

Wilo-DrainLift M1/8

- | | | | |
|-----------|---|------------|---|
| D | Einbau- und Betriebsanleitung | S | Monterings- och skötselanvisning |
| GB | Installation and operating instructions | H | Beépítési és üzemeltetési utasítás |
| F | Notice de montage et de mise en service | PL | Instrukcja montażu i obsługi |
| NL | Inbouw- en bedieningsvoorschriften | CZ | Návod k montáži a obsluze |
| E | Instrucciones de instalación y funcionamiento | RUS | Инструкция по монтажу и эксплуатации |
| I | Istruzioni di montaggio, uso e manutenzione | UA | Інструкція з монтажу та експлуатації |
| GR | Οδηγίες εγκατάστασης και λειτουργίας | RO | Instrucțiuni de montaj și de exploatare |

1 General information

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. These installation and operating instructions correspond to the relevant version of the product and the underlying safety standards valid at the time of going to print.

EC declaration of conformity:

A copy of the EC declaration of conformity is a component of these operating instructions. If a technical modification is made on the designs named there without our agreement, this declaration loses its validity.

2 Safety

These operating instructions contain basic information which must be adhered to during installation and operation. For this reason, these 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 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 Designation of information in the operating instructions

Symbols:



General danger symbol



Danger due to electric voltage



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) injuries to persons is probable if this information is disregarded.

CAUTION!

There is a risk of damaging the pump/unit. 'Caution' implies that damage to the product is likely if the information is disregarded.

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

2.2 Personnel qualifications

The installation personnel must have the appropriate qualification for this work.

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 product/installation. Non-observance of the safety instructions can result in the loss of any claims to damages.

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

- Failure of important product/installation functions
- Failure of required maintenance and repair procedures
- Danger to persons from electrical, mechanical and bacteriological influences
- Property damage

2.4 Safety instructions for the operator

The existing directives for accident prevention must be adhered to.

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.

This device is not intended to be operated by persons (including children) with impaired physical, sensory or mental capacities or lack of experience and/or lack of knowledge, except in cases where they are supervised by a person responsible for their safety or where they receive instruction from such a person as to how the device is to be operated.

Children must be kept under supervision in order to ensure that they do not play with the device.

2.5 Safety instructions for inspection and installation work

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

Work to the product/installation 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/installation be complied with.

2.6 Unauthorised modification and spare part production

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 their usage.

2.7 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 unit and individual components are delivered on a pallet.

Immediately upon receipt of the product:

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



CAUTION! Risk of damage!

Inappropriate transport and interim storage can cause damage to the product.

- **Only transport the product on the pallet and only use approved handling equipment.**
- **During transport, check for stability and mechanical damage.**
- **Prior to installation, store the product on the pallet so that it remains dry and is protected from the sun.**

4 Intended use

The DrainLift M1/8 sewage lifting unit is an automatic sewage lifting unit according to EN 12050-1 for collecting and pumping sewage which is free of faeces or which contain faeces for the backflow-proof drainage from building discharge points and properties 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.

If greasy sewage should accumulate, a grease trap is to be installed.

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: During installation and operation, be sure to observe the nationally and regionally valid standards and regulations.

The specifications in the operating instructions of the switchgear are also to be observed.



DANGER! Risk of explosion!

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

- If the unit is used for sewage containing faeces, the valid regulations for potentially explosive areas are to be observed.



WARNING! Health hazard!

Because of the materials used, the pumps are not suitable for pumping potable water! Contaminated sewage is a health hazard.



CAUTION! Risk of damage!

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

- Never introduce solids, fibrous substances, tar, sand, cement, ash, coarse paper, paper towels, cardboard, debris, rubbish, animal waste, grease, or oil into the drains!
If greasy sewage should accumulate, a grease trap is to be installed.
- Improper use and overstraining lead to material damage to the product.
- The maximum possible inflow must always be less than the volume flow of a pump at the respective duty point.

Application limits

The unit is not designed for permanent operation!

The specified maximum volume flow applies for intermittent operation (S3 – 15 %/80 s, i.e. max. 12 s operating time, min. 68 s idle time).

The unit may switch on a maximum of 45 times per hour. The running time of the pump may not exceed 12 s, including the run-on time (run-on time = pump running time after the end of pumping water). The running time, including run-on time (if required), should be set as short as possible.

The geodesic delivery head may not be more than 6.5 mWS.



WARNING! Risk of burns!

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



WARNING! Danger due to overpressure!

If the lowest suction head is more than 5 m, this will cause overpressure in the reservoir should the installation malfunction. If this happens, there is a risk that the reservoir will burst.

In case of malfunctions, the inlet must be blocked off immediately!

The intended use includes complying with these instructions.

Any other use is considered outside the intended use.

5 Product information

5.1 Type key

Example:	DrainLift M 1/8 (1~) DrainLift M 1/8 (3~) RV
DrainLift	Sewage lifting unit
M	Size
1	1 = Single-pump system
/8	Maximum delivery head [m] when Q=0 m ³ /h
(1~)	1~: Single-phase version 3~: Three-phase version
RV	RV = Version with non-return valve

5.2 Technical data

Connected voltage	[V]	1~230 +10/-5 %, 3~400 ± 10 %
Connection version		1~: Switchgear with cable and shock-proof plug 3~: Switchgear with cable and CEE plug
Power consumption P ₁	[kW]	See unit name plate
Nominal current	[A]	See unit name plate

5.2 Technical data		
Mains frequency	[Hz]	50
Protection class		System: IP 67 (2 mWS, 7 days) Switchgear: IP 54
Speed	[rpm]	2900
Operating mode		S3-15 %/80 sec
Max. switching frequency (pump)	[1/h]	45
Max. total delivery head	[mWS]	8.5
Max. permitted geodesic delivery head	[mWS]	6.5
Max. permitted pressure in the pressure pipeline	[bar]	1.5
Max. volume flow	[m ³ /h]	35
Max. fluid temperature	[°C]	40 (60 °C, 3 min)
Max. ambient temperature	[°C]	40
Max. solid grain size	[mm]	45
Sound pressure level (depending on duty point)	[dB(A)]	< 70 * ¹⁾
Gross volume	[l]	62
Switching volume	[l]	24
Dimensions (WxHxD)	[mm]	600x505x580
Net weight	[kg]	40
Pressure connection	[DN]	80
Inlet ports	[DN]	40, 100, 150
Ventilation	[DN]	70

