

## Wilo-DrainLift XL

- |           |   |            |                                      |
|-----------|---|------------|--------------------------------------|
| <b>D</b>  | Einbau- und Betriebsanleitung                 | <b>TR</b>  | Montaj ve kullanma kılavuzu          |
| <b>GB</b> | Installation and operating instructions       | <b>H</b>   | Beépítési és üzemeltetési utasítás   |
| <b>F</b>  | Notice de montage et de mise en service       | <b>PL</b>  | Instrukcja montażu i obsługi         |
| <b>NL</b> | Inbouw- en bedieningsvoorschriften            | <b>CZ</b>  | Návod k montáži a obsluze            |
| <b>E</b>  | Instrucciones de instalación y funcionamiento | <b>RUS</b> | Инструкция по монтажу и эксплуатации |
| <b>I</b>  | Istruzioni di montaggio, uso e manutenzione   | <b>RO</b>  | Instrucțiuni de montaj și exploatare |
| <b>GR</b> | Οδηγίες εγκατάστασης και                      |            |                                      |

Fig. 10:

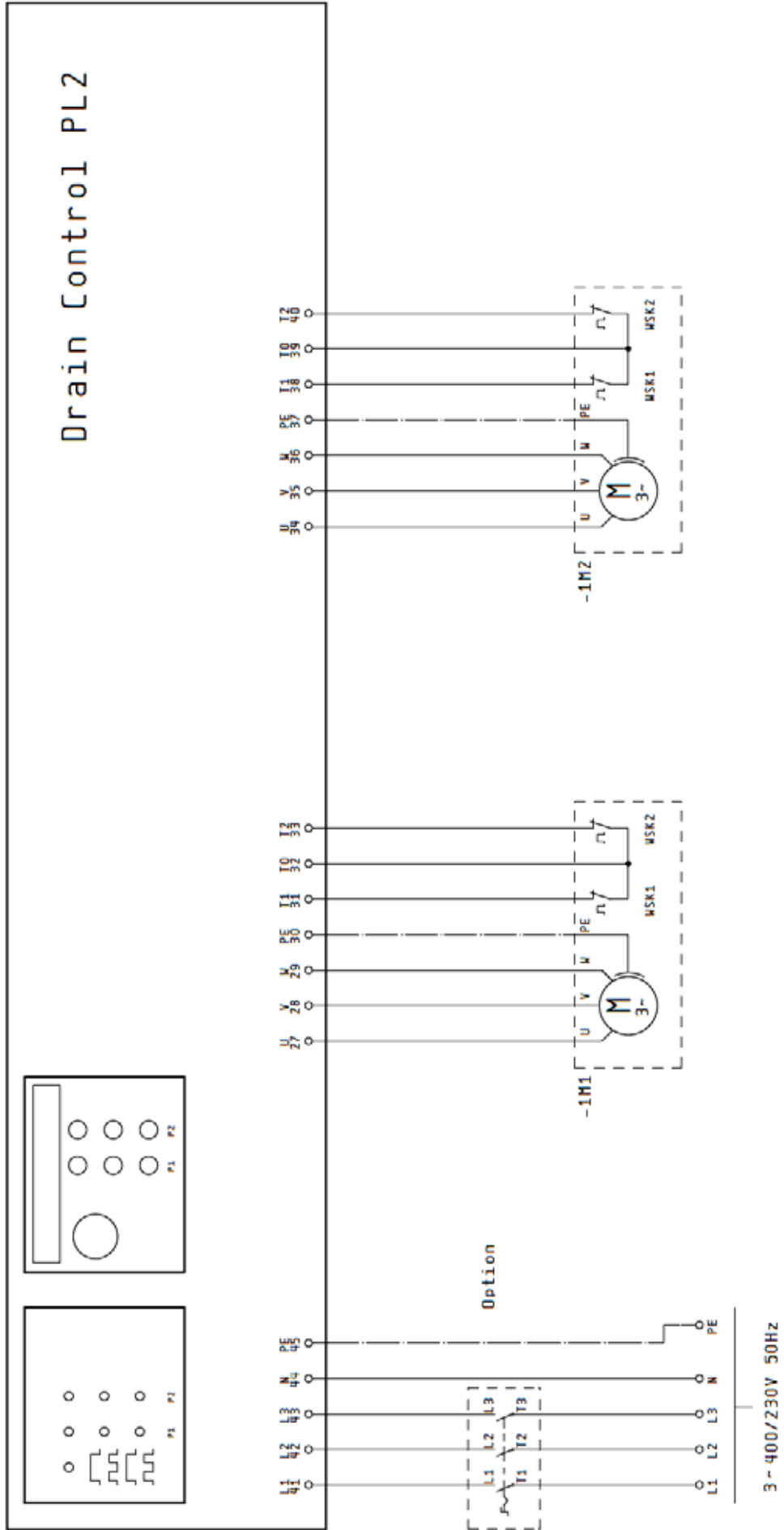
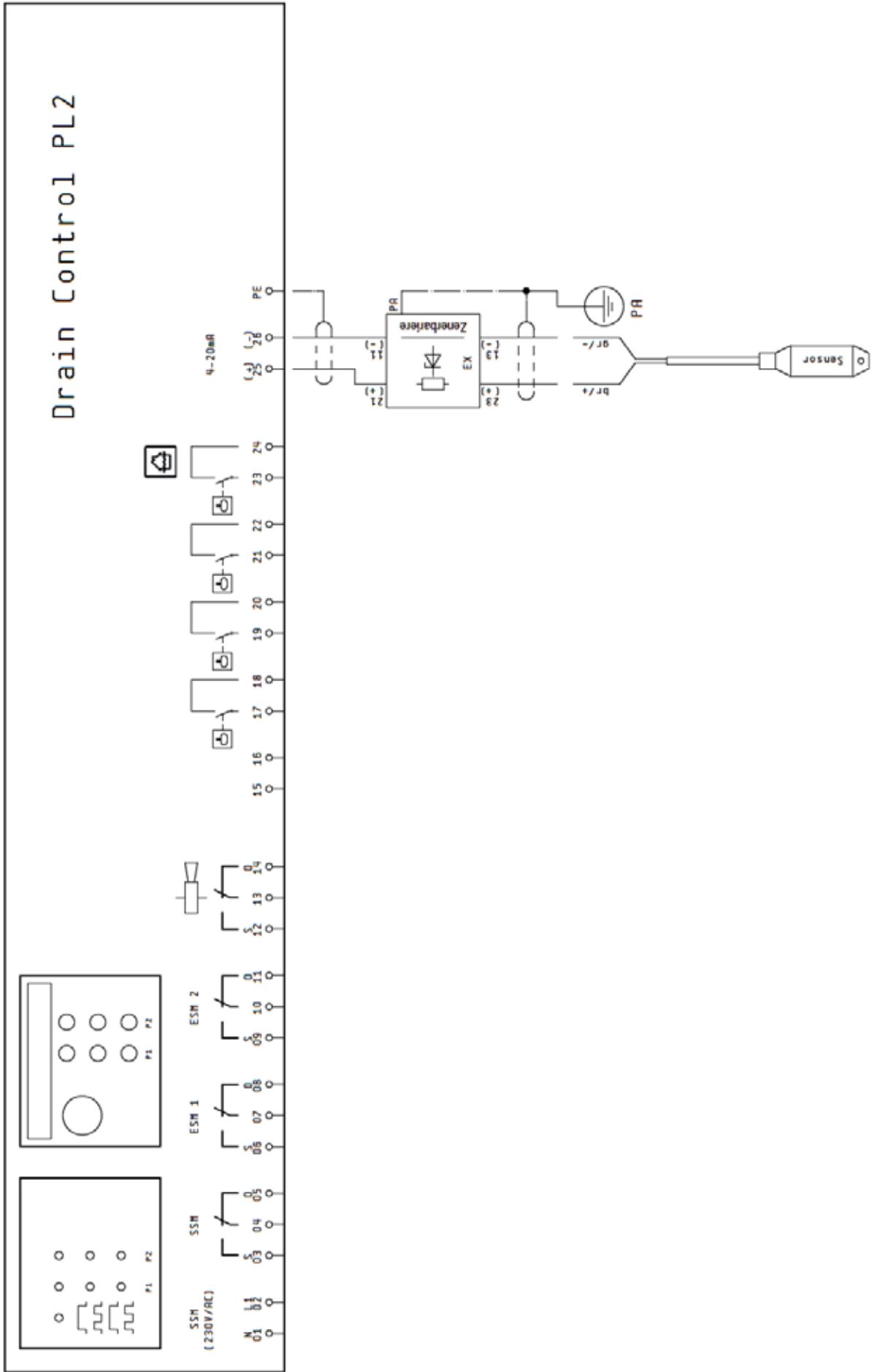


Fig. 11:



## 1 General

### About this document

The language of the original operating instructions is German. 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 at the place where the product is installed. Strict adherence to these instructions is a precondition for the proper use and correct operation of the product. The installation and operating instructions are in accordance with the version of the product and the status of the underlying technical safety regulations and standards at the time of publication.

EC declaration of conformity

A copy of the EC declaration of conformity is a component of these operating instructions. This declaration shall be invalidated if the technical characteristics of the designs stated in the declaration are modified without our prior agreement, or in case of failure to observe the declarations on product/personnel safety given in the operating instructions.

## 2 Safety

These operating instructions contain basic information which must be adhered to during installation, operation and maintenance. For this reason, these operating instructions must, without fail, be read by the service technician and the responsible specialist/operator before installation and commissioning.

It is not only the general safety instructions listed under the main point "safety" that must be adhered to but also the special safety instructions with danger symbols included under the following main points.

### 2.1 Indication of instructions in the operating instructions

**Symbols:**



**General danger symbol**



**Danger from electrical voltage**



**USEFUL NOTE**

**Signal words:**

**DANGER!**

**Acutely dangerous situation**

**Non-observance results in death or the most serious of injuries.**

**WARNING!**

**The user can suffer (serious) injuries. "Warning" implies that (serious) injury to persons is probable if this information is disregarded.**

**CAUTION!**

**There is a risk of damage to the product/system. "Caution" implies that damage to the product is likely if this information is disregarded.**

NOTE: Useful information on handling the product. It draws attention to possible problems.

