> <p>WILO SE ndearbhaíonn an cur síos ar na táirí atá i ráiteas seo, siad i gcomhréir leis na forálacha atá sna treoracha seo a leanas na hEorpa agus leis na dlíthe náisiúnta is infheidhme orthu:</p> <p>Innealra 2006/42/EC ; Comhoiriúnacht Leictreamaighnéadach 2014/30/EC</p> <p>Agus siad i gcomhréir le forálacha na caighdeán chomhchuibhithe na hEorpa dá dtagraítear sa leathanach roimhe seo.</p>
<p style="text-align: center;">(HR) - Hrvatski EZ IZJAVA O SUKLADNOSTI</p> <p>WILO SE izjavljuje da su proizvodi navedeni u ovoj izjavi u skladu sa sljedećim prihvaćenim europskim direktivama i nacionalnim zakonima:</p> <p>EZ smjernica o strojevima 2006/42/EZ ; Elektromagnetna kompatibilnost - smjernica 2014/30/EZ</p> <p>i usklađenim europskim normama navedenim na prethodnoj stranici.</p>	<p style="text-align: center;">(HU) - Magyar EK-MEGFELELŐSÉGI NYILATKOZAT</p> <p>WILO SE kijelenti, hogy a jelen megfelelőségi nyilatkozatban megjelölt termékek megfelelnek a következő európai irányelvek előírásainak, valamint azok nemzeti jogrendbe átültetett rendelkezéseinek:</p> <p>Gépek 2006/42/EK ; Elektromágneses összeférhetőségre 2014/30/EK</p> <p>valamint az előző oldalon szereplő, harmonizált európai szabványoknak.</p>
<p style="text-align: center;">(IS) - Íslenska EB LEYFISYFIRLÝSING</p> <p>WILO SE lýsir því yfir að vörurnar sem um getur í þessari yfirlýsingu eru í samræmi við eftirfarandi tilskipunum ESB og landslögum hafa samþykkt:</p> <p>Vélartilskipun 2006/42/EB ; Rafseguls-samhæfni-tilskipun 2014/30/EB</p> <p>og samhæfða evrópska staðla sem nefnd eru í fyri síðu.</p>	<p style="text-align: center;">(IT) - Italiano DICHIARAZIONE CE DI CONFORMITÀ</p> <p>WILO SE dichiara che i prodotti descritti nella presente dichiarazione sono conformi alle disposizioni delle seguenti direttive europee nonché alle legislazioni nazionali che le traspongono :</p> <p>Macchine 2006/42/CE ; Compatibilità Elettromagnetica 2014/30/CE</p> <p>E sono pure conformi alle disposizioni delle norme europee armonizzate citate a pagina precedente.</p>
<p style="text-align: center;">(LT) - Lietuvių kalba EB ATITIKTIES DEKLARACIJA</p> <p>WILO SE pareiškia, kad šioje deklaracijoje nurodyti gaminiai atitinka šiuos Europos direktyvų ir jas perkeliančiu nacionalinių įstatymų nuostatus:</p> <p>Mašinos 2006/42/EB ; Elektromagnetinis Suderinamumas 2014/30/EB</p> <p>ir taip pat harmonizuotas Europos normas, kurios buvo ciuotos ankstesniame puslapyje.</p>	<p style="text-align: center;">(LV) - Latviešu valoda EK ATBILSTĪBAS DEKLARĀCIJU</p> <p>WILO SE deklarē, ka izstrādājumi, kas ir nosaukti šajā deklarācijā, atbilst šeit uzskaitīto Eiropas direktīvu nosacījumiem, kā arī atsevišķu valstu likumiem, kuros tie ir ietverti:</p> <p>Mašīnas 2006/42/EK ; Elektromagnētiskās Saderības 2014/30/EK</p> <p>un saskaņotajiem Eiropas standartiem, kas minēti iepriekšējā lappusē.</p>

(MT) - Malti DIKJARAZZJONI KE TA' KONFORMITÀ	(NL) - Nederlands EG-VERKLARING VAN OVEREENSTEMMING
<p>WILO SE jiddikjara li l-prodotti spéċifikati f'din id-dikjarazzjoni huma konformi mad-direttivi Ewropej li jsegwu u mal-leġislazzjonijiet nazzjonali li japplikawhom:</p> <p>Makkinarju 2006/42/KE ; Kompatibbiltà Elettromanjetika 2014/30/KE</p> <p>kif ukoll man-normi Ewropej armoniżzati li jsegwu imsemmija fil-paġna précédenti.</p>	<p>WILO SE verklaart dat de in deze verklaring vermelde producten voldoen aan de bepalingen van de volgende Europese richtlijnen evenals aan de nationale wetgevingen waarin deze bepalingen zijn overgenomen:</p> <p>Machines 2006/42/EG ; Elektromagnetische Compatibiliteit 2014/30/EG</p> <p>De producten voldoen eveneens aan de geharmoniseerde Europese normen die op de vorige pagina worden genoemd.</p>