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

CE	
WILO SE Dortmund Nortkirchenstr. 100, 44263 Dortmund, Germany 09	
EN 12050-1	
Faeces lifting unit for buildings, DN 80	
Lifting power	- see pump curve
Noise level	- < 70 dB(A)
Corrosion protection	- coated, or corrosion-resistant materials Inox/composite

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

5.3 Scope of delivery

Sewage lifting unit, including:

Switchgear (1~ 230 V/3~ 400 V),

- 1 inlet seal DN 100 (for pipe Ø 110 mm)
- 1 keyhole saw Ø 124 for inlet, DN 100
- 1 PVC hose section, Ø 50 mm, with clamps for inlet port, DN 50
- 1 special lip seal for suction pipe connection of diaphragm hand pump, DN 50
- 1 collar for ventilation connection, DN 70
- 1 set of fixation material
- 6 sound absorption strips for insulation of structure-borne noise
- 1 DN 80/100 flange piece with flat gasket, flexible hose section, hose clips, screws and nuts for connecting the pressure pipeline, DN 100
- 1 set of 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:

- Non-return valve (DN 80) for direct installation in the DrainLift M1/8 unit (already included in the scope of delivery of the DrainLift M1/8...RV)
- Flange piece DN 80, DN 80/100 (1 x DN 80/100 already included in the scope of delivery), DN 100, DN 150 for connecting the slide valve on the inlet or pressure side to the pipe

- Inlet seal for additional inlet, DN 100 (one is already included in the scope of delivery)
- Connection set for inlet, DN 150 (curve cutter, 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
- Rechargeable battery (NiMH) 9 V/200 mAh
- Horn 230 V/50 Hz
- Flashing light 230 V/50 Hz
- Signal lamp 230 V/50 Hz

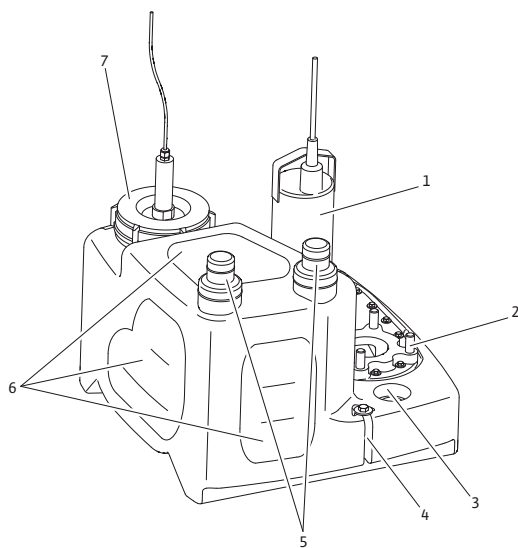
6 Description and function

6.1 Description of the unit

The DrainLift M1/8 sewage lifting unit (Fig. 1) is a ready-to-connect, fully submersible sewage lifting unit (overflow level: 2 mWS, overflow time: 7 days) with a collection tank that is impermeable to gas and water and that is equipped with a buoyancy safeguard. Due to the special tank geometry, settling sediments are also fed to the pump so that deposits in the tank are prevented.

The integrated centrifugal pump with a clog-free vortex impeller is equipped with a single-phase or three-phase AC motor. For automatic operation, with switchgear with shock-proof or CEE plug, potential-free contact, integrated alarm; independent of the mains via built-in rechargeable battery (accessory).

Fig. 1: Description of the unit



1	Pump
2	Connection for the non-return valve (accessory)
3	Low inlet, DN 50
4	Buoyancy safeguard
5	Combination inlet/venting connection, DN 50/DN 70
6	Freely selectable inlet surfaces for main inlet, DN 100/DN 150
7	Inspection opening + Level switching with rod float switch

6.2 Function

The introduced sewage is collected in the collection tank of the lifting unit. This is done via sewage inlet pipes, which can be connected to the marked tank areas as desired.

If the water level rises to the switch-on level, a contact is closed in the integrated rod float switch. The pump mounted to the tank is switched on via the switchgear and the collected sewage is automatically pumped into the connected external sewage line.

The pump is switched off via a time relay in the switchgear. By setting the pump run time on this relay, the operating mode of the unit can be optimised according to the respective in-house pressure pipeline. For example, by setting the run-on time up to the slurping operation, knocking of the non-return valve can be prevented.

A non-return valve (necessary accessory), which is to be installed directly after the unit in accordance with EN 12056, prevents the fluid from flowing back into the unit after the pump is switched off.

7 Installation and electrical connection



DANGER! Risk of fatal injury!

Inappropriate installation or electrical connection can be life-threatening.

- The installation and electrical connection may only be carried out by qualified personnel in accordance with the applicable regulations!
- Observe the regulations for accident prevention.



DANGER! Danger of suffocation!

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

- For safety reasons, make sure a second person is present at all times when you are working in the sump.
- Make sure the installation location is sufficiently ventilated.