Information that appears directly on the product, such as

- direction of rotation arrow,
  - identification for connections,
  - rating plate,
  - warning stickers,
- must be strictly complied with and kept in legible condition.

### 2.2 Personnel qualifications

The installation, operating and maintenance personnel must have the appropriate qualifications for this work. Area of responsibility, terms of reference and monitoring of the personnel are to be ensured by the operator. If the personnel are not in possession of the necessary knowledge, they are to be trained and instructed. This can be accomplished if necessary by the manufacturer of the product at the request of the operator.

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

Non-observance of the safety instructions can result in risk of injury to persons and damage to the environment and the product/unit. Non-observance of the safety instructions results in the loss of any claims to damages.

In detail, non-observance can, for example, result in the following risks:

- Danger to persons from electrical, mechanical and bacteriological influences
- Pollution of the environment due to leakage of hazardous materials
- Damage to property
- Failure of important product/unit functions
- Failure of required maintenance and repair procedures

### 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 regulations of the operator are to be complied with.

### 2.5 Safety instructions for the operator

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

- If hot or cold components on the product/the unit lead to hazards, local measures must be taken to guard them against touching.
- Guards protecting against touching moving components (such as the coupling) must not be removed whilst the product is in operation.
- Leakages (e.g. from the shaft seals) of hazardous fluids (which are explosive, toxic or hot) must be led away so that no danger to persons or to the environment arises. National statutory provisions are to be complied with.
- Danger from electrical current must be eliminated. Local directives or general directives [e.g. IEC, VDE etc.] and local power supply companies must be adhered to.

### 2.6 Safety instructions for installation and maintenance work

The operator must ensure that all installation and maintenance work is carried out by authorised and qualified personnel, who are sufficiently informed from their own detailed study of the operating instructions.

Work on the product/unit must only be carried out when at a standstill. It is mandatory that the procedure described in the installation and operating instructions for shutting down the product/unit be complied with.

Immediately on conclusion of the work, all safety and protective devices must be put back in position and/or recommissioned.

### 2.7 Unauthorised modification and manufacture of spare parts

Unauthorised modification and manufacture of spare parts will impair the safety of the product/personnel and will make void the manufacturer's declarations regarding safety. Modifications to the product are only permissible after consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer ensure safety. The use of other parts can nullify the liability from the results of the usage.

### 2.8 Improper use

The operating safety of the supplied product is only guaranteed for conventional use in accordance with Section 4 of the operating instructions.

The limit values must on no account fall under or exceed those specified in the catalogue/data sheet.

### 3 Transport and interim storage

The system and individual components are delivered on a pallet.

Immediately after receiving the product:

- Check the product for damage in transit
- In the event of damage in transit, take the necessary steps with the forwarding agent within the respective time limits.



#### **CAUTION! Risk of property damage!**

**Incorrect transport and interim storage can cause damage to the product.**

- **Only transport the product on the pallet and only use approved handling equipment.**
- **Make sure the product remains stable and does not suffer any mechanical damage during transport.**
- **Prior to installation, store the product on the pallet in such a manner that it remains dry and frost-proof and is not exposed to direct sunlight.**
- **Do not stack.**

### 4 Intended use

The DrainLift XL sewage lifting unit is an automatically operating wastewater lifting unit in accordance with EN 12050-1 for backup-free drainage of sewage that does and does not contain faeces and that originates from building discharge points below the backflow level. The unit is only suitable for domestic sewage as defined in EN 12056-1. According to DIN 1986-3 [in Germany], no explosives or harmful substances may be introduced in high concentrations, such as solid substances, debris, ashes, garbage, sand, plaster, cement, lime, mortar, fibrous materials, textiles, paper towels, diapers, cardboard, coarse paper, synthetic resins, tar, kitchen waste, greases, oils, slaughterhouse waste, disposal of slaughtered animals and animal waste (liquid manure, etc.), toxic, aggressive and corrosive substances, such as heavy metals, biocides, pesticides, acids, bases, salts, cleaning agents and disinfectants, dish-washing or laundry detergents, and such which have a high degree of foam formation or swimming-pool water.

A grease trap should to be provided if greasy sewage accumulates.

According to EN 12056-1, no sewage from drainage objects may be introduced which lie above the backflow level and can be drained by means of gravity.



NOTE: Make sure the national and regional applicable standards and regulations are observed during installation and operation.

The details in the operating instructions for the switchgear should also be observed.



#### **DANGER! Danger of explosion!**

**Sewage containing faeces can lead to gas accumulation in the collection reservoir, which can ignite as a result of improper installation and operation.**

- **If the unit is used for sewage containing faeces, the valid safety regulations for potentially explosive areas are to be observed.**
- **The switchgear is not protected against explosions and is only allowed to be operated outside the explosive area.**
- **Breakdown barriers must be used if level sensors or float switches are used in potentially explosive areas.**



#### **WARNING! Health hazard!**

**The materials used mean that the sewage lifting unit is not suitable for pumping potable water!**

**Contact with sewage poses a health hazard.**



#### **CAUTION! Risk of property damage!**

**Inappropriate materials in the system can cause damage to the product.**

- **Never discharge solids, fibrous substances, tar, sand, cement, ash, coarse paper, paper towels, cardboard, debris, rubbish, animal waste, grease, or oil.**
- A grease trap should to be provided if greasy sewage accumulates.**
- **Improper use and overstraining causes damage to the product. The maximum possible inflow quantity must always be lower than the volume flow of a pump at the respective duty point.**

**Application limits**

The specified maximum volume flow applies for intermittent operation (S3 – 60% / 60 s, i.e. max. 36 s operating time, min. 24 s idle time).

The unit may switch on a maximum of 30 times per hour per pump. The running time of the pump may not exceed 36 s, including the follow-up time (follow-up time = pump running time after the end of pumping water). The operating time and follow-up time (if required) should be set as short as possible.

Furthermore, the operating parameters should be observed in accordance with Table 5.2.

**WARNING! Danger due to overpressure!**

**If the lowest inlet head is higher than 5 m, this will cause dangerous overpressure in the reservoir in the event of a unit failure. If this happens, there will be a risk of the tank bursting. In case of malfunctions, the inlet must be blocked off immediately.**

**WARNING! Risk of burns!**

**Depending on the operating status of the system, the entire pump can become very hot.**

**Touching the pump can cause burns.**

Correct use of the pump/installation also includes following these instructions.

Any use going over and beyond the intended use is considered to be improper.

**5 Product information****5.1 Type key**

Example:	DrainLift XL 2/25 (3~)
DrainLift	Sewage lifting unit
XL	Size
2	2 = double-pump system
/25	Maximum delivery head [m] when Q=0 m <sup>3</sup> /h
(3~)	3~: Three-phase version

5.2 Technical data	DrainLift XL				
	2/10	2/15	2/20	2/25	
Connected voltage	[V]	3~400 ± 10 %			
Connection version		Switchgear with 1.5 m mains cable and 32 A CEE plug, pre-installed			
Power consumption P <sub>1</sub>	[kW]	See unit name plate			
Nominal current	[A]	See unit name plate			
Mains frequency	[Hz]	50			
Protection class		Unit: IP 67 (2 mwc, 7 days) Switchgear: 65			
Speed	[rpm]	2900			
Operating mode		S1, S3-60%/60 s			
Max. switching frequency	[1/h]	60 (30 per pump)			
Max. total delivery head	[mWS]	10	15	20	22
Max. permitted geodesic delivery head	[mWS]	9	13	16	19
Max. permissible pressure in the pressure pipe	[bar]	3			
Max. volume flow	[m <sup>3</sup> /h]	35	37	40	40
Max. fluid temperature	[°C]	40			
Min. fluid temperature	[°C]	3			
Max. ambient temperature	[°C]	40			
Max. solid grain size	[mm]	40			
Sound pressure level (depending on duty point)	[dB(A)]	< 70 * <sup>1)</sup>			
Gross volume	[l]	380			
Switching volume (switching level)	[l]	260 (ON 550 mm)			
Max. inflow in one hour (only at max. possible switching volume)	[l]	15600			
Minimum level for Pump ON switching point	[mm]	550			
Minimum level for Pump OFF switching point	[mm]	80			

5.2 Technical data	DrainLift XL				
		2/10	2/15	2/20	2/25
Dimensions (width/height/depth)	[mm]	835/955/1120			
Diagonal dimension	[mm]	1300			
Net weight	[kg]	108			
Pressure connection	[DN]	80			
Inlet ports	[DN]	50, 100, 150			
Ventilation	[DN]	70			

\*1) Improper system and pipe installation, as well as impermissible operation, can increase the acoustic emissions.

<b>CE</b>
WILO SE Dortmund Nortkirchenstr. 100, 44263 Dortmund, Germany
<b>09</b>
<b>EN 12050-1</b>
Faeces lifting unit for building DN 80
<b>Lifting power</b> – See pump curve
<b>Noise level</b> – TRS
<b>Corrosion protection</b> – coated, or corrosion-resistant materials, inox/composite

Please state all the information on the system name plate when ordering spare parts.

### 5.3 Scope of delivery

Sewage lifting unit, including:

- 1 Switchgear DrainControl PL2/0.3–12.0 A (3~ 400 V) with 1.5 m mains cable and 32 A CEE plug, pre-installed
- 1 Breakdown barrier in the housing with 1 m cable, pre-installed
- 1 Level sensor 0–1 mwc, 10 m cable
- 1 Inlet seal DN 150 (for pipe  $\varnothing$  160 mm)
- 1 Keyhole saw  $\varnothing$  175 for inlet DN 150
- 1 DN 150 hose section with clamps for DN 150 inlet connection
- 1 Hose section PVC  $\varnothing$  50 mm with hose clips for connecting the suction line to the diaphragm hand pump or an inlet DN 50
- 1 Collar for ventilation connection, DN 70
- 1 Set of fixation material
- 1 Flange piece DN 80/100 with flat gasket, flexible hose section, hose clips, bolts and nuts for connecting the discharge pipeline DN 100
- 1 Installation and operating instructions

### 5.4 Accessories

Accessories must be ordered separately. For a detailed list and description, see the catalogue/price list.

