

SL1 and SLV pumps

1.1 - 11 kW, 50 Hz

Installation and operating instructions



Installation and operating instructions in other languages for 50 Hz

net.grundfos.com/qr/i/96771279

be
think
innovate

GRUNDFOS 

English (GB) Installation and operating instructions

Original installation and operating instructions

CONTENTS

	Page
1. Symbols used in this document	2
2. General description	3
2.1 Product drawing	3
2.2 Control and monitoring	3
2.3 Applications	3
2.4 Operating conditions	3
3. Delivery and handling	4
3.1 Transportation	4
3.2 Storage	4
4. Identification	5
4.1 Nameplate	5
4.2 Type key	6
5. Approvals	6
5.1 Approval standards	6
5.2 Explanation to Ex approval	7
6. Safety	8
6.1 Potentially explosive environments	8
7. Installation	9
7.1 Submerged installation on auto coupling	9
7.2 Free-standing submerged installation on ring stand	10
7.3 Torques for inlet and outlet flanges	11
8. Electrical connection	12
8.1 Wiring diagrams	14
8.2 Pump controllers	18
8.3 Thermal switch, Pt1000 and PTC thermistor	18
8.4 WIO sensor (water-in-oil sensor)	18
8.5 Moisture switch	19
8.6 IO 113	19
8.7 Frequency converter operation	20
9. Startup	21
9.1 General startup procedure	21
9.2 Operating modes	21
9.3 Direction of rotation	22
10. Maintenance and service	23
10.1 Inspection	23
10.2 Dismantling the pump	24
10.3 Assembling the pump	26
10.4 Oil quantities	27
10.5 Service kits	27
10.6 Contaminated pumps	27
11. Fault finding	28
12. Technical data	30
13. Disposal	31



Warning

Prior to installation, read these installation and operating instructions. Installation and operation must comply with local regulations and accepted codes of good practice.

Warning

The use of this product requires experience with and knowledge of the product.



Persons with reduced physical, sensory or mental capabilities must not use this product, unless they are under supervision or have been instructed in the use of the product by a person responsible for their safety.

Children must not use or play with this product.

1. Symbols used in this document



Warning

If these safety instructions are not observed, it may result in personal injury.



Warning

If these instructions are not observed, it may lead to electric shock with consequent risk of serious personal injury or death.



Warning

These instructions must be observed for explosion-proof pumps.



Caution

If these safety instructions are not observed, it may result in malfunction or damage to the equipment.



Note

Notes or instructions that make the job easier and ensure safe operation.

2. General description

This booklet includes instructions for installation, operation and maintenance of Grundfos SL1 and SLV submersible sewage and wastewater pumps with motors of 1.1 to 11 kW. Grundfos SL1 and SLV sewage and wastewater pumps are designed for pumping domestic, municipal and industrial sewage and wastewater.

Two types of pumps are available:

- SL1 sewage pumps with S-tube impeller
- SLV sewage pumps with SuperVortex free-flow impeller.

The pumps can be installed on an auto-coupling system or stand freely on the bottom of a tank.

Grundfos SL1 and SLV pumps are designed with an S-tube and SuperVortex impeller, respectively, to ensure reliable and optimum operation.

The booklet also includes specific instructions for the explosion-proof pumps.

2.1 Product drawing

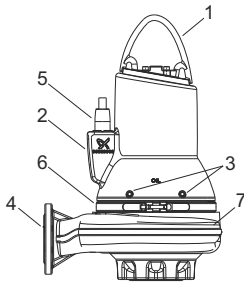


Fig. 1 SL1 pump

Pos.	Description
1	Lifting bracket
2	Nameplate
3	Oil screws
4	Outlet flange
5	Cable plug
6	Clamp
7	Pump housing

2.2 Control and monitoring

The pumps can be controlled via the Grundfos controllers LC, LCD and dedicated controls DC, DCD. See section [8.2 Pump controllers](#).

Pumps with sensor are supplied together with an IO 113. See section [8.6 IO 113](#).

2.3 Applications

SL1 and SLV pumps are designed for pumping these liquids:

- large quantities of drainage and surface water
- domestic wastewater with discharge from toilets
- wastewater with a high content of fibres (SuperVortex impeller)
- municipal and commercial sewage and wastewater.

2.4 Operating conditions

SL1 and SLV pumps are suitable for the following operating situations:

- **S1 operation** (continuous operation), the pump must always be covered by the pumped liquid to the top of the motor. See fig. [2](#).
- **S3 operation** (intermittent operation), the pump must always be covered by the pumped liquid up to the top of the cable entry. See fig. [2](#).

For further information about S1 and S3 operation, see section [9.2 Operating modes](#).

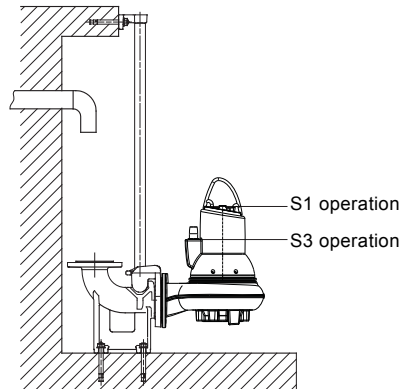


Fig. 2 Stop levels

TM04 2648 2808

TM04 2649 2808

pH value

SL1 and SLV pumps in permanent installations can be used for pumping liquids with the following pH values:

Pump type	Material variant	Material	pH value
SL1/SLV	Standard	Cast-iron impeller and pump housing	6.5 - 14 ¹⁾
SLV	Q	Stainless-steel impeller and cast-iron pump housing	6-14 ¹⁾

1) For fluctuating pH values, the range is pH 4 to 14.

Liquid temperature

0-40 °C.

For short periods (maximum 3 minutes) a temperature of up to 60 °C is permissible (non-Ex versions only).



Warning

Explosion-proof pumps must never pump liquids of a temperature higher than +40 °C.

Ambient temperature

Warning

For explosion-proof pumps, the ambient temperature on the installation site must be in the range from -20 °C to +40 °C.



For explosion-proof pumps with WIO sensor, the ambient temperature on the installation site must be in the range from 0-40 °C.

For non-explosion-proof pumps, the ambient temperature may exceed +40 °C for a short period (maximum 3 minutes).

Density and viscosity of pumped liquid

When pumping liquids with a density and/or a kinematic viscosity higher than that of water, use motors with correspondingly higher outputs.

Flow velocity

We recommend that you keep a minimum flow velocity to avoid sedimentations in the piping system. Recommended flow velocities:

- in vertical pipes: 1.0 m/s
- in horizontal pipes: 0.7 m/s.

Free spherical passage

From 50 to 100 mm, depending on pump size.

Operating mode

Maximum 20 starts per hour.

3. Delivery and handling

The pump may be transported and stored in a vertical or horizontal position. Make sure that it cannot roll or fall over.

3.1 Transportation

All lifting equipment must be rated for the purpose and checked for damage before any attempts to lift the pump. The lifting equipment rating must under no circumstances be exceeded. The pump weight is stated on the pump nameplate.

Warning



Always lift the pump by its lifting bracket or by means of a fork-lift truck if the pump is fixed on a pallet. Never lift the pump by means of the power cable or the hose or the pipe.

3.2 Storage

During long periods of storage, the pump must be protected against moisture and heat.

Storage temperature: -30 °C to +60 °C.

Warning



If the pump is stored for more than one year or it takes a long time before it is put into operation after the installation, the impeller must be turned at least once a month.

If the pump has been in use, the oil must be changed before storage.

After a long period of storage, the pump must be inspected before it is put into operation. Make sure that the impeller can rotate freely. Pay special attention to the condition of the shaft seal, O-rings, oil and the cable entry.

4. Identification

4.1 Nameplate

The nameplate states the operating data and approvals applying to the pump. The nameplate is fitted to the side of the motor housing close to the cable entry.

Fix the extra nameplate supplied with the pump to the cable end in the control cabinet.



1	CE0344	II2G	96771279
2	KEMA 08ATEX 0125X		
3	Ex cd IIB T4, T3 Gb		
4	Type: SLV.80.80.110.EX.2.51D		
5	Model: 9687208500000001		
6	P.c. 0845	IP68	20 m
9	Hmax: 44.9 m	Qmax: 90 m ³ /h	
11	Motor: 3~	Tmax.: 40 °C	
13	P1: 12.5 kW	P2: 11.0 kW	
15	n: 2950 min ⁻¹	Cosφ: 0.89	
17	380-415 V Δ	22.4-20.8 A	
19	V Y	A	
21	50 Hz	Insul.class: H	
23	EN 12050-1	Weight: 180 kg	
	Made in Tatabanya. Hungary		
	 		

Fig. 3 Nameplate

Pos.	Description
1	Approvals
2	Explosion protection certificate No.
3	Ex description
4	Type designation
5	Model number
6	Production code (year and week)
7	Enclosure class to IEC
8	Maximum installation depth
9	Maximum head
10	Maximum flow rate
11	Number of phases
12	Maximum liquid temperature
13	Rated input power
14	Shaft power
15	Rated speed
16	Power factor
17	Rated voltage, D
18	Rated current, D
19	Rated voltage, Y
20	Rated current, Y
21	Frequency
22	Insulation class
23	Approval
24	Weight without cable
25	Country of production

TM04 3297 0716

4.2 Type key

The pump can be identified by means of the type designation stated on the pump nameplate.

Example: **SLV.80.80.40.A.Ex.4.5.0D.Q**

Code	Designation	Explanation
SL	Pump type	Grundfos wastewater pump
1	Impeller type	S-tube impeller
V		SuperVortex impeller
80	Free spherical passage [mm]	Maximum solids size
80	Pump outlet [mm]	Nominal diameter of pump outlet
40	Power [kW]	Output power P2 / 10
Blank	Sensor version	Standard version
A		Sensor version
Blank	Pump version	Non-explosion-proof version
Ex		Explosion-proof version
2	Number of poles	2-pole
4		4-pole
50	Frequency [Hz]	50 Hz
0B	Voltage and starting method	3 x 400-415 V, direct-on-line starting
0D		3 x 380-415 V, direct-on-line starting
1D		3 x 380-415 V, star-delta starting
0E		3 x 220-240 V, direct-on-line starting
1E		3 x 220-240 V, star-delta starting
Blank		1st generation
A	Generation	2nd generation
B		3rd generation
C		4rd generation
Blank		Pump materials
Q	Stainless-steel impeller, cast-iron pump housing and motor housing	
Blank	Customisation	Pump in standard range
Z		Custom-built pump

5. Approvals

SL1 and SLV pumps have been tested by KEMA. The explosion-proof version hold two examination certificates:

- ATEX(EU): KEMA08ATEX0125X
- IECEx: IECEx KEM08.0039X

Both certificates have been issued by KEMA.





5.1 Approval standards

The standard variants are approved by LGA (notified body under the Construction Products Directive) according to EN 12050-1 or EN 12050-2 as specified on the pump nameplate.

5.2 Explanation to Ex approval

SL1 and SLV pumps have the following explosion protection classifications:


ATEX:

Direct-drive pump without sensor:	CE 0344  II 2 G Ex c d IIB T4 Gb
Direct-drive pump with sensor:	CE 0344  II 2 G Ex c d mb IIB T4 Gb
Pump driven by frequency converter without sensor:	CE 0344  II 2 G Ex c d IIB T3 Gb
Pump driven by frequency converter with sensor:	CE 0344  II 2 G Ex c d mb IIB T3 Gb

IECEX:

Pump without sensor:	Ex d IIB T3/T4 Gb
Pump with sensor:	Ex d mb T3/T4 Gb

5.2.1 Europe

Directive/standard	Code	Description
ATEX	CE 0344	= CE marking of conformity according to the ATEX directive 2014/34/EU. 0344 is the number of the notified body which has certified the quality system for ATEX.
		= Marking of explosion protection.
	II	= Equipment group according to the ATEX directive, defining the requirements applicable to the equipment in this group.
	2	= Equipment category according to the ATEX directive, defining the requirements applicable to the equipment in this category.
	G	= Explosive atmosphere caused by gases or vapours.
	Ex	= The equipment conforms to harmonised European standard.
	c	Constructional safety according to EN 13463-5:2011 and EN 13463-1:2009.
Harmonised European standard EN 60079-0	d	= Flameproof enclosure according to EN 60079-1:2007.
	mb	= Encapsulation according to EN 60079-18:2009.
	IIB	= Classification of gases, see EN 60079-0:2012. Gas group B includes gas group A.
	T4/T3	= Maximum surface temperature is 135 °C / 200 °C according to EN 60079-0:2012.
	Gb	= Equipment protection level.

5.2.2 Australia and New Zealand

Explosion-proof variants for Australia and New Zealand are approved Ex d IIB T3/T4 Gb (without WIO sensor) or Ex d mb T3/T4 Gb (with WIO sensor).

Standard	Code	Description
IEC 60079-0 and IEC 60079-1	Ex	= Area classification according to AS 2430.1.
	d	= Flameproof enclosure according to IEC 60079-1:2007.
	mb	= Encapsulation according to IEC 60079-18:2009.
	IIB	= Classification of gases, see IEC 60079-0:2011. Gas group B includes gas group A.
	T4/T3	= Maximum surface temperature is 135 °C / 200 °C according to IEC 60079-0:2011.
	Gb	= Equipment protection level.

6. Safety



Warning

Pump installation in tanks must be carried out by specially trained persons.

Work in or near tanks must be carried out according to local regulations.



Warning

Persons must not enter the installation area when the atmosphere is explosive.



Warning

It must be possible to lock the main switch in position 0. Type and requirements as specified in EN 60204-1, 5.3.2.

For safety reasons, all work in tanks must be supervised by a person outside the pump tank.



Note

We recommend that you make all maintenance and service work when the pump is placed outside the tank.

Tanks for submersible sewage and wastewater pumps may contain sewage or wastewater with toxic and/or disease-causing substances. Therefore, all persons involved must wear appropriate personal protective equipment and clothing, and all work on and near the pump must be carried out under strict observance of the hygiene regulations in force.



Warning

Make sure that the lifting bracket is tightened before attempting to lift the pump. Tighten if necessary. Carelessness during lifting or transportation may cause injury to personnel or damage to the pump.

6.1 Potentially explosive environments

Use explosion-proof pumps for applications in potentially explosive environments. See section [5.2 Explanation to Ex approval](#).



Warning

SL1 and SLV pumps must under no circumstances be used to pump explosive, flammable or combustible liquids.



Warning

The classification of the installation site must be approved by the local fire-fighting authorities in each individual case.

Special conditions for safe use of SL1 and SLV explosion-proof pumps:

1. Make sure the moisture switch and thermal switches are connected in the same circuit but have separate alarm outputs (motor stop) in case of high humidity or high temperature in the motor.
2. Bolts used for replacement must be class A2-70 or better according to EN/ISO 3506-1.
3. Contact the manufacturer for information on the dimensions of the flameproof joints.
4. The level of pumped liquid must be controlled by two level switches connected to the motor control circuit. The minimum level depends on the installation type and is specified in these installation and operating instructions.
5. Make sure the permanently attached cable is suitably mechanically protected and terminated in a suitable terminal board placed outside the potentially explosive area.
6. The sewage pumps have an ambient temperature range of -20 °C to +40 °C and a maximum process temperature of +40 °C. The minimum ambient temperature for a pump with a water-in-oil sensor is 0 °C.
7. The thermal protection in the stator windings has a nominal switch temperature of 150 °C and must guarantee the disconnection of the power supply. The power supply must be reset manually.
8. The control unit must protect the WIO sensor against short circuit current of the supply to which it is connected. The maximum current from the control unit must be limited to 350 mA.
9. In case of frequency converter usage, the maximum surface temperature of the pump can be 200 °C.



7. Installation



Warning

During installation, always support the pump by means of lifting chains or place it in horizontal position to secure stability.

Caution

Prior to installation, make sure the tank bottom is even.



Warning

Before beginning the installation, switch off the power supply and lock the main switch in position 0 with a padlock to ensure that the power supply cannot be accidentally switched on.

Any external voltage connected to the pump must be switched off before working on the pump.

Before beginning installation procedures, carry out these checks:

- Does the pump correspond to order?
- Is the pump suitable for the supply voltage and frequency available at the installation site?
- Are accessories and other equipment undamaged?

Note

Further details concerning accessories can be found in the data booklet on SL1 and SLV pumps on www.grundfos.com.

Fix the extra nameplate supplied with the pump to the cable end in the control cabinet.

All safety regulations must be observed at the installation site, for example the use of blowers for fresh-air supply to the tank.

Prior to installation, check the oil level in the oil chamber. See section [10. Maintenance and service](#).



Warning

Do not put your hands or any tool into the pump inlet or outlet port after the pump has been connected to the power supply, unless the pump has been switched off by removing the fuses or switching off the main switch. Make sure that the power supply cannot be accidentally switched on.

Caution

We recommend that you always use Grundfos accessories to avoid malfunctions due to incorrect installation.



Warning

Only use the lifting bracket for lifting the pump. Do not use it to hold the pump when in operation.

Installation types

SL1 and SLV pumps are designed for two installation types:

- submerged installation on auto coupling
- free-standing submerged installation on ring stand.

7.1 Submerged installation on auto coupling

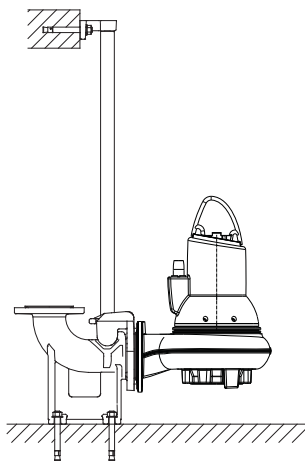


Fig. 4 Submerged installation on auto coupling

Pumps for permanent installation can be installed on a stationary auto-coupling guide rail system. The auto-coupling system facilitates maintenance and service as the pump can easily be lifted out of the tank.



Warning

Before beginning installation procedures, make sure that the atmosphere in the tank is not potentially explosive.

Make sure that the pipes are installed without the use of undue force. No loads from the weight of the pipes must be carried by the pump. We recommend that you use loose flanges to ease the installation and to avoid pipe tension at flanges and bolts.

Caution

Do not use elastic elements or bellows in the pipes. These elements must never be used as a means to align the pipes.

Caution

TM04 2650 2808

Proceed as follows:

1. Drill mounting holes for the guide rail bracket on the inside of the tank and fasten the guide rail bracket provisionally with two screws.
2. Place the auto-coupling base unit on the bottom of the tank. Use a plumb line to establish the correct positioning. Fasten the auto coupling with expansion bolts. If the bottom of the tank is uneven, the auto-coupling base unit must be supported so that it is level when being fastened.
3. Assemble the outlet pipe in accordance with the generally accepted procedures and without exposing the pipe to distortion or tension.
4. Place the guide rails on the auto-coupling base unit and adjust the length of the rails accurately to the guide rail bracket at the top of the tank.
5. Unscrew the provisionally fastened guide rail bracket. Insert the upper guide rail bracket into the guide rails. Fasten the guide rail bracket on the inside of the tank.

Note

The guide rails must not have any axial play as this would cause noise during pump operation.

6. Clean out debris from the tank before lowering the pump into the tank.
7. Fit the guide claw to the outlet port of the pump.
8. Slide the guide claw of the pump between the guide rails and lower the pump into the tank by means of a chain secured to the lifting bracket of the pump. When the pump reaches the auto-coupling base unit, the pump will automatically connect tightly.
9. Hang up the end of the chain on a suitable hook at the top of the tank and in such a way that the chain cannot come into contact with the pump housing.
10. Adjust the length of the power cable by coiling it up on a relief fitting to ensure that the cable is not damaged during operation. Fasten the relief fitting to a suitable hook at the top of the tank. Make sure that the cables are not sharply bent or pinched.
11. Connect the power cable.

Note

The free end of the cable must not be submerged, as water may penetrate into the cable.

7.2 Free-standing submerged installation on ring stand

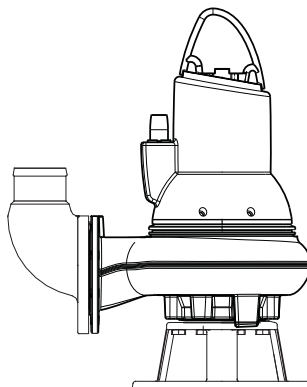


Fig. 5 Free-standing submerged installation on ring stand

Pumps for free-standing submerged installation cannot stand freely on the bottom of the tank. The pump must be installed on a ring stand. See fig. 5.

The ring stand is available as an accessory.

In order to facilitate service on the pump, fit a flexible union or coupling to the elbow on the outlet port for easy separation.

If a hose is used, make sure that the hose does not buckle and that the inside diameter of the hose matches that of the pump outlet port.

If a rigid pipe is used, fit the union or coupling, non-return valve and isolating valve in the order mentioned, when viewed from the pump.

If the pump is installed in muddy conditions or on uneven ground, support the pump on bricks or a similar support.

TM04 2651 2808

Proceed as follows:

1. Fit a 90 ° elbow to the pump outlet port and connect the outlet pipe or hose.
2. Lower the pump into the liquid by means of a chain secured to the lifting bracket of the pump. We recommend that you place the pump on a plane, solid foundation. Make sure that the pump is hanging from the chain and **not** the cable. Make sure that the pump is standing securely.
3. Hang up the end of the chain on a suitable hook at the top of the tank and in such a way that the chain cannot come into contact with the pump housing.
4. Adjust the length of the power cable by coiling it up on a relief fitting to ensure that the cable is not damaged during operation. Fasten the relief fitting to a suitable hook at the top of the tank. Make sure that the cable is not sharply bent or pinched.
5. Connect the power cable.

Note

The free end of the cable must not be submerged, as water may penetrate into the cable.

7.3 Torques for inlet and outlet flanges

Grade 4.6 (5) galvanised steel screws and nuts

DN	DC [mm]	Screws	Specified torques rounded off by ± 5 [Nm]	
			Slightly oiled	Well lubricated
DN 65	145	4 x M16	70	60
DN 80	160	8 x M16	70	60
DN 100	180	8 x M16	70	60
DN 150	240	8 x M20	140	120

Grade A2.50 (AISI 304) steel screws and nuts

DN	DC [mm]	Screws	Specified torques rounded off by ± 5 [Nm]	
			Slightly oiled	Well lubricated
DN 65	145	4 x M16	-	60
DN 80	160	8 x M16	-	60
DN 100	180	8 x M16	-	60
DN 150	240	8 x M20	-	120

Caution

The gasket must be a full face, reinforced paper gasket like Klingersil C4300. If softer gasket material is used, torques must be reconsidered.