7.1 Preparing for installation



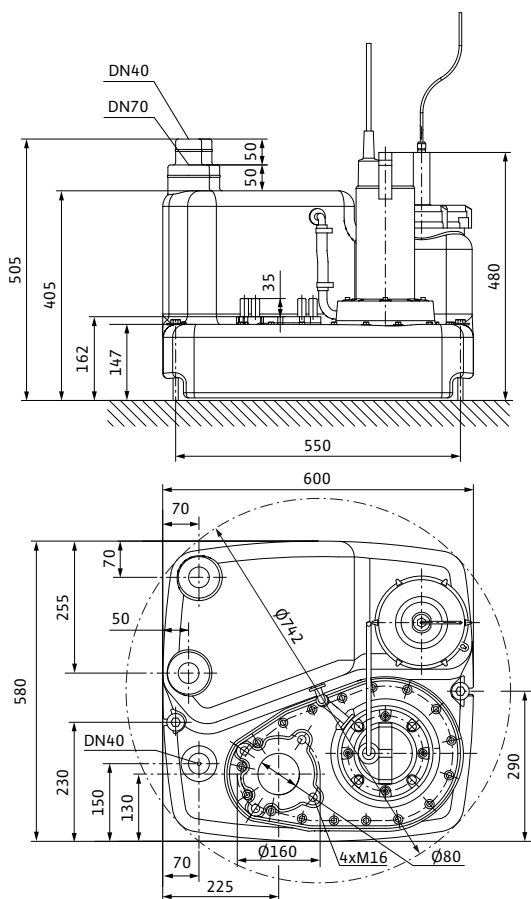
CAUTION! Risk of damage!

Incorrect installation can result in damage to the product.

- Only let qualified personnel do the installation work!
- Observe national and regional regulations!
- Observe the installation and operating instructions for the accessories!
- **Never pull on the cable when setting up the installation!**

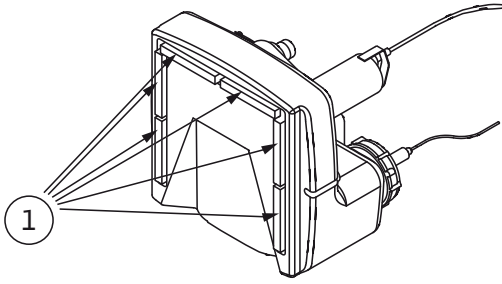
When installing lifting units, especially observe the regionally valid regulations (e.g. in Germany, the "Landesbauordnung, DIN 1986-100") and, in general, the corresponding specifications of EN 12050-1 and EN 12056 (gravity drainage stations within buildings)!

Fig. 2: Installation plan



- Observe the dimensions according to the installation plan (Fig. 2).
- In accordance with EN 12056-4, installation locations for lifting units must be sufficiently large so that the unit is freely accessible for operating and maintenance work.
- There must be sufficient working space of at least 60 cm in width/height available next to and above all parts which are to be operated and maintained.
- The installation location must be frost-proof, ventilated and well-lit.
- The installation surface must be solid (suitable for accommodating dowels), horizontal and flat.
- The placement of any existing or still-to-be installed inlet, pressure and vent lines is to be checked with regard to connection options to the unit.
- Observe the installation and operating instructions for the accessories!

Fig. 3: Attachment of the sound absorption strips



For the sound-insulating installation of the unit, stick the enclosed sound absorption strips in the recesses in the tank floor provided for this purpose (see Fig. 3, item 1).

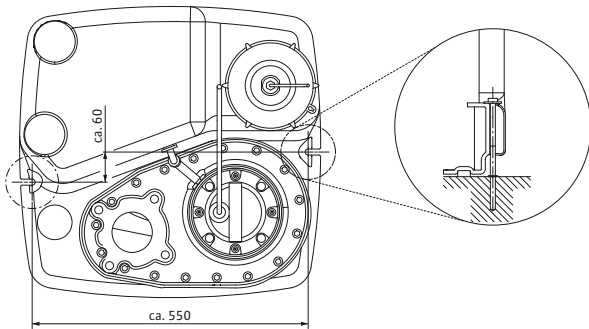
7.2 Installation

Place the unit on a flat solid floor and align.

In accordance with EN 12056-4, sewage lifting units must be installed so that they cannot twist and turn.

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

Fig. 4: Buoyancy safeguard



Fix the unit to the floor with the enclosed fixation material (Fig. 4).

- 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
- Properly fix the unit to the floor with dowels and screws

7.3 Connecting the pipes

All pipes must be installed so that they are stress-free, noise-insulated and flexible. No pipeline forces or torques may act on the unit. The pipes (incl. valves) are to be fastened and supported such that neither tensile nor compressive forces act on the unit.

All line connections must be made with care. Carefully tighten any connections with hose clips (**starting torque 5 Nm!**).

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

In the inlet pipe in front of the tank as well as after the non-return valve, a gate valve is always necessary in accordance with EN 12056-4. (Fig. 12).

7.3.1 Pressure pipeline



CAUTION! Risk of damage!

Occurring pressure surges (e.g. when closing the non-return valve) can sometimes be several times more than the pump pressure, depending on the operating conditions (to avoid this, see also sect. 8.2.2 "Setting the pump run time").

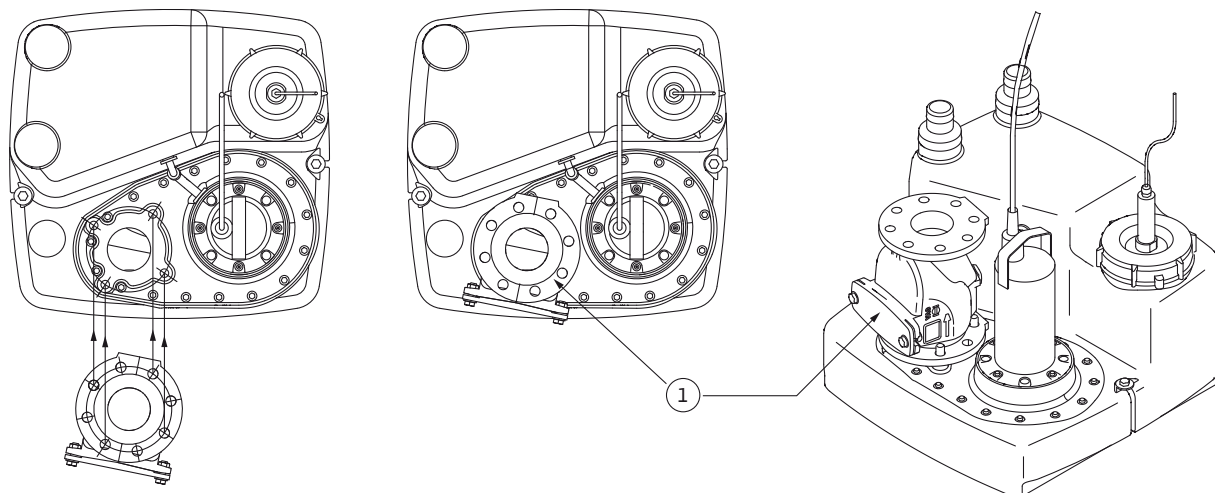
- **Therefore, in addition to the corresponding pressure resistance, also pay attention to the longitudinal force fit connection elements of the pipe!**
- **The pressure pipeline with all installed parts must reliably withstand the occurring operating pressures.**

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. 12).