The following accessories are available:

- Flange piece DN 80, DN 80/100 (1 pc. DN 80/100 already included in scope of delivery), DN 100, DN 150 for connecting the slide valve on the intake or pressure side to the piping
- Connection set for inlet DN 100 (keyhole saw  $\varnothing$  124, inlet seal)
- Gate valve (DN 80) for discharge pipe
- Gate valve (DN 100, DN 150) for inlet pipe
- Diaphragm hand pump R 1½ (without hose)
- 3-way cock for switching over to the manual suctioning from the pump sump/tank
- Alarm switchgear
- Horn 230 V / 50 Hz
- Flash light 230 V / 50 Hz
- Signal lamp 230 V / 50 Hz



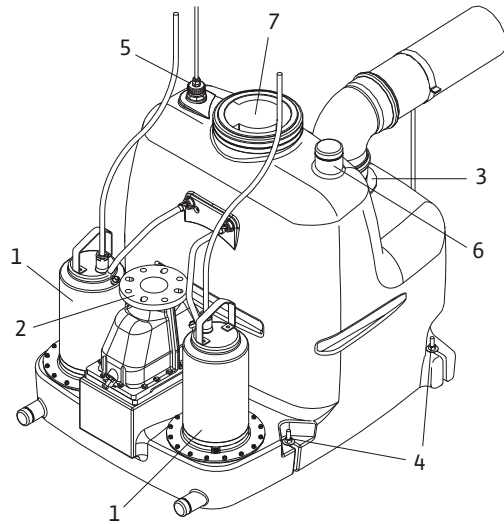
## 6 Description and function

### 6.1 Description of the unit

The DrainLift XL sewage lifting unit (Fig. 1) is a connection-ready, fully submersible sewage lifting unit (flooding height: 2 mwc, flooding time: 7 days) with a gas and watertight collection tank and buoyancy safeguards.

The integrated centrifugal pumps are equipped with clogging-free vortex impellers. The level sensor (Fig. 1, no. 5) registers the level in the tank and sends this value to the switchgear, which switches the pumps on or off automatically. Refer to the operating instructions of the switchgear for a detailed description of the functions.

Fig. 1: Description of the unit



1	Pump
2	Non-return valve
3	Inlet DN 150
4	Buoyancy safeguards
5	Level sensor
6	Ventilation connection piece DN 70
7	Maintenance aperture

### 6.2 Function

The discharged sewage is collected in the collection tank of the lifting unit. The inlet is from a sewage inlet pipe which can be connected as required to the horizontal surface (rear of the tank).

The DrainLift XL sewage lifting unit is delivered with switchgear and pre-installed CEE plug with phase inverter, breakdown barrier and level sensor supplied in the same package. The water level in the tank is registered by means of the integrated level sensor. If the water level rises as far as the set activation point then one of the pumps mounted on the tank is switched on and the collected sewage is automatically pumped into the connected external sewage line. If the water level continues to rise, the second pump is activated. When the high water level is reached, an optical and audible signal is issued, the alarm signal contact is actuated and there is additionally a forced switch-on of the pump(s). In order for both pumps to be loaded evenly, pump cycling occurs after each pump cycle. If one of the pumps fails, the other pump takes over the entire pumping work.

The pump(s) are deactivated once the deactivation level is reached. To avoid sudden valve closures, a follow-up time can be set in the switchgear in order for the base-load pump to be operated up to slurping operation. The follow-up time is understood to be the time that elapses after the level drops below the deactivation point until the base-load pump switches off.

A dual non-return valve is built into the unit so that a non-return valve required in acc. with EN 12056 no longer has to be installed in the pressure pipeline. The pressure channels of both pumps are joined in the non-return valve. A venting mechanism allows the pressure pipe to be drained into the tank, if necessary.

## 7 Installation and electrical connection



### **DANGER! Risk of fatal injury!**

Incorrect installation and inexperienced electrical connection can pose a risk of fatal injury.

- The installation and electrical connection may only be carried out by qualified personnel in accordance with the applicable regulations!
- Accident prevention regulations must be observed!



### **DANGER! Danger of suffocation!**

Toxic or health-hazardous substances in sewage sumps can lead to infections or suffocation.

- For safety reasons, a second person must be present at all times when working in sumps.
- Make sure the installation location is ventilated sufficiently.

### 7.1 Preparing for installation



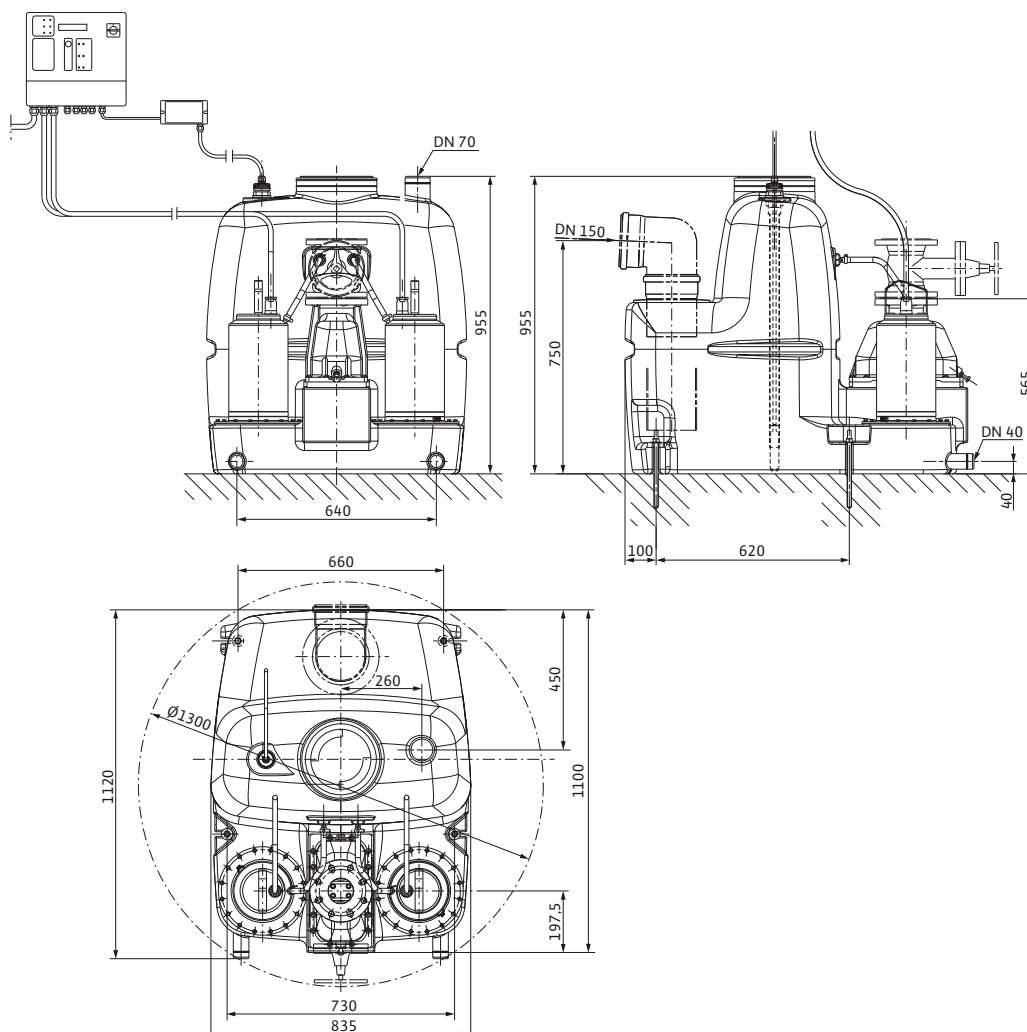
### **CAUTION! Risk of property damage!**

Incorrect installation can result in damage to the product.

- Only use qualified personnel for the installation work!
- Observe national and regional regulations!
- Observe the installation and operating instructions for the accessories!
- Never pull the cable when setting up/aligning the system!

In particular the valid regional regulations (e.g. in Germany, the "Landesbauordnung (federal regulations for buildings), DIN 1986-100") and, in general, the corresponding specifications of EN 12050-1 and EN 12056 (Gravity Drainage Systems Inside Buildings) should be observed when installing lifting units.

Fig. 2: Installation plan



- Observe the dimensions according to the installation plan (Fig. 2).
- According to EN 12056-4, installation rooms for lifting units must be of sufficient size so that the unit is freely accessible for operating and maintenance work.
- There must be a sufficient working space of at least 60 cm in width and height available next to and above all parts to be operated and subjected to maintenance.
- The installation room must be frost-proof, ventilated and well-lit.
- The installation surface must be firm (suitable for accommodating dowels), horizontal and flat.
- The course of any existing or still-to-be installed inlet, pressure and ventilation lines is to be checked with regard to connection options to the unit.
- Select an installation location suitable for the size of the unit and accessibility of the connections.
- Dimensions of the switchgear (H x W x D): 320 mm x 300 mm x 120 mm
- Install the switchgear and breakdown barrier at a dry and frost-proof location.
- The site must also be protected from direct sunlight.
- Observe the accessories and catalogue specifications for outdoor installations.
- Observe the installation and operating instructions for the accessories!

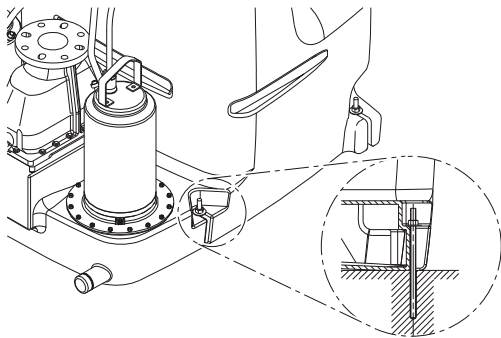
## 7.2 Installation

Place the unit on a flat solid floor and align.

According to EN 12056-4, sewage lifting units must be installed in such a manner that they cannot twist and turn.

Units which threaten to float must be installed so that they are anti-buoyant.