8. Electrical connection



Warning

The pump must not run dry.

An additional level switch must be installed to ensure that the pump is stopped in case the stop level switch is not operating.

Warning

Connect the pump to an external main switch which ensures all-pole disconnection with a contact separation according to EN 60204-1, 5.3.2.



It must be possible to lock the main switch in position 0. Type and requirements as specified in EN 60204-1, 5.3.2.

The electrical connection must be carried out in accordance with local regulations.



Warning

The pumps must be connected to a control box with a motor protection relay with IEC trip class 10 or 15.

Warning



Power supply for motor protection circuit must be low voltage, Class 2.

See motor protection wiring diagram in section [8.1 Wiring diagrams](#).



Warning

Pumps for hazardous locations must be connected to a control box with a motor protection relay with IEC trip class 10.

Warning

Do not install Grundfos control boxes, pump controllers, Ex barriers and the free end of the power cable in potentially explosive environments.

The classification of the installation site must be approved by the local fire-fighting authorities in each individual case.

On explosion-proof pumps, make sure that an external earth conductor is connected to the external earth terminal on the pump using a secure cable clamp. Clean the surface of the external earth connection and mount the cable clamp.



The cross section of the earth conductor must be at least 4 mm², for example type H07 V2-K (PVT 90 °) yellow and green.

Make sure that the earth connection is protected from corrosion.

Make sure that all protective equipment has been connected correctly.

Float switches used in potentially explosive environments must be approved for this application. They must be connected to the Grundfos LC, LCD 108 pump controller via the intrinsically safe LC-Ex4 barrier to ensure a safe circuit.



Warning

If the supply cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons.



Set the motor-protective circuit breaker to the rated current of the pump. The rated current is stated on the pump nameplate.



If the pump has an Ex mark on the nameplate, make sure that the pump is connected in accordance with the instructions given in this booklet.

The mains supply voltage and frequency are marked on the pump nameplate. The voltage tolerance must be within -10 % to +10 % of the rated voltage. Make sure that the motor is suitable for the power supply available at the installation site.

All pumps are supplied with 10 m cable and a free cable end, except for pumps for Australia and New Zealand which have 15 m cable.

Pumps without sensor must be connected to one of these three controller types:

- a control box with motor-protective circuit breaker, such as a Grundfos CU 100
- a Grundfos LC, LCD 107, LC, LCD 108 or LC, LCD 110 pump controller
- a Grundfos DC, DCD pump controller.

Pumps with sensor must be connected to a Grundfos IO 113 and one of these three controller types:

- a control box with motor-protective circuit breaker, such as a Grundfos CU 100
- a Grundfos LC, LCD 107, LC, LCD 108 or LC, LCD 110 pump controller
- a Grundfos DC, DCD pump controller.



Warning

Before installation and the first startup of the pump, check the condition of the cable visually to avoid short circuits.

Pumps with WIO sensor

For safe installation and operation of pumps equipped with a WIO sensor, we recommend that you install an RC filter between the power contactor and the pump.

Caution

If an RC filter is installed to avoid any kind of transients in the installation, the RC filter must be installed between the power contactor and the pump.

Please note that the following aspects may cause problems in case of transients in the power supply system:

- Motor power:
 - The bigger the motor, the higher the transients.
- Length of power cable:
 - Where power and signal conductors are running in parallel close to each other, the risk of transients causing interference between power and signal conductors will increase with the length of the cable.
- Switchboard layout:
 - Power and signal conductors must be physically separated as much as possible. Close installation can cause interference in case of transients.
- Supply network "stiffness":
 - If a transformer station is located close to the installation, the supply network may be "stiff" and transient levels will be higher.

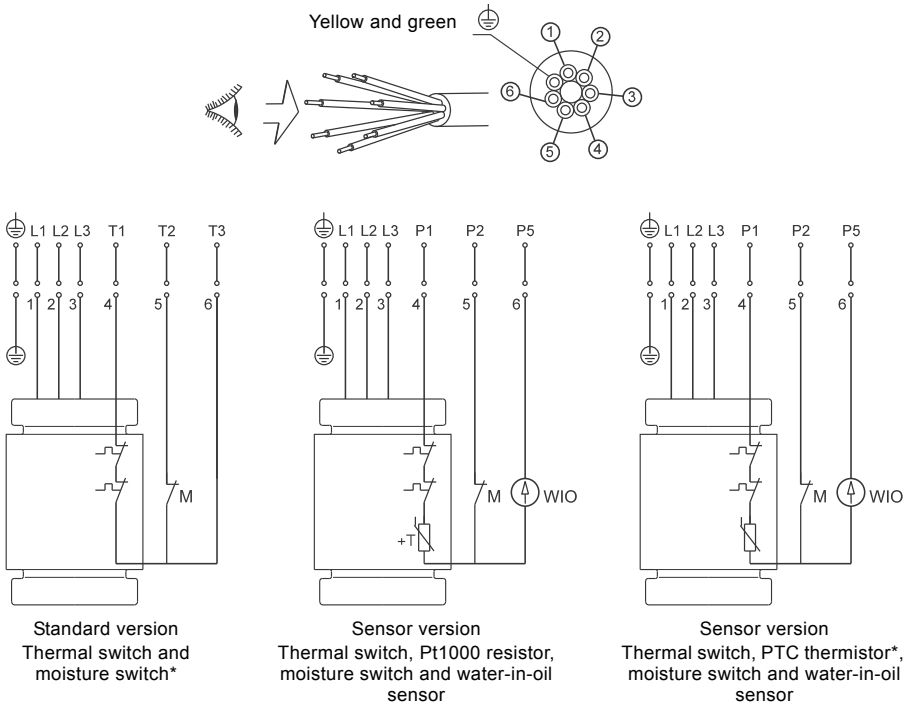
If combinations of the above aspects are present, it may be necessary to install RC filters for pumps with WIO sensors to protect against transients.

Transients can be completely eliminated if soft starters are used. But be aware that soft starters and variable speed drives have other EMC-related issues that must be taken into consideration.

For more information, see section [8.7 Frequency converter operation](#)

8.1 Wiring diagrams

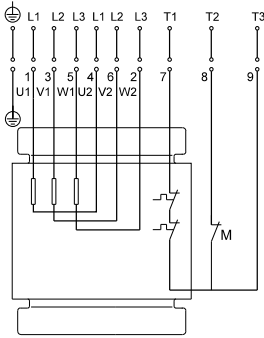
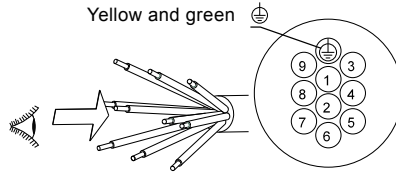
The pumps are supplied via either a 7-core cable or a 10-core cable. See fig. 6 for wiring diagrams for 7-core cable connection or figs. 7, 8 and 9 for wiring diagrams for 10-core cable connection. For further information, see the installation and operating instructions for the selected control box or pump controller.



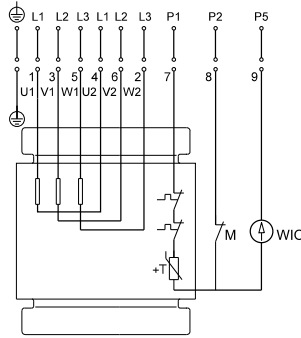
* Pumps from 4 kW and up sold in Australia and New Zealand are fitted with a PTC thermistor.

Fig. 6 Wiring diagram, 7-core cable, DOL

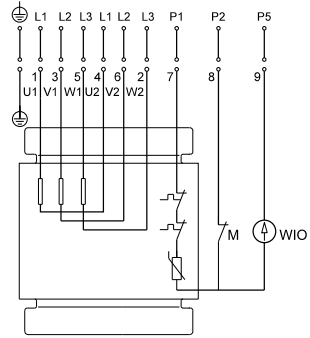
TM04 6884 0314



Standard version
Thermal switch and
moisture switch*



Sensor version
Thermal switch, Pt1000 resistor,
moisture switch and water-in-oil
sensor

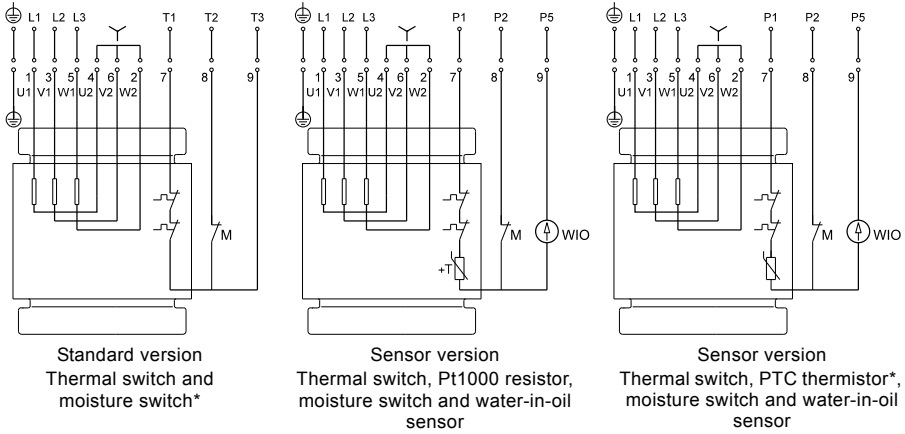
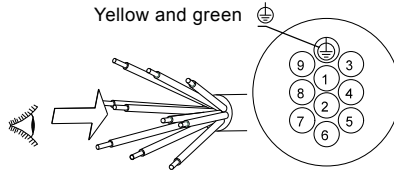


Sensor version
Thermal switch, PTC thermistor*,
moisture switch and water-in-oil
sensor

* Pumps from 4 kW and up sold in Australia and New Zealand are fitted with a PTC thermistor.

Fig. 7 Wiring diagram, 10-core cable, star/delta (Y/D)

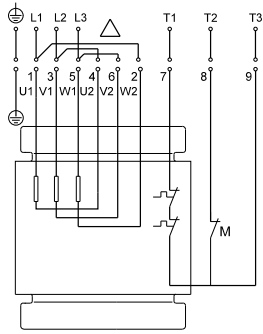
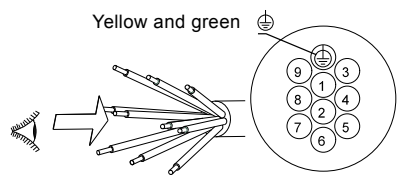
TM04 6885 0314



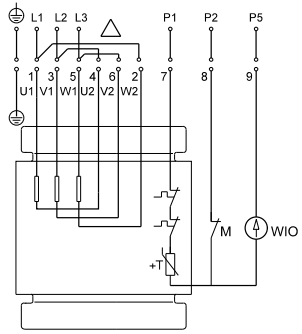
* Pumps from 4 kW and up sold in Australia and New Zealand are fitted with a PTC thermistor.

Fig. 8 Wiring diagram, 10-core cable, star-connected (Y)

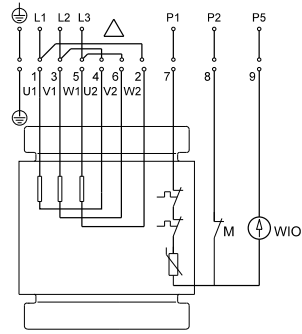
TM04 6886 0314



Standard version
Thermal switch and
moisture switch*



Sensor version
Thermal switch, Pt1000 resistor,
moisture switch and water-in-oil
sensor



Sensor version
Thermal switch, PTC thermistor*,
moisture switch and water-in-oil
sensor

* Pumps from 4 kW and up sold in Australia and New Zealand are fitted with a PTC thermistor.

TM04 6887 0314

Fig. 9 Wiring diagram, 10-core cable, delta-connected (D)

To find out whether the pump is fitted with a thermal switch or a PTC thermistor, measure the motor winding resistance. See table below.

	Without cable	With 10 m cable	With 15 m cable
Thermal switch	< 50 mΩ	< 320 mΩ	< 390 mΩ
PTC thermistor	> 100 mΩ	> 370 mΩ	> 440 mΩ

8.2 Pump controllers

SL1 and SLV pumps can be connected to the following Grundfos pump controllers for level control:

LC controllers are for one-pump-installations and LCD controllers are for two-pump installations.

- LC 107 and LCD 107 with air bells
- LC 108 and LCD 108 with float switches
- LC 110 and LCD 110 with electrodes
- Grundfos DC and DCD.

For further information on controllers, please see the installation and operating instructions for the selected controller or go to www.grundfos.com.

8.3 Thermal switch, Pt1000 and PTC thermistor

All SL1 and SLV pumps have thermal protection incorporated in the stator windings.

Pumps without sensor

Pumps without sensor have a thermal switch or a PTC thermistor. Via the pump controller safety circuit, the thermal switch will stop the pump by breaking the circuit in case of overtemperature (approximately 150 °C). The thermal switch will reclose the circuit after cooling. For pumps equipped with a PTC thermistor, connect the thermistor to either the PTC relay or the I/O module to break the circuit at 150 °C.

The maximum operating current of the thermal switch is 0.5 A at 500 VAC and $\cos \phi$ 0.6. The switch must be able to break a coil in the supply circuit.

Pumps with WIO sensor

Pumps with WIO sensor have either a thermal switch and a Pt1000 sensor or a PTC thermistor in the windings, depending on the installation site.

Via the pump controller safety circuit, the thermal switch or the thermistor will stop the pump by breaking the circuit in case of overtemperature (approximately 150 °C). The thermal switch or the thermistor will reclose the circuit after cooling.

The maximum operating current of both the Pt1000 and the thermistor is 1 mA at 24 VDC.

Non-explosion-proof pumps

When closing the circuit after cooling, the thermal protection can restart the pump automatically via the controller. Pumps from 4 kW and up sold in Australia and New Zealand are fitted with a PTC thermistor.

Explosion-proof pumps

Warning



The thermal protection of explosion-proof pumps must not restart the pump automatically. This ensures protection against overtemperature in potentially explosive environments. In pumps with sensor this is done by removing the short circuit between terminals R1 and R2 in the IO 113. See Electrical data in the installation and operating instructions for IO 113.

Warning



The separate motor-protective circuit breaker or controller must not be installed in potentially explosive environments.

8.4 WIO sensor (water-in-oil sensor)

The WIO sensor measures the water content in the oil and converts the value into an analogue current signal. The two sensor conductors are for power supply and for carrying the signal to the IO 113. The sensor measures the water content from 0 to 20 %. It also sends a signal if the water content is outside the normal range (warning), or if there is air in the oil chamber (alarm). The sensor is fitted in a stainless-steel tube for mechanical protection.

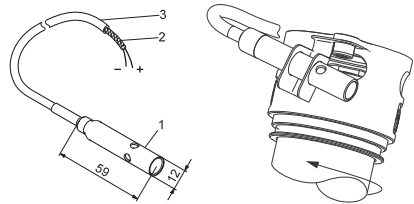


Fig. 10 WIO sensor

8.4.1 Fitting the WIO sensor

Fit the sensor next to one of the shaft seal openings. See fig. 10. The sensor must be tilted into the motor's direction of rotation to ensure that oil is led into the sensor. Make sure that the sensor is submerged in the oil.

8.4.2 Technical data

Input voltage:	12-24 VDC
Output current:	3.4 - 22 mA
Power input:	0.6 W
Ambient temperature:	0-70 °C

See also the installation and operating instructions for IO 113 on www.grundfos.com.

8.5 Moisture switch

All pumps are fitted with a moisture switch as standard with the moisture switch being connected via the supply cable, see section [8. Electrical connection](#), and connected to a separate circuit breaker.

The moisture switch is positioned in the bottom of the motor. If there is moisture in the motor, the switch will break the circuit and send a signal to the IO 113.

The moisture switch is non-reversing and must be replaced after use.

The moisture switch is connected to the control cable, and it must be connected to the safety circuit of the separate pump controller. See section [8. Electrical connection](#).

The motor-protective circuit breaker of the pump controller must include a circuit which automatically disconnects the power supply in case the protective circuit for the pump is opened.

Caution

8.6 IO 113

IO 113 provides an interface between a Grundfos wastewater pump equipped with sensors and the pump controller(s). The most important sensor status information is indicated on the front panel.

One pump can be connected to one IO 113 module.

Together with the sensors, the IO 113 provides a galvanic isolation between the motor voltage in the pump and the connected controller(s).

IO 113 can do the following as standard:

- Protect the pump against overheating.
- Monitor the status of these items:
 - motor winding temperature
 - leakage (WIO)
 - moisture in pump.
- Measure the stator insulation resistance.
- Stop the pump in case of alarm.
- Remotely monitor the pump via RS-485 communication (Modbus or GENIbus).
- Control the pump via a frequency converter.



Warning

IO 113 must not be used for purposes other than those specified above.

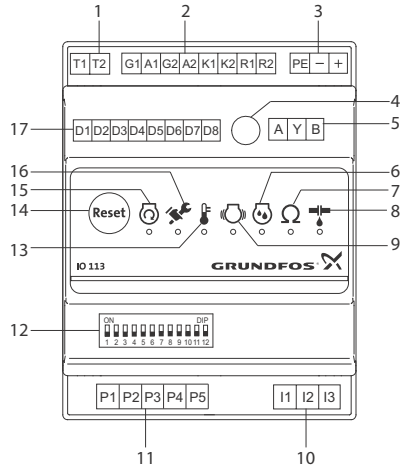


Fig. 11 IO 113 module

Pos.	Description
1	Terminals for alarm relay
2	Terminals for analog and digital inputs and outputs
3	Terminals for supply voltage
4	Potentiometer for setting the warning limit of stator insulation resistance
5	Terminals for RS-485 for GENIbus or Modbus
6	Indicator light for moisture measurement
7	Indicator light for stator insulation resistance
8	Indicator light for leakage (WIO)
9	Indicator light for vibration in pump
10	Terminals for measurement of stator insulation resistance
11	Terminals for connection of pump sensors
12	DIP switch for configuration
13	Indicator light for motor temperature
14	Button for resetting alarms
15	Indicator light for motor running
16	Indicator light for service
17	Terminals for digital outputs

TM05 1881 3811

8.7 Frequency converter operation

All SL1 and SLV pump types are designed for frequency converter operation to keep the energy consumption at a minimum.

To avoid the risk of sedimentation in the pipes, we recommend that you operate the speed-controlled pump at a flow rate above 1 m/s.

For frequency converter operation, please observe the following:

- Requirements must be fulfilled. See section [8.7.1 Requirements](#).
- Recommendations ought to be followed. See section [8.7.2 Recommendations](#).
- Consequences ought to be considered. See section [8.7.3 Consequences](#).

8.7.1 Requirements

- The thermal protection of the motor must be connected.
- Minimum switching frequency: 2.5 kHz.
- Peak voltage and dU/dt must be in accordance with the table below. The values stated are maximum values supplied to the motor terminals. The cable influence has not been taken into account. See the frequency converter data sheet regarding the actual values and the cable influence on the peak voltage and dU/dt.

Maximum repetitive peak voltage [V]	Maximum dU/dt U_N 400 V [V/ μ sec.]
850	2000

- If the pump is an Ex-approved pump, check if the Ex certificate of the specific pump allows the use of a frequency converter.
- Set the frequency converter U/f ratio according to the motor data.
- Local regulations and standards must be fulfilled.

8.7.2 Recommendations

Before installing a frequency converter, calculate the lowest allowable frequency in the installation in order to avoid zero flow.

- Do not reduce the motor speed to less than 30 % of rated speed.
- Keep the flow velocity above 1 m/sec.
- Let the pump run at rated speed at least once a day in order to prevent sedimentation in the piping system.
- Do not exceed the frequency indicated on the nameplate. In this case there is risk of motor overload.
- Keep the power cable as short as possible. The peak voltage will increase with the length of the power cable. See data sheet for the frequency converter used.
- Use input and output filters on the frequency converter. See data sheet for the frequency converter used.
- Use screened power cable if there is a risk that electrical noise can disturb other electrical equipment. See data sheet for the frequency converter used.

8.7.3 Consequences

When operating the pump via a frequency converter, please be aware of these possible consequences:

- The locked-rotor torque will be lower. How much lower will depend on the frequency converter type. See the installation and operating instructions for the frequency converter used for information on the locked-rotor torque available.
- The working condition of bearings and shaft seal may be affected. The possible effect will depend on the application. The actual effect cannot be predicted.
- The acoustic noise level may increase. See the installation and operating instructions for the frequency converter used for advice as to how to reduce the acoustic noise.

9. Startup

Warning



Before starting work on the pump, make sure that the fuses have been removed or the main switch has been switched off.

Make sure that the power supply cannot be accidentally switched on.

Make sure that all protective equipment has been connected correctly.

The pump must not run dry.



Warning

The pump must not be started if the atmosphere in the tank is potentially explosive.



Warning

It may lead to personal injuries or death to open the clamp while the pump is operating.

9.1 General startup procedure

This procedure applies to new installations as well as after service inspections if startup takes place some time after the pump was placed in the tank.

1. Remove the fuses and check that the impeller can rotate freely. Turn the impeller by hand.



Warning

The impeller can have sharp edges - wear protective gloves.

2. Check the condition of the oil in the oil chamber. See also section [10.1 Inspection](#).
3. Check that the system, bolts, gaskets, pipes and valves are in correct condition.
4. Mount the pump in the system.
5. Switch on the power supply.
6. Check whether the monitoring units, if used, are operating satisfactorily.
7. **For pumps with WIO sensor**, switch on IO 113 and check that there are no alarms or warnings. See section [8.6 IO 113](#).
8. Check the setting of air bells, float switches or electrodes.
9. Check the direction of rotation. See section [9.3 Direction of rotation](#).
10. Open the isolating valves, if fitted.
11. Check that the liquid level is above the motor for S1 operation and above the cable entry for S3 operation. See fig. [14](#). If the minimum level is not reached do not start the pump.
12. Start the pump and let the pump run briefly, and check if the liquid level is falling.
13. Observe if the outlet pressure and input current are normal. If not there might be air trapped inside the pump.

Note

Trapped air can be removed from the pump housing by tilting the pump by means of the lifting chain when the pump is in operation.

Caution

In case of abnormal noise or vibrations from the pump, other pump failure or power supply failure or water supply failure, stop the pump immediately. Do not attempt to restart the pump until the cause of the fault has been found and the fault corrected.