The pressure pipeline 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! Only install the non-return valve in the shown position 1 (Fig. 5).

Fig. 5: Installation/alignment of the non-return valve

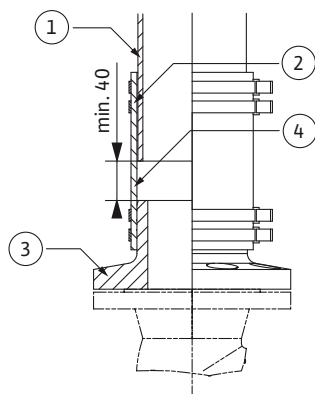
**CAUTION! Risk of damage!**

The use of other valves than those from the Wilo accessories can lead to malfunctions on or damage to the product.

If other valves are used, pay attention to the type approval of the non-return valve according to EN 12050-4, as well as to sufficient pressure resistance (PN10) of the valves.

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

Fig. 6: Flexible pressure pipeline connection



To avoid the transfer of forces and vibrations between the unit and the pressure pipeline, the connection should be flexible. Also, keep a distance between the flange piece and the pressure pipe (Fig. 6).

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

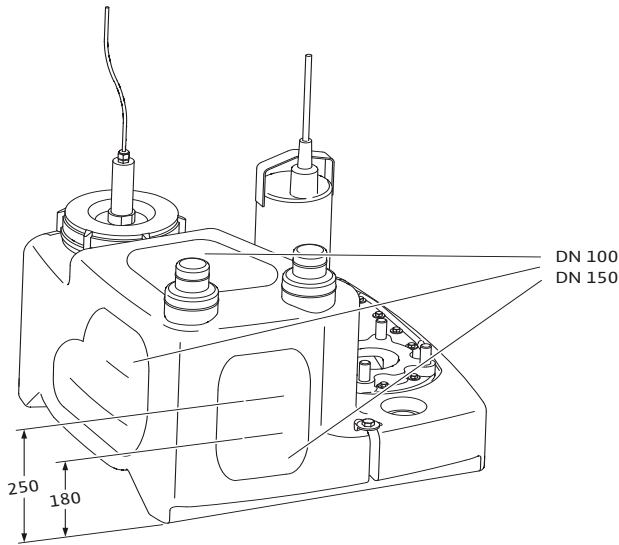
7.3.2 Inlet ports

Install the inlet pipes so that they can run empty by themselves.

Main inlet DN 100/DN 150

Only insert the main inlet pipe (DN 100 or DN 150) in the tank at the marked surfaces.

Fig. 7: Permissible surfaces for the main inlet port (DN 100/DN 150)



The hole sawed with the keyhole saw must lie **within** the surfaces here (Fig. 7).



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

- Measure position. Pay attention to the minimum connection height for the inlet in the tank and the perpendicular entry into the tank ($90^\circ \pm 5^\circ$). The horizontal notch lines in the tank provide orientation for the connection heights 180 mm and 250 mm (pipe centre). Other infinitely variable connection heights are possible.



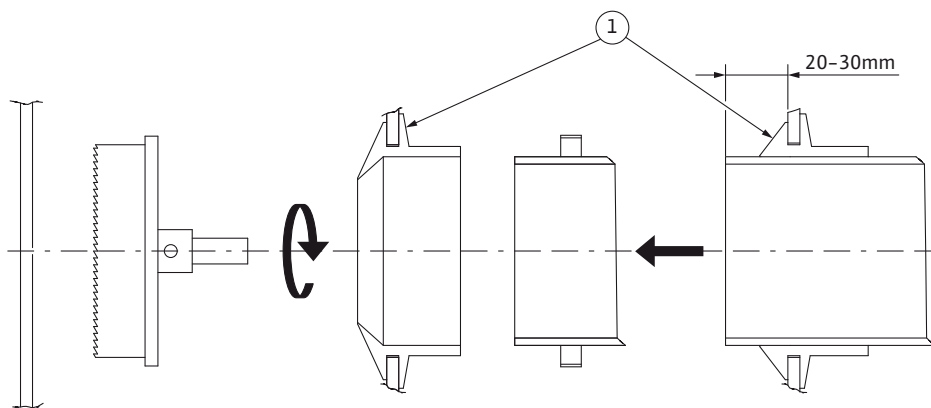
NOTE: Inlet ports below 180 mm are possible, but can cause a corresponding backflow in the inlet pipe. In this case, when the pump run-time is set low, there is the danger that the pipe no longer empties completely due to the low water level drop in the tank, which can cause deposits to form inside it (see 8.2.2 Setting the pump run-time).

- Select the position and pipe installation so that surge-like water entry and strong air entry are avoided as much as possible.



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



- Drill a hole for the inlet with a keyhole saw (DN 100 included in delivery, DN 150 accessory) in one of the tank surfaces intended for this purpose (Fig. 8).
Make sure the excess material in the drill bit is removed completely!
Max. speed 200 rpm; if necessary, put the saw down once in a while to remove drilled material. If this material isn't completely removed, the tank material heats up and starts to melt; Interrupt the cutting process, allow to cool and clean the saw; Lower the speed, vary the feed pressure, and then maybe change the direction of rotation (counterclockwise rotation max. 200 rpm), until there is no more material.