Fig. 3: Buoyancy safeguard



Fix the unit to the floor with the enclosed fixation material (Fig. 3).

- Mark the position of the drilled holes on the floor for fastening in the slots on the side of the tank
- Drill holes in the floor.
- Install the supplied threaded rods according to the installation drawing and the supplied instruction manual for the mortar cartridges
- Fasten the tank to the floor so that it is anti-buoyant after the curing of the mortar cartridges

## 7.3 Connection of the piping

All piping must be installed without tension in a noise-insulated and flexible manner. The unit must not be subjected to any pipeline forces or torques. The pipes (including valves) are to be fastened and supported in such a manner that neither tensile nor compressive forces are applied to the unit.

All line connections must be established with care. Carefully tighten any connections with hose clamps (**tightening torque of 5 Nm**).

Do not reduce the pipe diameter in the direction of flow.

According to EN 12056-4, a gate valve is always required in the inlet pipe in front of the tank and behind the non-return valve. (Fig. 9).

### 7.3.1 Discharge piping



**CAUTION! Risk of property damage!**

Occurring pressure surges (e.g. when closing the non-return valve) can be several times more than the pump pressure, depending on the operating conditions (to avoid this, see also 8.2.3 Setting the pump run follow-up time).

- The longitudinal force-fitted connection elements of the piping should therefore be observed in addition to the corresponding pressure resistance.
- The discharge piping, including all installation parts, must reliably withstand the operating pressures which occur.

To protect against any backflow out of the main public sewer, the pressure pipeline is to be designed as a "pipe loop", the bottom edge of which must lie at the highest point above the locally defined backflow level (usually at street level) (see also Fig.9).

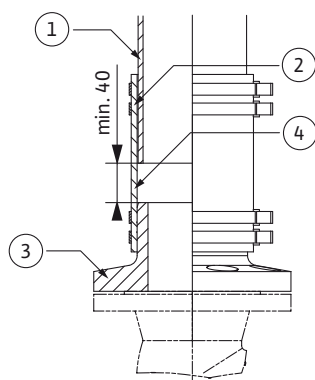
The discharge piping is to be installed so that it is frost-proof.  
Mount the gate valve (DN 80) to the pressure connection of the unit (available as an accessory, nuts, washers, flat gasket included). Support the weight of the valves.



**CAUTION! Risk of property damage!**  
**Using valves which are not Wilo accessories may cause malfunctions or damage to the product.**

Afterwards, connect the pressure pipeline directly to the gate valve (flange piece, flexible hose section, flat gasket and connection elements included).

Fig. 4: Flexible discharge pipe connection



To avoid the transfer of forces and vibrations between the unit and the discharge piping, the connection should be flexible. Therefore keep a distance between the flange piece and pressure pipe (Fig. 4).

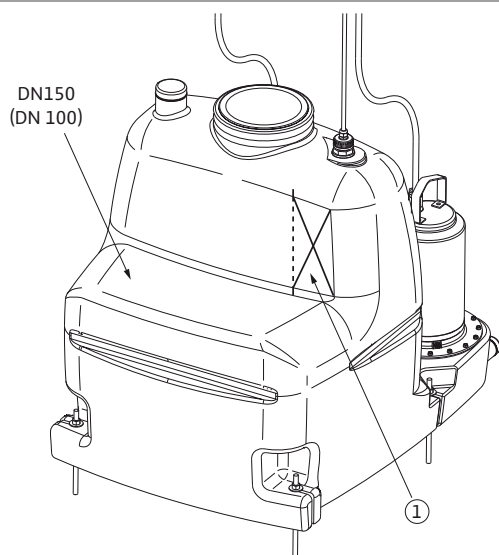
1	Pressure pipe
2	Hose sleeve
3	Flange piece
4	Keep a distance of approx. 40–60 mm

### 7.3.2 Inlet connection

Install the inlet pipes so that they can run empty of their own accord.

Only introduce the main inlet pipe DN 150 or DN 100 into the tank in the horizontal surface (Fig. 5).

Fig. 5: Permissible surfaces for the main inlet port (DN 150 / DN 100)



**CAUTION! Risk of property damage!**  
**Connecting the inlet pipe outside of the marked surfaces can lead to leakage, malfunctions and damage to the product.**

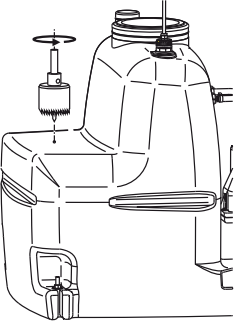
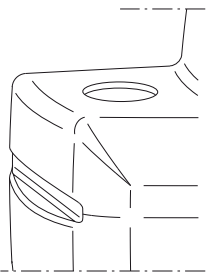
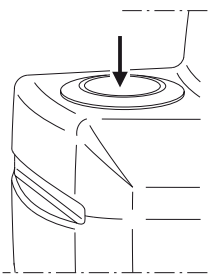
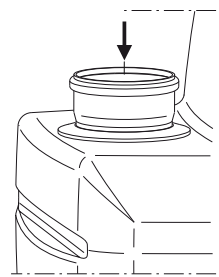
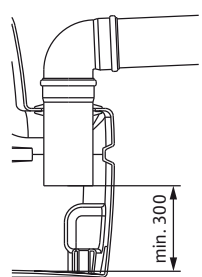
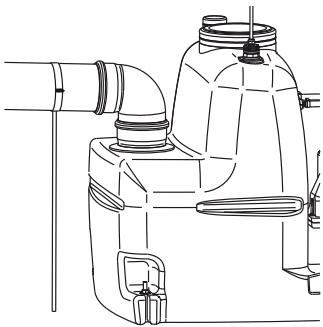
- Select the position and pipe installation so that surge-like water entry and strong air entry are avoided as much as possible.
- It is possible to connect the inlet pipe into the vertical surface (above the horizontal connection surface).

**Leave out the area of the level sensor (Fig. 5, no. 1) in this case!**



**CAUTION! Risk of malfunctions!**  
**Surge-like water entry can impair the function of the unit.**  
**Connect the inlet pipe so that the entering water flow does not hit the float of the level control directly.**

Fig. 6: Setting up the inlet port (DN 150 / DN 100)

 <p>1.</p>	<p>1.</p> <ul style="list-style-type: none"> <li>• Define the position of the middle of the inlet – and mark it</li> <li>• Cut the hole using the keyhole saw <math>\varnothing 175</math> (DN 150)</li> <li>• Make sure the excess material in the drill bit is removed completely. *)</li> </ul>
 <p>2.</p>  <p>3.</p>	<p>2.</p> <ul style="list-style-type: none"> <li>• Make sure the cut surface is clean! Remove burrs!</li> </ul> <p>3.</p> <ul style="list-style-type: none"> <li>• Insert the inlet seal</li> <li>• Moisten the inner surface of the seal with lubricant</li> </ul>
 <p>4.</p>  <p>5.</p>	<p>4.</p> <ul style="list-style-type: none"> <li>• Insert the inlet pipe – HT pipe DN 150</li> </ul> <p>5.</p> <ul style="list-style-type: none"> <li>• Push-in depth: minimum 30 mm beyond the seal, maximum 300 mm above the base of the tank.</li> </ul>
 <p>6.</p>	<p>6.</p> <ul style="list-style-type: none"> <li>• Connect the inlet pipe and inlet seal using hose clips.</li> <li>• Set the pipe clips correctly in order to secure the inlet pipe to prevent it from slipping in the seal and in order to hold the weight of the pipe.</li> </ul>

\*) Speed max. 200 rpm; if necessary, put the keyhole saw down once in a while to remove drilled material. If this material is not completely removed, the tank material heats up and starts to melt; Interrupt the cutting process, allow to cool and clean the keyhole saw; Lower the speed, vary the feed pressure, and then maybe change the direction of rotation (anti-clockwise rotation max. 200 rpm), until there is no more material.



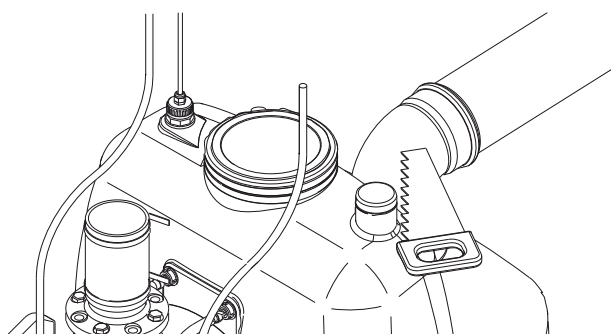
NOTE: Check to make sure that the cut diameter is 175 mm for DN 150 or 124 mm for DN 100 once in a while, since the leak-tightness of the pipe connection depends on this decisively.

According to EN 12056-4, a gate valve (accessory) is required in the inlet pipe in front of the tank if the unit is installed inside the building in (Fig.9).

### 7.3.3 Bleeding (DN 70)

EN12050-1 stipulates that the unit must be connected to a ventilation line which vents via the roof and is absolutely necessary for the perfect working order of the unit. The connection is made on the connecting piece DN 70 to the tank roof using the enclosed Konfix connector. For this purpose, the base of the connecting piece DN 70 is sawn off about 15 mm beyond the top edge of the connecting piece and above the lip (see Fig. 7). Remove any burrs and excess material. Push the Konfix connector up to the inner collar and fasten with the enclosed hose clip. Afterwards, open by pulling off the tag and pushing in the venting pipe with some lubricant. Secure the venting pipe against slipping out using clamps, and always install with a downward incline toward the unit.