After one week of operation or after replacement of the shaft seal, check the condition of the oil in the chamber. For pumps without sensor, this is done by taking a sample of the oil. See section [10. Maintenance and service](#) for procedure.

Every time the pump has been removed from the tank, go through the above procedure when starting up again.

9.2 Operating modes

The pumps are designed for intermittent operation (S3). When completely submerged, the pumps can also operate continuously (S1).

S3, intermittent operation:

Operating mode S3 means that within 10 minutes the pump must be in operation for 4 minutes and stopped for 6 minutes. See fig. [12](#).

In this operating mode, the pump is partly submerged in the pumped liquid, that is the liquid level reaches at minimum the top of the cable entry on the motor housing. See fig. [2](#).

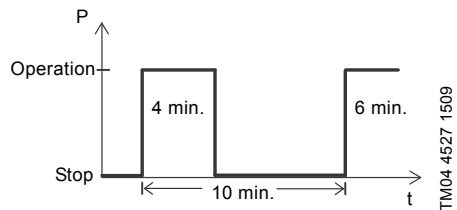
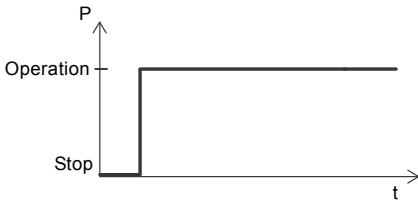


Fig. 12 S3, intermittent operation

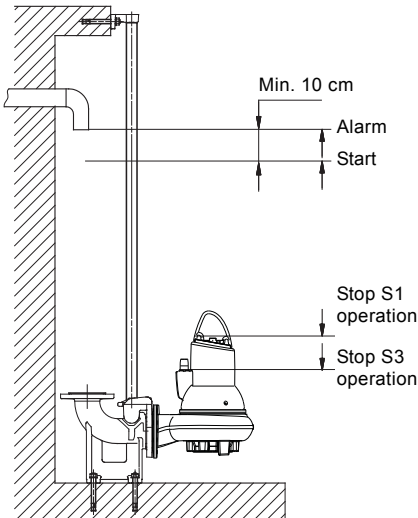
TM04 4527 1509

S1, continuous operation:

In this operating mode, the pump can operate continuously without being stopped for cooling. See fig. 13. Being completely submerged, the pump is sufficiently cooled by the surrounding liquid. See fig. 2.



TM04 4528 1509

Fig. 13 S1, continuous operation

TM04 2654 2808

Fig. 14 Start and stop levels

Make sure that the effective volume of the tank does not become so low that the number of starts per hour exceeds the maximum permissible number.

9.3 Direction of rotation**Note**

The pump may be started for a very short period without being submerged to check the direction of rotation.

Check the direction of rotation before starting up the pump.

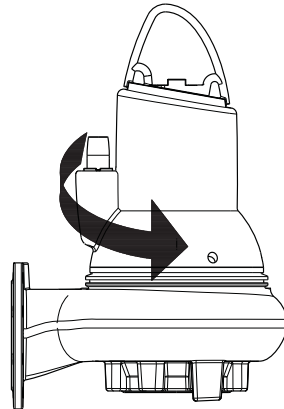
An arrow on the motor housing indicates the correct direction of rotation. Correct direction of rotation is clockwise when viewed from above.

Checking the direction of rotation

The direction of rotation must be checked in the following way every time the pump is connected to a new installation.

Procedure

1. Let the pump hang from a lifting device, for example the hoist used for lowering the pump into the tank.
2. Start and stop the pump while observing the movement (jerk) of the pump. If connected correctly, the impeller will rotate clockwise, that is the pump will jerk counterclockwise. See fig. 15.
3. If the direction of the rotation is wrong, interchange any two of the phases in the power supply cable. See fig. 6 or 8.



TM04 2657 2808

Fig. 15 Jerk direction

10. Maintenance and service

Warning



During maintenance and service, including transportation to service workshop, always support the pump by means of lifting chains or place it in horizontal position to secure stability.

Warning



Before starting work on the pump, make sure that the fuses have been removed or the main switch has been switched off. Make sure that the power supply cannot be accidentally switched on.

Make sure that all protective equipment has been connected correctly.

Warning



Before starting work on the pump, make sure that the main switch has been locked in position 0.

All rotating parts must have stopped moving.

Warning



Maintenance work on explosion-proof pumps must be carried out by Grundfos or a service workshop authorised by Grundfos.

However, this does not apply to the hydraulic components, such as pump housing and impeller.

Warning



The cable must only be replaced by Grundfos or a service workshop authorised by Grundfos.

Before carrying out maintenance and service, make sure that the pump has been thoroughly flushed with clean water. Rinse the pump parts in water after dismantling.

10.1 Inspection

Pumps running normal operation must be inspected every 3000 operating hours or at least once a year. If the pumped liquid is very muddy or sandy, inspect the pump at shorter intervals.

Check the following points:

- **Power consumption**
See pump nameplate.
- **Oil level and oil condition**
When the pump is new or after replacement of the shaft seal, check the oil level and water content after one week of operation. If there is more than 20 % extra liquid (water) in the oil chamber, the shaft seal is defective. The oil must be changed after 3000 operating hours or once a year.
Use Shell Ondina 919 oil or similar type.
See section [10.2.1 Oil change](#).
- **Cable entry**
Make sure that the cable entry is watertight (visual inspection) and that the cable is not sharply bent and/or pinched.
- **Pump parts**
Check impeller, pump housing, etc. for possible wear. Replace the defective parts.
See section [10.2.2 Removing the pump housing and impeller](#).
- **Ball bearings**
Check the shaft for noisy or heavy operation (turn the shaft by hand). Replace the defective ball bearings.
A general overhaul of the pump is usually required in case of defective ball bearings or poor motor function. This work must be carried out by Grundfos or a service workshop authorised by Grundfos.



Warning

Defective bearings may reduce the Ex safety.

- **O-rings and similar parts**
During service and replacement, make sure that the grooves for the O-rings as well as the seal faces have been cleaned before the new parts are fitted. Grease O-rings and recesses before assembly.

Note

Do not reuse rubber parts.



Warning

Explosion-proof pumps must be checked by an authorised Ex workshop once a year.

10.2 Dismantling the pump

Note See www.grundfos.com for service videos.

10.2.1 Oil change

After 3000 operating hours or once a year, change the oil in the oil chamber as described below.

If the shaft seal has been replaced, the oil must be changed.

Warning



When loosening the screws of the oil chamber, note that pressure may have built up in the chamber. Do not remove the screws until the pressure has been fully relieved.

Draining of oil

1. Place the pump on a plane surface with one oil screw pointing downwards.
2. Place a suitable container (approximately 1 litre), for instance made of transparent plastic material, under the oil screw.

Note Used oil must be disposed of in accordance with local regulations.

3. Remove the lower oil screw.
4. Remove the upper oil screw.
If the pump has been in operation for a long period of time, if the oil is drained off shortly after the pump has been stopped, and if the oil is greyish white like milk, it contains water. If the oil contains more than 20 % water, it is an indication that the shaft seal is defective and must be replaced. If the shaft seal is not replaced, the motor will be damaged.
If the quantity of oil is smaller than the quantity stated in section [10.4 Oil quantities](#), the shaft seal is defective.
5. Clean the faces for the gaskets for oil screws.

Filling with oil

1. Turn the pump so that the oil filling holes are placed opposite to each other, pointing upwards.

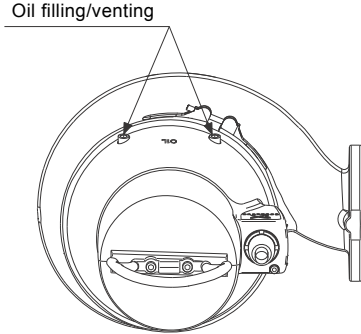


Fig. 16 Oil filling holes

2. Pour oil into the chamber.
For oil quantity, see section [10.4 Oil quantities](#).
3. Fit the oil screws with new gaskets.

10.2.2 Removing the pump housing and impeller

For position numbers, see pages [38](#) and [39](#).

Procedure

1. Loosen the clamp (92).
2. Remove the screw (92a) using your fingers.
3. Remove the pump housing (50) by inserting two screwdrivers between the cooling jacket and the pump housing.
4. Remove the screw (188a). Hold the impeller with a strap wrench.

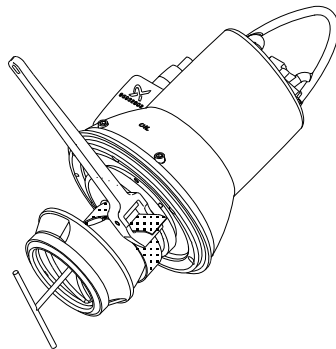


Fig. 17 Removing the impeller

5. Loosen the impeller (49) with a light blow on the edge. Pull it off.
6. Remove the key (9a) and the spring for impeller (157).

TM04 6477 0410

TM04 6476 0410

10.2.3 Removing the seal ring and wear ring

Procedure

1. Turn the pump housing upside-down.
2. Knock the seal ring (46) out of the pump housing using a punch.

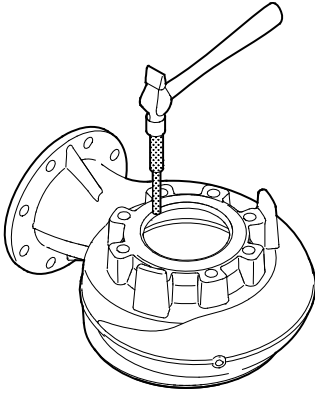


Fig. 18 Removing the seal ring

3. Clean the pump housing where the seal ring was fitted.
4. Remove the wear ring (49c) using a screwdriver.

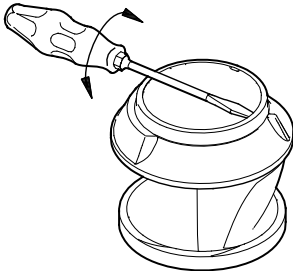


Fig. 19 Removing the wear ring

5. Clean the impeller where the wear ring was fitted.

10.2.4 Removing the shaft seal

Procedure

1. Remove the screws (188).
2. Remove the cover for oil chamber (58) using a puller.
3. Remove the screws (186).
4. Remove the shaft seal (105) using the puller.
5. Remove the O-ring (153b).

Procedure (pump with WIO sensor)

1. Remove the screws (188).
2. Remove the cover for oil chamber (58) using a puller.
3. Remove the screws (186).
4. Remove the sensor (521) and holder (522) from the shaft seal.
5. Remove the shaft seal (105) using the puller.
6. Remove the O-ring (153b).

TM02 8420 5103

TM02 8422 5103

10.3 Assembling the pump

10.3.1 Tightening torques and lubricants

Pos.	Designation	Quantity	Dim.	Torque [Nm]	Lubricant
92a	Screw	1		12 ± 2	
118a	Screw	2	M8	20 ± 2	
			M10	30 ± 3	
174	Screw	1		4 ± 1	
181	Union nut	1	7-core cable	50 ± 5	
			10-core cable	75 ± 5	
186	Screw	2		7 + 2-0	
182	Screw	4		20 ± 2	
187	Screw	4		20 ± 2	
188	Screw	2	M8	20 ± 2	
			M10	30 ± 3	
188a	Screw	2	M10	50 + 5-0	
			M12	75 ± 5	
193	Screw	2		16 ± 2	
	O-rings	All			Rocol

Rocol Sapphire Aqua-Sil, product number RM2924 (1 kg).

Shell Ondina 919, product number 96001442 (1 l).

10.3.2 Fitting the shaft seal

Procedure

1. Fit and lubricate the O-ring (153b) with oil.
2. Slide the shaft seal (105) gently over the shaft.
3. Fit and tighten the screws (186).
4. Fit and lubricate the O-ring (107) in the cover for oil chamber (58) with oil.
5. Fit the cover for oil chamber.
6. Fit and tighten the screws (188).

Procedure (pump with WIO sensor)

1. Fit and lubricate the O-ring (153b) with oil.
2. Slide the shaft seal (105) gently over the shaft.
3. Fit the holder (522) and sensor (521) with one of the screws (186).
4. Fit the second screw and tighten both screws (186).
5. Fit and lubricate the O-ring (107) in the cover for oil chamber (58) with oil.
6. Check that the sensor is positioned correctly. See section [8.4.1 Fitting the WIO sensor](#) and fig. 10. This is of special importance in horizontal pumps.
7. Fit the cover for oil chamber.
8. Fit and tighten the screws (188).

10.3.3 Fitting the seal ring and wear ring

Procedure

1. Lubricate the seal ring (46) with soapy water.
2. Place the seal ring in the pump housing.
3. Knock the seal ring home in the pump housing using a punch or a wooden block.

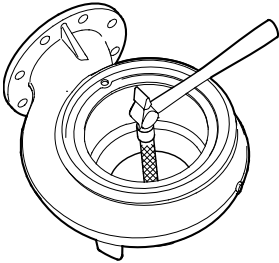


Fig. 20 Fitting the seal ring

4. Place the wear ring (49c) on the impeller.
5. Knock the wear ring home using a wooden block.

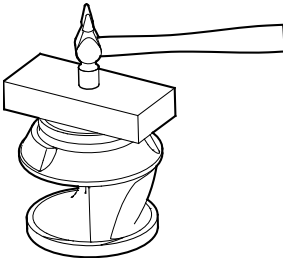


Fig. 21 Fitting the wear ring

10.3.4 Fitting the impeller and pump housing

Procedure

1. Fit the spring (157) and the key (9a). Keep the key in position while the impeller is fitted.
2. Fit the impeller (49).
3. Fit the washer (66) and the screw (188a).
4. Tighten the screw (188a) to 75 Nm. Hold the impeller with the strap wrench.
5. Mark the position of the pin on the pump housing.
6. Mark the position of the pin hole on the oil chamber.
7. Fit and lubricate the O-ring (37) with oil.
8. Fit the pump part in the pump housing (50).
9. Fit the clamp (92).
10. Tighten the screw (92a) to 12 Nm.
11. Check that the impeller rotates freely and without drag.

10.4 Oil quantities

The table shows the quantity of oil in the oil chamber of SL1 and SLV pumps. Oil type: Shell Ondina 919.

	Power [kW]	Oil quantity [l]
2-pole	2.2	0.6
	3.0	0.6
	4.0	1.0
	6.0	1.0
	7.5	1.0
	9.2	1.2
	11.0	1.2
4-pole	1.1	0.6
	1.3	0.6
	1.5	0.6
	2.2	0.6
	3.0	1.0
	4.0	1.0
	5.5	1.0
	7.5	1.2

Note Used oil must be disposed of in accordance with local regulations.

10.5 Service kits

For service kits for SL1 and SLV, see www.grundfos.com or Service Kit Catalogue.

10.6 Contaminated pumps

Note The product will be classified as contaminated if it has been used for a liquid which is injurious to health or toxic.

If you request Grundfos to service the product, contact Grundfos with details about the liquid before returning the product for service. Otherwise, Grundfos can refuse to accept the product for service.

Any application for service must include details about the liquid.

Clean the product in the best possible way before you return it.

Costs of returning the product are to be paid by the customer.

TM02 8421 5103

TM02 8423 5103

11. Fault finding



Warning

Before attempting to diagnose any fault, make sure that the fuses have been removed or the main switch has been switched off. Make sure that the power supply cannot be accidentally switched on.

All rotating parts must have stopped moving.



Warning

All regulations applying to pumps installed in potentially explosive environments must be observed.

Make sure that no work is carried out in potentially explosive atmosphere.

For pumps with sensor, start fault finding by checking the status on the IO 113 front panel.

Note

See installation and operating instructions for IO 113.

Fault	Cause	Remedy
1. The motor does not start. The fuses blow or the motor-protective circuit breaker trips immediately. Caution: Do not start again!	a) Supply failure; short circuit; earth-leakage fault in cable or motor winding.	Have the cable and motor checked and repaired by a qualified electrician.
	b) The fuses blow due to use of the wrong type of fuse.	Fit fuses of the correct type.
	c) The impeller is blocked by impurities.	Clean the impeller.
	d) Air bells, float switches or electrodes are out of adjustment or defective.	Readjust or replace the air bells, float switches or electrodes.
	e) Moisture in the stator housing (alarm). IO 113 interrupts the supply voltage.*	Replace the O-rings, the shaft seal and moisture switch.
	f) The WIO sensor is not covered by oil (alarm). IO 113 interrupts the supply voltage.*	Check, and possibly replace, the shaft seal, fill up with oil and reset IO 113.
	g) Stator insulation resistance is too low.*	Reset the alarm on IO 113, see the installation and operating instructions for IO 113.
2. The pump operates, but the motor-protective circuit breaker trips after a short while.	a) Low setting of the thermal relay in the motor-protective circuit breaker.	Set the relay in accordance with the specifications on the nameplate.
	b) Increased current consumption due to large voltage drop.	Measure the voltage between two motor phases. Tolerance: -10 % to +6 %. Reestablish the correct voltage supply.
	c) The impeller is blocked by impurities. Increased current consumption in all three phases.	Clean the impeller.
	d) Wrong direction of rotation.	Check the direction of rotation and possibly interchange any two of the phases in the incoming supply cable. See section 9.3 Direction of rotation .
3. The thermal switch of the pump trips after a short while.	a) The liquid temperature is too high.	Reduce the liquid temperature.
	b) The viscosity of the pumped liquid is too high.	Dilute the pumped liquid.
	c) Wrong electrical connection. (If the pump is star-connected to a delta connection, the result will be very low undervoltage).	Check and correct the electrical installation.

Fault	Cause	Remedy
4. The pump operates at below-standard performance and power consumption.	a) The impeller is blocked by impurities.	Clean the impeller.
	b) Wrong direction of rotation.	Check the direction of rotation and possibly interchange any two of the phases in the incoming supply cable. See section 9.3 Direction of rotation .
5. The pump operates, but gives no liquid.	a) The outlet valve is closed or blocked.	Check the outlet valve and possibly open and/or clean it.
	b) Non-return valve blocked.	Clean the non-return valve.
	c) Air in pump.	Vent the pump.
6. High power consumption (SLV).	a) Wrong direction of rotation.	Check the direction of rotation and possibly interchange any two of the phases in the incoming supply cable. See section 9.3 Direction of rotation .
	b) The impeller is blocked by impurities.	Clean the impeller.
7. Noisy operation and excessive vibrations (SL1).	a) Wrong direction of rotation.	Check the direction of rotation and possibly interchange any two of the phases in the incoming supply cable. See section 9.3 Direction of rotation .
	b) The impeller is blocked by impurities.	Clean the impeller.
8. The pump is clogged.	a) The liquid contains large particles.	Select a pump with a larger size of passage.
	b) A float layer has formed on the surface of the liquid.	Install a mixer in the tank.

* Applies only to pumps with sensor and with IO 113.

12. Technical data

Supply voltage

- 3 x 380-415 V -10 % to +10 %, 50 Hz
- 3 x 400-415 V -10 % to +10 %, 50 Hz.

Enclosure class

IP68. According to IEC 60529.

Insulation class

H (180 °C).

Pressure

Maximum pressure: 6 bar

All pump housings have a cast-iron PN 10 outlet flange.

Dimensions

Outlet flanges are DN 65, DN 80, DN 100 or DN 150 according to EN 1092-2.

Pump curves

Pump curves are available via the internet on www.grundfos.com.

The curves are to be considered as a guide. They must not be used as guarantee curves.

Test curves for the supplied pump are available on request.

Make sure that the pump does not operate outside the recommended operating range during normal operation.

Pump noise emission < 70 dB(A)

- Sound power measurements were carried out according to ISO 3743.
- Sound power was calculated at a distance of 1 metre according to ISO 11203.

The sound pressure level of the pump is lower than the limiting values stated in the EC Council Directive 2006/42/EC relating to machinery.

2-pole motor				Cable connection		
Power P ₂ [kW]	Power P ₁ [kW]	Voltage [V]	Starting method	Thermal protection	Cable cross section [mm ²]	Conductors or plug pins
2.2	2.8	3 x 380-415	DOL	Thermal switch	1.5	7/7
2.2	2.8	3 x 380-415	Y/D	Thermal switch	1.5	10/10
2.2	2.8	3 x 400-415	DOL	Thermal switch	1.5	7/7
3	3.8	3 x 380-415	DOL	Thermal switch	1.5	7/7
3	3.8	3 x 380-415	Y/D	Thermal switch	1.5	10/10
3	3.8	3 x 400-415	DOL	Thermal switch	1.5	7/7
4	4.8	3 x 380-415	Y/D	Thermal switch	2.5	10/10
4	4.8	3 x 400-415	DOL	Thermistor	2.5	7/10
6.0	7.1	3 x 380-415	Y/D	Thermal switch	2.5	10/10
6.0	7.1	3 x 400-415	DOL	Thermistor	2.5	7/10
7.5	8.9	3 x 380-415	Y/D	Thermal switch	2.5	10/10
7.5	8.9	3 x 400-415	DOL	Thermistor	2.5	7/10
9.2	10.5	3 x 380-415	Y/D	Thermal switch	2.5	10/10
9.2	10.5	3 x 400-415	DOL	Thermistor	2.5	7/10
11	12.6	3 x 380-415	Y/D	Thermal switch	2.5	10/10
11	12.6	3 x 400-415	DOL	Thermistor	2.5	7/10

The supply cable resistance depends on the cable diameter.

Resistance per running metre of cable: 1.5 mm² = 0.012 Ω.

Resistance per running metre of cable: 2.5 mm² = 0.007 Ω.

