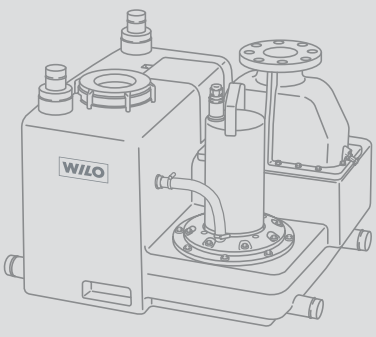
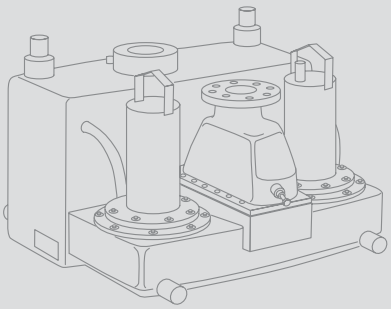
WILO
Pumpen Intelligenz.

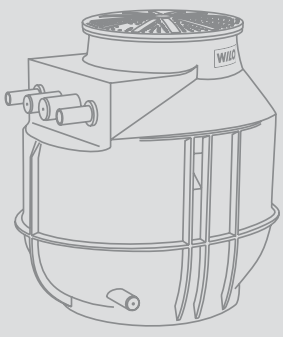
Catalogue Drainage and Sewage

Drainage and Sewage Lifting Units and Pumps Stations

Pump Systems
and Accessories







Catalogue C3 – 50 Hz – 2007

C3

6 Wilo-Comfort-Vario CO 1/MVIE
B4
Series
Catalogue

1	2	3	4	5	6	7	8	9	10	11	12	13
Wilo-Jet WJ	Wilo-Sub TWS/TWS-SE	Wilo-SilentMaster	Wilo-Sub TWU 3	Wilo-RainSystem AF Comfort	Wilo-Comfort-Vario CO 1/MVIE	Wilo-EasyStar	Wilo-Safe	Wilo-Star-Z 15 TT	Wilo-DrainLift Con	Wilo-Stratos	Wilo-Drain TM/TMW 32 Twister	Wilo-DrainLift S
B1	B1	B1	B1	B1	B4	A1	A1	A1	C3	A1	C1	C3

8 Wilo-CronoBloc-BL
A3
Series
Catalogue

1	2	3	4	5	6	7	8	9	10	11
Wilo-EMU KS	Wilo-RainSystem AF 150	Wilo-Comfort-Vario COR 3/MHIE VR	Wilo-Stratos-D	Wilo-CronoLine-IL-E	Wilo-TOP-Z	Wilo-Stratos-Z	Wilo-CronoBloc-BL	Wilo-DrainLift M	Wilo-DrainLift WS	Wilo-VeroNorm-NP/NPG
C1	B1	B4	A1	A2	A1	A1	A3	C3	C3	A3

Program overview and fields of application

Wastewater and sewage lifting units, pumps stations

System type	Macerator	Floor-mounted installation	Concealed floor installation	Main field of application					Page
Condensate/Wastewater/Drainage									**9**
Wilo-DrainLift Con		•						S/M/C	10
Wilo-DrainLift TMP		•		S				S	10
Wilo-DrainLift Box			•	S/M	S/M			S/M/C	10
Sewage/Faeces									**25**
Wilo-DrainLift KH	•	•		S	S/M	S/M		S	26
Wilo-DrainLift S		•		S	S/M	S/M		S	26
Wilo-DrainLift M		•		S/M	S/M	S/M	C	S/M	26
Wilo-DrainLift L		•		M/C	M/C	M/C	C	M/C	28
Wilo-DrainLift XL		•		M/C	M/C	M/C	C	M/C	28
Wilo-DrainLift XXL		•		C	C	C	C	C	28
Pumps stations									**67**
Wilo-DrainLift WS 40-50	•	•	•	S/M/C	S/M/C	S/M/C	C	S/M/C	68
Wilo-DrainLift WS 625	•		•	S/M/C	S/M/C	S/M/C	C	C	68
Wilo-DrainLift WS 900/1100	•		•	S/M/C	D/M/C	S/M/C	C	C	68

Legend:

- • Applicable
- **S** Single- and two-family houses
- **M** Multifamily houses
- **C** Commercial

Fields of application:

- Wastewater/Drainage
- Wastewater/ coarse contaminants
- Sewage/faeces
- Production sewage
- Condensate Calorific value/air-conditioning device

Wilo-DrainLift WS 625.

The Wilo-DrainLift WS 625 drainage and sewage shaft is a pump station with a small diameter: ideal for pressure drainage. Fast and uncomplicated installation: this buoyancy-safe shaft is placed outside the building into the ground. In combination with the submersible pumps Wilo-Drain TMW 32/11, TC 40 and MTS 40/... it suits perfectly for the disposal of drainage and sewage, which accrue under the backflow level. Powerful? That is what we call Pumpen Intelligenz.

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Pumpen Intelligenz.

Contents

General Notes and Abbreviations

Abbreviations and what they mean

Abbreviation	Meaning
1~	1-phase alternating current
1/min	Revolutions per minute (rpm)
3~	3-phase alternating current
Autopilot	Automatic adjustment of pump performance during setback phases, e.g. boiler setback mode overnight
blsf	Blocking current-proof, no motor protection
DM	3-phase AC motor
Δp-c	Control mode for constant differential pressure
Δp-T	Control mode for differential-pressure control as a function of fluid temperature
Δp-v	Control mode for variable differential pressure
ΔT	Control mode for differential temperature
EM	1-phase AC motor
EnEV	German energy saving act (Energie-Einsparverordnung)
ECM technology	Electronically commutated motor with new wet rotor encapsulation, newly developed glandless drive concept for high-efficiency pumps
Ext. Aus	Control input "Overriding Off"
Ext. Min	Control input "Overriding Min", e.g. for setback mode without autopilot
FI	Residual-current device
GA	Building automation
GRD	Mechanical seal
GTW	Special cast iron: white malleable cast iron
°d	Degree of German water hardness, unit for assessing water hardness
H	Delivery head
IF	Interface
Inox	Stainless steel
Int. MS	Internal motor protection: Pumps with internal protection against unacceptably high winding temperatures
IR	Infrared interface
KDS	Capacitors
KLF	PTC thermistor sensor
KTL coating	Cataphoretic painting: Paintwork with high adhesive strength for long-lasting corrosion protection
KTW	Authorisation for products with plastics, for utilisation in potable water applications
LON	Local operating network (open, non-manufacturer-dependent, standardised data bus system in LONWORKS networks)