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

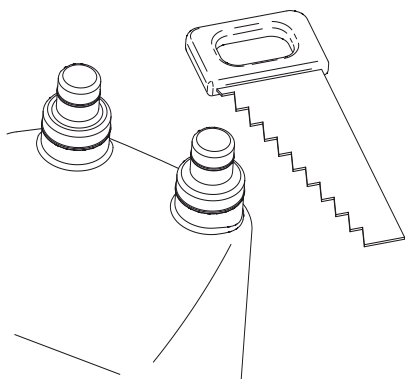
- Deburr and smooth the cut surface for a clean seal fit.
- Insert an inflow seal (Fig. 8, item 1)
 1. Moisten the inside of the seal with a lubricant
 2. Push the hose clip onto the pipe and push the inlet pipe in about approx. 20–30 mm
 3. Firmly connect the inflow pipe and inflow seal with a hose clip.

In the inlet pipe in front of the tank, a gate valve (accessory) is required when the unit is installed within a building in accordance with EN 12056-4 (Fig. 12).

Inlet (DN 50)

In addition to the main inlet, an inlet (DN 50) can be connected to one of the two combination connecting pieces (DN 50/DN 70) on the tank roof.

Fig. 9: Preparation of the tank connecting pieces to be connected

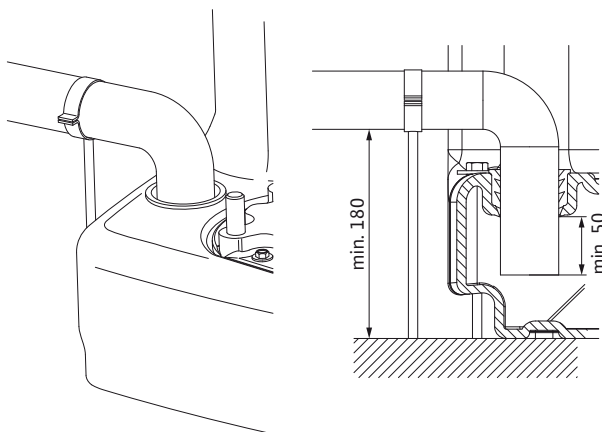


The connecting piece is opened by sawing off the lug bottom (DN 50) about 15 mm above the lip (Fig. 9).

Remove burrs and any excess material.
Connect carefully with the enclosed hose section and hose clips or with a commercially available Konfix connector.

Another inlet (DN 50) can be installed at the connection point for the diaphragm hand pump.

Fig. 10: Installation of inlet pipe (DN 50) at a low inlet position



To establish the connection to the tank, see 7.3.4 Connection of an emergency disposal (Fig. 11).

Secure the inlet pipe using clamps so that it can't slip out of the tank opening (Fig. 10).

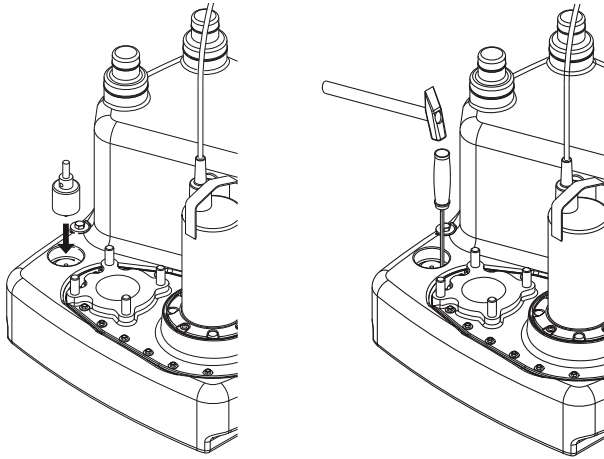
7.3.3 Ventilation (DN 70)

In accordance with EN 12050-1, the unit must be connected to a venting line, which vents via the roof, and is absolutely necessary for the unit to function perfectly. The connection is made on one of the two combination connecting pieces (DN 50/DN 70) to the tank roof using the enclosed Konfix connector. For this, the bottom of the connecting piece (DN 70) is sawed off about 15 mm above the lip (see Fig. 9). Remove burrs and any 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.

7.3.4 Emergency drain connection (diaphragm hand pump)

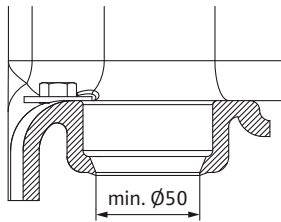
Fundamentally, it is recommended to install a diaphragm hand pump (accessory) for draining the tank in an emergency. The suction line for the diaphragm hand pump (outer diameter 50 mm) is connected in the recess (\varnothing 65 mm) at the pump level of the tank (Fig. 11).

Fig. 11: Suction pipe connection for the diaphragm hand pump



1a

1b



Remove the bottom of the recess.

1a. To do this, use a keyhole saw (outer \varnothing 50–56 mm).



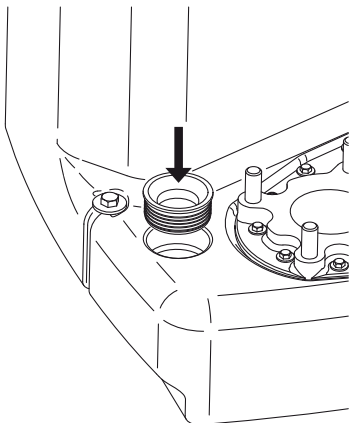
CAUTION! Risk of damage!
Remove the bottom from the tank, since otherwise the unit could be damaged!

1b. If there is no correctly-sized keyhole saw available, the opening can also be made using a narrow chisel or sharp screwdriver (max. 5 mm wide). To do this, move around the entire circumference of the deep circular groove with a sharp tool with light hits of a hammer until the bottom slowly comes off.