4-pole motor					Cable connection	
Power P ₂ [kW]	Power P ₁ [kW]	Voltage [V]	Starting method	Thermal protection	Cable cross section [mm ²]	Conductors or plug pins
1.1	1.5	3 x 380-415	DOL	Thermal switch	1.5	7/7
1.1	1.5	3 x 400-415	DOL	Thermal switch	1.5	7/7
1.3	1.8	3 x 380-415	DOL	Thermal switch	1.5	7/7
1.3	1.8	3 x 400-415	DOL	Thermal switch	1.5	7/7
1.5	2.1	3 x 380-415	DOL	Thermal switch	1.5	7/7
1.5	2.1	3 x 400-415	DOL	Thermal switch	1.5	7/7
2.2	2.9	3 x 380-415	DOL	Thermal switch	1.5	7/7
2.2	2.9	3 x 380-415	Y/D	Thermal switch	1.5	10/10
2.2	2.9	3 x 400-415	DOL	Thermal switch	1.5	7/7
3	3.7	3 x 380-415	DOL	Thermal switch	1.5	7/7
3	3.7	3 x 380-415	Y/D	Thermal switch	1.5	10/10
3	3.7	3 x 400-415	DOL	Thermal switch	2.5	7/7
4	4.9	3 x 380-415	Y/D	Thermal switch	2.5	10/10
4	4.9	3 x 400-415	DOL	Thermistor	2.5	7/10
5.5	6.5	3 x 380-415	Y/D	Thermal switch	2.5	10/10
5.5	6.5	3 x 400-415	DOL	Thermistor	2.5	7/10
7.5	9.0	3 x 380-415	Y/D	Thermal switch	2.5	10/10
7.5	9.0	3 x 400-415	DOL	Thermistor	2.5	7/10

The supply cable resistance depends on the cable diameter.

Resistance per running metre of cable: 1.5 mm² = 0.012 Ω.

Resistance per running metre of cable: 2.5 mm² = 0.007 Ω.

13. Disposal

This product or parts of it must be disposed of in an environmentally sound way:

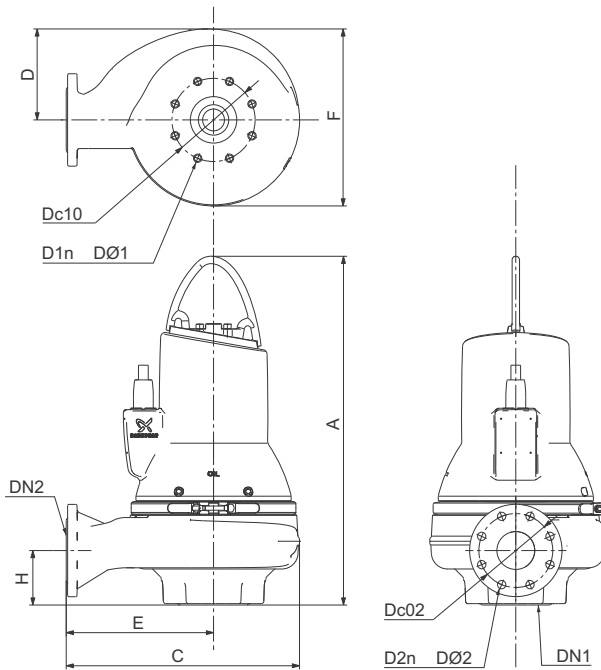
1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.

Subject to alterations.

Appendix

Dimensions and weights

Pumps without accessories

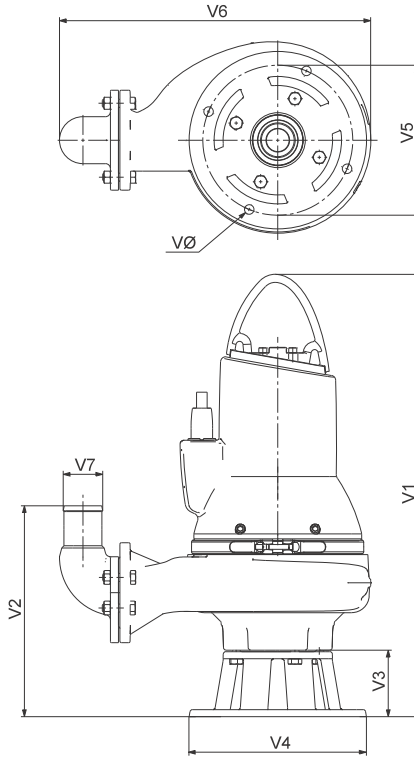


TM04 2793 3008

Pump type	A	C	D	E	F	H	DN1	Dc1	D1n- DØ1	DN2	Dc2	D2n- DØ2	Weight [kg]
SL1.50.65.22.2	641	366	171	216	321	93	65	145	4 x M16	65	145	4 x 18	86
SL1.50.65.30.2	641	366	171	216	321	93	65	145	4 x M16	65	145	4 x 18	89
SL1.50.65.40.2	677	407	200	227	379	93	65	145	4 x M16	65	145	4 x 18	115
SL1.50.80.22.2	641	366	171	216	321	100	65	145	4 x M16	80	160	8 x 18	87
SL1.50.80.30.2	641	366	171	216	321	100	65	145	4 x M16	80	160	8 x 18	90
SL1.50.80.40.2	677	407	200	227	379	100	65	145	4 x M16	80	160	8 x 18	116
SL1.80.80.15.4	682	435	171	272	347	100	100	180	8 x M16	80	160	8 x 18	95
SL1.80.80.22.4	682	435	171	272	347	100	100	180	8 x M16	80	160	8 x 18	107
SL1.80.80.30.4	711	505	200	319	397	118	100	180	8 x M16	80	160	8 x 18	137
SL1.80.80.40.4	748	505	200	319	397	118	100	180	8 x M16	80	160	8 x 18	142
SL1.80.80.55.4	755	505	200	319	397	118	100	180	8 x M16	80	160	8 x 18	149
SL1.80.80.75.4	818	530	217	328	423	118	100	180	8 x M16	80	160	8 x 18	193
SL1.80.100.15.4	682	435	171	272	347	112	100	180	8 x M16	100	180	8 x 19	96
SL1.80.100.22.4	682	435	171	272	347	112	100	180	8 x M16	100	180	8 x 19	108
SL1.80.100.30.4	726	505	200	319	397	118	100	180	8 x M16	100	180	8 x 19	139

Pump type	A	C	D	E	F	H	DN1	Dc1	D1n-DØ1	DN2	Dc2	D2n-DØ2	Weight [kg]
SL1.80.100.40.4	748	505	200	319	397	118	100	180	8 x M16	100	180	8 x 19	143
SL1.80.100.55.4	755	505	200	319	397	118	100	180	8 x M16	100	180	8 x 19	150
SL1.80.100.75.4	818	530	217	328	423	118	100	180	8 x M16	100	180	8 x 19	194
SL1.100.100.40.4	754	541	200	320	438	115	150	240	8 x M20	100	180	8 x 22	155
SL1.100.100.55.4	762	541	200	320	438	115	150	240	8 x M20	100	180	8 x 22	161
SL1.100.100.75.4	827	541	217	312	462	115	150	240	8 x M20	100	180	8 x 22	202
SL1.100.150.40.4	755	541	200	320	440	143	150	240	8 x M20	150	240	8 x 22	157
SL1.100.150.40.4	755	541	200	320	440	143	150	240	8 x M20	150	240	8 x 22	157
SL1.100.150.55.4	762	541	200	320	440	143	150	240	8 x M20	150	240	8 x 22	163
SL1.100.150.75.4	827	541	217	306	472	143	150	240	8 x M20	150	240	8 x 22	204
SLV.65.65.22.2	684	396	171	246	321	102	80	160	8 x M16	65	145	4 x 18	88
SLV.65.65.30.2	684	396	171	246	321	102	80	160	8 x M16	65	145	4 x 18	91
SLV.65.65.40.2	718	456	200	276	380	106	80	160	8 x M16	65	145	4 x 18	117
SLV.65.80.22.2	685	397	171	247	321	103	80	160	8 x M16	80	160	8 x 18	89
SLV.65.80.30.2	685	397	171	247	321	103	80	160	8 x M16	80	160	8 x 18	92
SLV.65.80.40.2	718	455	200	276	379	106	80	160	8 x M16	80	160	8 x 18	117
SLV.80.80.11.4	711	409	171	241	339	109	80	160	8 x M16	80	160	8 x 18	94
SLV.80.80.13.4	711	409	171	241	339	109	80	160	8 x M16	80	160	8 x 18	94
SLV.80.80.15.4	711	409	171	241	339	109	80	160	8 x M16	80	160	8 x 18	94
SLV.80.80.110.2	782	489	217	293	413	123	80	160	8 x M16	80	160	8 x 18	183
SLV.80.80.22.4	711	409	171	241	339	109	80	160	8 x M16	80	160	8 x 18	106
SLV.80.80.40.4	748	460	200	267	393	109	80	160	8 x M16	80	160	8 x 18	134
SLV.80.80.60.2	751	456	200	276	380	104	80	160	8 x M16	80	160	8 x 18	140
SLV.80.80.75.2	751	456	200	276	380	104	80	160	8 x M16	80	160	8 x 18	140
SLV.80.80.92.2	782	489	217	293	413	123	80	160	8 x M16	80	160	8 x 18	183
SLV.80.100.11.4	711	407	171	241	337	109	80	160	8 x M16	100	180	8 x 18	95
SLV.80.100.13.4	711	407	171	241	337	109	80	160	8 x M16	100	180	8 x 18	95
SLV.80.100.15.4	711	407	171	241	337	109	80	160	8 x M16	100	180	8 x 18	95
SLV.80.100.110.2	782	499	217	303	413	123	80	160	8 x M16	100	180	8 x 18	184
SLV.80.100.22.4	711	407	171	241	337	109	80	160	8 x M16	100	180	8 x 18	107
SLV.80.100.40.4	748	458	200	267	391	109	80	160	8 x M16	100	180	8 x 18	135
SLV.80.100.60.2	751	466	200	286	380	108	80	160	8 x M16	100	180	8 x 18	141
SLV.80.100.75.2	751	466	200	286	380	108	80	160	8 x M16	100	180	8 x 18	141
SLV.80.100.92.2	782	499	217	303	413	123	80	160	8 x M16	100	180	8 x 18	184
SLV.100.100.30.4	737	457	200	277	380	134	100	180	8 x M16	100	160	8 x 18	125
SLV.100.100.40.4	759	457	200	277	380	134	100	180	8 x M16	100	160	8 x 18	130
SLV.100.100.55.4	766	457	200	277	380	134	100	180	8 x M16	100	160	8 x 18	136
SLV.100.100.75.4	842	490	217	294	413	145	100	180	8 x M16	100	180	8 x 22	179

Pumps with ring stand

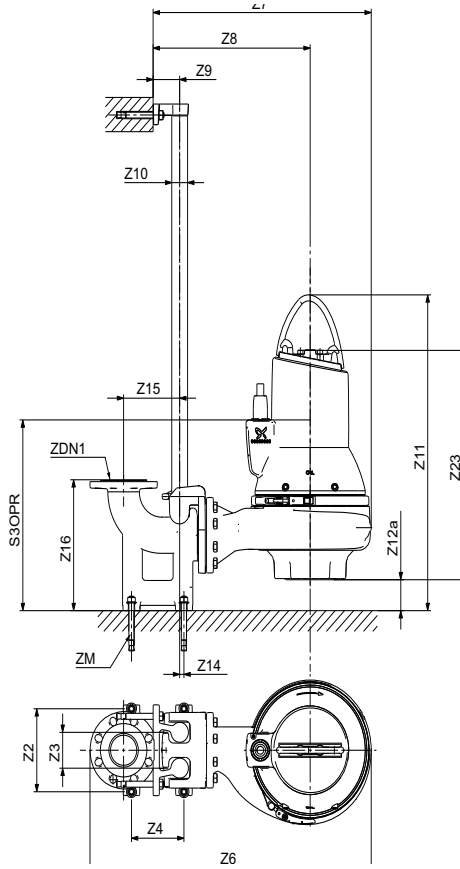


Pump type	V1	V2	V3	V4	V5	V6	V7	VØ
SL1.50.65.22.2	771	339	130	325	270	491	65	18
L1.50.65.30.2	771	339	130	325	270	491	65	18
SL1.50.65.40.2	807	341	130	325	270	519	65	18
SL1.50.80.22.2	771	339	130	325	270	496	80	18
SL1.50.80.30.2	771	339	130	325	270	496	80	18
SL1.50.80.40.2	807	341	130	325	270	525	80	18
SL1.80.80.15.4	812	364	130	355	300	567	80	19
SL1.80.80.22.4	812	364	130	355	300	567	80	19
SL1.80.80.30.4	841	390	130	355	300	623	80	19
SL1.80.80.40.4	878	390	130	355	300	623	80	19
SL1.80.80.55.4	885	390	130	355	300	623	80	19
SL1.80.80.75.4	948	390	130	355	300	648	80	19
SL1.80.100.15.4	812	369	130	355	300	591	100	19
SL1.80.100.22.4	812	369	130	355	300	591	100	19
SL1.80.100.30.4	856	395	130	355	300	647	100	19
SL1.80.100.40.4	878	395	130	355	300	647	100	19
SL1.80.100.55.4	885	395	130	355	300	647	100	19

TM04 2795 3008

Pump type	V1	V2	V3	V4	V5	V6	V7	VØ
SL1.80.100.75.4	948	395	130	355	300	672	100	19
SL1.100.100.40.4	941	445	186	450	400	711	100	22
SL1.100.100.55.4	948	445	186	450	400	711	100	22
SL1.100.100.75.4	1.013	445	186	450	400	706	100	22
SL1.100.150.40.4	941	555	186	450	400	807	150	22
SL1.100.150.40.4	941	555	186	450	400	807	150	22
SL1.100.150.55.4	948	555	186	450	400	807	150	22
SL1.100.150.75.4	1.013	555	186	450	400	803	150	22
SLV.65.65.22.2	812	372	128	330	280	524	65	18
SLV.65.65.30.2	812	372	128	330	280	524	65	18
SLV.65.65.40.2	846	376	128	330	280	568	65	18
SLV.65.80.22.2	813	373	128	330	280	530	80	18
SLV.65.80.30.2	813	373	128	330	280	530	80	18
SLV.65.80.40.2	846	376	128	330	280	573	80	18
SLV.80.80.11.4	839	379	128	330	280	527	80	18
SLV.80.80.13.4	839	379	128	330	280	527	80	18
SLV.80.80.15.4	839	379	128	330	280	527	80	18
SLV.80.80.110.2	910	393	128	330	280	607	80	18
SLV.80.80.22.4	839	379	128	330	280	527	80	18
SLV.80.80.40.4	876	379	128	330	280	578	80	18
SLV.80.80.60.2	879	374	128	330	280	574	80	18
SLV.80.80.75.2	879	374	128	330	280	574	80	18
SLV.80.80.92.2	910	393	128	330	280	607	80	18
SLV.80.100.11.4	840	354	128	330	280	549	100	18
SLV.80.100.13.4	840	354	128	330	280	549	100	18
SLV.80.100.15.4	840	354	128	330	280	549	100	18
SLV.80.100.110.2	910	368	128	330	280	641	100	18
SLV.80.100.22.4	840	354	128	330	280	549	100	18
SLV.80.100.40.4	876	354	128	330	280	600	100	18
SLV.80.100.60.2	879	353	128	330	280	598	100	18
SLV.80.100.75.2	879	353	128	330	280	598	100	18
SLV.80.100.92.2	910	368	128	330	280	641	100	18
SLV.100.100.30.4	867	411	130	355	300	599	100	19
SLV.100.100.40.4	889	411	130	355	300	599	100	19
SLV.100.100.55.4	896	411	130	355	300	599	100	19
SLV.100.100.75.4	972	422	130	355	300	632	100	19

Pumps on auto coupling



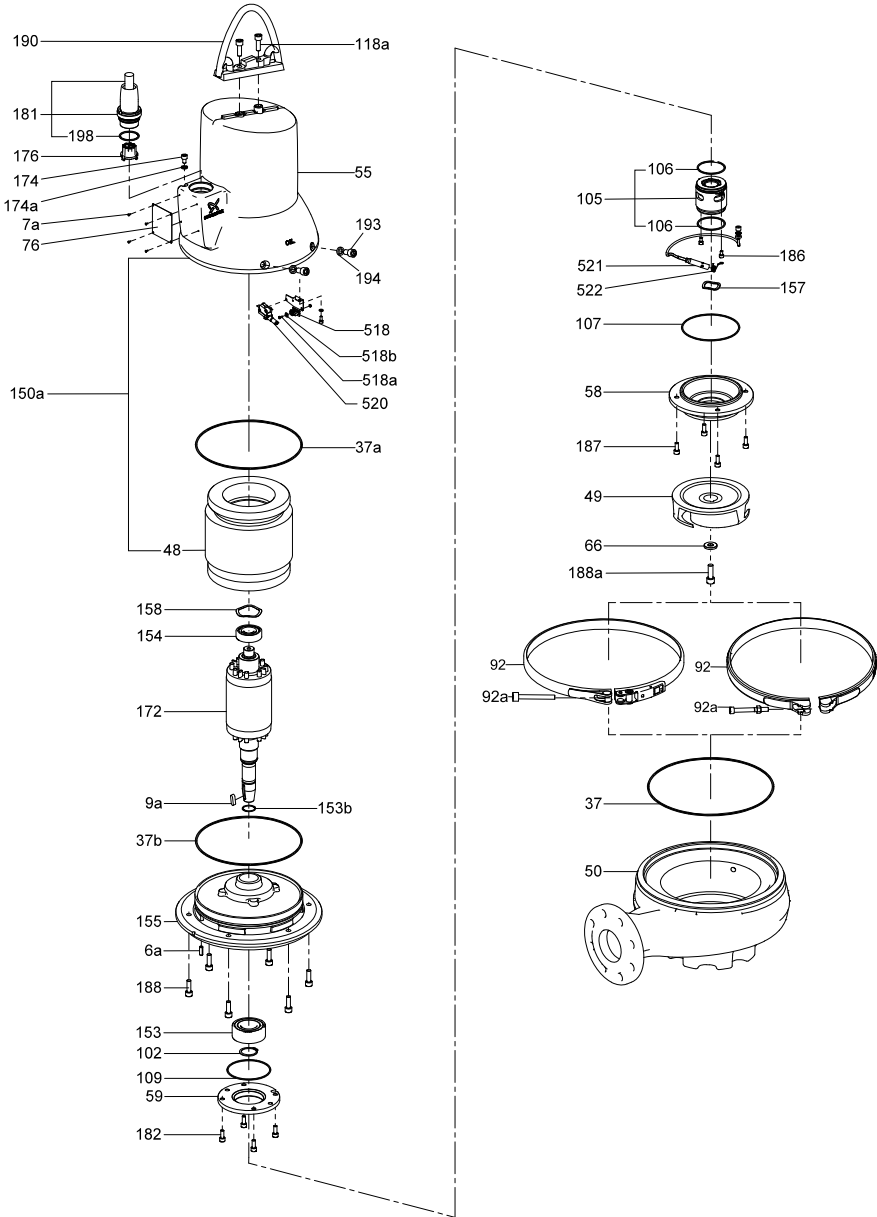
TM04 2794 3008

Pump type	Z2	Z3	Z4	Z6	Z7	Z8	Z9	Z10 ["]	Z11	Z12a	Z14	Z15	Z16	Dc1	DN1	ZM
SL1.50.65.22.2	210	95	140	700	513	363	81	1.5	740	99	1	175	266	145	65	4 x M16
SL1.50.65.30.2	210	95	140	700	513	363	81	1.5	740	99	1	175	266	145	65	4 x M16
SL1.50.65.40.2	210	95	140	741	554	375	81	1.5	775	97	1	175	266	145	65	4 x M16
SL1.50.80.22.2	220	95	160	719	526	376	81	1.5	774	133	13	171	345	145	65	4 x M16
SL1.50.80.30.2	220	95	160	719	526	376	81	1.5	774	133	13	171	345	145	65	4 x M16
SL1.50.80.40.2	220	95	160	760	567	387	81	1.5	808	132	13	171	345	145	65	4 x M16
SL1.80.80.15.4	220	95	160	788	595	432	81	1.5	790	108	13	171	345	180	100	4 x M16
SL1.80.80.22.4	220	95	160	788	595	432	81	1.5	790	108	13	171	345	180	100	4 x M16
SL1.80.80.30.4	220	95	160	858	666	480	81	1.5	793	82	13	171	345	180	100	4 x M16
SL1.80.80.40.4	220	95	160	858	666	480	81	1.5	830	82	13	171	345	180	100	4 x M16
SL1.80.80.55.4	220	95	160	858	666	480	81	1.5	837	82	13	171	345	180	100	4 x M16
SL1.80.80.75.4	220	95	160	883	690	489	81	1.5	900	82	13	171	345	180	100	4 x M16
SL1.80.100.15.4	260	110	270	878	652	489	110	2.0	830	148	0	220	413	180	100	4 x M16
SL1.80.100.22.4	260	110	270	878	652	489	110	2.0	830	148	0	220	413	180	100	4 x M16