Abbreviation	Meaning
MOT	Motor module (drive motor + impeller + terminal box/electronics module) for replacement in the TOP .. Series
PLR	Pump master computer, Wilo-specific data interface
PT 100	Platinum temperature sensor with a resistance value of 100 W at 0°C
Q (= $\dot{V}$)	Flow volume
SBM	Run signal or collective run signal
SSM	Fault signal or collective fault signal
Control input "0 - 10 V"	Analogue input for external activation of functions
Wilo-Control	Building automation management with pumps and accessories
TrinkwV 2001	German potable water ordinance of 2001 (valid from 01.01.2003)
VDI 2035	VDI guideline for the prevention of damage in hot-water heating installations
WRAS	Water Regulations Advisory Scheme
WSK	Thermal winding contacts (in motor for monitoring winding temperature, full motor protection through additional tripping unit)
	Operating mode of twin-head pumps: Individual operation of the respective operating pump
	Operating mode of twin-head pumps: Parallel operation of both pumps
	No. of poles for the pumps: 2-pole
	No. of poles for the pumps: 4-pole
	No. of poles for the pumps: 6-pole

Wear and tear

Pumps or parts of pumps are subject to wear in accordance with state-of-the-art technology (DIN 31051/DIN-EN 13306). This wear may vary depending on operating parameters (temperature, pressure, water conditions) and the installation/usage situation and may result in the malfunction or failure at different times of the aforementioned products/components, including their electrical/electronic circuitry. Wearing parts are all components subject to rotary or dynamic strain, including electronic components under tension, in particular:

- seals/gaskets (including rotating mechanical seals), seal ring
- bearings and shafts
- stuffing boxes
- capacitors
- relays/contactors/switches
- electronic circuits, semiconductor components, etc.
- impellers
- wearing rings/wearing plates

We do not accept liability for faults or defects arising from natural wear and tear.

Wilo – General Terms of Delivery and Service

The latest version of our General Terms of Delivery and Service can be found on the Internet at

www.wilo.com

Both the sewage generated in a building or on a piece of property and the rainwater which collects on courtyard and roof surfaces should be conveyed to the sewerage system with the aid of pump stations and lifting units, insofar as they do not flow naturally downhill into the local sewage network. There are different ways of disposing of these sewage waters, depending on the respective media to be conveyed. Wilo-Submersible pumps and sewage lifting units are designed especially to meet these different requirements and are in compliance with currently valid EN Standards.
Planning must be carried out in accordance with DIN EN 12050/12056 – Drainage systems for buildings and sites. A distinction is made here between sewage emerging from discharge points above the local backflow level, which must be guided to the public sewerage system by taking advantage of natural declines in elevation, and sewage from discharge points whose water levels in the anti-syphon trap lie below the local backflow level. The backflow level is at a minimum the same as the street level (kerb) at the connection point, although local ordinances issued by the responsible government agency can also require that it be at a higher elevation.
Sewage (rainwater and wastewater) which arise at levels below the backflow level must be conveyed to the public sewerage system by means of automatically operating lifting units – Wilo-Sewage lifting unit or Wilo-Submersible pump.

Pursuant to DIN 1986-100, EN 12050, the following details are to be observed for installation planning and construction, among others:

- Lifting unit are to be designed in terms of performance in such a way that a minimum flow velocity of 0.7 m/s is guaranteed for the prescribed nominal widths of the pressure pipe.
  Prescribed minimum nominal diameters:
  Wastewater lifting unit - DN 32
  Sewage lifting unit - DN 80 (without separation/macerator)
- The pressure pipe of a lifting unit must be equipped with a non-return valve and laid with its invert above the backflow level. The pressure pipe is not permitted to be connected to wastewater downpipes.
- The installation of waste water gate valves (both supply-side and pressure-side) is to be performed in accordance with DIN 1986-100, EN 12050/EN 12056.
- Ventilation pipes from lifting units are to be guided to heights above the roof level; the minimum nominal pipe width is DN 70 for sewage lifting units.
- Feed lines are to be laid with sufficient drop-off gradients (a minimum of 1:50).
- It is expedient to avoid rigidity when laying pipelines through masonry.
- An automatic standby pump is to be provided for if the sewage drain pipe does not allow for interruptions.
- Switchboxes and signalling systems are to be installed at a dry, readily accessible position. The signalling system is to be mounted at a readily noticeable position.
- Lifting units must be serviced regularly.
- The installation area is to be provided with sufficient ventilation and lighting. A working space of at least 600 mm is to be provided for above and next to all operating elements and all parts requiring servicing.
  The lifting unit must be provided with anti-buoyant mounting.
- Sewage containing mineral oils or explosive admixtures must be guided through oil precipitators and/or petrol precipitators; those containing fatty substances must go through grease traps and those with sand through sand catchers. Acidic sewage must be neutralised.

Determining the required pump and/or system output
Flow volume Qp [l/s]:
Corresponds to the total of the incoming waste water QS added to the incoming rainwater Qr, which must be determined in accordance with EN 12050/EN12056:
QS = amount of wastewater [l/s], made up of the total of all sewage providers, taking into account simultaneity,
Qr = amount of rainwater [l/s], totalling the product of precipitation volume, discharge coefficient and precipitation surface.
Delivery head H_{Ges} [m]:
Refers to the total derived from the height differential between the lowest collecting tank level and the invert of the backflow loop + the entire friction losses Hf [m] in the pressure pipe.
Note: When selecting a lifting unit, it is necessary to take into account the fact that the differential between the delivery head at duty point with nominal flow rate (taking into account minimum flow volume) and delivery head with zero flow volume must still amount to approximately 2-3 m in order to open the non-return valve.

Operating modes (in accordance with DIN EN 60034-1)
S1 = continuous operation
The motor temperature increases during operation until it reaches the operating temperature (thermal persistent state). The temperature is dissipated during operation by means of coolant and/or the surrounding fluid. The machine can be operated without interruption while in this status. Specification of the installation type (surfaced/submerged) and/or of the installation is also to be taken into account! Continuous operation has no effect on this. S1 does not explicitly mean 24 h/day, 7 days/week!
Please observe the service life specifications and/or running times per years in the respective documentation.
S2 to S9
The motor can not be operated continuously, because the power dissipation that is transformed into heat in the motor exceeds the heat dissipation capacity of the cooling apparatus. The motor would overheat after a certain time and then be switched off as necessary by the motor protection feature.
S3
This operating mode represents a conventional load for sewage pumps. It describes a ratio of operating time to downtime. Both values must be indicated on the name plate and/or in the installation and operating instructions. For S3 operation, calculations are always in reference to a time period of 10 min.
Examples:

S3 - 20% means:	Operating time 20% of 10 min = 2 min
	Downtime 80% of 10 min = 8 min
S3 - 3 min means:	Operating time 3 min
	Downtime 7 min

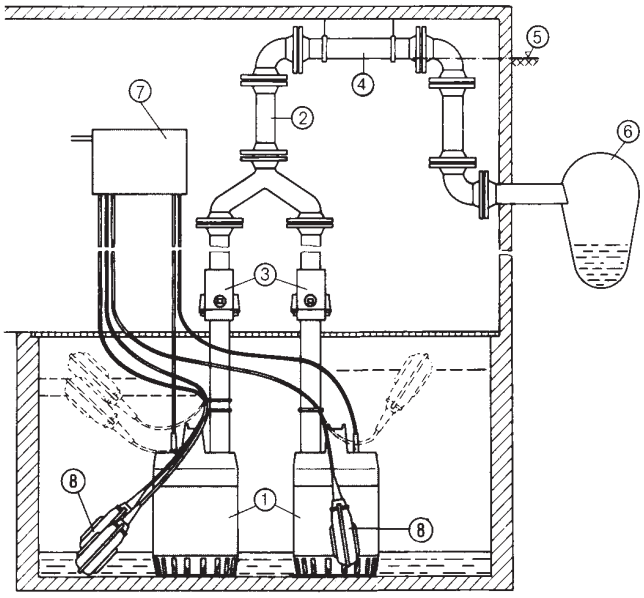
If two values are specified, then this means, for example with:

S3 - 5 min/20 min:	Operating time 5 min
	Downtime 15 min
S3 - 25%/20 min:	Operating time 5 min
	Downtime 15 min

Additional planning instructions:
See Wilo-Planning Guide “Sewage” (must be ordered).

Wastewater lifting unit (sewage without faeces)

Twin-head pumps – Wilo-Drain Twister



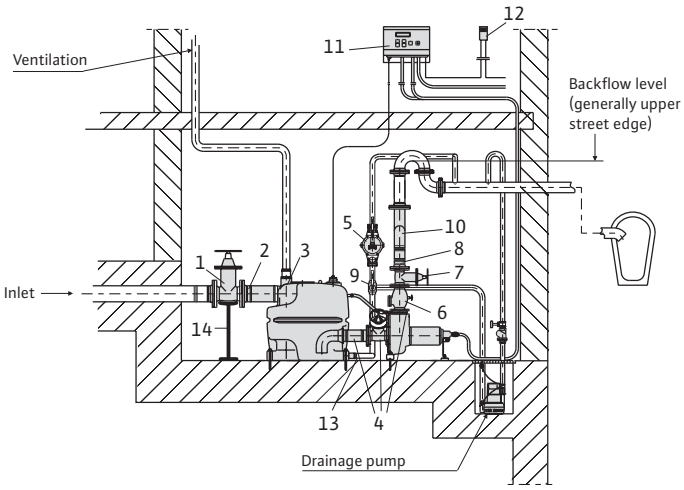
Twin-head pumps – Wilo-Drain Twister drainage station

1 Submersible pump (2x)
2 Pressure pipe DN 32 with Y-piece
3 Non-return valve
4 Backflow loop
5 Backflow level
6 Channel
7 Switchgear
8 Float switch for monitoring levels and alarms

Configuration of the backflow loop
The backflow loop should not be set up in direct perpendicular configuration over the site of the lifting unit if at all possible. The rest of the sewage pipe is to be laid at an incline downward to the connection to the sewerage system.

Wastewater and sewage lifting unit (sewage with faecal content)

Double system – Wilo-DrainLift XXL



1 Gate valve DN 100 or DN 150
2 Single-ended flanged nipple with hose and hose clips DN 100 or DN 150
3 Elastic hose connection for ventilation
4 Kit containing connection between reservoir and pump, 2 gate valves and ventilation flange with hose
5 Diaphragm hand pump 1 ½"
6 Non-return valve DN 80 or DN 100
7 Gate valve DN 80 or DN 100
8 Single-ended flanged nipple with hose and hose clips DN 80 or DN 100
9 3-way spigot
10 Y-pipe DN 80 or DN 100
11 Microprocessor-controlled switchgear
12 KAS, small alarm switchgear with signalling tone
13 Elastic hose connection for diaphragm hand pump
14 Armature support for weight relief

Planning Guide

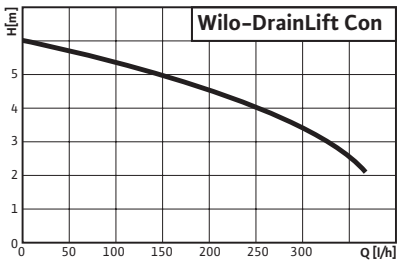
Wastewater and sewage lifting units, pumps stations

Contents

Wastewater lifting unit

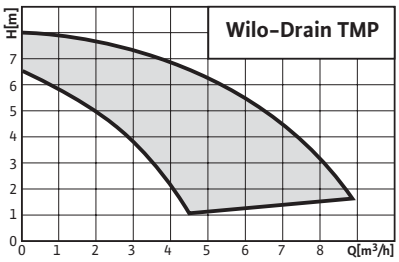
Series overview Wilo-DrainLift Con, TMP, Box

Series: Wilo-DrainLift Con



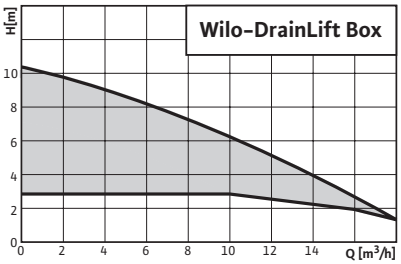
> Condensate lifting unit
> Application:
- Pumping of condensate, utilisable in
  - Condensing boiler technology
  - Air conditioning and refrigeration systems (such as refrigerators and evaporators)

Series: Wilo-DrainLift TMP



> Wastewater lifting unit (floor-mounted installation)
> Application:
- Automatic drainage for showers, washbasins, washing machines/dishwashers, etc.
- Pumping of non-agressive rainwater, wastewater and drainage water that is free of faeces, fibre, grease and oil.