Fig. 7: ventilation connection DN 70

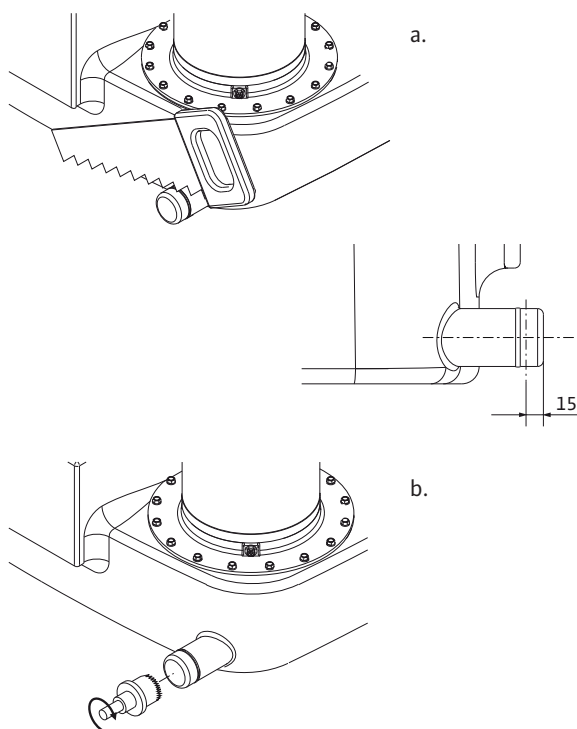


1. Saw off the base of the connecting piece DN 70 – cutting edge 15 mm beyond the top edge of the connecting piece and above the lip
2. Remove burrs and any excess material
3. Push on the Konfix connector and secure it
4. Open the Konfix connector – pull off the tag
5. Push in the venting pipe – use lubricant if necessary

### 7.3.4 Emergency drain connection (diaphragm hand pump)

It is always recommended to install a diaphragm hand pump (accessory) for draining the tank in an emergency. The suction line for the diaphragm hand pump (outer diameter 50 mm) is connected using one of the two connecting pieces ( $\varnothing$  50 mm) on the front side of the tank (Fig. 8).

Fig. 8: Connection of diaphragm hand pump



Remove the base of the connecting piece  
To do this, either

- a. use a saw

Cut edge about 15 mm from the base of the connecting pipe and before the lip

Remove burrs and any excess material.

or

- b. use a suitable keyhole saw

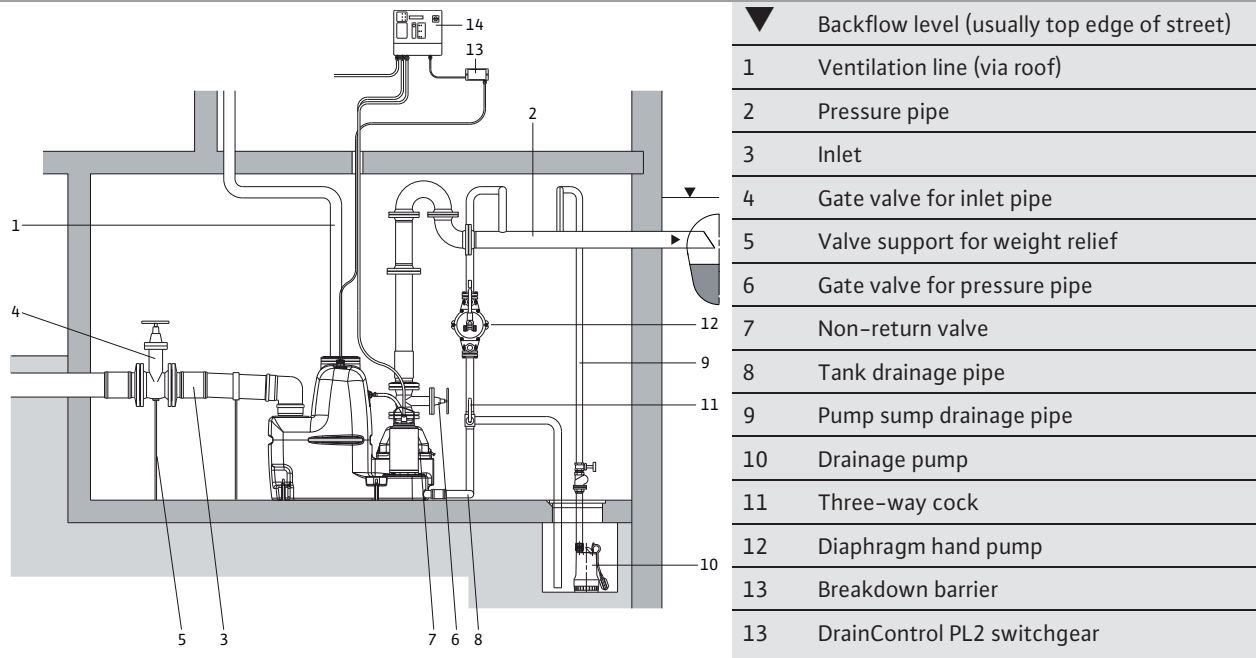
Remove burrs and any excess material.

### 7.3.5 Basement drainage

According to EN 12056-4, a pump sump is to be provided for the automatic drainage of the installation room for faeces lifting units (Fig.9).

- Design pump (item 10) according to the delivery head of the unit. The dimensions of the pit in the floor of the installation room should be at least 500 x 500 x 500 mm.
- By switching, a 3-way cock (item 11, accessories) allows both the tank to be manually drained as well as the pump sump using a diaphragm hand pump (no. 12).

Fig. 9: Installation example



### 7.4 Electrical connection



#### **DANGER! Risk of fatal injury!**

**Improper electrical connections pose a risk of fatal injury due to electric shock.**

- **Only allow the electrical connection to be made by an electrician approved by the local electricity supplier and in accordance with the local regulations in force.**
- **Observe the installation and operating instructions for the switchgear and the accessories.**
- **Disconnect the power supply before starting any work**
- The current type and voltage of the mains connection must correspond to the specifications on the name plate.
- Mains side fuse protection:
  - DrainLift XL 2/10: 25 A, slow
  - DrainLift XL 2/15: 25 A, slow
  - DrainLift XL 2/20: 25 A, slow
  - DrainLift XL 2/25: 25 A, slow



**NOTE:** To increase the operational reliability, it is mandatory for an automatic circuit breaker (which disconnects all power leads) with K characteristic to be used.

- Earth the system according to regulations.
- It is extremely important to use a residual-current-operated protection switch  $\leq 30$  mA in accordance with the applicable local regulations.
- The switchgear and breakdown barrier must be installed in dry, overflow-proof rooms. The national regulations are to be observed for the positioning [in Germany: VDE 0100].
- Ensure the separate supply of the alarm switchgear (accessory) in accordance with the rating plate data. Connect the alarm switchgear.
- Apply the clockwise rotating field.
- The technical connection conditions of the local energy supply company are to be observed for the connection.

#### 7.4.1 Switchgear mains connection

- Mains connection: 3~400 V + N + PE (L1, L2, L3, N, PE)
- Version: Switchgear with CEE plug pre-installed [in accordance with VDE 0623 in Germany].
- Connect the clockwise rotating field

#### 7.4.2 Connection of the pumps (Fig. 10)

- The pumps are to be wired with the switchgear.
- Undo the housing screws and remove the terminal cover.
- Guide the cable ends of the pump connection line through the threaded cable connections.
- Wire up the cable ends in accordance with the marking on the terminal strips and the specifications in the wiring diagram:
  - Mains connection of the pump 1 to the terminals 27, 28 and 29.
  - Mains connection of the pump 2 to the terminals 34, 35 and 36.
  - Earth conductor to the remaining PE terminal.
  - Connection of the thermal winding contact (WSK) pump 1 to terminals 31 and 32
  - Connection of the thermal winding contact (WSK) pump 2 to terminals 38 and 39

#### 7.4.3 Connection of the level sensor (Fig. 11)

- The level sensor must be wired directly with the breakdown barrier.
- Undo the housing screws and remove the cover.
- Feed the cable ends from the level sensor through the cable bushing.
- Wire up the cable ends according to the information in the wiring diagram:
  - Brown wire (+) to terminal 23 (+) of the breakdown barrier
  - Green wire (-) to terminal 13 (-) of the breakdown barrier
  - Blue wire (shield) to PE terminal
  - The cable of the breakdown barrier with a signal level of 4–20 mA must be connected to terminals 25 (+) and 26 (-) in the switchgear using two-wire technology.
- Close the cover of the breakdown barrier and the switchgear, and tighten the housing screws



#### **DANGER! Danger of explosion!**

**If a level sensor is used in potentially explosive areas there is a danger of explosion.**

- **Always use a breakdown barrier (Zener barrier) between the switchgear and the level sensor in potentially explosive areas.**
- **Observe the safety instructions in the operating instructions for the breakdown barrier.**



#### NOTE:

Observe the correct polarity when connecting the level sensor and the breakdown barrier.

#### 7.4.4 Alarm signal connection

The DrainLift XL system is factory-fitted with an acoustic signal transmitter in the switchgear.

An external alarm switchgear, a horn or a flash light can be connected via a potential-free contact (SSM) in the switchgear. Contact load:

- Permitted minimum: 12 V DC, 10 mA
- Permitted maximum: 250 V AC, 1 A



#### **DANGER! Risk of fatal injury!**

**There is a danger of electric shock by touching live components when working on the open switchgear.**

**This work may only be carried out by qualified personnel.**

**To connect the alarm signal, switch off the device so that it is voltage-free and secure it against being switched back on again by unauthorised persons.**

Comply with the Installation and operating instructions of the DrainControl PL2 switchgear!

- Remove the power plug!
  - Open the cover of the switchgear.
  - Remove the protective cover from the threaded cable connection.
  - Feed the cable through the screwed connection and connect it to the potential-free alarm contact in accordance with the wiring diagram.
  - After connecting the cable for the alarm signal, close the cover of the switchgear and tighten the threaded cable connection.
  - Plug in the mains plug again.
- Refer to the operating instructions of the switchgear for a detailed description of the connection options and operation.



## 8 Commissioning

It is recommended to have commissioning performed by Wilo's customer service.

### 8.1 Inspection of the unit



#### CAUTION! Risk of property damage!

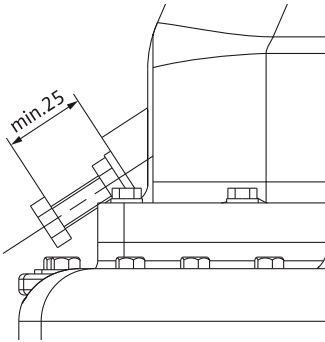
Dirt and solids as well as incorrect commissioning can cause damage to the unit or individual components during operation.