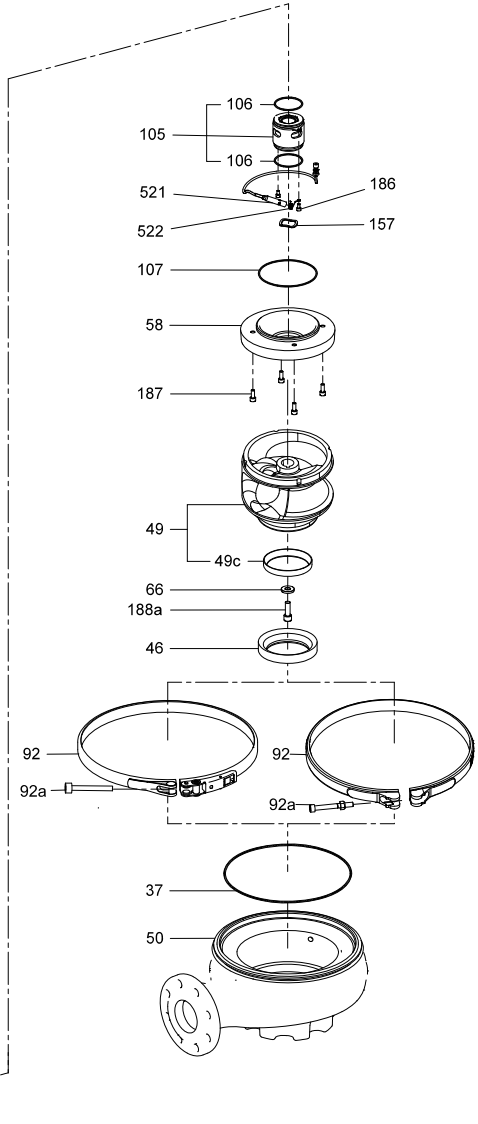
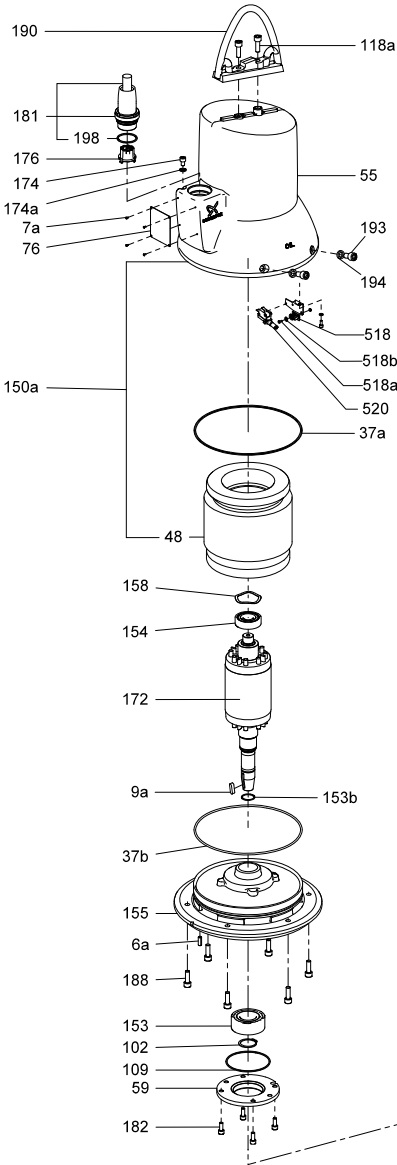
Pump type	Z2	Z3	Z4	Z6	Z7	Z8	Z9	Z10 [°]	Z11	Z12a	Z14	Z15	Z16	Dc1	DN1	ZM
SL1.80.100.30.4	260	110	270	948	722	536	110	2.0	848	122	0	220	413	180	100	4 x M16
SL1.80.100.40.4	260	110	270	948	722	536	110	2.0	870	122	0	220	413	180	100	4 x M16
SL1.80.100.55.4	260	110	270	948	722	536	110	2.0	877	122	0	220	413	180	100	4 x M16
SL1.80.100.75.4	260	110	270	972	747	545	110	2.0	940	122	0	220	413	180	100	4 x M16
SL1.100.100.40.4	260	110	270	983	758	537	110	2.0	880	125	0	220	413	240	150	4 x M16
SL1.100.100.55.4	260	110	270	983	758	537	110	2.0	886	125	0	220	413	240	150	4 x M16
SL1.100.100.75.4	260	110	270	983	758	529	110	2.0	951	125	0	220	413	240	150	4 x M16
SL1.100.150.40.4	300	110	280	1093	780	559	110	2.0	919	164	0	280	450	240	150	4 x M16
SL1.100.150.40.4	300	110	280	1093	780	559	110	2.0	919	164	0	280	450	240	150	4 x M16
SL1.100.150.55.4	300	110	280	1093	780	559	110	2.0	926	164	0	280	450	240	150	4 x M16
SL1.100.150.75.4	300	110	280	1093	780	545	110	2.0	990	164	0	280	450	240	150	4 x M16
SLV.65.65.22.2	210	95	140	730	543	394	81	1.5	747	63	1	175	266	160	80	4 x M16
SLV.65.65.30.2	210	95	140	730	543	394	81	1.5	747	63	1	175	266	160	80	4 x M16
SLV.65.65.40.2	210	95	140	790	604	424	81	1.5	778	60	1	175	266	160	80	4 x M16
SLV.65.80.22.2	220	95	160	750	557	408	81	1.5	782	97	13	171	345	160	80	4 x M16
SLV.65.80.30.2	220	95	160	750	557	408	81	1.5	782	97	13	171	345	160	80	4 x M16
SLV.65.80.40.2	220	95	160	808	616	437	81	1.5	812	94	13	171	345	160	80	4 x M16
SLV.80.80.11.4	220	95	160	762	569	402	81	1.5	802	91	13	171	345	160	80	4 x M16
SLV.80.80.13.4	220	95	160	762	569	402	81	1.5	802	91	13	171	345	160	80	4 x M16
SLV.80.80.15.4	220	95	160	762	569	402	81	1.5	802	91	13	171	345	160	80	4 x M16
SLV.80.80.110.2	220	95	160	842	650	454	81	1.5	859	77	13	171	345	160	80	4 x M16
SLV.80.80.22.4	220	95	160	762	569	402	81	1.5	802	91	13	171	345	160	80	4 x M16
SLV.80.80.40.4	220	95	160	813	620	428	81	1.5	840	91	13	171	345	160	80	4 x M16
SLV.80.80.60.2	220	95	160	809	617	437	81	1.5	847	96	13	171	345	160	80	4 x M16
SLV.80.80.75.2	220	95	160	809	617	437	81	1.5	847	96	13	171	345	160	80	4 x M16
SLV.80.80.92.2	220	95	160	842	650	454	81	1.5	859	77	13	171	345	160	80	4 x M16
SLV.80.100.11.4	260	110	270	850	624	458	110	2.0	842	131	0	220	413	160	80	4 x M16
SLV.80.100.13.4	260	110	270	850	624	458	110	2.0	842	131	0	220	413	160	80	4 x M16
SLV.80.100.15.4	260	110	270	850	624	458	110	2.0	842	131	0	220	413	160	80	4 x M16
SLV.80.100.110.2	260	110	270	942	716	520	110	2.0	899	117	0	220	413	160	80	4 x M16
SLV.80.100.22.4	260	110	270	850	624	458	110	2.0	842	131	0	220	413	160	80	4 x M16
SLV.80.100.40.4	260	110	270	901	675	484	110	2.0	857	109	0	220	413	160	80	4 x M16
SLV.80.100.60.2	260	110	270	909	683	503	110	2.0	883	132	0	220	413	160	80	4 x M16
SLV.80.100.75.2	260	110	270	909	683	503	110	2.0	883	132	0	220	413	160	80	4 x M16
SLV.80.100.92.2	260	110	270	942	716	520	110	2.0	899	117	0	220	413	160	80	4 x M16
SLV.100.100.30.4	260	110	270	900	674	494	110	2.0	844	106	0	220	413	180	100	4 x M16
SLV.100.100.40.4	260	110	270	900	674	494	110	2.0	865	106	0	220	413	180	100	4 x M16
SLV.100.100.55.4	260	110	270	900	674	494	110	2.0	873	106	0	220	413	180	100	4 x M16
SLV.100.100.75.4	260	110	270	933	707	511	110	2.0	938	95	0	220	413	180	100	4 x M16

Exploded drawings

SLV



TM06 0885 1114



Declaration of performance

GB:**EU declaration of performance in accordance with Annex III of Regulation (EU) No 305/2011 (Construction Product Regulation)**

1. Unique identification code of the product type:
 - EN 12050-1 or EN 12050-2 (SL1.50).
2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):
 - SL1, SLV pumps marked with EN 12050-1 or EN 12050-2 (SL1.50) on the nameplate.
3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:
 - Pumps for pumping of wastewater containing faecal matter marked with EN 12050-1 on the nameplate.
 - SL1.50 pumps for pumping of faecal-free wastewater marked with EN 12050-2 on the nameplate.
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Denmark.
5. NOT RELEVANT.
6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: System 3.
7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:
 - TÜV Rheinland LGA Products GmbH, identification number: 0197.
Performed test according to EN 12050-1 or EN 12050-2 (SL1.50) under system 3.
(description of the third party tasks as set out in Annex V)
 - Certificate number: LGA-Certificate No 7381115. Type-tested and monitored.
8. NOT RELEVANT.
9. Declared performance:
 - The products covered by this declaration of performance are in compliance with the essential characteristics and the performance requirements as described in the following:
 - Standards used: EN 12050-1:2001 or EN 12050-2:2000 (SL1.50).
10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

BG:**Декларация на ЕС за изпълнение съгласно Анекс III на регламент (ЕС) № 305/2011 (Регламент за строителните продукти)**

1. Уникален идентификационен код на типа продукт:
 - EN 12050-1 или EN 12050-2 (SL1.50).
2. Типов, партиден или сериен номер на всеки друг елемент, позволяващ идентификация на строителния продукт, изисквана съгласно Член 11(4):
 - Помпи SL1, SLV, означени с EN 12050-1 или EN 12050-2 (SL1.50) на табелата с данни.
3. Употреба или употреби по предназначение на строителния продукт, в съответствие с приложимата хармонизирана техническа спецификация, както е предвидено от производителя:
 - Помпи за изпомпване на отпадни води, съдържащи фекални вещества, означени с EN 12050-1 на табелата с данни.
 - Помпи SL1.50 за изпомпване на отпадни води без фекални вещества, означени с EN 12050-2 на табелата с данни.
4. Име, запазено търговско име или запазена търговска марка и адрес за контакт на производителя, както се изисква съгласно Член 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Дания.
5. НЕ Е СЕ ОТНАСЯ ЗА СЛУЧАЯ.
6. Система или системи за оценка и проверка на устойчивостта на изпълнението на строителния продукт, както е изложено в Анекс V:
 - Система 3.
7. В случай на декларация за изпълнение, отнасяща се за строителен продукт, който попада в обсега на хармонизиран стандарт:
 - TÜV Rheinland LGA Products GmbH, идентификационен номер: 0197.
Изпълнен тест в съответствие с EN 12050-1 или EN 12050-2 (SL1.50) съгласно система 3.
(описание на задачи на трети лица, както е изложено в Анекс V)
 - Номер на сертификат: LGA сертификат № 7381115.
Тестван за тип и наблюдаван.
8. НЕ Е СЕ ОТНАСЯ ЗА СЛУЧАЯ.
9. Декларирано изпълнение:
 - Продуктите, предмет на тази декларация за изпълнение, са в съответствие с основните характеристики и изисквания за изпълнение, описани по-долу:
 - Приложени стандарти: EN 12050-1:2001 или EN 12050-2:2000.
10. Изпълнението на продукта, посочен в точки 1 и 2, е в съответствие с декларираното изпълнение в точка 9.

CZ:**Prohlášení o vlastnostech EU v souladu s
Dodatkem III předpisu (EU) č. 305/2011
(Předpis pro stavební výrobky)**

1. Jedinečný identifikační kód typu výrobku:
 - EN 12050-1 nebo EN 12050-2 (SL1.50).
2. Typ, dávka nebo výrobní číslo nebo jakýkoliv prvek umožňující identifikaci stavebního výrobku podle požadavku Článku 11(4):
 - Čerpadla SL1, SLV s označením EN 12050-1 nebo EN 12050-2 (SL1.50) na typovém štítku.
3. Zamýšlená použití stavebního výrobku v souladu s příslušnou harmonizovanou technickou specifikací výrobce:
 - Čerpací stanice odpadních vod s fekáliemi s označením EN 12050-1 na typovém štítku.
 - Čerpací stanice SL1.50 odpadních vod s fekáliemi s označením EN 12050-2 na typovém štítku.
4. Název, registrovaný obchodní název nebo registrovaná ochranná známka a kontaktní adresa výrobce podle požadavku Článku 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dánsko.
5. NESOUVISÍ.
6. Systém nebo systémy posuzování a ověřování stálosti vlastnosti stavebního výrobku podle ustanovení Dodatku V:
 - Systém 3.
7. V případě prohlášení o vlastnostech stavebního výrobku zahrnutého v harmonizované normě:
 - TÜV Rheinland LGA Products GmbH, identifikační číslo: 0197. Proveden test podle EN 12050-1 nebo EN 12050-2 (SL1.50) v systému 3.
(popis úkolů třetí strany podle ustanovení Dodatku V)
 - Číslo certifikátu: Certifikát LGA č. 7381115.
Typ testován a monitorován.
8. NESOUVISÍ.
9. Prohlašované vlastnosti:
Výrobky uvedené v tomto Prohlášení o vlastnostech jsou v souladu se základními charakteristikami a požadavky na vlastnosti, jak je popsáno níže:
 - Použité normy: EN 12050-1:2001 nebo EN 12050-2:2000 (SL1.50).
10. Vlastnosti výrobku uvedeného v bodech 1 a 2 v souladu s prohlašovanými vlastnostmi v bodě 9.

DE:**EU-Leistungserklärung gemäß Anhang III der
Verordnung (EU) Nr. 305/2011
(Bauprodukte-Verordnung)**

1. Einmalige Kennnummer des Produkttyps:
 - EN 12050-1 oder EN 12050-2 (SL1.50).
2. Typ, Charge, Seriennummer oder jedes andere Element, das eine Identifizierung des Bauprodukts erlaubt, wie in Artikel 11 (4) vorgeschrieben.
 - SL1-, SLV-Pumpen, auf dem Typenschild mit EN 12050-1 oder EN 12050-2 (SL1.50) gekennzeichnet.
3. Verwendungszweck oder Verwendungszwecke des Bauprodukts, gemäß den geltenden harmonisierten technischen Spezifikationen, wie vom Hersteller vorgesehen:
 - Pumpen für die Förderung von fäkalienhaltigem Abwasser, auf dem Typenschild mit EN 12050-1 gekennzeichnet.
 - SL1.50-Pumpen für die Förderung von fäkalienfreiem Abwasser, auf dem Typenschild mit EN 12050-2 gekennzeichnet.
4. es Warenzeichen und Kontaktschrift des Herstellers, wie in Artikel 11(5) vorgeschrieben.
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dänemark
5. NICHT RELEVANT.
6. System oder Systeme zur Bewertung und Überprüfung der Leistungsbeständigkeit des Bauprodukts gemäß Anhang V:
 - System 3.
7. Bei der Leistungserklärung bezüglich eines von einer harmonisierten Norm erfassten Bauprodukts:
 - TÜV Rheinland LGA Products GmbH, Kennnummer: 0197. Vorgenommene Prüfung gemäß EN 12050-1 oder EN 12050-2 (SL1.50) unter Anwendung von System 3.
(Beschreibung der Aufgaben von unabhängigen Dritten gemäß Anhang V)
 - Zertifikatnummer: LGA-Zertifikatnr. 7381115. Typgeprüft und überwacht.
8. NICHT RELEVANT.
9. Erklärte Leistung:
Die von dieser Leistungserklärung erfassten Produkte entsprechen den grundlegenden Charakteristika und Leistungsanforderungen, wie im Folgenden beschrieben:
 - Angewendete Normen: EN 12050-1:2001 oder EN 12050-2:2000 (SL12.50).
10. Die Leistung des in Punkt 1 und 2 genannten Produkts entspricht der in Punkt 9 erklärten Leistung.

DK:**EU-ydeevnedeklaration i henhold til bilag III af forordning (EU) nr. 305/2011 (Byggevareforordningen)**

1. Varetypens unikke identifikationskode:
 - EN 12050-1 eller EN 12050-2 (SL1.50).
2. Type-, parti- eller serienummer eller en anden form for angivelse ved hjælp af hvilken byggevaren kan identificeres som krævet i henhold til artikel 11, stk. 4:
 - SL1-, SLV-pumper der er mærket med EN 12050-1 eller EN 12050-2 (SL1.50) på typeskiltet.
3. Byggevarens tilsigtede anvendelse eller anvendelser i overensstemmelse med den gældende harmoniserede tekniske specifikation som påtænkt af fabrikanten:
 - Pumper til pumpning af spildevand med fækalier der er mærket med EN 12050-1 på typeskiltet.
 - SL1.50-pumper til pumpning af fækaliefrit spildevand der er mærket med EN 12050-2 på typeskiltet.
4. Fabrikantens navn, registrerede firmabetegetelse eller registrerede varemærke og kontaktsadresse som krævet i henhold til artikel 11, stk. 5:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danmark.
5. IKKE RELEVANT.
6. Systemet eller systemerne til vurdering og kontrol af at byggevarens ydeevne er konstant, jf. bilag V:
 - System 3.
7. Hvis ydeevnedeklarationen vedrører en byggevare der er omfattet af en harmoniseret standard:
 - TÜV Rheinland LGA Products GmbH, identifikationsnummer: 0197.
Udført test i henhold til EN 12050-1 eller EN 12050-2 (SL1.50) efter system 3
(beskrivelse af tredjepartsopgaverne, jf. bilag V).
 - Certifikatnummer: LGA-certifikat nr. 7381115. Typetestet og overvåget.
8. IKKE RELEVANT.
9. Deklareret ydeevne:

De produkter der er omfattet af denne ydeevnedeklaration, er i overensstemmelse med de væsentlige egenskaber og ydelseskrav der er beskrevet i følgende:

 - Anvendte standarder: EN 12050-1:2001 eller EN 12050-2:2000 (SL1.50).
10. Ydeevnen for den byggevare der er anført i punkt 1 og 2, er i overensstemmelse med den deklarerede ydeevne i punkt 9.

EE:**EU toimivusdeklaratsioon on kooskõlas EU normatiivi nr. 305/2011 Lisa III (Ehitustootete normid)**

1. Toote tüübi ainulaadne identifitseerimis kood:
 - EN 12050-1 või EN 12050-2 (SL1.50).
2. Tüübi-, partii- või tootenumber või mõni teine element mis võimaldab kindlaks teha, et ehitustoodete vastab artikli 11(4):
 - SL1, SLV pumpadel on andmeplaadil märgistus EN 12050-1 või EN 12050-2 (SL1.50).
3. Ehitustooted on ettenähtud kasutamiseks vastavalt tootja poolt etteantud kasutusalaletel järgides tehnilisi ettekirjutusi.
 - Andmeplaadil märgitud EN 12050-1 pumbad on mõeldud fekaale sisaldava heitvee pumpamiseks.
 - Andmeplaadil märgitud EN 12050-2 (SL1.50) pumplad on mõeldud fekaale mittesaldava heitvee pumpamiseks.
4. Nimetus, registreeritud kaubamärk või registreeritud kaubamärk ja kontaktsaadress tootjafirmast peavad olema vastavuses Artikkel 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Taani.
5. POLE OLULINE.
6. Süsteemi või süsteemi hindamine ja kinnitamine püsiva jõudlusega ehitustootetes nagu on kirjas Lisa V:
 - Süsteem 3.
7. Toimivusdeklaratsioon järgib ehitustoodete standarditest:
 - TÜV Rheinland LGA Products GmbH, indentifitseerimis number: 0197.
Testitud vastavalt EN 12050-1 või EN 12050-2 (SL1.50) järgi süsteem 3.
 - (kolmandate osapoolte ülesanded nagu on kirjas Lisa V)
 - Sertifikaadi number: LGA-Sertifikaadi Nr 7381115.
Tüüptestitud ja jälgitud.
8. POLE OLULINE.
9. Avaldatud jõudlus:

Toode, mille kohta antud toimivusdeklaratsioon kehtib, on vastavuses põhiomadustega ja jõudlus vajadustega nagu järgnevalt kirjutatud:

 - Kasutatud standardid: EN 12050-1:2001 või EN 12050-2:2000 (SL1.50).
10. Toote tuvastatud jõudlus punktides 1 ja 2 on vastavuses toimivusdeklaratsiooni punkti 9.

ES:**Declaración UE de prestaciones conforme al Anexo III del Reglamento (UE) n.º 305/2011 (Reglamento de productos de construcción)**

1. Código de identificación único del tipo de producto:
 - EN 12050-1 o EN 12050-2 (SL1.50).
2. Tipo, lote o número de serie, o cualquier otro elemento que facilite la identificación del producto de construcción de acuerdo con los requisitos establecidos en el Artículo 11(4):
 - Bombas SL1, SLV en cuya placa de características figure la norma EN 12050-1 o EN 12050-2 (SL1.50).
3. Uso o usos previstos del producto de construcción, conforme a la especificación técnica armonizada correspondiente, según lo previsto por el fabricante:
 - Bombas para el bombeo de aguas residuales que contengan materia fecal en cuya placa de características figure la norma EN 12050-1.
 - Bombas SL1.50 para el bombeo de aguas residuales que contengan materia fecal en cuya placa de características figure la norma EN 12050-2.
4. Nombre, nombre comercial registrado o marca comercial registrada y domicilio de contacto del fabricante de acuerdo con los requisitos establecidos en el Artículo 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dinamarca.
5. NO CORRESPONDE.
6. Sistema o sistemas de evaluación y verificación de la continuidad de las prestaciones del producto de construcción, de acuerdo con lo establecido en el Anexo V.
 - Sistema 3.
7. Si la declaración de prestaciones concierne a un producto de construcción cubierto por una norma armonizada:
 - TÜV Rheinland LGA Products GmbH, número de identificación: 0197.
Ensayo ejecutado según las normas EN 12050-1 o EN 12050-2 (SL1.50), sistema 3.
(Descripción de las tareas de las que deben responsabilizarse otras partes de acuerdo con lo establecido en el Anexo V).
 - Número de certificado: Certificado LGA n.º 7381115. Tipo sometido a ensayo y monitorizado.
8. NO CORRESPONDE.
9. Prestaciones declaradas:

Los productos que cubre esta declaración de prestaciones satisfacen las características fundamentales y requisitos en materia de prestaciones descritos en:

 - Normas aplicadas: EN 12050-1:2001 o EN 12050-2:2000 (SL1.50).
10. Las prestaciones del producto indicado en los puntos 1 y 2 cumplen lo declarado en el punto 9.

FI:**EU-suoritusasoilmoitus laadittu asetuksen 305/2011/EU liitteen III mukaisesti (Rakennustuoteasetus)**

1. Tuotetyypin yksilöllinen tunnistus:
 - EN 12050-1 tai EN 12050-2 (SL1.50).
2. Tyyppi-, erä- tai sarjanumero tai muu merkintä, jonka ansiosta rakennustuotteet voidaan tunnistaa, kuten 11 artiklan 4 kohdassa edellytetään:
 - SL1-, SLV-pumput, joiden arvokilvessä on merkintä EN 12050-1 tai EN 12050-2 (SL1.50).
3. Valmistajan ennakoima, sovellettavan yhdenmukaistetun teknisen eritelmän mukainen rakennustuotteen aiottu käyttötarkoitus tai -tarkoitukset:
 - Pumput ulosteperäistä materiaalia sisältävien jätevesien pumppaukseen. Arvokilvessä on merkintä EN 12050-1.
 - SL1.50 pumput sellaisten jätevesien pumppaukseen, jotka eivät sisällä ulosteperäistä materiaalia. Arvokilvessä on merkintä EN 12050-2.
4. Valmistajan nimi, rekisteröity kaupan nimi tai tavaramerkki sekä osoite, josta valmistajaan saa yhteyden, kuten 11 artiklan 5 kohdassa edellytetään:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Tanska.
5. EI TARVITA.
6. Rakennustuotteen suoritusarvon pysyvyyden arviointi- ja varmennusjärjestelmä(t) liitteen V mukaisesti:
 - Järjestelmä 3.
7. Kun kyse on yhdenmukaistetun standardin piiriin kuuluvan rakennustuotteen suoritusarvoilmoituksesta:
 - TÜV Rheinland LGA Products GmbH, tunnistenumero: 0197.
Testaus suoritettu standardien EN 12050-1 tai EN 12050-2 (SL1.50) ja järjestelmän 3 mukaisesti.
(Liitteessä V esitetyillä kolmannen osapuolen tehtävien kuvauksia noudattaen.)
 - Sertifiikaatin numero: LGA-sertifikaatti nro 7381115.
Tyyppitestattu ja valvottu.
8. EI TARVITA.
9. Ilmoitetut suoritusarvot:

Tähän suoritusarvoilmoitukseen kuuluvien tuotteiden perusominaisuudet ja suoritusarvo vaatimukset:

 - Sovellettavat standardit: EN 12050-1:2001 tai EN 12050-2:2000 (SL1.50).
10. Kohdissa 1 ja 2 yksilöidyn tuotteen suoritusarvot ovat kohdassa 9 ilmoitettujen suoritusarvojen mukaiset.