Series: Wilo-DrainLift Box



> Wastewater lifting unit
> Applications:
- For concealed floor installation, can be utilised in:
  - Rooms subject to possible flooding
  - Garage entrances
  - Cellar stairways

Series overview Wilo-DrainLift Con, TMP, Box

Series: Wilo-DrainLift Con

> Product advantages
- Low-noise operation
- 2 Intake openings
- Alarm contact as standard equipment
- User-friendly installation
- Variable feed lines/drains

> Additional information: **Page**

Series: Wilo-DrainLift TMP

> Product advantages
- Contemporary design
- Shower drains possible at 110 mm height
- Low-noise operation thanks to built-in submersible pump

> Additional information: **Page**

Series: Wilo-DrainLiftBox

> Product advantages
- User-friendly installation thanks to built-in pump and flap trap
- Large tank volume
- Easy-maintenance
- Pumps with pressure pipe that can be pulled

> Additional information: **Page**

Equipment/Function Wilo DrainLift Con, TMP, Box

		Wilo-DrainLift ...				
		Con	**TMP 32-0.5.1 EM**	**TMP 40/8**	**Box 32**	**Box 40**
Sealing Pumps-/motor						
Fluid side:	Mechanical seal	–	–	•	•	•
Oil barrier chamber		–	–	–	•	•
Construction						
Pump position:	Submersion pump in the tank	–	•	•	•	•
	Motor parts outside the tank	•	–	–	–	–
Single-pump system		•	•	•	•	•
Vortex impeller		•	•	•	•	•
Open multichannel impeller		–	–		–	–
Patented turbulence apparatus		–	–	–	•	–
Materials						
Motor	Stainless steel	•	•	•	•	•
Hydraulic housing:	Plastic	•	•	PP-GF30	PP-GF30	–
	Grey cast iron	–	–	–	–	EN-GJL-200
Impeller:	Plastic	•	•	•	•	–
	Grey cast iron	–	–	–	–	•
Tank:	Plastic/ABS	ABS	ABS	PE	PE	PE
Equipment						
Motor operation monitoringtemperature (WSK)		–	–	•	•	•
Level control:	Float switch	•	–	•	•	•
	Pneumatic pressure sensor	–	•	–	–	–
Alarm:	Mains-independent	–	–	–	–	–
	Potential-free contact	•	–	–	–	–
Pump cable detachable		–	–	–	–	–
Ready-to-plug		•	•	•	•	•
Integrated non-return device		•	•	•	•	•
Feed seal		–	–	–	–	–
Kit for pressure pipe connection		–	•	•	•	•
Fixation material		•	•	•	–	–
Active carbon filter		–	•	–	–	–
Pressure hose		•	–	–	–	–

• = available, – = not available

Series description Wilo-Drain Lift Con

Wilo-DrainLift Con
Automatic condensate lifting unit

Type key
Example: **Wilo-DrainLift Con**
Con Condensate

Application
The condensate lifting unit must be used if disposal is not possible via natural gravity flow, or if the installation location is below the back-flow level. It has been designed for installation in condensing boilers that generate aggressive condensate according to the specifications of Work Sheet A 251 as distributed by the ATV (German Association for Water, Wastewater and Waste). Because of the materials used in the manufacture of the plant, condensate with a pH value of up to 2.4 can be conveyed without any problems. For oil-fired or gas-fired boilers with an output > 200 kW, the lifting unit must be installed downline of a neutralisation system. The condensate lifting unit can also be used in the air-conditioning and cooling systems where condensate is produced, for example refrigerators and freezers, evaporators, and refrigerated display cases.
The plant can be installed in free-standing form or vertically wall-mounted with two fastening holes. The positioning of the motor unit on the tank is reversible, allowing a variable inlet and outlet.

Construction
2 feed lines in the lid (19 or 24 mm). Hose connection on discharge end, DN 10 mm with built-in check valve.

Scope of delivery
Fully-assembled lifting unit with standard series alarm contact for connection to condensing boiler or alarm switchgear. Incl. hose connection with built-in non-return valve. 5 m hose for pressure side, 1 m alarm cable and 2 m power cable with shockproof plug and wall mounting material and installation and operating instructions.

Accessories
- Intake adapter Ø 24 on 25 mm, Ø 24 on 30 mm, Ø 24 on 40 mm
- Pressure hose 25 m length

Technical Data Wilo-DrainLift Con

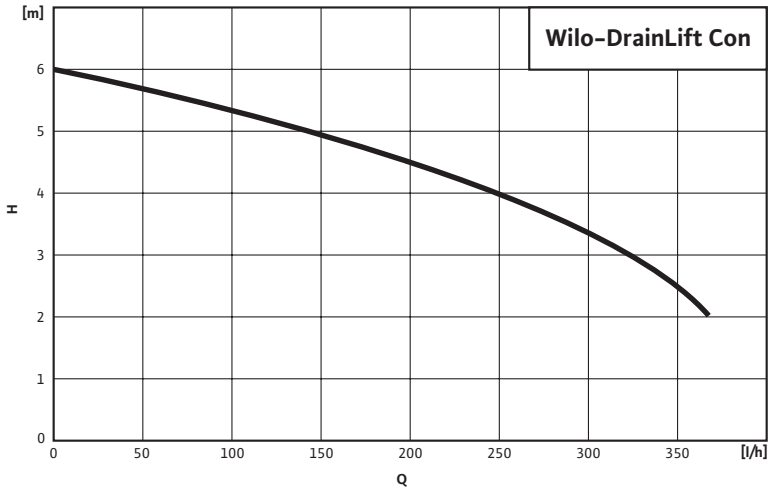
	Wilo-DrainLift Con
Approved fluids	
Charged condensate (pH ≥ 2.4)	•
Electrical connection	
Mains connection [V]	1~230
Connected load P_1 [kW]	0.08
Nominal current [A]	0.8
Mains frequency [Hz]	50
Cable length from plant to switchgear/plug [m]	2
Permitted field of application	
Operating mode	S3
Fluid temperature, maximum [°C]	80
Connections	
Delivery connection [mm]	12
Intake connection [mm]	19/24
Motor	
Protection class	IP 20
Dimensions/weights	
Gross volume [l]	1.5
Weight [kg]	2

• = available or authorised, – = not available or not authorised

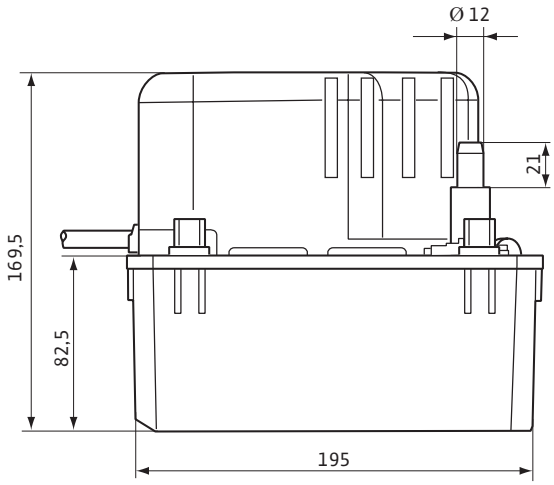
Pump curve, Dimensions Wilo-DrainLift Con

Wilo-DrainLift Con

2-pole, 50 Hz



Dimension drawing



Series description Wilo-DrainLift TMP

Wilo-DrainLift TMP
Wastewater lifting unit (floor-mounted installation)

Type key

Example: **Wilo-TMP 32- 0.5 EM**

TMP	Wastewater lifting unit (floor-mounted installation)
32	Nominal diameter of the pressure port (DN 32 / G 11/4)
- 0.5	Rated motor power [kW]
EM	AC 1~230 V, 50 Hz

Application

Wastewater lifting unit for automatic drainage of showers, washbasins, washing machines/dishwashers,etc., in both old and new buildings, the wastewater of which cannot be piped to the canalisation through the use of natural inclines and/or for disposal of wastewater that is generated below the backflow level. For the pumping of non-agressive wastewater and drainage waters that are free of faeces, fibre, grease and oil. DIN EN 12050-2 and DIN 1986-100 must both be complied with.