- Clean the entire unit to remove any dirt, in particular solids, prior to commissioning.
- Observe the installation and operating instructions for the switchgear and the accessories.

Commissioning may be carried out only if the relevant safety regulations, VDE regulations as well as regional regulations are met.

- Check for the presence of and proper versions of all required components and connections (inlets, discharge pipe with check valve, ventilation via the roof, floor fixation, electrical connection).
- Check the position of the venting screw on the non-return valve to make sure the flap can move freely in its seat and for the sealing position of the sealing nut.

Fig. 12: Position of the venting screw while the unit is in operation



#### CAUTION! Risk of property damage!

If the venting screw with sealing nut is not in the required position, this can lead to damage on the flap and unit, as well as to high noise development (Fig. 12).

### 8.2 Initial commissioning

- Plug in the mains plug.
- Check or make the settings acc. to sections 8.2.1, 8.2.2 and 8.2.3.
- Open the check valves.
- Fill the system via the connected inlet until each pump has pumped out at least once and the pressure pipeline is completely filled.  
The filling level in the tank must not rise when the discharge piping is filled and the inlet closed. If the filling level continues to rise, the flap of the non-return valve is leaky (must check the flap and the position of the venting screw).  
For a test start-up, the "manual mode" button on the switchgear can also be pressed before reaching the switch-on level in the tank.
- Check the unit and pipe joints for impermeability and perfect function (switch the pump on and off).
- Fill the unit with a maximum possible inlet and check whether the unit is working perfectly. Observe in particular:
  - Correct position of switching points.
  - Adequate volume flow of the pumps at maximum flow whilst the pump is running (level must fall).
  - Vibration-free operation of the pumps without air inclusions in the fluid.



#### CAUTION! Risk of property damage!

Air in the fluid causes considerable vibrations which can destroy the pumps and the entire unit, depending on the respective operating conditions of the pumps. The minimum water level in the tank for the "Pump ON level switching point" (see technical data) must be guaranteed.

### 8.2.1 Switchgear settings

- During the initial commissioning it is necessary to set the unit parameters on the switchgear, see also the installation and operating instructions for the switchgear.
- Compare the default value of the motor current with the specifications on the name plate of the motor and, if necessary, correct the settings.
- Set the maximum value of the sensor to 1.0 mwc in the menu item “20 mA → level”.

### 8.2.2 Setting the switching level

The level for switching the pumps and the alarm can be selected as required in steps of 1 cm.

Recommended settings:

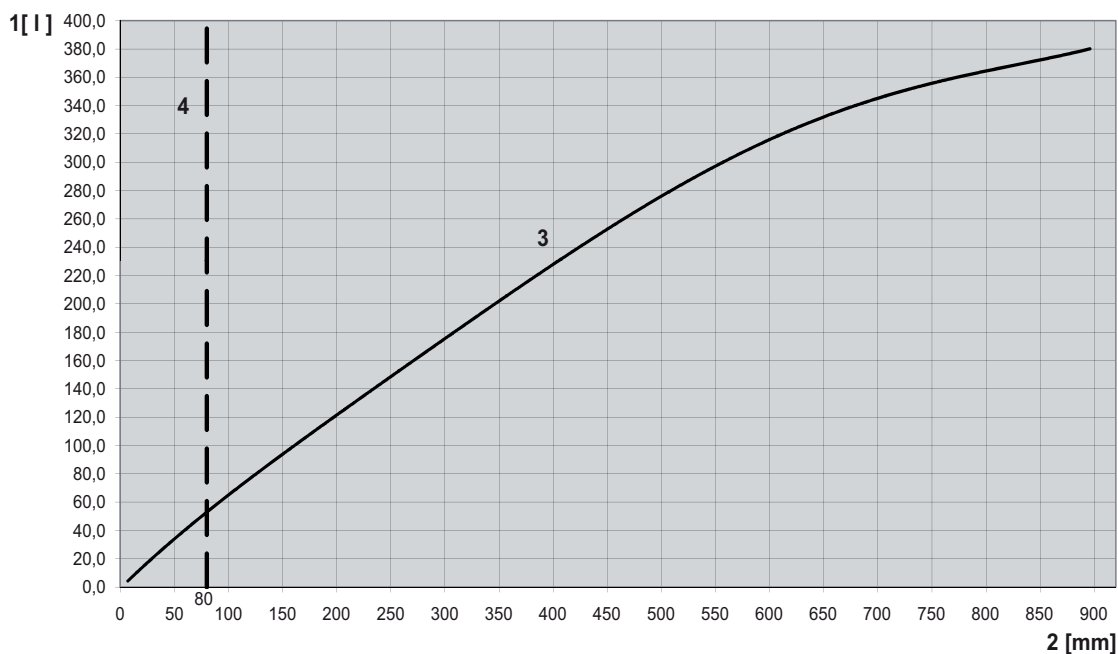
- Base load ON: 550 mm
- Base load OFF: 80 mm
- Peak load ON: 650 mm
- Peak load OFF: 400 mm
- High water (alarm): 750 mm

If you wish to use different switching points, you must comply with the supplied filling level curve (Fig. 13). The filling level display on the switchgear directly corresponds to the level in the tank in this case.

Always note the following points, in particular in case of deviations from the recommended settings:

- The filling level probe must be in contact with the base of the tank.
- According to EN 12056-4, the switching volume should be sufficient to allow the volume of the discharge piping to be replaced during each pump cycle.
- The level specifications in the technical data table should be observed (minimum values for activation and deactivation level).
- If the pump activation level is set higher than the inlet height, there will be a risk of back-flow in the connected objects.
- Do not exceed 80 mm for the base load OFF switching point. If additional pumping out is required, this must only be done by setting the follow-up time accordingly (see 8.2.3).
- The base load OFF and peak load OFF switching points should be at least 50 mm apart.

Fig. 13: Filling level curve



1 Tank fill volume [l]

2 Water level above installation level [mm]

3 Filling level curve

4 Minimum level base-load pump OFF<sub>min</sub>

### 8.2.3 Setting the pump follow-up time

The pump follow-up time must be set in the "Follow-up" menu in the switchgear.

- If, after switching off the pump when only water has been pumped without slurping (audible pumping of a water/air mixture), there is no or just a slight flap knock (closing noise of the flap), the pump run-time should be set so that the pump switches off shortly before slurping starts.
- If the flap slams closed after the pump switches off combined with vibrations in the unit and pipework, this is to be stopped by adjusting the pump follow-up time. To do this, adjust the run-on time in the "Follow-up" menu for the pump running time until it is possible to hear slurping of the water/air mixture at the end of the pumping procedure. The slurping time should not exceed 3 s.



#### **CAUTION! Risk of property damage!**

**Fluid hammer (by the closing of the non-return valves) can destroy the unit and discharge pipeline. They are to be avoided onsite by means of appropriate measures (e.g. additional valve with counterweight, follow-up time of the pumps).**

### 8.3 Decommissioning

The unit must be decommissioned prior to maintenance or dismantling work.



#### **WARNING! Risk of burns!**

**Depending on the operating status of the system, the entire pump can become very hot. Touching the pump can cause burns.**

**Allow the unit and pump to cool to room temperature.**

#### **Dismantling and installation**

- Dismantling and installation by qualified personnel only!
- Disconnect the system from the power supply and secure it against being switched on again.
- Depressurise any pressure parts before carrying out any work on them.
- Close the gate valve (inlet and pressure pipe).
- Empty the collection reservoir (e.g. using diaphragm hand pump).
- Unscrew and remove the maintenance cover for cleaning.



#### **DANGER! Risk of infection!**

**If the unit or unit components are to be sent in for repairs, the used unit should be drained and cleaned before transport for reasons of hygiene. Furthermore, all parts which may be touched must be disinfected (spray disinfection). The parts must be packed in tear-proof plastic bags of sufficient size in such a manner that they are tightly sealed and leak-proof. They are to be sent in without delay via instructed forwarding agents.**

After longer periods of non-use, check the unit for contaminants and clean, if necessary.

## 9 Maintenance



### **DANGER! Risk of fatal injury!**

There is a mortal danger through shock when working on electrical equipment.

- Before all maintenance and repair work, switch off the unit from the power supply and make sure it cannot be switched on by unauthorised persons.
- Work on the electrical part of the unit may only be carried out by a qualified electrician.



### **DANGER!**

Toxic or harmful substances in sewage can cause infections or suffocation.

- Ventilate the installation site sufficiently prior to any maintenance work.
- Use appropriate protective equipment during maintenance work to prevent any risk of infection.
- For safety reasons, a second person must be present at all times when working in sumps.
- Risk of explosion when opening (avoid open sources of ignition)!
- Observe the installation and operating instructions for the unit, switchgear and accessories!

The unit operator must make sure all the maintenance, inspection and installation work is performed by authorised and qualified personnel who have informed themselves sufficiently by studying the installation and operating instructions in detail.

- Sewage lifting units are to be subjected to maintenance by experts in accordance with EN 12056-4.

The intervals must not exceed:

- ¼ year in the case of commercial companies
- ½ year for units in multi-family houses
- 1 year for units in single-family houses.
- A maintenance report must be issued.

It is recommended to have the unit serviced and inspected by Wilo's customer service.



NOTE: Expensive repairs can be avoided and trouble-free operation of the unit achieved with a minimum of maintenance by compiling a maintenance plan. Wilo's customer service is available for commissioning and maintenance work.

After maintenance and repair work, install and connect the unit as described in the chapter "Installation and electrical connection". Switch on the system as described in the "Commissioning" chapter.

## 10 Faults, causes and remedies

**Have faults remedied only by qualified personnel.**

**Observe the safety instructions in 9 Maintenance.**

- Observe the installation and operating instructions for the unit, switchgear and accessories!
- If the operating fault is unable to be remedied, please consult a specialist technician, Wilo service or the closest Wilo representative.