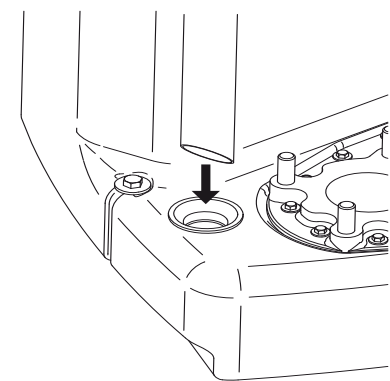
CAUTION! Risk of damage!
When separating the lateral surface (\varnothing 65 mm) (sealing surface) and bottom, don't damage the tank!

- When using hammers and sharp puncturing tools, only hit the hammer lightly. The tank could crack!
- Remove the separated bottom from the tank, since otherwise the unit could be damaged!

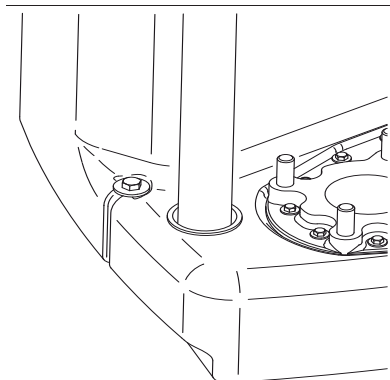


2. Push the enclosed seal all the way in,

Fig. 11: Suction pipe connection for the diaphragm hand pump



3. Bevel the suction pipe (outer \varnothing 50 mm) at the suction end (approx. 30° to 45°) and push it through the seal all the way to the floor using a lubricant.



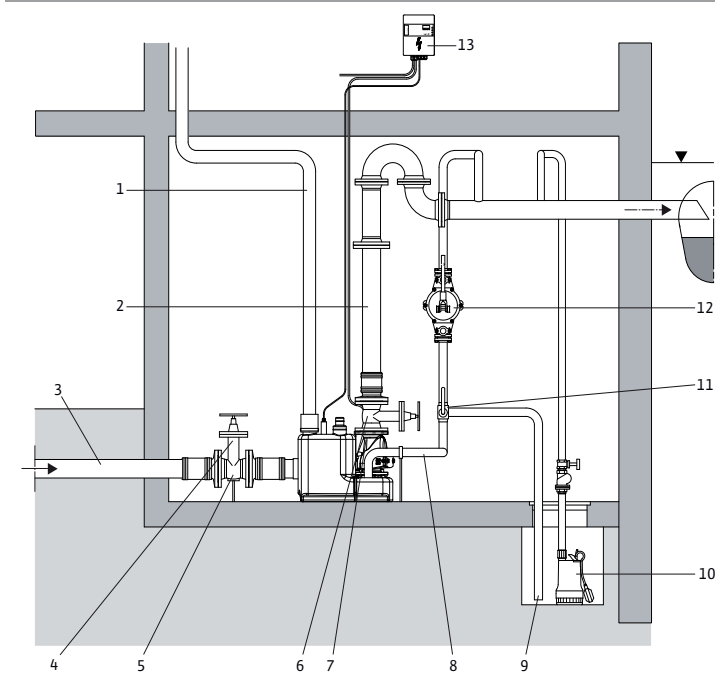
4. Make sure the seal has an exact fit. Secure the suction pipe using clamps so that it doesn't slip out of the tank opening.

7.3.5 Drainage of cellars

To automatically drain the installation area of faeces lifting units, a pump sump is to be put in place in accordance with EN 12056-4 (Fig. 12).

- Design pump (item 10) according to the delivery head of the unit. The dimensions of the pit in the floor of the installation area 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 (Pos. 12).

Fig. 12: Installation example



▼	Backflow level (usually upper edge of street)
1	Ventilation pipe (over roof)
2	Pressure pipe
3	Inlet
4	Gate valve for inlet pipe
5	Fitting support for weight relief
6	Gate valve for pressure pipe
7	Non-return valve
8	Tank draining pipe
9	Pump sump drainage pipe
10	Drainage pump
11	3-way cock
12	Diaphragm hand pump
13	EC-Drain LS1 switchgear

7.4 Electrical connection



DANGER! Risk of fatal injury!

Improper electrical connections can lead to fatal electrical shocks.

- **Have the electrical connection established by an electrician approved by the local electricity supplier only and in accordance with local regulations.**
- **Observe the installation and operating instructions of the switchgear and the accessories!**
- The current type and voltage of the mains connection must correspond to the specifications on the name plate.
- Mains side fuse protection:
 - DrainLift M1/8 (1~): 16 A, slow-blow
 - DrainLift M1/8 (3~): 16 A, slow-blow



NOTE: To increase operating safety, it is essential that a circuit breaker (which disconnects all power leads) with K characteristic is used.

- Earth the system according to regulations.
- Lay the connecting cable in accordance with the applicable standards/regulations and the prescribed wire connection.
- It is urgently recommended to use a residual-current-operated protection switch ≤ 30 mA according to the valid local regulations.
- The switchgear and alarm must be installed in dry rooms which are overflow-proof. The national regulations are to be observed when positioning [in Germany: VDE 0100].
- Make sure that the separate supply of the alarm switchgear matches the name plate data. Connect the alarm switchgear.
- For three-phase versions, apply a clockwise rotating field.
- When connecting, the technical connection conditions of the local electricity supply companies are to be observed.

7.4.1 Mains connection

DrainLift M1/8 (1~)

L, N, PE:

Mains connection 1~230 V, PE, version: Switchgear with shock-proof plug for socket [in acc. with VDE 0620 in Germany].

DrainLift M1/8 (3~)

L1, L2, L3, PE:

Mains connection 3~400 V, PE, version: Switchgear with CEE plug for CEE socket [in acc. with VDE 0623 in Germany].

The DrainLift M1/8 (1~) single-phase version is intended for operation on a power supply network with a system impedance at the house connection of $Z_{\max} = 0.218$ ohms in acc. with DIN EN/IEC 61000-3-11 for a maximum number of 45 switching operations per hour.