Note:
The piping of sewage water containing faeces into wastewater lifting units is not permitted; we recommend for such cases the use of sewage lifting units from the Wilo-DrainLift S-XXL series.

Construction

Connection-ready, automatically switching wastewater lifting unit with all of the required switchgear and control mechanisms and a built-in flap trap.

TMP 32
Active carbon filter with overflow protection for ventilation and exhaust, 2 DN 40 intake connecting pieces at different height levels, pressure port DN 32 (G 1 $^1/_4$). Ventilation can also be carried out at roof level through the use of self-sealing plug couplers (pipe exterior diameter 25 mm).

TMP 40
Flexible utilisation using feed lines that can possibly be either lateral or from above (particularly advantageous with retrofitting installation), easy-maintenance system construction with built-in TMW 32, DN 40 pressure port.

Scope of delivery

Connection-ready, automatically switching wastewater lifting unit with active carbon filter (for TMP 32) and installation and operating instructions.

Technical Data Wilo-DrainLift TMP

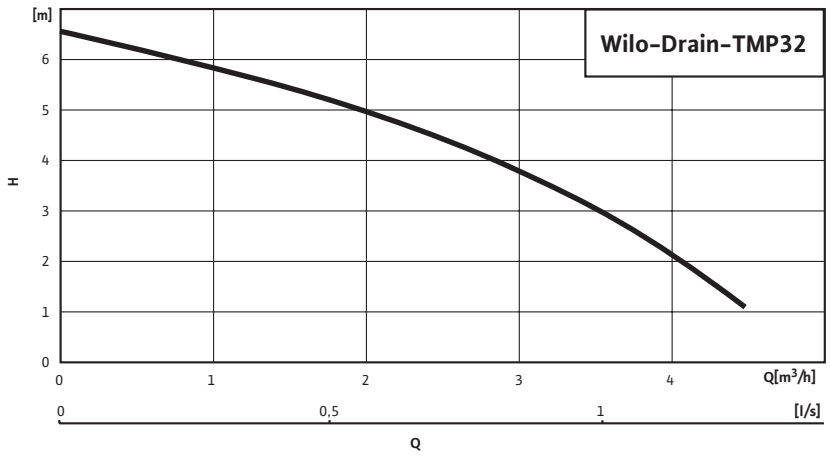
	Wilo-DrainLift ...	
	TMP 32-0.5.1EM	**TMP 40/8**
Approved fluids		
Domestic sewage not containing faeces	•	•
Domestic sewage containing faeces	–	–
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
Charged condensate	–	–
Electrical connection		
Mains connection [V]	1~230	1~230
Power consumption P_1 [kW]	0.33	0.45
Rated motor power P_2 [kW]	0.25	0.37
Nominal current [A]	1.5	2.1
Mains frequency [Hz]	50	50
Cable length from plant to switchgear/plug [m]	1.2	2.5
Permitted field of application		
Operating mode	S1 (1000 h, tmax 45°C) S3 (10%, tmax 75°C)	S3 -25%
Switching frequency max. [1/h]	–	60
Max. permitted pressure in the pressure pipe [bar]	1.0	1.1
Fluid temperature, maximum [°C]	45	35
Fluid temperature [°C] short periods, 3 minutes	75	90
Connections		
Delivery connection [mm]	Ø 32 (G $1^1/_4$)	Ø 40
Intake connection [mm]	40 (2x G $1^1/_2$)	25/32/40
Ventilation [mm]	25	32
Motor		
Insulation Class	F	F
Protection Class	IP 44	IP 67
Dimensions/weights		
Gross volume [l]	17	32
Switching volume [l]	2.6	15
Weight [kg]	7.1	8.0

• = available or authorised, – = not available or not authorised

Pump curves Wilo-DrainLift TMP

Wilo-DrainLift TMP 32-0.5.1

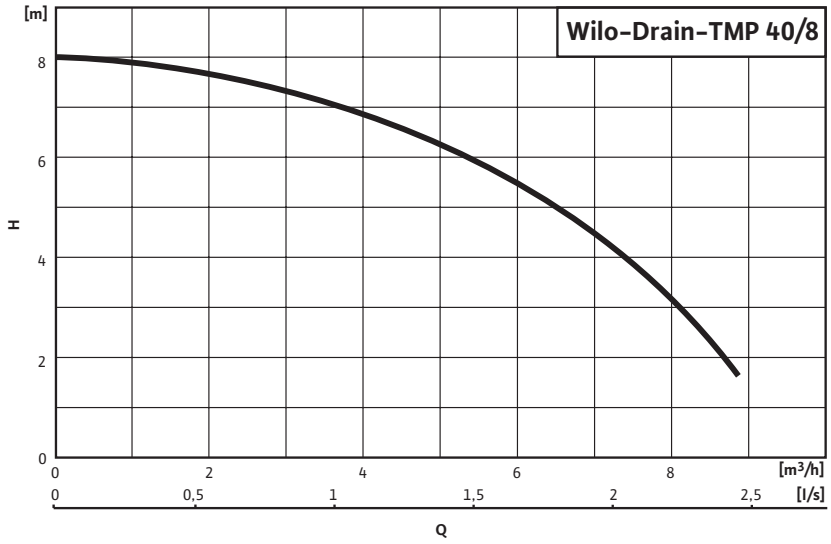
2-pole, 50 Hz



In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Wilo-DrainLift TMP 40/8

2-pole, 50 Hz

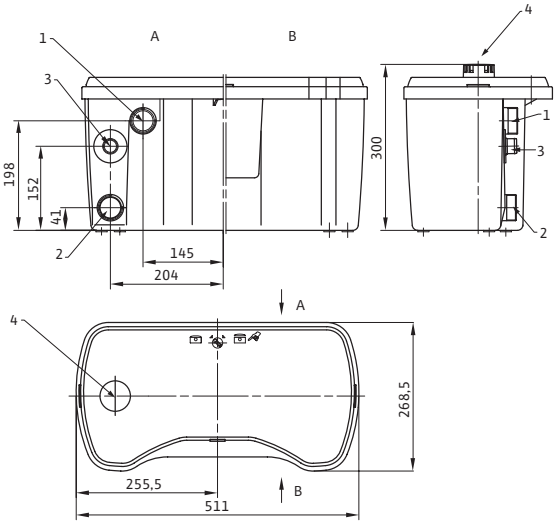


In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Dimensions Wilo-DrainLift TMP