Faults	Code: Cause and remedy
The pump doesn't pump properly	1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17
Volume flow too low	1, 2, 3, 4, 5, 7, 8, 11, 12, 13
Current consumption too high	1, 2, 3, 4, 5, 7, 13
Delivery head too small	1, 2, 3, 4, 5, 8, 11, 12, 13, 16
Pump running roughly /loud noise	1, 2, 3, 9, 12, 13, 14, 16

Cause	Remedy <sup>1)</sup>
1	Pump inlet or impeller clogged • Remove deposits in the pump and/or tank
2	Incorrect direction of rotation • Swap two phases of the current feed
3	Wear to inner parts (impeller, bearing) • Replace worn parts
4	Operating voltage too low
5	Running on two phases (only with 3~ version) • Replace defective fuse • Check line connections
6	Motor not running, since no voltage available • Check electrical installation
7	Motor winding or electrical line defective <sup>2)</sup>
8	Non-return valve clogged • Clean non-return valve
9	Excess water level drop in the tank • Check/exchange the level monitor
10	Level monitor defective • Check the level monitor
11	Slide valve in pressure pipe not or insufficiently open • Open slide valve completely
12	Impermissible amount of air or gas in the fluid <sup>2)</sup>
13	Radial bearing in motor defective <sup>2)</sup>
14	Unit-related vibrations • Check piping for flexible connection
15	Temperature monitor for winding monitoring switched off due to excessive winding temperature • Motor switches on again automatically after cooling down.
16	Pump ventilation clogged • Clean ventilation line
17	Thermal overcurrent monitor triggered • Reset overcurrent monitor in switchgear.

<sup>1)</sup> To remedy faults on parts under pressure, depressurise them first (vent the non-return valve and drain the tank, if necessary with diaphragm hand pump).

<sup>2)</sup> Further enquiry required

### 11 Spare parts

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

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

### 12 Disposal

Damage to the environment and risks to personal health are avoided by the proper disposal and appropriate recycling of this product.

1. Draw on public or private waste management companies for the disposal of the product or components.
2. For more information on the correct disposal, please contact your local council or waste disposal office or the supplier from whom you obtained the product.

**Subject to change without prior notice!**

**D EG – Konformitätserklärung**  
**GB EC – Declaration of conformity**  
**F Déclaration de conformité CE**

(gemäß 2006/42/EG Anhang II,1A, 89/106/EWG Anhang 4 und 2004/108/EG Anhang IV,2,  
according 2006/42/EC annex II,1A, 89/106/EEC annex 4 and 2004/108/EC annex IV,2,  
conforme 2006/42/CE appendice II,1A, 89/106/CEE appendice 4 et 2004/108/CE appendice IV,2)

Hiermit erklären wir, dass die Bauart der Baureihe :  
*Herewith, we declare that the product type of the series:*  
*Par le présent, nous déclarons que l'agrégat de la série :*

(Die Seriennummer ist auf dem Typenschild des Produktes angegeben. /  
*The serial number is marked on the product site plate. /*  
*Le numéro de série est inscrit sur la plaque signalétique du produit.)*

**DrainLift M1/8**  
**DrainLift M2/8**  
**DrainLift L**  
**DrainLift XL**

in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entspricht:  
*in its delivered state complies with the following relevant provisions:*  
*est conforme aux dispositions suivantes dont il relève:*

**EG-Maschinenrichtlinie**  
**EC-Machinery directive**

**2006/42/EG**

**Directives CE relatives aux machines**

Die Schutzziele der Niederspannungsrichtlinie 2006/95/EG werden gemäß Anhang I, Nr. 1.5.1 der Maschinenrichtlinie 2006/42/EG eingehalten.  
*The protection objectives of the low-voltage directive 2006/95/EC are realized according annex I, No. 1.5.1 of the EC-Machinery directive 2006/42/EC.*

*Les objectifs protection de la directive basse-tension 2006/95/CE sont respectées conformément à appendice I, n° 1.5.1 de la directive CE relatives aux machines 2006/42/CE.*

**Elektromagnetische Verträglichkeit – Richtlinie**  
**Electromagnetic compatibility – directive**  
**Compatibilité électromagnétique – directive**

**2004/108/EG**

**Bauproduktenrichtlinie**  
**Construction product directive**  
**Directive de produit de construction**

**89/106/EWG**

i.d.F./ as amended/ avec les amendements suivants :  
93/68/EWG

Angewendete harmonisierte Normen, insbesondere:  
*Applied harmonized standards, in particular:*  
*Normes harmonisées, notamment:*

**EN ISO 12100**                      **EN 60730-2-16**  
**EN ISO 14121-1**                **EN 61000-6-2**  
**EN 60034-1**                      **EN 61000-6-3**  
**EN 60204-1**                      **DIN EN 12050-1**  
**EN 60335-2-41**                 **DIN EN 12050-4 \*)**


**\*) refers to units with integrated non-return valve**

Bei einer mit uns nicht abgestimmten technischen Änderung der oben genannten Bauarten, verliert diese Erklärung ihre Gültigkeit.  
*If the above mentioned series are technically modified without our approval, this declaration shall no longer be applicable.*  
*Si les gammes mentionnées ci-dessus sont modifiées sans notre approbation, cette déclaration perdra sa validité.*

Bevollmächtigter für die Zusammenstellung der technischen Unterlagen ist:  
*Authorized representative for the completion of the technical documentation:*  
*Mandataire pour le complément de la documentation technique est :*

Wilo SE, Werk Hof  
Division Submersible & High Flow Pumps  
Quality  
Heimgartenstraße 1-3  
95030 Hof/Germany

Dortmund, 09.02.2011

i. V.   
Erwin Prieß  
Quality Manager



WILO SE  
Nortkirchenstraße 100  
44263 Dortmund  
Germany

**NL**  
**EG-verklaring van overeenstemming**  
Hiermede verklaren wij dat dit aggregaat in de geleverde uitvoering voldoet aan de volgende bepalingen:  
**EG-richtlijnen betreffende machines 2006/42/EG**  
De veiligheidsdoelstellingen van de laagspanningsrichtlijn worden overeenkomstig bijlage I, nr. 1.5.1 van de machinerichtlijn 2006/42/EG aangehouden.  
**Electromagnetische compatibiliteit 2004/108/EG**  
**Bouwproductenrichtlijn 89/106/EEG** als vervolg op 93/86/EEG  
gebruikte geharmoniseerde normen, in het bijzonder: zie vorige pagina

**P**  
**Declaração de Conformidade CE**  
Pela presente, declaramos que esta unidade no seu estado original, está conforme os seguintes requisitos:  
**Directivas CEE relativas a máquinas 2006/42/EG**  
Os objectivos de protecção da directiva de baixa tensão são cumpridos de acordo com o anexo I, nº 1.5.1 da directiva de máquinas 2006/42/CE.  
**Compatibilidade electromagnética 2004/108/EG**  
**Directiva sobre produtos de construção 89/106/CEE** com os aditamentos seguintes 93/68/EEG  
normas harmonizadas aplicadas, especialmente: ver página anterior

**FIN**  
**CE-standardinmukaususseloste**  
Ilmoitamme täten, että tämä laite vastaa seuraavia asiaankuuluvia määräyksiä:  
**EU-konedirektiivi: 2006/42/EG**  
Pienjännitedirektiivin suojatavoitteita noudatetaan konedirektiivin 2006/42/EY liitteen I, nro 1.5.1 mukaisesti.  
**Sähkömagneettinen soveltuvuus 2004/108/EG**  
**EU materiaalidirektiivi 89/106/EEG** seuraavin täsmennyksin 93/68/EEG  
käytetyt yhteensovitetut standardit, erityisesti: katso edellinen sivu.

**CZ**  
**Prohlášení o shodě ES**  
Prohlášíme tímto, že tento agregát v dodaném provedení odpovídá následujícím příslušným ustanovením:  
**Směrnice ES pro strojní zařízení 2006/42/ES**  
Cíle týkající se bezpečnosti stanovené ve směrnici o elektrických zařízeních nízkého napětí jsou dodrženy podle přílohy I, č. 1.5.1 směrnice o strojních zařízeních 2006/42/ES.  
**Směrnice o elektromagnetické kompatibilitě 2004/108/ES**  
**Směrnice pro stavební výrobky 89/106/EEG** ve znění 93/68/EEG  
použité harmonizační normy, zejména: viz předchozí strana

**GR**  
**Δήλωση συμμόρφωσης της ΕΕ**  
Δηλώνουμε ότι το προϊόν αυτό σ' αυτή την κατάσταση παράδοσης ικανοποιεί τις ακόλουθες διατάξεις:  
**Οδηγίες ΕΚ για μηχανήματα 2006/42/ΕΚ**  
Οι απαιτήσεις προστασίας της οδηγίας χαμηλής τάσης τηρούνται σύμφωνα με το παράρτημα Ι, αρ. 1.5.1 της οδηγίας σχετικά με τα μηχανήματα 2006/42/ΕΓ.  
**Ηλεκτρομαγνητική συμβατότητα ΕΚ-2004/108/ΕΚ**  
**Οδηγία κατασκευής 89/106/ΕΟΚ** όπως τροποποιήθηκε 93/68/ΕΟΚ  
Εναρμονισμένα χρησιμοποιούμενα πρότυπα, ιδιαιτέρως: Βλέπε προηγούμενη σελίδα

**EST**  
**EÜ vastavusdeklaratsioon**  
Käesolevaga tõendame, et see toode vastab järgmistele asjakohastele direktiividele:  
**Masinadirektiiv 2006/42/EÜ**  
Madalpingedirektiivi kaitse-eesmärgid on täidetud vastavalt masinate direktiivi 2006/42/EÜ I lisa punktile 1.5.1.  
**Elektromagnetilise ühilduvuse direktiiv 2004/108/EÜ**  
**Ehitustoodete direktiiv 89/106/EÜ**, muudetud direktiiviga 93/68/EMÜ kohaldatud harmoneeritud standardid, eriti: vt eelmist lk