FR:

**Déclaration des performances UE
conformément à l'Annexe III du Règlement (UE)
n° 305/2011
(Règlement Produits de Construction)**

1. Code d'identification unique du type de produit :
– EN 12050-1 ou EN 12050-2 (SL1.50).
2. Numéro de type, de lot ou de série ou tout autre élément permettant l'identification du produit de construction comme l'exige l'Article 11(4) :
– Pompes SL1, SLV marquées EN 12050-1 ou EN 12050-2 (SL1.50) sur la plaque signalétique.
3. Usage(s) prévu(s) du produit de construction conformément à la spécification technique harmonisée applicable comme indiqué par le fabricant :
– Pompe pour la collecte des effluents contenant des matières fécales marquées EN 12050-1 sur la plaque signalétique.
– Pompe SL1.50 pour la collecte des effluents exempts de matières fécales marquées EN 12050-2 sur la plaque signalétique.
4. Nom, nom de commerce déposé ou marque commerciale déposée et adresse du fabricant comme l'exige l'Article 11(5) :
– Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danemark.
5. NON APPLICABLE.
6. Système ou systèmes d'attestation et de vérification de la constance des performances du produit de construction comme stipulé dans l'Annexe V :
– Système 3.
7. En cas de déclaration des performances d'un produit de construction couvert par une norme harmonisée :
– TÜV Rheinland LGA Products GmbH, numéro d'identification : 0197.
Test effectué conformément aux normes EN 12050-1 ou EN 12050-2 (SL1.50) selon le système 3.
(description des tâches de tierce partie comme stipulé dans l'Annexe V)
– Numéro de certificat : Certificat LGA n° 7381115. Contrôlé et homologué.
8. NON APPLICABLE.
9. Performances déclarées :
Les produits couverts par cette déclaration des performances sont conformes aux caractéristiques essentielles et aux exigences de performances décrites par la suite :
– Normes utilisées : EN 12050-1:2001 ou EN 12050-2:2000 (SL1.50).
10. Les performances du produit identifié aux points 1 et 2 sont conformes aux performances déclarées au point 9.

GR:

**Δήλωση απόδοσης ΕΕ σύμφωνα με το
Παράρτημα ΙΙΙ του Κανονισμού (ΕΕ)
Αρ. 305/2011
(Κανονισμός για Προϊόντα του Τομέα Δομικών
Κατασκευών)**

1. Μοναδικός κωδικός ταυτοποίησης του τύπου του προϊόντος:
– EN 12050-1 ή EN 12050-2 (SL1.50).
2. Αριθμός τύπου, παρτίδας ή σειράς ή οποιοδήποτε άλλο στοιχείο επιτρέπει την ταυτοποίηση του προϊόντος του τομέα των δομικών κατασκευών όπως απαιτείται δυνάμει του Άρθρου 11(4):
– Αντλίες SL1, SLV με σήμανση EN 12050-1 ή EN 12050-2 (SL1.50) στην πινακίδα.
3. Προτεινόμενη χρήση ή χρήσεις του προϊόντος του τομέα δομικών κατασκευών, σύμφωνα με την ισχύουσα εναρμονισμένη τεχνική προδιαγραφή, όπως προβλέπεται από τον κατασκευαστή:
– Αντλίες για άντληση ακαθάρτων υδάτων που περιέχουν περιττώματα με σήμανση EN 12050-1 στην πινακίδα.
– Αντλίες SL1.50 για άντληση ακαθάρτων υδάτων χωρίς περιττώματα με σήμανση EN 12050-2 στην πινακίδα.
4. Όνομα, εμπορική επωνυμία ή σήμα κατατεθέν και διεύθυνση επικοινωνίας του κατασκευαστή όπως απαιτείται δυνάμει του Άρθρου 11(5):
– Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Δανία.
5. ΜΗ ΣΧΕΤΙΚΟ.
6. Σύστημα ή συστήματα αξιολόγησης και επαλήθευσης της σταθερότητας της απόδοσης του προϊόντος του τομέα δομικών κατασκευών όπως καθορίζεται στο Παράρτημα V:
– Σύστημα 3.
7. Σε περίπτωση δήλωσης απόδοσης που αφορά προϊόν του τομέα δομικών κατασκευών το οποίο καλύπτεται από ?εναρμονισμένο πρότυπο:
– TÜV Rheinland LGA Products GmbH, αριθμός ταυτοποίησης: 0197.
Διενήργησε δοκιμή σύμφωνα με τα EN 12050-1 ή EN 12050-2 (SL1.50) βάσει του συστήματος 3.
(περιγραφή των καθηκόντων του τρίτου μέρους όπως καθορίζονται στο Παράρτημα V)
– Αριθμός πιστοποιητικού: Πιστοποιητικό LGA Αρ. 7381115.
Έχει υποβληθεί σε δοκιμή τύπου και παρακολουθείται.
8. ΜΗ ΣΧΕΤΙΚΟ.
9. Δηλωθείσα απόδοση:
Τα προϊόντα που καλύπτονται από την παρούσα δήλωση απόδοσης συμμορφώνονται με τα ουσιώδη χαρακτηριστικά και τις απαιτήσεις απόδοσης όπως περιγράφεται στα ακόλουθα:
– Πρότυπα που χρησιμοποιήθηκαν: EN 12050-1:2001 ή EN 12050-2:2000 (SL1.50).
10. Η απόδοση του προϊόντος που ταυτοποιήθηκε στα σημεία 1 και 2 συμμορφώνεται με τη δηλωθείσα απόδοση στο σημείο 9.

HR:

**Izjava EU o izjavi u skladu s aneksom III uredbe
(EU) br. 305/2011
(Uredba za građevinske proizvode)**

1. Jedinstveni identifikacijski kod vrste proizvoda:
 - EN 12050-1 ili EN 12050-2 (SL1.50).
2. Vrsta, broj serije, serijski broj ili bilo koji drugi element koji omogućuje identificiranje građevinskog proizvoda u skladu sa člankom 11(4):
 - SL1, SLV crpke označene s EN 12050-1 ili EN 12050-2 (SL1.50) na natpisnoj pločici.
3. Namjena ili uporabe građevinskog proizvoda u skladu s primjenjivim harmoniziranim tehničkim specifikacijama, kao što je predvidio proizvođač:
 - Crpke za ispuštanje otpadnih voda s fekalijama, označene s EN 12050-1 na natpisnoj pločici.
 - SL1.50 crpke za ispuštanje otpadnih voda bez fekalija, označene s EN 12050-2 na natpisnoj pločici.
4. Naziv, registrirani trgovački naziv ili registrirani zaštitni znak i adresa za kontaktiranje proizvođača u skladu sa člankom 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danska.
5. NIJE RELEVANTNO.
6. Procjena jednog ili više sustava i provjera stalnosti rada građevinskog proizvoda, kao što je određeno aneksom V:
 - Sustav 3.
7. U slučaju izjave o izvedbi za građevinski proizvod pokriven harmoniziranim standardom:
 - TÜV Rheinland LGA Products GmbH, identifikacijski broj: 0197.
 - Izvršite ispitivanje u skladu s EN 12050-1 ili EN 12050-2 (SL1.50) u okviru sustava 3.
(Opis zadataka trećih strana, kao što je definirano aneksom V)
 - Broj certifikata: Br. LGA certifikata 7381115. Ispitana vrsta i nadzirano.
8. NIJE RELEVANTNO.
9. Izjavljena izvedba:
 - Proizvodi obuhvaćeni ovom izjavom o izvedbi u skladu su s osnovnim karakteristikama i zahtjevima za izvedbu, kao što je definirano u nastavku:
 - Uporabljeni standardi: EN 12050-1:2001 ili EN 12050-2:2000 (SL1.50).
10. Izvedba proizvoda identificirana u točkama 1 i 2 u skladu je s izjavljenom izvedbom u točki 9.

HU:

**EU teljesítménynyilatkozat a 305/2011 számú
EU rendelet III. mellékletének megfelelően
(Építési termék rendelet)**

1. A termék típus egyedi azonosító kódja:
 - EN 12050-1 vagy EN 12050-2 (SL1.50).
2. Típus, adag, sorozatszám, vagy bármilyen más olyan elem, amely lehetővé teszi az építési terméknek a 11. cikk (4) bekezdése alapján megkövetelt azonosítását:
 - SL1, SLV szivattyúk, EN 12050-1 vagy EN 12050-2 (SL1.50) jelöléssel az adattáblán.
3. Az építési termék tervezett felhasználása vagy felhasználásai, a vonatkozó harmonizált műszaki előírásoknak megfelelően, a gyártó szándéka szerint:
 - Fekáliatartalmú szennyvíz szivattyúzására szolgáló szivattyúk, EN 12050-1 jelöléssel az adattáblán.
 - Fekáliamentes szennyvíz szivattyúzására szolgáló SL1.50 szivattyúk, EN 12050-2 jelöléssel az adattáblán.
4. A gyártó neve, védjegye, bejegyzett kereskedelmi neve és értesítési címe a 11. cikk (5) bekezdése alapján megkövetelt módon:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dánia.
5. NEM RELEVÁNS.
6. Az építési termék teljesítmény állandóságának értékelésére és ellenőrzésére vonatkozó rendszer vagy rendszerek, az V. mellékletben meghatározott módon:
 - 3-as rendszer.
7. Olyan építési termékre vonatkozó teljesítménynyilatkozat esetén, amelyre kiterjed egy harmonizált szabvány:
 - TÜV Rheinland LGA Products GmbH, azonosító szám: 0197.
 - Az EN 12050-1 vagy EN 12050-2 (SL1.50) szerint elvégzett teszt, a 3-as rendszer keretében.
(harmadik fél feladatainak leírása az V. mellékletben meghatározott módon)
 - Tanúsítvány száma: LGA-Tanúsítvány száma 7381115.
8. NEM RELEVÁNS.
9. Megadott teljesítmény:
 - Azok a termékek, amelyekre ez a teljesítménynyilatkozat vonatkozik, rendelkeznek azokkal az alapvető jellemzőkkel és kielégítik azokat a teljesítményre vonatkozó követelményeket, amelyeket alább ismertetünk:
 - Alkalmazott szabványok: EN 12050-1:2001 vagy EN 12050-2:2000 (SL1.50).
10. Az 1-es és 2-es pontban azonosított termék teljesítménye összhangban van a 9. pontban megadott teljesítménnyel.

IT:**Dichiarazione UE di prestazioni in conformità all'all. III del Regolamento (UE) n. 305/2011 (regolamento sui prodotti da costruzione)**

1. Codice identificativo esclusivo del tipo di prodotto:
 - EN 12050-1 oppure EN 12050-2 (SL1.50).
2. Tipo, lotto o numero di serie o qualsiasi altro elemento che consenta l'identificazione del prodotto da costruzione come necessario secondo l'art. 11(4):
 - Pompe SL1, SLV, marcate con EN 12050-1 oppure EN 12050-2 (SL1.50) sulla targa dei dati identificativi.
3. Utilizzo o utilizzi previsti del prodotto da costruzione, in accordo alla specifica tecnica armonizzata pertinente, come previsto dal fabbricante:
 - Pompe per il pompaggio di acque reflue contenenti materie fecali, marcate con EN 12050-1 sulla targa dei dati identificativi.
 - Pompe SL1.50 per il pompaggio di acque reflue non contenenti materiali fecali, marcate con EN 12050-2 sulla targa dei dati identificativi.
4. Denominazione, denominazione commerciale registrata o marchio registrato e indirizzo di contatto del fabbricante secondo l'art. 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danimarca.
5. NON RILEVANTE.
6. Sistema o sistemi di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione come definito sub all. V:
 - Sistema 3.
7. In caso di dichiarazione di prestazioni concernente un prodotto da costruzione conforme a una norma armonizzata:
 - TÜV Rheinland LGA Products GmbH, numero d'identificazione: 0197.
Test eseguito secondo EN 12050-1 oppure EN 12050-2 (SL1.50) con il sistema 3.
(descrizione delle mansioni di terzi come definito sub all. V)
 - Numero certificato: N. certificato LGA 7381115. Testato per il tipo e monitorato.
8. NON RILEVANTE.
9. Prestazioni dichiarate:

I prodotti coperti dalla presente dichiarazione di prestazione sono conformi alle caratteristiche essenziali ed ai requisiti di prestazioni descritti dove segue:

 - Norme applicate: EN 12050-1:2001 oppure EN 12050-2:2000 (SL1.50).
10. Le prestazioni del prodotto identificato ai punti 1 e 2 sono conformi alle prestazioni dichiarate al punto 9.

LT:**EB eksploatacinių savybių deklaracija pagal reglamento (ES) Nr. 305/2011 III priedą (Statybos produktų reglamentas)**

1. Unikalus produkto tipo identifikacinis kodas:
 - EN 12050-1 arba EN 12050-2 (SL1.50).
2. Tipo, partijos ar serijos numeris ar bet koks kitas elementas, pagal kurį galima identifikuoti statybos produktą, kaip reikalaujama pagal 11 straipsnio 4 dalį:
 - SL1, SLV siurbilai, vardinėje plokštelėje pažymėti EN 12050-1 arba EN 12050-2 (SL1.50).
3. Gamintojo numatyta statybos produkto naudojimo paskirtis ar paskirtys pagal taikomą darniąją techninę specifikaciją:
 - Siurbilai, skirti išsiurbti nuotekas, kurių sudėtyje yra fekalijų, vardinėje plokštelėje pažymėti EN 12050-1.
 - SL1.50 siurbilai, skirti išsiurbti nuotekas, kurių sudėtyje nėra fekalijų, vardinėje plokštelėje pažymėti EN 12050-2.
4. Gamintojo pavadinimas, registruotas komercinis pavadinimas arba registruotas prekės ženklas ir kontaktinis adresas, kaip reikalaujama pagal 11 straipsnio 5 dalį:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danija.
5. NETAIKYTINA.
6. Statybos produkto eksploatacinių savybių pastovumo vertinimo ir tikrinimo sistema ar sistemos, kaip nustatyta V priede:
 - Sistema 3.
7. Eksploatacinių savybių deklaracijos, susijusios su statybos produktu, kuriam taikomas darnusis standartas, atveju:
 - „TÜV Rheinland LGA Products GmbH“, identifikacinis numeris: 0197.
atliko EN 12050-1 arba EN 12050-2 (SL1.50) reikalavimus atitinkančių bandymą pagal sistemą 3.
(trečiosios šalies užduočių, kaip nustatyta V priede, aprašymas)
 - Sertifikato numeris: LGA sertifikatas Nr. 7381115. Tipas patikrintas ir stebimas.
8. NETAIKYTINA.
9. Deklaruojamos eksploatacinės savybės:

Produktai, kuriuos apima ši eksploatacinių savybių deklaracija, atitinka esmines charakteristikas ir eksploatacinių savybių reikalavimus, kaip aprašyta:

 - Taikomi standartai: EN 12050-1:2001 arba EN 12050-2:2000 (SL1.50).
10. 1 ir 2 punktuose nurodyto produkto eksploatacinės savybės atitinka 9 punkte deklaruojamas eksploatacines savybes.

LV:**EK ekspluatācijas īpašību deklarācija saskaņā ar Regulas (ES) Nr. 305/2011 III pielikumu (Būvizstrādājumu regula)**

- Unikāls izstrādājuma tipa identifikācijas numurs:
 - EN 12050-1 vai EN 12050-2 (SL1.50).
- Tips, partijas vai sērijas numurs vai kāds cits būvizstrādājuma identifikācijas elements, kā noteikts 11. panta 4. punktā:
 - SL1, SLV sūkņi ar EN 12050-1 vai EN 12050-2 (SL1.50) apzīmējumu uz datu plāksnītes.
- Būvizstrādājuma paredzētais izmantojums vai izmantojumi saskaņā ar piemērojamo saskaņoto tehnisko specifikāciju, kā paredzējis ražotājs:
 - Izkārnījumus saturošo notekūdeņu sūknēšanai paredzētie sūkņi ar EN 12050-1 apzīmējumu uz datu plāksnītes.
 - Izkārnījumus nesaturošo notekūdeņu sūknēšanai paredzētie SL1.50 sūkņi ar EN 12050-2 apzīmējumu uz datu plāksnītes.
- Ražotāja nosaukums, reģistrētais komercnosaukums vai reģistrētā preču zīme un kontaktdrese, kā noteikts 11. panta 5. punktā:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dānija.
- NAV ATTIECINĀMS.
- Ekspluatācijas īpašību noturības novērtējuma un pārbaudes sistēma vai sistēmas, kā noteikts V pielikumā:
 - 3. sistēma.
- Gadījumā, ja ekspluatācijas īpašību deklarācija attiecas uz būvizstrādājumu, kuram ir saskaņotais standarts:
 - TÜV Rheinland LGA Products GmbH, identifikācijas numurs: 0197.
Pārbaudi veica saskaņā ar EN 12050-1 vai EN 12050-2 (SL1.50) atbilstoši 3. sistēmai.
(V pielikumā izklāstīto trešo personu uzdevumu apraksts)
 - Sertifikāta numurs: LGA sertifikāts Nr. 7381115. Pārbaudīts un kontrolēts atbilstoši tipam.
- NAV ATTIECINĀMS.
- Deklarētās ekspluatācijas īpašības
 - Izstrādājumi, uz kuriem attiecas šī ekspluatācijas īpašību deklarācija, atbilst būtiskiem raksturlielumiem un prasībām pret ekspluatācijas īpašībām, kas aprakstītas tālākminētajos dokumentos.
 - Piemērotie standarti: EN 12050-1:2001 vai EN 12050-2:2000 (SL1.50).
- Pielikuma 1. un 2. punktā norādītā izstrādājuma ekspluatācijas īpašības atbilst 9. punktā norādītajām deklarētajām ekspluatācijas īpašībām.

NL:**Prestatieverklaring van EU in overeenstemming met Bijlage III van verordening (EU) nr. 305/2011 (Bouwproductenverordening)**

- Unieke identificatiecode van het producttype:
 - EN 12050-1 of EN 12050-2 (SL1.50).
- Type-, batch- of serienummer of enig ander element dat identificatie van het bouwproduct mogelijk maakt zoals vereist conform artikel 11(4):
 - SL1, SLV pompen gemarkeerd met EN 12050-1 of EN 12050-2 (SL1.50) op het typeplaatje.
- Beoogde toepassing of toepassingen van het bouwproduct, in overeenstemming met de van toepassing zijnde geharmoniseerde technische specificatie, zoals voorzien door de fabrikant:
 - Pompen voor het verpompen van afvalwater dat fecale materie bevat gemarkeerd met EN 12050-1 op het typeplaatje.
 - SL1.50 pompen voor het verpompen van afvalwater dat geen fecale materie bevat gemarkeerd met EN 12050-2 op het typeplaatje.
- Naam, gedeponeerde handelsnaam of gedeponeerd handelsmerk en contactadres van de fabrikant zoals vereist conform artikel 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Denemarken.
- NIET RELEVANT.
- Systeem of systemen voor beoordeling en verificatie van constantheid van prestaties van het bouwproduct zoals beschreven in Bijlage V:
 - Systeem 3.
- In het geval van de prestatieverklaring voor een bouwproduct dat onder een geharmoniseerde norm valt:
 - TÜV Rheinland LGA Products GmbH, identificatienummer: 0197.
Uitgevoerde test conform EN 12050-1 of EN 12050-2 (SL1.50) onder systeem 3.
(beschrijving van de externe taken zoals beschreven in Bijlage V)
 - Certificaatnummer: LGA-certificaatnr. 7381115. Type getest en bewaakt.
- NIET RELEVANT.
- Verklaarde prestatie:
 - De producten die vallen onder deze prestatieverklaring zijn in overeenstemming met de essentiële eigenschappen en de prestatievereisten zoals beschreven in het volgende:
 - Gebruikte normen: EN 12050-1:2001 of EN 12050-2:2000 (SL1.50).
- De prestaties van het product dat is geïdentificeerd in punten 1 en 2 zijn in overeenstemming met de verklaarde prestaties in punt 9.