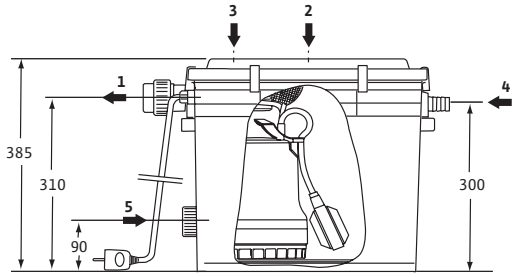
Dimension Drawings

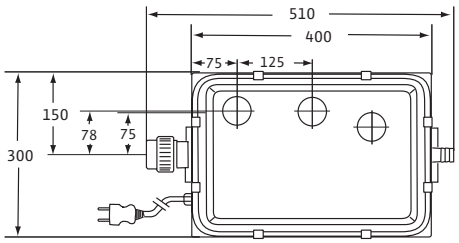
Wilo-DrainLift TMP 32-0.5.1



1 = Feed line DN 40
2 = Feed line DN 40 (shower)
3 = Pressure port G1 1/4 (DN 32)
4 = Ventilation DN 25

Wilo-DrainLift TMP 40/8



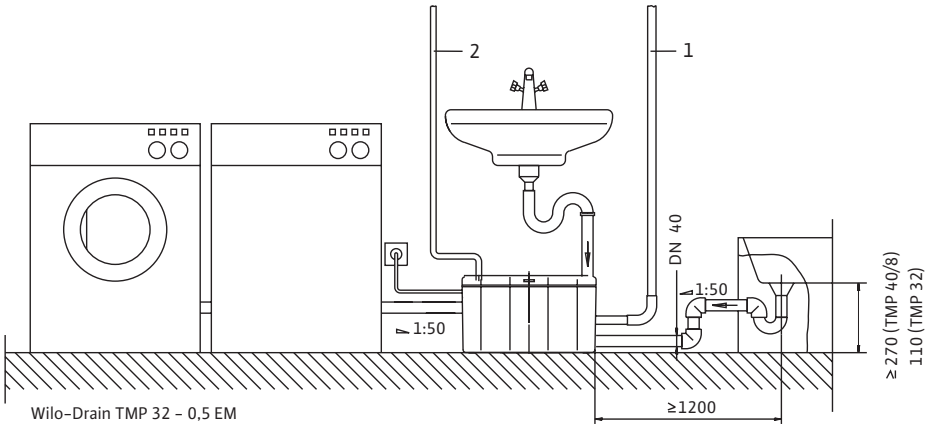


1 = Pressure pipe DN 40
2 = Ventilation DN 32
3 = Feed line DN 32 (wash basin)
4 = Feed line DN 25 (washing machine)
5 = Feed line DN 40 (shower)

Installation example Wilo-DrainLift TMP

Installation example

Wilo-DrainLift TMP 32/40



1: Pressure pipe
2: Ventilation pipe (optional)

Series description Wilo-DrainLift Box

Wilo-DrainLift Box
Wastewater lifting unit

Type key

Example:	**Wilo-DrainLift Box 32/8**
Box	Wastewater lifting unit (concealed floor installation)
32	Nominal diameter of the pressure port (DN32, Ø 40)
8	Max. delivery head [m]

Application
Drainage of rooms, garage entrances and cellar stairways that are subject to possible flooding, in addition to showers, washbasins, etc. for concealed floor installation in old and new buildings.

Construction
Automatically switching lifting unit with integrated submersible pump. Installation-ready for placement in concealed floor structures. Flexible, thanks to three intake options in DN 100, of which one fee line can be used for connection with a second tank.

Scope of delivery
Connection-ready mounted pump with attached float switch in impact-resistant plastic container for concealed floor installation. Completely ready for operation with pressure pipe and flap trap already installed. Pump cable (5 m or 10 m long) with mounted shockproof plug. Installation and operating instructions

Technical Data Wilo-DrainLift Box

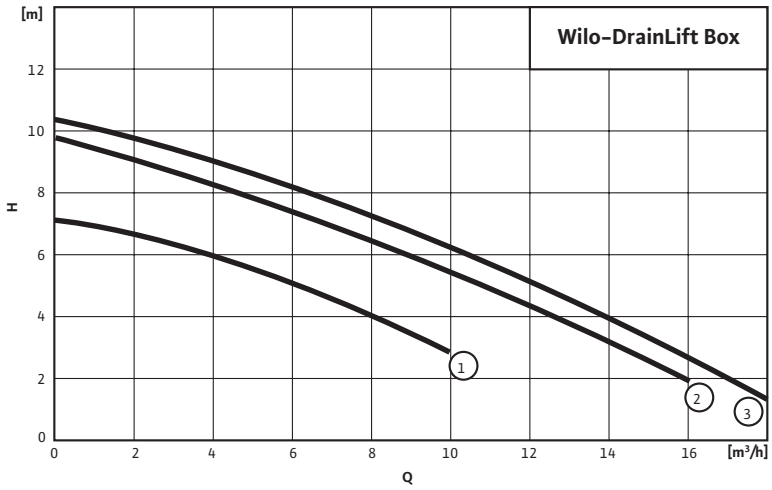
	Wilo-DrainLift ...		
	Box 32/8	**Box 32/11**	**Box 40/10**
Approved fluids			
Domestic sewage not containing faeces	•	•	•
Domestic sewage containing faeces	–	–	–
Washing machine soap and water mixture (without long-fibre constituents)	•	•	•
Shower and bath water, unchlorinated	•	•	•
Charged condensate	–	–	–
Electrical connection			
Mains connection [V]	1~230	1~230	1~230
Power consumption P_1 [kW]	0.45	0.75	0.94
Rated motor power P_2 [kW]	0.37	0.55	0.6
Nominal current [A]	2.1	3.6	4.4
Mains frequency [Hz]	50	50	50
Cable length from plant to switchgear/plug [m]	10	10	5
Permitted field of application			
Operating mode	S 3 -25%	S 3 -25%	S 3 -25%
Switching frequency max. [1/h]	60	60	30
Max. permitted pressure in the pressure pipe [bar]	1.1	1.1	1.1
Fluid temperature, maximum [°C]	35	35	35
Fluid temperature [°C] short periods, 3 minutes	90	90	–
Connections			
Delivery connection [mm]	Ø 40	Ø 40	Ø 40
Intake connection [mm]	100	100	100
Ventilation [mm]	100	100	100
Motor			
Insulation Class	F	F	B
Protection Class	IP 67	IP 67	IP 67
Dimensions/weights			
Gross volume [l]	85	85	85
Switching volume [l]	22	22	30
Weight [kg]	30	32	38