**SK**  
**ES vyhlásenie o zhode**  
Týmto vyhlasujeme, že konstrukcie tejto konštrukčnej série v dodanom vyhotovení vyhovujú nasledujúcim príslušným ustanoveniam:  
**Stroje - smernica 2006/42/ES**  
Bezpečnostné ciele smernice o nízkom napätí sú dodržiavané v zmysle prílohy I, č. 1.5.1 smernice o strojových zariadeniach 2006/42/ES.  
**Elektromagnetická zhoda - smernica 2004/108/ES**  
**Stavebné materiály - smernica 89/106/ES** pozmenená 93/68/EHP  
používané harmonizované normy, najmä: pozri predchádzajúcu stranu

**M**  
**Dikjarazzjoni ta' konformità KE**  
B'dan il-mezz, niddikjaraw li l-prodotti tas-serje jissodisfaw id-dispożizzjonijiet relevanti li jgħejjin:  
**Makkinarju - Direttiva 2006/42/KE**  
L-oġġettivi tas-sigurtà tad-Direttiva dwar il-Vultaġġ Baxx huma konformi mal-Anness I, Nru 1.5.1 tad-Direttiva dwar il-Makkinarju 2006/42/KE.  
**Kompatibilità elettromagnetica - Direttiva 2004/108/KE**  
**Direttiva dwar il-prodotti tal-konstruzzjoni 89/106/KEE** kif emendata bid-Direttiva 93/68/KEE  
kif ukoll standards armonizzati b' mod partikolari: ara l-paġna ta' qabel

**I**  
**Dichiarazione di conformità CE**  
Con la presente si dichiara che i presenti prodotti sono conformi alle seguenti disposizioni e direttive rilevanti:  
**Direttiva macchine 2006/42/EG**  
Gli obiettivi di protezione della direttiva macchine vengono rispettati secondo allegato I, n. 1.5.1 dalla direttiva macchine 2006/42/CE.  
**Compatibilità elettromagnetica 2004/108/EG**  
**Direttiva linee guida costruzione dei prodotti 89/106/CEE** e seguenti modifiche 93/68/CEE  
norme armonizzate applicate, in particolare: vedi pagina precedente

**S**  
**CE - försäkran**  
Härmed förklarar vi att denna maskin i levererat utförande motsvarar följande tillämpliga bestämmelser:  
**EG-Maskindirektiv 2006/42/EG**  
Produkten uppfyller säkerhetsmålen i lågspänningsdirektivet enligt bilaga I, nr 1.5.1 i maskindirektiv 2006/42/EG.  
**EG-Elektromagnetisk kompatibilitet - riktlinje 2004/108/EG**  
**EG-Byggmaterialdirektiv 89/106/EEG** med följande ändringar 93/68/EEG  
tillämpade harmoniserade normer, i synnerhet: se föregående sida

**DK**  
**EF-overensstemmelseserklæring**  
Vi erklærer hermed, at denne enhed ved levering overholder følgende relevante bestemmelser:  
**EU-maskindirektiv 2006/42/EG**  
Lavsævningsdirektivets mål om beskyttelse overholdes i henhold til bilag I, nr. 1.5.1 i maskindirektiv 2006/42/EF.  
**Elektromagnetisk kompatibilitet: 2004/108/EG**  
**Produktkonstruktionsdirektiv 98/106/EEG** følgende 93/68/EEG  
anvendte harmoniserede standarder, særligt: se forrige side

**PL**  
**Deklaracja Zgodności WE**  
Niniejszym deklarujemy z pełną odpowiedzialnością, że dostarczony wyrób jest zgodny z następującymi dokumentami:  
**dyrektywa maszynowa WE 2006/42/WE**  
Przestrzegane są cele ochrony dyrektywy niskonapięciowej zgodnie z załącznikiem I, nr 1.5.1 dyrektywy maszynowej 2006/42/WE.  
**dyrektywa dot. kompatybilności elektromagnetycznej 2004/108/WE**  
**dyrektywa w sprawie wyrobów budowlanych 89/106/EEG** w brzmieniu 93/68/EEG  
stosowanymi normami zharmonizowanymi, a w szczególności: patrz poprzednia strona

**TR**  
**CE Uygunluk Teyid Belgesi**  
Bu cihazın teslim edildiği şekliyle aşağıdaki standartlara uygun olduğunu teyid ederiz:  
**AB-Makina Standartları 2006/42/EG**  
Aşağıda belirtilen güvenlik amaçları hedefleri, 2006/42/AT makine yönetmeli Ek I, no. 1.5.1'e uygundur.  
**Elektromanyetik Uyumluluk 2004/108/EG**  
**Ürün imalat yönetmeliği 89/106/EEG** ve takip eden, 93/68/EEG  
kısımın kullanılan standartlar için: bkz. bir önceki sayfa

**LV**  
**EC - atbilstības deklarācija**  
Ar šo mēs apliecinām, ka šis izstrādājums atbilst sekojošiem noteikumiem:  
**Mašīnu direktīva 2006/42/EK**  
Zemsprēguma direktīvas drošības mērķi tiek ievēroti atbilstoši Mašīnu direktīvas 2006/42/EK pielikumam I, Nr. 1.5.1.  
**Elektromagnētiskās savietojamības direktīva 2004/108/EK**  
**Direktīva par būvzīdādājumiem 89/106/EK** pēc labojumiem 93/68/EES piemēroti harmonizēti standarti, tai skaitā: skatīt iepriekšējo lappusi

**SLO**  
**ES - izjava o skladnosti**  
Izjavljamo, da dobavljene vrste izvedbe te serije ustrežajo sledičim zadevnim določilom:  
**Direktiva o strojih 2006/42/ES**  
Cilji Direktive o nizkonapetostni opremi so v skladu s priložo I, št. 1.5.1 Direktive o strojih 2006/42/EG doseženi.  
**Direktiva o elektromagnetni združljivosti 2004/108/ES**  
**Direktiva o gradbenih proizvodih 89/106/EGS** v verziji 93/68/EGS  
uporabljeni harmonizirani standardi, predvsem: glejte prejšnjo stran

**E**  
**Declaración de conformidad CE**  
Por la presente declaramos la conformidad del producto en su estado de suministro con las disposiciones pertinentes siguientes:  
**Directiva sobre máquinas 2006/42/EG**  
Se cumplen los objetivos en materia de seguridad establecidos en la Directiva de Baja tensión según lo especificado en el Anexo I, punto 1.5.1 de la Directiva de Máquinas 2006/42/CE.  
**Directiva sobre compatibilidad electromagnética 2004/108/EG**  
**Directiva sobre productos de construcción 89/106/CEE** modificada por 93/68/CEE  
normas armonizadas adoptadas, especialmente: véase página anterior

**N**  
**EU-Overensstemmelseserklæring**  
Vi erklærer hermed at denne enheten i utførelse som levert er i overensstemmelse med følgende relevante bestemmelser:  
**EG-Maskindirektiv 2006/42/EG**  
Lavspenningsdirektivets verne mål overholdes i samsvar med vedlegg I, nr. 1.5.1 i maskindirektiv 2006/42/EF.  
**EG-EMV-Elektromagnetisk kompatibilitet 2004/108/EG**  
**Byggevaredirektiv 89/106/EEG** med senere tilføyelser 93/68/EEG  
anvendte harmoniserte standarder, særligt: se forrige side

**H**  
**EK-megfelelősségi nyilatkozat**  
Ezennel kijelentjük, hogy az berendezés megfelel az alábbi irányelveknek:  
**Gépek irányelv: 2006/42/EK**  
A kisfeszültségű irányelv védelmi előírásait a 2006/42/EK gépekre vonatkozó irányelv I. függelékének 1.5.1. sz. pontja szerint teljesíti.  
**Elektromágneses összeférhetőség irányelv: 2004/108/EK**  
**Építési termékek irányelv 89/106/EGK** és az azt kiegészítő 93/68/EGK irányelv alkalmazott harmonizált szabványoknak, különösen: lásd az előző oldalt

**RUS**  
**Декларация о соответствии Европейским нормам**  
Настоящим документом заявляем, что данный агрегат в его объеме поставки соответствует следующим нормативным документам:  
**Директивы ЕС в отношении машин 2006/42/EG**  
Требования по безопасности, изложенные в директиве по низковольтному напряжению, соблюдаются согласно приложению I, № 1.5.1 директивы в отношении машин 2006/42/EG.  
**Электромгнитная устойчивость 2004/108/EG**  
**Директива о строительных изделиях 89/106/EEG** с поправками 93/68/EEG  
Используемые согласованные стандарты и нормы, в частности: см. предыдущую страницу

**RO**  
**EC-Declarație de conformitate**  
Prin prezenta declarăm că acest produs așa cum este livrat, corespunde cu următoarele prevederi aplicabile:  
**Directiva CE pentru mașini 2006/42/EG**  
Sunt respectate obiectivele de protecție din directiva privind joasa tensiune conform Anexei I, Nr. 1.5.1 din directiva privind mașinile 2006/42/CE.  
**Compatibilitatea electromagnetică - directiva 2004/108/EG**  
**Directiva privind produsele pentru construcții 89/106/EEG** cu amendamentele ulterioare 93/68/EEG  
standarde armonizate aplicate, îndeosebi: vezi pagina precedentă

**LT**  
**EB atitikties deklaracija**  
Šiuo pažymima, kad šis gaminys atitinka šias normas ir direktyvas:  
**Mašinių direktyvą 2006/42/EB**  
Laikomasi Žemos įtampos direktyvos keliamų saugos reikalavimų pagal Mašinių direktyvos 2006/42/EB priedo 1.5.1 punktą.  
**Elektromagnetinio suderinamumo direktyvą 2004/108/EB**  
**Statybos produktų direktyvos 89/106/EB** pataisą 93/68/EEB pritaikytus vieningus standartus, o būtent: žr. ankstesniame puslapyje

**BG**  
**EO-Декларация за съответствие**  
Декларираме, че продуктът отговаря на следните изисквания:  
**Машина директива 2006/42/EO**  
Целите за защита на разпоредбата за ниско напрежение са съставени съгласно. Приложение I, № 1.5.1 от Директивата за машини 2006/42/ЕС.  
**Електромагнитна съвместимост - директива 2004/108/EO**  
**Директива за строителни материали 89/106/ЕИО** изменени 93/68/ЕИО  
Хармонизирани стандарти: вж. предната страница



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