(NO) - Norsk EU-OVERENSSTEMMELSESERKLAERING	(PL) - Polski DEKLARACJA ZGODNOŚCI WE
<p>WILO SE erklærer at produktene nevnt i denne erklæringen er i samsvar med følgende europeiske direktiver og nasjonale lover:</p> <p>EG-Maskindirektiv 2006/42/EG ; EG-EMV-Elektrromagnetisk kompatibilitet 2014/30/EG</p> <p>og harmoniserte europeiske standarder nevnt på forrige side.</p>	<p>WILO SE oświadczyc, że produkty wymienione w niniejszej deklaracji są zgodne z postanowieniami następujących dyrektyw europejskich i transponującymi je przepisami prawa krajowego:</p> <p>Maszyn 2006/42/WE ; Kompatybilności Elektromagnetycznej 2014/30/WE</p> <p>oraz z następującymi normami europejskimi zharmonizowanymi podanymi na poprzedniej stronie.</p>
(PT) - Português DECLARAÇÃO CE DE CONFORMIDADE	(RO) - Română DECLARAȚIE DE CONFORMITATE CE
<p>WILO SE declara que os materiais designados na presente declaração obedecem às disposições das directivas europeias e às legislações nacionais que as transcrevem :</p> <p>Máquinas 2006/42/CE ; Compatibilidade Electromagnética 2014/30/CE</p> <p>E obedecem também às normas europeias harmonizadas citadas na página precedente.</p>	<p>WILO SE declară că produsele citate în prezenta declarație sunt conforme cu dispozițiile directivelor europene următoare și cu legislațiile naționale care le transpun :</p> <p>Mașini 2006/42/CE ; Compatibilitate Electromagnetică 2014/30/CE</p> <p>și, de asemenea, sunt conforme cu normele europene armonizate citate în pagina precedentă.</p>
(RU) - русский язык Декларация о соответствии Европейским нормам	(SK) - Slovenčina ES VYHLÁSENIE O ZHODE
<p>WILO SE заявляет, что продукты, перечисленные в данной декларации о соответствии, отвечают следующим европейским директивам и национальным предписаниям:</p> <p>Директива ЕС по машинному оборудованию 2006/42/EC ; Директива ЕС по электромагнитной совместимости 2014/30/EC</p> <p>и гармонизированным европейским стандартам, упомянутым на предыдущей странице.</p>	<p>WILO SE čestne prehlasuje, že výrobky ktoré sú predmetom tejto deklarácie, sú v súlade s požiadavkami nasledujúcich európskych directive a odpovedajúcich národných legislatívnych predpisov:</p> <p>Strojových zariadeniach 2006/42/ES ; Elektromagnetickú Kompatibilitu 2014/30/ES</p> <p>ako aj s harmonizovanými európskych normami uvedenými na predchádzajúcej strane.</p>
(SL) - Slovenščina ES-IZJAVA O SKLADNOSTI	(SV) - Svenska EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE
<p>WILO SE izjavlja, da so izdelki, navedeni v tej izjavi, v skladu z določili naslednjih evropskih direktiv in z nacionalnimi zakonodajami, ki jih vsebujejo:</p> <p>Stroji 2006/42/ES ; Elektromagnetno Združljivostjo 2014/30/ES</p> <p>pa tudi z usklajenimi evropskimi standardi, navedenimi na prejšnji strani.</p>	<p>WILO SE intygar att materialet som beskrivs i följande intyg överensstämmer med bestämmelserna i följande europeiska direktiv och nationella lagstiftningar som inför dem:</p> <p>Maskiner 2006/42/EG ; Elektromagnetisk Kompatibilitet 2014/30/EG</p> <p>Det överensstämmer även med följande harmoniserade europeiska standarder som nämnts på den föregående sidan.</p>
(TR) - Türkçe CE UYGUNLUK TEYİD BELGESİ	
<p>WILO SE bu belgede belirtilen ürünlerin aşağıdaki Avrupa yönetmeliklerine ve ulusal kanunlara uygun olduğunu beyan etmektedir:</p> <p>Makine Yönetmeliği 2006/42/AT ; Elektromanyetik Uyumluluk Yönetmeliği 2014/30/AT</p> <p>ve önceki sayfada belirtilen uyumlaştırılmış Avrupa standartlarına.</p>	

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