• = available or authorised, – = not available or not authorised

Pump curves Wilo-DrainLift Box

Wilo-DrainLift Box

2-pole, 50 Hz



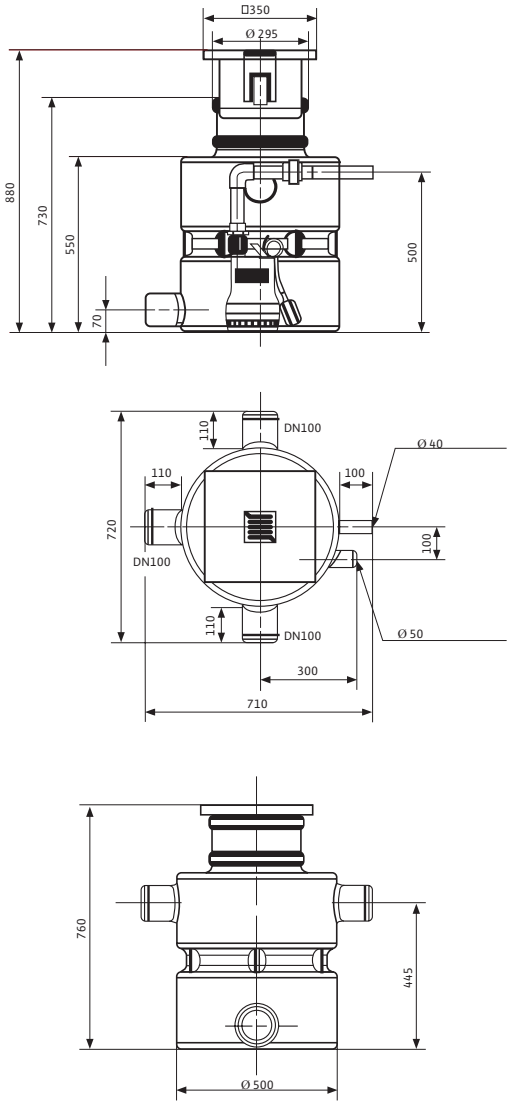
1 = DrainLift Box 32/8
2 = DrainLift Box 32/11
3 = DrainLift Box 40/10

In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

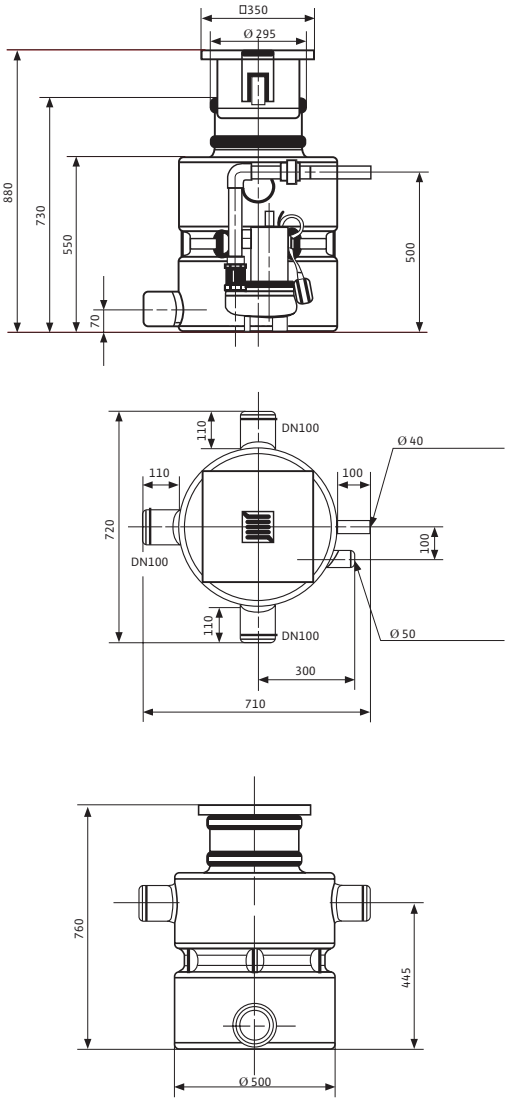
Dimensions Wilo-DrainLift Box

Dimension Drawings

DrainLift Box 32



DrainLift Box 40



Contents

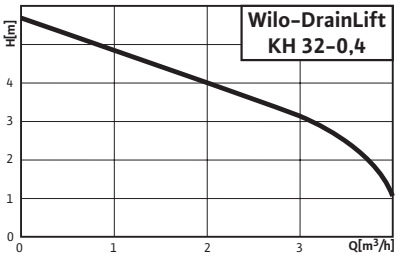
Sewage lifting units

Sewage/faeces

Sewage lifting units

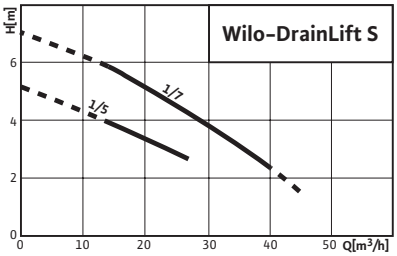
Series overview Wilo-DrainLift KH, S, M

Series: Wilo-DrainLift KH



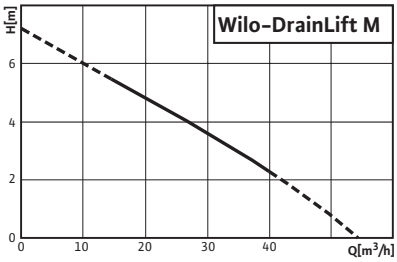
> Small lifting unit
> Applications:
- For limited application (in direct connection behind a toilet) with macerator for single-toilet disposal in addition to a hand wash-basin, a shower or a bidet.

Series: Wilo-DrainLift S



> Sewage lifting unit
> Application:
- Pumping of raw sewage, which cannot be piped to the canalisation through the use of natural inclines.
- Drainage of individual rooms.

Series: Wilo-DrainLift M



> Sewage lifting unit
> Application:
- Pumping of raw sewage, which cannot be piped to the canalisation through the use of natural inclines.
- For drainage of single-family houses and small building complexes.