PL:**Deklaracja właściwości użytkowych UE według załącznika III do dyrektywy (UE) nr 305/2011 w/s wprowadzania do obrotu wyrobów budowlanych**

1. Niepowtarzalny kod identyfikacyjny typu wyrobu:
 - EN 12050-1 lub EN 12050-2 (SL1.50).
2. Numer typu, partii lub serii lub jakiegokolwiek inny element umożliwiający identyfikację wyrobu budowlanego, wymagany zgodnie z art. 11 ust. 4:
 - Pompy SL1, SLV oznaczone na tabliczce znamionowej kodem EN 12050-1 lub EN 12050-2 (SL1.50).
3. Przewidziane przez producenta zamierzone zastosowanie lub zastosowania wyrobu budowlanego zgodnie z mającą zastosowanie zharmonizowaną specyfikacją techniczną:
 - Pompy do pompowania ścieków zawierających fekalia, oznaczone na tabliczce znamionowej kodem EN 12050-1.
 - Pompy SL1.50 do pompowania ścieków bez zawartości fekalii, oznaczone na tabliczce znamionowej kodem EN 12050-2.
4. Nazwa, zastrzeżona nazwa handlowa lub zastrzeżony znak towarowy oraz adres kontaktowy producenta, wymagany zgodnie z art. 11 ust. 5:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dania.
5. NIE DOTYCZY.
6. System lub systemy oceny i weryfikacji stałości właściwości użytkowych wyrobu budowlanego określone w załączniku V:
 - System 3.
7. W przypadku deklaracji właściwości użytkowych dotyczącej wyrobu budowlanego objętego normą zharmonizowaną:
 - Jednostka certyfikująca TÜV Rheinland LGA Products GmbH, numer identyfikacyjny: 0197, przeprowadziła badanie określone w EN 12050-1 lub EN 12050-2 (SL1.50), w systemie 3 i wydała certyfikat (opis zadań strony trzeciej, określonych w załączniku V)
 - Nr certyfikatu: certyfikat LGA nr 7381115 (certyfikat badania typu i stałości właściwości użytkowych).
8. NIE DOTYCZY.
9. Deklarowane właściwości użytkowe:

Wyroby, których dotyczy niniejsza deklaracja właściwości użytkowych są zgodne z zasadniczymi charakterystykami i wymaganiami określonymi w następujących normach:

 - Zastosowane normy: EN 12050-1:2001 lub EN 12050-2:2000 (SL1.50).
10. Właściwości użytkowe wyrobu określone w pkt 1 i 2 są zgodne z właściwościami użytkowymi deklarowanymi w pkt 9.

PT:**Declaração de desempenho UE, em conformidade com o Anexo III do Regulamento (UE) N.º 305/2011 (Regulamento de Produtos da Construção)**

1. Código de identificação exclusivo do tipo de produto:
 - EN 12050-1 ou EN 12050-2 (SL1.50).
2. Tipo, lote ou número de série ou qualquer outro elemento que permita a identificação do produto de construção, em conformidade com o Artigo 11(4):
 - Bombas SL1, SLV com a indicação EN 12050-1 ou EN 12050-2 (SL1.50) na chapa de características.
3. Utilização ou utilizações prevista(s) do produto de construção, em conformidade com a especificação técnica harmonizada aplicável, conforme previsto pelo fabricante:
 - Bombas para bombeamento de águas residuais com conteúdo de matéria fecal com a indicação EN 12050-1 na chapa de características.
 - Bombas SL1.50 para bombeamento de águas residuais sem matéria fecal com a indicação EN 12050-2 na chapa de características.
4. Nome, nome comercial registado ou marca registada e endereço de contacto do fabricante, em conformidade com o Artigo 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Dinamarca.
5. NÃO RELEVANTE.
6. Sistema ou sistemas de avaliação e verificação da regularidade do desempenho do produto de construção, conforme definido no Anexo V:
 - Sistema 3.
7. Em caso de declaração de desempenho referente a um produto de construção abrangido por uma norma harmonizada:
 - TÜV Rheinland LGA Products GmbH, número de identificação: 0197.
Teste realizado em conformidade com EN 12050-1 ou EN 12050-2 (SL1.50) ao abrigo do sistema 3.
(descrição das tarefas de partes terceiras, conforme definido no Anexo V)
 - Número do certificado: Certificado LGA N.º 7381115. Testado e monitorizado.
8. NÃO RELEVANTE.
9. Desempenho declarado:

Os produtos abrangidos por esta declaração de desempenho cumprem as características essenciais e os requisitos de desempenho conforme descritos em:

 - Normas utilizadas: EN 12050-1:2001 ou EN 12050-2:2000 (SL1.50).
10. O desempenho do produto identificado nos pontos 1 e 2 encontra-se em conformidade com o desempenho declarado no ponto 9.

RO:**Declarație UE de performanță în conformitate cu anexa III a Regulamentului (UE) nr 305/2011 (reglementare privind produsele pentru construcții)**

1. Cod unic de identificare a tipului de produs:
 - EN 12050-1 sau EN 12050-2 (SL1.50).
2. Tipul, lotul sau seria, sau orice alt element care permite identificarea produsului pentru construcții după cum este necesar în conformitate cu articolul 11 (4):
 - Pompe SL1, SLV marcate cu EN 12050-1 sau EN 12050-2 (SL1.50) pe placa de identificare.
3. Utilizarea sau utilizările preconizate ale produsului pentru construcții, în conformitate cu specificația tehnică armonizată aplicabilă, astfel cum este prevăzut de către producător:
 - Pompe pentru pomparea apei uzate conținând materii fecale, marcate cu EN 12050-1 pe placa de identificare.
 - Pompe SL1.50 pentru pomparea apei uzate fără materii fecale, marcate cu EN 12050-2 pe placa de identificare.
4. Înregistrată și adresa de contact a fabricantului cerute conform cu articolului 11 (5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danemarca.
5. NU ESTE RELEVANT.
6. Sistemul sau sistemele de evaluare și verificare a constanței performanței produsului pentru construcții astfel cum este prevăzut în anexa V:
 - Sistemul 3.
7. În cazul declarației de performanță pentru un produs pentru construcții specificat într-un standard armonizat:
 - TÜV Rheinland LGA Products GmbH, număr de identificare: 0197.
Test efectuat conform EN 12050-1 sau EN 12050-2 (SL1.50) potrivit sistemului 3.
(descrierea sarcinilor terței părți așa cum este prevăzut în anexa V)
 - Numărul certificatului: LGA-Certificat nr. 7381115. Tip testat și monitorizat.
8. NU ESTE RELEVANT.
9. Performanță declarată:

Produsele specificate de această declarație de performanță sunt în conformitate cu caracteristicile esențiale și cerințele de performanță descrise în cele ce urmează:

 - Standarde utilizate: EN 12050-1:2001 sau EN 12050-2:2000 (SL1.50).
10. Performanța produsului identificat la punctele 1 și 2 este în conformitate cu performanța declarată la punctul 9.

RS:**EU deklaracija o performansama u skladu sa Aneksom III propisa (EU) br. 305/2011 (propis o konstrukciji proizvoda)**

1. Jedinствена identifikaciona šifra tipa proizvoda:
 - EN 12050-1 ili EN 12050-2 (SL1.50).
2. Tip, serija ili serijski broj ili neki drugi element koji omogućava identifikaciju konstrukcije proizvoda, kako je propisano shodno Članu 11(4):
 - Pumpe SL1, SLV označene su sa EN 12050-1 ili EN 12050-2 (SL1.50) na natpisnoj pločici.
3. Predviđena namena ili predviđene namene konstruisanog proizvoda u skladu sa važećim i usklađenim tehničkim specifikacijama, kako je predviđeno proizvođač:
 - Pumpe za pumpanje otpadnih voda sa fekalnim materijama na natpisnoj pločici imaju oznaku EN 12050-1.
 - Pumpe SL1.50 za pumpanje otpadnih voda bez fekalnih materija na natpisnoj pločici imaju oznaku EN 12050-2.
4. Naziv, registrovana trgovačka marka ili registrovani zaštitni znak i kontakt adresa proizvođača kako je propisano na osnovu Člana 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danska.
5. NIJE RELEVANTNO.
6. Sistem ili sistemi za procenu i verifikaciju konstantnosti performansi konstruisanog proizvoda, kako je predviđeno u Aneksu V:
 - Sistem 3.
7. U slučaju deklaracije o performansama koja se odnosi na konstruisani proizvod koji je obuhvaćen usklađenim standardom:
 - TÜV Rheinland LGA Products GmbH, identifikacioni broj: 0197.
Izvršeno ispitivanje u skladu sa EN 12050-1 ili EN 12050-2 (SL1.50) na osnovu sistema 3
(opis zadatka treće strane kako je opisano u Aneksu V).
 - Broj sertifikata: LGA-sertifikat br. 7381115. Ispitivanje i praćenje tipa.
8. NIJE RELEVANTNO.
9. Deklarisane performanse:

Proizvodi koji su obuhvaćeni ovom deklaracijom o performansama usklađeni su sa osnovnim karakteristikama i zahtevima za performansama, kako je nadalje opisano:

 - Korišćeni standardi: EN 12050-1:2001 ili EN 12050-2:2000 (SL1.50).
10. Performanse proizvoda identifikovanog u tačkama 1 i 2 u saglasnosti su s deklarisanim performansama u tački 9.

RU:

Декларация ЕС о рабочих характеристиках согласно Приложению III Регламента (ЕС) № 305/2011 (Регламент на конструкционные, строительные материалы и продукцию)

1. Код однозначной идентификации типа продукции:
 - EN 12050-1 или EN 12050-2 (SL1.50).
2. Тип, номер партии, серийный номер или любой другой параметр, обеспечивающий идентификацию строительного оборудования согласно Статье 11(4):
 - Насосы SL1, SLV имеют обозначение EN 12050-1 или EN 12050-2 (SL1.50) на фирменной табличке.
3. Целевое применение или применения строительного оборудования в соответствии с применимыми согласованными техническими условиями, предусмотренными производителем:
 - Насосы для перекачки сточных вод с фекалиями имеют обозначение EN 12050-1 на фирменной табличке.
 - Насосы SL1, SLV для перекачки сточных вод без фекалий имеют обозначение EN 12050-2 на фирменной табличке.
4. Название, зарегистрированное торговое имя или зарегистрированная торговая марка и контактный адрес производителя согласно Статье 11(5):
 - Grundfos Holding A/S
 - Poul Due Jensens Vej 7
 - 8850 Bjerringbro
 - Дания.
5. НЕ ИСПОЛЬЗУЕТСЯ.
6. Система или системы оценки и проверки постоянства рабочих характеристик строительного оборудования согласно Приложению V:
 - Система 3.
7. Если декларация о рабочих характеристиках касается строительного оборудования, предусмотренного согласованным стандартом:
 - TÜV Rheinland LGA Products GmbH, идентификационный номер: 0197.
 - Испытание выполнено согласно EN 12050-1 или EN 12050-2 (SL1.50) по системе 3.
 - (описание задач третьей стороны согласно Приложению V)
 - Номер сертификата: LGA-Сертификат № 7381115. Прошел типовые испытания и контроль.
8. НЕ ИСПОЛЬЗУЕТСЯ.
9. Заявленные технические характеристики:
 - Оборудование, подпадающее под настоящую декларацию о технических характеристиках, соответствует существенным характеристикам и требованиям к рабочим характеристикам, указанным ниже:
 - Применяемые стандарты: EN 12050-1:2001 или EN 12050-2:2000 (SL1.50).
10. Технические характеристики оборудования, указанные в пунктах 1 и 2, соответствуют заявленным техническим характеристикам из пункта 9.

SE:

EU prestandadeklaration enligt bilaga III till förordning (EU) nr 305/2011 (byggproduktförordningen)

1. Produkttypens unika identifikationskod:
 - EN 12050-1 eller EN 12050-2 (SL1.50).
2. Typ-, parti- eller serienummer eller någon annan beteckning som möjliggör identifiering av byggprodukter i enlighet med artikel 11.4:
 - SL1-, SLV-pumpar märkta med EN 12050-1 eller EN 12050-2 (SL1.50) på typskylten.
3. Byggproduktens avsedda användning eller användningar i enlighet med den tillämpliga, harmoniserade tekniska specifikationen, såsom förutsett av tillverkaren:
 - Pumpar för pumpning av avloppsvatten innehållande fekalier märkta med EN 12050-1 på typskylten.
 - SL1.50-pumpar för pumpning av fekaliefritt avloppsvatten märkta med EN 12050-2 på typskylten.
4. Tillverkarens namn, registrerade företagsnamn eller registrerade varumärke samt kontaktadress enligt vad som krävs i artikel 11.5:
 - Grundfos Holding A/S
 - Poul Due Jensens Vej 7
 - 8850 Bjerringbro
 - Danmark.
5. EJ TILLÄMPLIGT.
6. Systemet eller systemen för bedömning och fortlöpande kontroll av byggproduktens prestanda enligt bilaga V:
 - System 3.
7. För det fall att prestandadeklarationen avser en byggprodukt som omfattas av en harmoniserad standard:
 - TÜV Rheinland LGA Products GmbH, identifikationsnummer: 0197.
 - Utförde provning enligt EN 12050-1 eller EN 12050-2 (SL1.50) under system 3.
 - (beskrivning av tredje parts uppgifter såsom de anges i bilaga V)
 - Certifikat nummer: LGA-certifikat nr 7381115. Typprovad och övervakad.
8. EJ TILLÄMPLIGT.
9. Angiven prestanda:
 - Produkterna som omfattas av denna prestandadeklaration överensstämmer med de väsentliga egenskaperna och prestandakraven i följande:
 - Tillämpade standarder: EN 12050-1:2001 eller EN 12050-2:2000 (SL1.50).
10. Prestandan för den produkt som anges i punkterna 1 och 2 överensstämmer med den prestanda som anges i punkt 9.

SI:**Izjava EU o delovanju v skladu z Dodatkom III Uredbe (EU) št. 305/2011 (uredba o gradbenih proizvodih)**

1. Edinstvena identifikacijska koda za tip izdelka:
 - EN 12050-1 ali EN 12050-2 (SL1.50).
2. Tip, serijska številka ali kateri koli drug element, ki dovoljuje identifikacijo gradbenega proizvoda, kot to zahteva člen 11(4):
 - Črpalke SL1, SLV z oznako EN 12050-1 ali EN 12050-2 (SL1.50) na tipski ploščici.
3. Predvidena uporaba gradbenega proizvoda v skladu z veljavimi harmoniziranimi tehničnimi specifikacijami, kot jo predvideva proizvajalec:
 - Črpalke za črpanje odpadne vode, ki vsebuje fekalije, z oznako EN 12050-1 na tipski ploščici.
 - Črpalke SL1.50 za črpanje odpadne vode, ki ne vsebuje fekalij, z oznako EN 12050-2 na tipski ploščici.
4. Ime, registrirano trgovsko ime ali registrirana blagovna znamka in naslov proizvajalca, kot zahteva člen 11(5):
 - Grundfos Holding A/S
 - Poul Due Jensens Vej 7
 - 8850 Bjerringbro
 - Danska.
5. NI POMEMBNO.
6. Sistem ali sistemi ocenjevanja in preverjanja stalnosti delovanja gradbenega proizvoda, kot je opredeljeno v Dodatku V:
 - Sistem 3.
7. Če izjavo o delovanju gradbenega proizvoda pokriva harmonizirani standard:
 - TÜV Rheinland LGA Products GmbH, identifikacijska številka: 0197.
 - Test izveden v skladu z EN 12050-1 ali EN 12050-2 (SL1.50) v sklopu sistema 3.
 - (opis nalog tretje osebe, kot to določa Dodatek V)
 - Številka certifikata: Certifikat LGA št. 7381115. Testirano glede tipa in nadzorovano.
8. NI POMEMBNO.
9. Deklarirano delovanje:
 - Proizvodi, ki jih krije ta izjava o delovanju, so skladni z bistvenimi lastnostmi in zahtevami delovanja, kot je opisano v nadaljevanju:
 - Uporabljeni standardi: EN 12050-1:2001 ali EN 12050-2:2000 (SL1.50).
10. Delovanje proizvoda, identificiranega pod točkama 1 in 2, je skladno z deklariranim delovanjem pod točko 9.

SK:**Vyhlasenie o parametroch EU v súlade s prílohou III nariadenia (EÚ) č. 305/2011 (Nariadenie o stavebných výrobkoch)**

1. Jediný identifikačný kód typu výrobku:
 - EN 12050-1 alebo EN 12050-2 (SL1.50).
2. Typ, číslo výrobnej dávky alebo sériové číslo, alebo akýkoľvek iný prvok umožňujúci identifikáciu stavebného výrobku, ako sa vyžaduje podľa článku 11 ods. 4:
 - Čerpadlá SL1, SLV s označením EN 12050-1 alebo EN 12050-2 (SL1.50) na typovom štítku.
3. Zamýšľané použitie stavebného výrobku, ktoré uvádza výrobca, v súlade s uplatniteľnou harmonizovanou technickou špecifikáciou:
 - Čerpadlá určené na čerpanie splaškov s obsahom fekálií s označením EN 12050-1 na typovom štítku.
 - Čerpadlá SL1.50 určené na čerpanie splaškov bez obsahu fekálií s označením EN 12050-2 na typovom štítku.
4. Názov, registrovaný obchodný názov alebo registrovaná obchodná značka a kontaktná adresa výrobcu podľa požiadaviek článku 11, ods. 5:
 - Grundfos Holding A/S
 - Poul Due Jensens Vej 7
 - 8850 Bjerringbro
 - Dánsko.
5. NEVZTAHUJE SA.
6. Systém alebo systémy posudzovania a overovania nemennosti parametrov stavebného výrobku podľa ustanovení prílohy V:
 - Systém 3.
7. V prípade vyhlásenia o parametroch týkajúceho sa stavebného výrobku, na ktorý sa vzťahuje harmonizovaná norma:
 - TÜV Rheinland LGA Products GmbH, identifikačné číslo: 0197.
 - Vykonal skúšku podľa EN 12050-1 alebo EN 12050-2 (SL1.50) v systéme 3.
 - (popis úloh tretej strany, ako sa uvádzajú v prílohe V)
 - Číslo certifikátu: Certifikát LGA č. 7381115. Typovo skúšaný a monitorovaný.
8. NEVZTAHUJE SA.
9. Deklarované parametre:
 - Výrobky, na ktoré sa vzťahuje toto vyhlásenie o parametroch, vyhovujú podstatnými vlastnosťami a parametrami nasledovne:
 - Použitý normy: EN 12050-1:2001 alebo EN 12050-2:2000 (SL1.50).
10. Parametre výrobku uvedené v bodoch 1 a 2 sú v zhode s deklarovanými parametrami v bode 9.

TR:

305/2011 sayılı AB Yönetmeliği Ek III'e uygun olarak performans beyanı (İnşaat Ürünü Yönetmeliği)

1. Ürün tipi özel tanımlama kodu:
 - EN 12050-1 veya EN 12050-2 (SL1.50).
2. Gereken şekil inşaat ürününün Madde 11(4)'e göre tanımlanmasına izin veren tip, parti, seri numarası veya başka bir öge:
 - Etiketinde EN 12050-1 veya EN 12050-2 (SL1.50) ifadesi yer alan SL1, SLV pompaları.
3. Üretici tarafından öngörülen biçimde ilgili uyumlu teknik özelliklere uygun olarak inşaat ürününün amaçlanan kullanımı ve kullanımları:
 - Dışkı içeren atık suların pompalanmasına yönelik, etiketinde EN 12050-1 bilgisi bulunan SL1.50 pompalar.
 - Dışkı içermeyen atık suların pompalanmasına yönelik, etiketinde EN 12050-2 bilgisi bulunan SL1.50 pompalar.
4. Madde 11(5)'e göre gereken şekilde üreticinin adı, tescilli ticari adı veya tescilli ticari markası ve iletişim adresi:
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danimarka.
5. İLGİLİ DEĞİL.
6. Ek V'te belirtilen şekilde inşaat ürününün performansının tutarlılığının değerlendirilmesi ve doğrulanmasına yönelik sistem veya sistemler:
 - Sistem 3.
7. Uyumlu bir standart kapsamındaki bir inşaat ürünüyle ilgili performans beyanı durumunda:
 - TÜV Rheinland LGA Products GmbH, tanımlama numarası: 0197.
EN 12050-1 veya EN 12050-2 (SL1.50)'e göre sistem 3 altında gerçekleştirilen test.
(Ek V'te belirtilen şekilde üçüncü taraf işlemlerin açıklaması)
 - Sertifika numarası: LGA Sertifika No. 7381115. Tip test edilmiş ve izlenmiştir.
8. İLGİLİ DEĞİL.
9. Beyan edilen performans:
 - Kullanılan standartlar: EN 12050-1:2001 veya EN 12050-2:2000 (SL1.50).
10. 1. ve 2. noktalarda belirtilen ürünün performansı, 9. noktada beyan edilen performansa uygundur.

UA:

Декларація ЄС щодо технічних характеристик згідно з Додатком III Регламенту (ЄС) № 305/2011 (Регламент на конструкційні будівничі матеріали і продукцію)

1. Код однозначної ідентифікації типу продукту:
 - EN 12050-1 або EN 12050-2 (SL1.50).
2. Тип, номер партії, номер серії або інший параметр, що дозволяє ідентифікувати продукт для встановлення в будівлях згідно Статті 11(4):
 - Насоси SL1, SLV мають на фірмовій табличці позначення EN 12050-1 або EN 12050-2 (SL1.50).
3. Цільове використання продукту для встановлення в будівлях згідно застосованих погоджених технічних умов, зазначених виробником:
 - Насоси для перекачування стічних вод з фекаліями мають позначення EN 12050-1 на фірмовій табличці.
 - Насоси SL1.50 для перекачування стічних вод без фекалій мають позначення EN 12050-2 на фірмовій табличці.
4. Назва, зареєстроване торгове ім'я або зареєстрована торгова марка та контактна адреса виробника згідно Статті 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Данія.
5. НЕ ЗАСТОСОВУЄТЬСЯ.
6. Система або системи оцінки і перевірки постійності робочих характеристик продукту для встановлення в будівлях згідно Додатку V:
 - Система 3.
7. Якщо декларація щодо робочих характеристик стосується продукту для встановлення в будівлях, що підпадає під узгоджений стандарт:
 - TÜV Rheinland LGA Products GmbH, ідентифікаційний номер: 0197.
Перевірка виконана згідно EN 12050-1 або EN 12050-2 (SL1.50) за системою 3.
(опис завдань третьою стороною відповідно до Додатку V)
 - Номер свідоцтва: LGA-Свідоцтво № 7381115. Перевірка типу і контроль пройдені.
8. НЕ ЗАСТОСОВУЄТЬСЯ.
9. Зазначені технічні характеристики:
 - Продукти, що підпадають під цю декларацію, відповідають основним характеристикам і вимогам до робочих характеристик, зазначеним нижче:
 - Стандарти, що застосовувалися: EN 12050-1:2001 або EN 12050-2:2000 (SL1.50).
10. Технічні характеристики продукту, вказані у пунктах 1 і 2, відповідають зазначеним технічним характеристикам з пункту 9.