NOTE: If the mains impedance and the number of switching operations per hour is greater than the values specified, because of the unfavourable mains conditions, the unit may cause temporary voltage drops and also disturbing voltage fluctuations (flickering).

Therefore, measures may be necessary before the unit can be operated correctly on this connection. The necessary information must be obtained from the electricity supply company and the manufacturer of the device.

7.4.2 Alarm signal connection

The DrainLift M1/8 unit is equipped with an acoustic signal transmitter in the switchgear in the factory.

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

Contact load:

- Minimum permitted: 12 V DC, 10 mA
- Maximum permitted: 250 V AC, 1 A



Connection of the external alarm signal

DANGER! Risk of fatal injury!

When working on the open switchgear, there is a danger of electric shock from touching the live components.

The work may only be carried out by skilled personnel.

To connect the alarm signal, switch the device so that it is voltage-free and secure it against being switched on again without authorisation.

Observe the installation and operating instructions of the EC-Drain LS1 switchgear!

- Pull out the mains 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 to the potential-free alarm contact according to the wiring diagram.
- After the cable has been connected for the alarm signal, seal the cover of the switchgear and tighten the threaded cable connection.
- Plug the mains plug back in.



NOTE: In the factory settings, the alarm signal triggers when the tank filling level is about 220 mm above the upper edge of the unit's installation surface. This is to be observed when drainage fixtures are also to be secured with the unit's alarm which lie relatively low (e.g. floor drains).

8 Commissioning

It is recommended that commissioning be carried out by Wilo After-Sales Service.

8.1 Checking the unit



CAUTION! Risk of damage!

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

- **Before commissioning, clean the entire unit to remove contaminants, particularly solids.**
- **Observe the installation and operating instructions of the switchgear and the accessories!**

Commissioning may only be carried out when the relevant safety regulations, VDE regulations as well as regional regulations have been 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.



CAUTION! Risk of 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.

- Check the level control for perfect mechanical condition. To do this, open the screw lid and check the float switch installed inside to make sure it can move easily and check that the float and the counter nut on the rod have a tight fit. Seal the screw lid tightly again.

8.2 Initial commissioning

- Plug the mains plug in.
- Open the check valves.
- Fill the system via the connected inlet until the pump has pumped out at least twice and the pressure pipeline is completely filled.
With the pressure pipeline filled and the inlet closed, the filling level in the tank must not rise. 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).

8.2.1 Switchgear settings

The switchgear is preset in the factory. For the rotation direction monitoring, adjustment of the DIP switches and other settings, see the installation and operating instructions of the Wilo EC-Drain LS1 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.

8.2.2 Setting the pump run-time

The pump run-time must be set in the switchgear on the rotary potentiometer (for setting the run-on time).



DANGER! Risk of fatal injury!

When working on the open switchgear, there's a danger of electric shock from touching the live components.

Work must only be carried out by skilled personnel!

To set the potentiometer, switch the device so it's voltage-free and secure it against being switched on again without authorisation.

- Set the pump run-time so that:
 - the amount of sewage in one pump operation is as great as possible (utilisation of the maximum switching volume)
 - loads on the unit and pipe are avoided
 - noise development is at a minimum.
- 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 switching off the pump combined with vibrations in the unit and pipework, this is to be stopped by adjusting the pump run-time. To do this, adjust the potentiometer for the pump run-time until you can hear the slurping of the water/air mixture at the end of the pump operation.
- The slurping time should be 2 s, and the total pump run-time of one pump operation should not exceed 12 s. Otherwise, the unit is working in an impermissible range (delivery head too high, inlet too big).

8.3 Decommissioning

The installation must be decommissioned before performance of maintenance work or disassembly.



WARNING! Risk of burns!

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

Allow the installation and pump to cool to room temperature.

Dismantling and installation

- Dismantling and installation by qualified personnel only!
- Disconnect the installation from the power supply and secure it against being switched back on again.
- Depressurise any pressurised parts before work.
- Close the gate valves (inlet and pressure pipe)!
- Empty the collection reservoir (e.g. with diaphragm hand pump)!
- To clean, unscrew and remove the maintenance cover.



DANGER! Risk of infection!

If the unit or unit components are to be sent in for repairs, a used unit must be drained and cleaned before transport for hygiene reasons. Also, all parts which can be touched must be disinfected (spray disinfection). The parts must be packed in tear-proof, sufficiently large plastic bags so that they are tightly sealed and leak-proof. They are to be sent in without delay via instructed forwarding agents.

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

9 Maintenance



DANGER! Risk of fatal injury!

There is risk of fatal injury due to electric shocks 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 lead to infections or suffocation.

- Before carrying out maintenance work at the installation location, ventilate sufficiently.
- Use appropriate protective equipment to prevent the risk of infection while performing maintenance work.
- For safety reasons, make sure a second person is present at all times when you are working in the sump.
- Risk of explosion when opening (avoid open sources of ignition)!

- **Observe the installation and operating instructions of the unit and the accessories.**

Read the “Decommissioning” chapter before performing maintenance work.

The system operator must make sure that all the maintenance, inspection and installation work is done by authorised and qualified personnel, who have acquainted themselves sufficiently with the system through a detailed study of the installation and operating instructions.

- Sewage lifting units are to be maintained by someone skilled to do so 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 in the case of units in single-family houses.
- A maintenance report must be drawn up.



It is recommended that the unit be maintained and checked by Wilo After-Sales Service.

NOTE: When drafting a maintenance plan, expensive repairs can be avoided and fault-free operation of the unit can be achieved with a minimum of maintenance effort. The Wilo-After-Sales Service is available for commissioning and maintenance work.

After maintenance and repair work, install and connect the installation as described in the chapter “Installation and electrical connection”. Switch on the machine as described in the “Commissioning” chapter.

10 Faults, causes and remedies

Only have faults rectified by qualified personnel! Follow the safety instructions in 9 Maintenance.

- Observe the installation and operating instructions of the unit and the accessories!
- If the operating fault cannot be remedied, please contact your specialist technician or Wilo Service or the closest Wilo representative.