CN:

**EU 产品性能声明，根据欧盟第305/2011号法规
(建筑用产品法规) 附录三的要求提供**

1. 产品类型的唯一识别码：
-EN 12050-1 或 EN 12050-2 (SL1.50)。
2. 按照第 11 (4) 条规定应提供的产品类型、批次、序列号或其它用来识别建筑产品的标识：
-铭牌上有 "EN 12050-1 或 EN 12050-2 (SL1.50)" 字样的 SL1, SLV 水泵。
3. 制造商预见的建筑产品用途 (与适用的统一技术指标相一致)：
-铭牌上有 "EN 12050-1" 字样的、用于抽取含渣废水的水泵。
-铭牌上有 "EN 12050-2" 字样的、用于抽取无渣废水的水泵 (SL1.50)。
4. 按照第 11 (5) 条规定应提供的制造商名称、注册商名称或注册商标以及地址等信息。
-Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
丹麦
5. 不适用
6. 按照附录五规定应提供的建筑产品性能一致性评估和验证系统：
-系统 3。
7. 如果产品性能声明中涉及的某个建筑产品属于某个协调标准的管辖范围：
-TÜV Rheinland 的 LGA 产品 GmbH, 识别号码: 0197。
根据 EN 12050-1 或 EN 12050-2 (SL1.50) 的规定在系统 3 的环境中进行了性能测试
(根据附录五的规定提供了第三方在测试中的任务)
-证书号码: LGA 证书号: 7381115。已通过测试和监控。
8. 不适用
9. 声明的性能：
本产品性能声明中所涉及的产品符合以下标准所规定的主要特性和性能指标：
-所用标准: EN 12050-1:2001 或 EN 12050-2:2000 (SL1.50)。
10. 第 1 点和第 2 点中所认定的产品达到第 9 点中所声明的性能。

KZ:

**305/2011 ережесінің (ЕО) ІІІ қосымшасына
сай ЕО өнімділік туралы декларациясы
(Құрылыс өнімдері туралы ереже)**

1. Өнім түрінң бірегей идентификациялық коды:
- EN 12050-1 немесе EN 12050-2 (SL1.50)。
2. Түр, бума, сериялық нөмір немесе құрылыс өнімін 11(4) тармағына сай талап етілетіндей құрылыс өнімін идентификациялауға мүмкіндік беретін кез келген басқа элемент:
- Зауыттық тақтайшасында EN 12050-1 немесе EN 12050-2 (SL1.50) деп белгіленген SL1, SLV сораптары。
3. Құрылыс өнімін мақсатты пайдалану немесе пайдалану өндіруші көздегендей тиісті үйлестірілген техникалық сипаттамаларға сай:
- Зауыттық тақтайшасында EN 12050-1 деп белгіленген нәжісті қамтитын ағынды суды айдмалауға арналған сораптар。
- Зауыттық тақтайшасында EN 12050-2 (SL1.50) деп белгіленген нәжіс жоқ ағынды суды айдмалауға арналған сораптар。
4. 11(5) тармаққа сай талап етілетіндей атау, тіркелген сауда атауы немесе тіркелген сауда белгісі және байланыс мекенжайы:
- Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Дания。
5. ТИІСТІ ЕМЕС.
6. Қосымшасында белгіленгендей жүйені немесе жүйелерді бағалау және құрылыс өнімінің өнімділігінің тұрақтылығын тексеру:
- 3-жүйе。
7. Құрылыс өніміне қатысты өнімділік туралы декларация үйлестірілген стандартпен қамтылған болса:
- TÜV Rheinland LGA Products GmbH, идентификациялық нөмір: 0197。
EN 12050-1 немесе EN 12050-2 (SL1.50) стандартына сай 3-жүйесімен сынақ орындалған。
(V қосымшасында белгіленгендей үшінші тарап тапсырмаларының сипаттамасы)
- Сертификат нөмірі LGA-сертификатының нөмірі: 7381115。
Сыналған және бақыланған түр。
8. ТИІСТІ ЕМЕС.
9. Жарияланған өнімділік:
Осы өнімділік туралы декларациямен қамтылған өнімдер төменде сипатталғандай маңызды сипаттамалар және өнімділік туралы талаптарға сай:
- Қолданылған стандарттар: EN 12050-1:2001 немесе EN 12050-2:2000 (SL1.50)。
10. 1 және 2 бөлімдерінде көрсетілген өнім өнімділігі 9-бөлімде жарияланған өнімділікке сай。

VI:

Công bố của EC về đặc tính hoạt động theo Phụ lục III của Quy định (EU) Số 305/2011 (Quy Định Sản Phẩm Xây Dựng)

1. Mã nhận dạng riêng của loại sản phẩm:
 - EN 12050-1 hoặc EN 12050-2 (SL1.50).
2. Loại, lô hoặc số sêri hoặc bất kỳ yếu tố khác cho phép nhận dạng sản phẩm xây dựng chiếu theo yêu cầu trong Điều 11(4):
 - Bơm SL1, SLV được đánh dấu là EN 12050-1 hoặc EN 12050-2 (SL1.50) trên tấm nhãn.
3. Việc sử dụng hay dự tính sử dụng sản phẩm, tương ứng với ứng dụng phù hợp theo đặc điểm kỹ thuật, như dự kiến của nhà sản xuất:
 - Bơm để bơm nước thải có chứa phân được đánh dấu là EN 12050-1 trên tấm nhãn.
 - Bơm SL1.50 để bơm nước thải không chứa phân được đánh dấu là EN 12050-2 trên tấm nhãn.
4. Tên, tên thương mại đã đăng ký hoặc thương hiệu đã đăng ký và địa chỉ liên lạc của nhà sản xuất chiếu theo yêu cầu trong Điều 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Đan Mạch.
5. KHÔNG LIÊN QUAN.
6. Hệ thống hoặc các hệ thống đánh giá và thẩm tra sự ổn định của đặc tính hoạt động của sản phẩm quy định tại Phụ lục V:
 - Hệ thống 3.
7. Trong trường hợp bản công bố đặc tính hoạt động liên quan đến một sản phẩm xây dựng được bao gồm bởi một tiêu chuẩn hài hòa:
 - TÜV Rheinland LGA Products GmbH, số nhân diện: 0197.
Thực hiện kiểm tra theo tiêu chuẩn EN 12050-1 hoặc EN 12050-2 (SL1.50) theo hệ thống 3.
(mô tả những nhiệm vụ của bên thứ ba như quy định tại Phụ lục V)
 - Giấy chứng nhận số: Giấy chứng nhận LGA Số 7381115.
Được kiểm tra mẫu và được theo dõi.
8. KHÔNG LIÊN QUAN.
9. Đặc tính hoạt động đã công bố:

Các sản phẩm được bao gồm trong bản công bố đặc tính hoạt động này phù hợp với các đặc điểm thiết yếu và các yêu cầu đặc tính hoạt động được mô tả trong các tài liệu sau:

 - Tiêu chuẩn được sử dụng: EN 12050-1:2001 hoặc EN 12050-2:2000 (SL1.50).
10. Đặc tính của sản phẩm được xác định trong mục 1 và 2 phù hợp với đặc tính hoạt động đã công bố tại mục 9.

AL:

Deklarata e performancës së BE-së në pajtim me Shtojcën III të Rregullores (BE) Nr 305/2011 (Rregullorja e Produktit të Ndërtimit)

1. Kodi unik i identifikimit të llojit të produktit:
 - EN 12050-1 ose EN 12050-2 (SL1.50).
2. Lloji, grupi apo numri serial ose çdo element tjetër që lejon identifikimin e produktit të ndërtimit siç kërkohet në zbatim të Nenit 11(4):
 - Pompat SL1, SLV që kanë të shënuar EN 12050-1 ose EN 12050-2 (SL1.50) në targetën e emrit.
3. Përdorimi ose përdorimet e synuara të produktit të ndërtimit, në pajtim me specifikimet teknike të zbatueshme të harmonizuara, siç është parashikuar nga prodhuesi:
 - Pompat për pompimin e ujërave të zeza që përbajnë materiale fekale që kanë të shënuar EN 12050-1 në targetën e emrit.
 - Pompat SL1.50 për pompimin e ujërave të zeza pa fekale që kanë të shënuar EN 12050-2 në plakën e emrit.
4. Emri, emri i regjistruar i tregtimit ose marka e regjistruar e tregtimit dhe adresa e kontaktit të prodhuesit siç kërkohet në zbatim të Nenit 11(5):
 - Grundfos Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro
Danimarkë.
5. NUK ËSHTË I PËRSHTATSHËM.
6. Sistemi ose sistemet e vlerësimit dhe verifikimit të qëndrueshmërisë së performancës së produktit të ndërtimit siç është përcaktuar në Shtojcën V:
 - Sistemi 3.
7. Në rastin kur deklarata e performancës në lidhje me një produkt ndërtimi që mbulohet nga një standard i harmonizuar:
 - Numri i identifikimit, TÜV Rheinland LGA Products GmbH: 0197.
Tersti i kryer sipas EN 12050-1 ose EN 12050-2 (SL1.50) nën sistemin 3.
(përkthimi i detyrave të palës së tretë siç janë përcaktuar në Shtojcën V)
 - Numri i certifikatës: Certifikata LGA Nr. 7381115. I testuar për llojin dhe i monitoruar.
Tipi i testuar.
8. NUK ËSHTË I PËRSHTATSHËM.
9. Performanca e deklaruar:

Produktet e mbuluara nga ky deklarim i performancës janë në pajtim me karakteristikat thelbësore dhe kërkesat e performancës siç janë përkthuar më poshtë:

 - Standartet e përdorura: EN 12050-1:2001 ose EN 12050-2:2000 (SL1.50).
10. Performanca e produktit identifikuar në pikat 1 dhe 2 është në pajtim me performancën e deklaruar në pikën 9.

EU declaration of performance reference number: 96771279.

Székesfehérvár, 15th of February 2016



Róbert Kis
Engineering Manager
GRUNDFOS Holding A/S
Poul Due Jensens Vej 7
8850 Bjerringbro, Denmark

Argentina

Bombas GRUNDFOS de Argentina S.A.
Ruta Panamericana km. 37.500 Centro
Industrial Garin
1619 Garin Pcia. de B.A.
Phone: +54-3327 414 444
Telefax: +54-3327 45 3190

Australia

GRUNDFOS Pumps Pty. Ltd.
P.O. Box 2040
Regency Park
South Australia 5942
Phone: +61-8-8461-4611
Telefax: +61-8-8340 0155

Austria

GRUNDFOS Pumpen Vertrieb
Ges.m.b.H.
Grundfosstraße 2
A-5082 Grödig/Salzburg
Tel.: +43-6246-883-0
Telefax: +43-6246-883-30

Belgium

N.V. GRUNDFOS Bellux S.A.
Boomsesteenweg 81-83
B-2630 Aartselaar
Tél.: +32-3-870 7300
Télécopie: +32-3-870 7301

Belarus

Представительство ГРУНДФОС в
Минске
220125, Минск
ул. Шафарнянская, 11, оф. 56, БЦ
«Порт»
Тел.: +7 (375 17) 286 39 72/73
Факс: +7 (375 17) 286 39 71
E-mail: minsk@grundfos.com

Bosnia and Herzegovina

GRUNDFOS Sarajevo
Zmaja od Bosne 7-7A,
BH-71000 Sarajevo
Phone: +387 33 592 480
Telefax: +387 33 590 465
www.ba.grundfos.com
e-mail: grundfos@bih.net.ba

Brazil

BOMBAS GRUNDFOS DO BRASIL
Av. Humberto de Alencar Castelo
Branco, 630
CEP 09850 - 300
São Bernardo do Campo - SP
Phone: +55-11 4393 5533
Telefax: +55-11 4343 5015

Bulgaria

Grundfos Bulgaria EOOD
Slatina District
Iztochna Tangenta street no. 100
BG - 1592 Sofia
Tel. +359 2 49 22 200
Fax. +359 2 49 22 201
email: bulgaria@grundfos.bg

Canada

GRUNDFOS Canada Inc.
2941 Brighton Road
Oakville, Ontario
L6H 6C9
Phone: +1-905 829 9533
Telefax: +1-905 829 9512

China

GRUNDFOS Pumps (Shanghai) Co. Ltd.
10F The Hub, No. 33 Suhong Road
Minhang District
Shanghai 201106
PRC
Phone: +86 21 612 252 22
Telefax: +86 21 612 253 33

COLOMBIA

GRUNDFOS Colombia S.A.S.
Km 1.5 vía Siberia-Cota Conj. Potrero
Chico,
Parque Empresarial Arcos de Cota Bod.
1A.
Cota, Cundinamarca
Phone: +57(1)-2913444
Telefax: +57(1)-8764586

Croatia

GRUNDFOS CROATIA d.o.o.
Buzinski prilaz 38, Buzin
HR-10010 Zagreb
Phone: +385 1 6595 400
Telefax: +385 1 6595 499
www.hr.grundfos.com

GRUNDFOS Sales Czechia and Slovakia s.r.o.

Čajkovského 21
779 00 Olomouc
Phone: +420-585-716 111

Denmark

GRUNDFOS DK A/S
Martin Bachs Vej 3
DK-8850 Bjerringbro
Tlf.: +45-87 50 50 50
Telefax: +45-87 50 51 51
E-mail: info_GDK@grundfos.com
www.grundfos.com/DK

Estonia

GRUNDFOS Pumps Eesti OÜ
Peterburi tee 92G
11415 Tallinn
Tel: + 372 606 1690
Fax: + 372 606 1691

Finland

OY GRUNDFOS Pumput AB
Trukkikuja 1
FI-01360 Vantaa
Phone: +358-(0) 207 889 500

France

Pompes GRUNDFOS Distribution S.A.
Parc d'Activités de Chesnes
57, rue de Malacombe
F-38290 St. Quentin Fallavier (Lyon)
Tél.: +33-4 74 82 15 15
Télécopie: +33-4 74 94 10 51

Germany

GRUNDFOS GMBH
Schlüterstr. 33
40699 Erkrath
Tel.: +49-(0) 211 929 69-0
Telefax: +49-(0) 211 929 69-3799
e-mail: infoservice@grundfos.de
Service in Deutschland:
e-mail: kundendienst@grundfos.de

Greece

GRUNDFOS Hellas A.E.B.E.
20th km. Athinon-Markopoulou Av.
P.O. Box 71
GR-19002 Peania
Phone: +0030-210-66 83 400
Telefax: +0030-210-66 46 273

Hong Kong

GRUNDFOS Pumps (Hong Kong) Ltd.
Unit 1, Ground floor
Siu Wai Industrial Centre
29-33 Wing Hong Street &
68 King Lam Street, Cheung Sha Wan
Kowloon
Phone: +852-27861706 / 27861741
Telefax: +852-27858664

Hungary

GRUNDFOS Hungária Kft.
Park u. 8
H-2045 Törökbálint,
Phone: +36-23 511 110
Telefax: +36-23 511 111

India

GRUNDFOS Pumps India Private
Limited
118 Old Mahabalipuram Road
Thoraiakkam
Chennai 600 096
Phone: +91-44 2496 6800

Indonesia

PT. GRUNDFOS POMPA
Graha Intirub Lt. 2 & 3
Jln. Cililitan Besar No.454. Makasar,
Jakarta Timur
ID-Jakarta 13650
Phone: +62 21-469-51900
Telefax: +62 21-460 6910 / 460 6901

Ireland

GRUNDFOS (Ireland) Ltd.
Unit A, Merrywell Business Park
Ballymount Road Lower
Dublin 12
Phone: +353-1-4089 800
Telefax: +353-1-4089 830

Italy

GRUNDFOS Pompe Italia S.r.l.
Via Gran Sasso 4
I-20060 Truccazzano (Milano)
Tel.: +39-02-95838112
Telefax: +39-02-95309290 / 95838461

Japan

GRUNDFOS Pumps K.K.
1-2-3, Shin-Miyakoda, Kita-ku,
Hamamatsu
431-2103 Japan
Phone: +81 53 428 4760
Telefax: +81 53 428 5005

Korea

GRUNDFOS Pumps Korea Ltd.
679 Floor, Aju Building 679-5
Yeoksam-dong, Kangnam-ku, 135-916
Seoul, Korea
Phone: +82-2-5317 600
Telefax: +82-2-5633 725

Latvia

SIA GRUNDFOS Pumps Latvija
Deglava biznesa centrs
Augusta Deglava iela 60, LV-1035, Rīga,
Tālr.: + 371 714 9640, 7 149 641
Faks: + 371 914 9646

Lithuania

GRUNDFOS Pumps UAB
Smolensko g. 6
LT-03201 Vilnius
Tel: + 370 52 395 430
Fax: + 370 52 395 431

Malaysia

GRUNDFOS Pumps Sdn. Bhd.
7 Jalan Peguam U1/25
Glenmarie Industrial Park
40150 Shah Alam
Selangor
Phone: +60-3-5569 2922
Telefax: +60-3-5569 2866

Mexico

Bombas GRUNDFOS de México S.A. de
C.V.
Boulevard TLC No. 15
Parque Industrial Stiva Aeropuerto
Apodaca, N.L. 66600
Phone: +52-81-8144 4000
Telefax: +52-81-8144 4010

Netherlands

GRUNDFOS Netherlands
Veluwezoom 35
1326 AE Almere
Postbus 22015
1302 CA ALMERE
Tel.: +31-88-478 6336
Telefax: +31-88-478 6332
E-mail: info_gnl@grundfos.com

New Zealand

GRUNDFOS Pumps NZ Ltd.
17 Beatrice Tinsley Crescent
North Harbour Industrial Estate
Albany, Auckland
Phone: +64-9-415 3240
Telefax: +64-9-415 3250

Norway

GRUNDFOS Pumper A/S
Strømsveien 344
Postboks 235, Leirdal
N-1011 Oslo
Tlf.: +47-22 90 47 00
Telefax: +47-22 32 21 50

Poland

GRUNDFOS Pompy Sp. z o.o.
ul. Klonowa 23
Baranowo k. Poznania
PL-62-081 Przeźmierowo
Tel: (+48-61) 650 13 00
Fax: (+48-61) 650 13 50

Portugal

Bombas GRUNDFOS Portugal, S.A.
Rua Calvet de Magalhães, 241
Apartado 1079
P-2770-153 Paço de Arcos
Tel.: +351-21-440 76 00
Telefax: +351-21-440 76 90

Romania

GRUNDFOS Pompe România SRL
Bd. Biruintei, nr 103
Pantelimon county Ilfov
Phone: +40 21 200 4100
Telefax: +40 21 200 4101
E-mail: romania@grundfos.ro

Russia

ООО Грундфос Россия
ул. Школьная, 39-41
Москва, RU-109544, Russia
Тел. (+7) 495 564-88-00 (495) 737-30-00
Факс (+7) 495 564 8811
E-mail grundfos.moscow@grundfos.com

Serbia

Grundfos Srbija d.o.o.
Omladinskih brigada 90b
11070 Novi Beograd
Phone: +381 11 2258 740
Telefax: +381 11 2281 769
www.rs.grundfos.com

Singapore

GRUNDFOS (Singapore) Pte. Ltd.
25 Jalan Tukang
Singapore 619264
Phone: +65-6681 9688
Telefax: +65-6681 9689

Slovakia

GRUNDFOS s.r.o.
Prievozská 4D
821 09 BRATISLAVA
Phona: +421 2 5020 1426
sk.grundfos.com

Slovenia

GRUNDFOS LJUBLJANA, d.o.o.
Leskovoška 9e, 1122 Ljubljana
Phone: +386 (0) 1 568 06 10
Telefax: +386 (0) 1 568 06 19
E-mail: tehnika-si@grundfos.com

South Africa

GRUNDFOS (PTY) LTD
Corner Mountjoy and George Allen
Roads
Wilbart Ext. 2
Bedfordview 2008
Phone: (+27) 11 579 4800
Fax: (+27) 11 455 6066
E-mail: lsmart@grundfos.com

Spain

Bombas GRUNDFOS España S.A.
Camino de la Fuentequilla, s/n
E-28110 Algete (Madrid)
Tel.: +34-91-848 8800
Telefax: +34-91-628 0465

Sweden

GRUNDFOS AB
Box 333 (Lunnagårdsgatan 6)
431 24 Mölndal
Tel.: +46 31 332 23 000
Telefax: +46 31 331 94 60

Switzerland

GRUNDFOS Pumpen AG
Bruggacherstrasse 10
CH-8117 Fällanden/ZH
Tel.: +41-44-806 8111
Telefax: +41-44-806 8115

Taiwan

GRUNDFOS Pumps (Taiwan) Ltd.
7 Floor, 219 Min-Chuan Road
Taichung, Taiwan, R.O.C.
Phone: +886-4-2305 0868
Telefax: +886-4-2305 0878

Thailand

GRUNDFOS (Thailand) Ltd.
92 Chaloe Phrakiat Rama 9 Road,
Dokmai, Pravej, Bangkok 10250
Phone: +66-2-725 8999
Telefax: +66-2-725 8998

Turkey

GRUNDFOS POMPA San. ve Tic. Ltd.
Sti.
Gebze Organize Sanayi Bölgesi
İhsan dede Caddesi,
2. yol 200. Sokak No. 204
41490 Gebze/ Kocaeli
Phone: +90 - 262-679 7979
Telefax: +90 - 262-679 7905
E-mail: satis@grundfos.com

Ukraine

Бізнес Центр Європа
Столичне шосе, 103
м. Київ, 03131, Україна
Телефон: (+38 044) 237 04 00
Факс.: (+38 044) 237 04 01
E-mail: ukraine@grundfos.com

United Arab Emirates

GRUNDFOS Gulf Distribution
P.O. Box 16768
Jebel Ali Free Zone
Dubai
Phone: +971 4 8815 166
Telefax: +971 4 8815 136

United Kingdom

GRUNDFOS Pumps Ltd.
Grovebury Road
Leighton Buzzard/Beds. LU7 4TL
Phone: +44-1525-850000
Telefax: +44-1525-850011

U.S.A.

GRUNDFOS Pumps Corporation
17100 West 118th Terrace
Olathe, Kansas 66061
Phone: +1-913-227-3400
Telefax: +1-913-227-3500

Uzbekistan

Grundfos Tashkent, Uzbekistan The Rep-
resentative Office of Grundfos Kazakhstan
in Uzbekistan
38a, Oybek street, Tashkent
Телефон: (+998) 71 150 3290 / 71 150
3291
Факс: (+998) 71 150 3292

Addresses Revised 09.08.2017

be think innovate

96771279 0617

ECM: 1183186

The name Grundfos, the Grundfos logo, and **be think innovate** are registered trademarks owned by Grundfos Holding A/S or Grundfos A/S, Denmark. All rights reserved worldwide.
© Copyright Grundfos Holding A/S

www.grundfos.com

GRUNDFOS 