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

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

¹⁾ To remedy faults on parts which are under pressure, depressurise these first (vent the non-return valve and drain the tank, with diaphragm hand pump if necessary).

²⁾ Further inquiry required

11 Spare parts

Spare parts can be ordered from your local specialist and/or via Wilo customer service. To avoid queries and incorrect orders, all data on the name plate should be submitted with each order.

12 Disposal

Disposing of this product properly prevents damage to the environment and risks to personal health.

1. Use public or private disposal organisations when disposing of all or part of the product.
2. For more information on proper disposal, please contact your local council or waste disposal office or the supplier from whom you obtained the product.

Subject to technical changes 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

89/106/EWG

Construction product directive

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

Directive de produit de construction

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.
Elektromagnetische compatibiliteit 2004/108/EG
Bouwproductenrichtlijn 89/106/EEG als vervolg op 93/86/EEG

gebruikte geharmoniseerde normen, in het bijzonder:
zie vorige pagina

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

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

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 objetivos 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

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

N
EU-Overensstemmelseserklæring
Vi erklærer hermed at denne enhet 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
Byggeveredirektiv 89/106/EEG med senere tilføyelser 93/68/EEG

anvendte harmoniserte standarder, særlig:
se forrige side

FIN
CE-standardinmukaisuuslause
Ilmoitamme täten, että tämä laite vastaa seuraavia asiaankuuluvia määräyksiä:
EU-konedirektiivi: 2006/42/EG
Pienjännitedirektiivin suojatavoitteita noudatetaan konedirektiivin 2006/42/EY liitteessä I, nro 1.5.1 mukaisesti.

Sähkömagneettinen soveltuvuus 2004/108/EG
EU materiaalidirektiivi 89/106/EEG seuraavien täsmennyksin 93/68/EEG

käytetyt yhteensovitettut standardit, erityisesti:
katso edellinen sivu.

DK
EF-overensstemmelseserklæring
Vi erklærer hermed, at denne enhed ved levering overholder følgende relevante bestemmelser:
EU-maskindirektiver 2006/42/EG
Lavspændingsdirektivets 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

H
EK-megfelelőségi nyilatkozat
Ezennel kijelentjük, hogy az berendezés megfelel az alábbi irányelveknek:

Gépek irányelv: 2006/42/EK
A kistesztültségű 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/EEG és az azt kiváltó 93/68/EEG irányelv
alkalmazott harmonizált szabványoknak, különösen:
lásd az előző oldalt

CZ
Prohlášení o shodě ES
Prohláshujeme 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

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

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

GR
Δήλωση συμμόρφωσης της ΕΕ
Δηλώνουμε ότι το προϊόν αυτό ο' 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/ΕΕΚ όπως τροποποιήθηκε 93/68/ΕΕΚ

Εναρμονισμένα χρησιμοποιούμενα πρότυπα, ιδιαίτερα:
Βλέπε προηγούμενη σελίδα

TR
CE Uygunluk Teyid Belgesi
Bu cihazın teslim edildiği şekliyle aşağıdaki standartlara uygun olduğunu teyid ederiz:
AB-Makina Standartları 2006/42/EG
Alçak gerilim yönetmesinin koruma hedefleri, 2006/42/AT makine yönetgesi 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

kismen kullanılan standartlar için:
bkz. bir önceki sayfa

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 electromagnetica – directiva 2004/108/EG
Directiva privind produsele pentru construcții 89/106/EEG cu amendamentele ulterioare 93/68/EEG
standarde armonizate aplicate, ideosebi:
vezi pagina precedentă

EST
EÜ vastavusdeklaratsioon
Käesolevaga tõendame, et see toode vastab järgmistele asjakohastele direktiividele:
Masinadirektiiv 2006/42/EÜ
Madalpingedirektiivi kaits-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/EE, muudetud direktiiviga 93/68/EMÜ kohaldatud harmoneeritud standardid, eriti:
vt eelmist lk

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

LT
EB atitikties deklaracija
Šiuo pažymima, kad šis gaminytis atitinka šias normas ir direktyvas:

Mašinių direktyvą 2006/42/EB
Laikomasi žemos įtampos direktyvos keliamų saugos reikalavimų pagal Mašinių direktyvos 2006/42/EB I priedo 1.5.1 punktą.
Elektromagnetinio suderinamumo direktyvą 2004/108/EB
Statybos produktų direktyvos 89/106/EEB pataisą 93/68/EEB pritaikytus vieningus standartus, o būtent:
žr. ankstesniame puslapyje

SK
ES vyhlášení o zhode
Týmto vyhlasujeme, že konštrukcie 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/EEG pozmenená 93/68/EEG

používané harmonizované normy, najmä:
pozri predchádzajúcu stranu

SLO
ES – izjava o skladnosti
Izjavljamo, da dobavljene vrste izdelbe te serije ustrezajo sledečim zadevnim določilom:
Direktiva o strojih 2006/42/ES
Cilji Direktive o nizkonapetostni opremi so v skladu s prilogo 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/EEG s verziji 93/68/EEG

uporabljeni harmonizirani standardi, predvsem:
glejte prejšnjo stran

BG
EO-Декларация за съответствие
Декларираме, че продуктът отговаря на следните изисквания:

Машинна 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/EEG изменени 93/68/EEG
Хармонизирани стандарти:
вж. предната страница

M
Dikjarazzjoni ta' konformità KE
B'dan il-mezz, niddikjaraw li l-prodotti tas-serje jissodisfaw id-dispożizzjonijiet rilevanti li għejjin:
Makkinarju – Direttiva 2006/42/KE
L-obiettivi 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 elettromanjetika – Direttiva 2004/108/KE
Direttiva dwar il-prodotti tal-kostruzzjoni 89/106/KEE kif emendata bid-Direttiva 93/68/KEE
kif ukoll standards armonizzati b'mod partikolari:
ara l-paġna ta' qabel



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