Series overview Wilo-DrainLift KH, S, M

Series: Wilo-DrainLift KH

> Product advantages
- Contemporary, space-saving design
- Easy installation through self-sealing, direct toilet connection

> Additional information: **Page**

Series: Wilo-DrainLift S

> Product advantages
- Freely selectable feed lines
- Front-wall installation possible
- Low weight
- Space-saving installation
- Flap trap in the scope of delivery

> Additional information: **Page**

Series: Wilo-DrainLift M

> Product advantages
- Freely selectable feed lines
- Low weight
- Mains-independent alarm
- Built-in flap trap
- Large tank volume

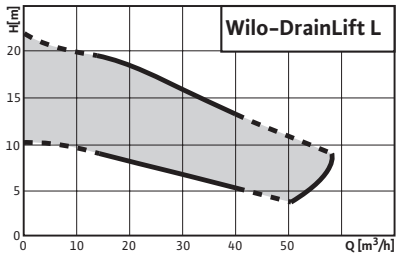
> Additional information: **Page**

Sewage/faeces

Sewage lifting units

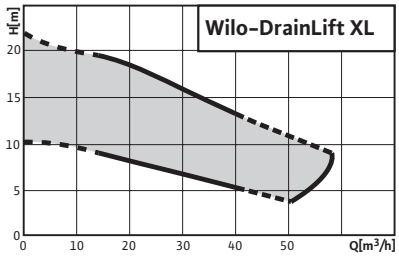
Series overview Wilo-DrainLift L, XL, XXL

Series: Wilo-DrainLift L



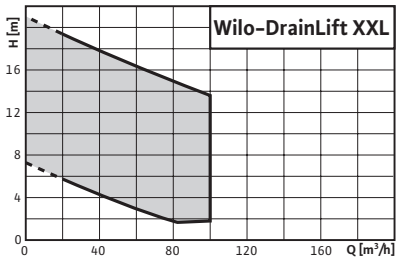
> Sewage lifting unit
> Application:
- Pumping of raw sewage, which cannot be piped to the canalisation through the use of natural inclines.
- For drainage of multifamily houses and smaller structures (cafés, among others).

Series: Wilo-DrainLift XL



> Sewage lifting unit
> Application:
- Pumping of raw sewage, which cannot be piped to the canalisation through the use of natural inclines.
- For drainage of larger structures (restaurants, department stores, among others).

Series: Wilo-DrainLift XXL



> Sewage lifting unit
> Application:
- Elimination of raw sewage, which cannot be piped to the canalisation through the use of natural inclines.
- For drainage of building complexes (hotels, hospitals, among others).

Series overview Wilo-DrainLift L, XL, XXL

Series: Wilo-DrainLift L

> Product advantages
- Freely selectable feed lines
- Low weight
- Mains-independent alarm
- Built-in flap trap
- Large tank volume
- Extensive range of services

> Additional information: **Page**

Series: Wilo-DrainLift XL

> Product advantages
- Large tank volume
- Mains-independent alarm
- Only one pressure outlet (Y-pipe built-in)
- Built-in flap trap
- Suitable for continuous operation

> Additional information: **Page**

Series: Wilo-DrainLift XXL

> Product advantages
- Large tank volume
- Low weight
- Wide performance spectrum
- Suitable for continuous operation

> Additional information: **Page**

Sewage/faeces

Sewage lifting units

Equipment/Function Wilo-DrainLift KH, S, M, L, XL, XXL

		Wilo-DrainLift ...								
		KH 32-0.4 EM	**S1/5**	**S1/7**	**M1**	**M2**	**L1**	**L2**	**XL2**	**XXL**
Sealing Pumps-/motor										
Fluid side:										
	Mechanical seal	–	•	•	•	•	•	•	•	•
	Oil barrier chamber	–	•	•	•	•	•	•	•	•
Construction										
Pump position:										
	Motor part outside the tank	–	•	•	•	•	•	•	•	•
	Submersion pump dry external	–	–	–	–	–	–	–	–	•
	Submersion pump in the tank	•	–	–	–	–	–	–	–	–
Intake position freely selectable		–	•	•	•	•	•	•	–	–
Single-pump system		•	•	•	•	–	•	–	–	–
Double pump system		–	–	–	–	•	–	•	•	•
Open single-channel impeller		–	–	–	–	–	–	–	–	•
Vortex impeller		•	•	•	•	•	•	•	•	–
Macerator		•	–	–	–	–	–	–	–	–
Materials										
Motor housing	Stainless steel	1.4301	1.4404	1.4404	1.4404	1.4404	1.4404	1.4404	1.4404	1.4404
Hydraulics	Plastic	PP-GF30	PUR	PUR	PUR	PUR	PUR	PUR	PUR	PUR
Tank	Plastic	ABS	PE	PE	PE	PE	PE	PE	PE	PE
Equipment										
Sheath current cooling		–	–	–	–	–	–	–	•	•
Motor operation monitoring :										
	Temperature (WSK)	•	•	•	•	•	•	•	•	•
	Impermeability	–	–	–	–	–	–	–	–	•
Level control:										
	Float switch	–	–	–	•	•	•	•	•	•
	Pneumatic pressure sensor	•	•	•	–	–	–	–	–	–
Alarm: mains-independent		–	–	–	•	•	•	•	•	–
Potential-free contact		–	•	•	•	•	•	•	•	•
Pump cable detachable		–	•	•	•	•	•	•	•	•
Ready-to-plug		•	•	•	•	•	•	•	•	–
Non-return valve		•	•	•	•	•	•	•	•	–
Feed seal		•	•	•	•	•	•	•	–	–
Curve cutter for intake borehole		–	•	•	•	•	•	•	–	–

• = available, – = not available

Equipment/Function Wilo-DrainLift KH, S, M, L, XL, XXL

	Wilo-DrainLift ...								
	KH 32-0.4 EM	**S1/5**	**S1/7**	**M1**	**M2**	**L1**	**L2**	**XL2**	**XXL**
Equipment (continued)									
Hose connection for ventilation	–	•	•	•	•	•	•	•	•
Hose connection for diaphragm hand pump	–	•	•	•	•	•	•	•	•
Kit for pressure pipe connection	•	–	•	•	•	•	•	•	•
Fixation material	•	•	•	•	•	•	•	•	•
Sound insulation material	–	•	•	•	•	•	•	–	–
Switchgear	–	–	–	•	•	•	•	•	•
Active carbon filter	•	–	–	–	–	–	–	–	–

• = available, – = not available

Series description Wilo-DrainLift KH

Wilo-DrainLift KH
Small lifting unit

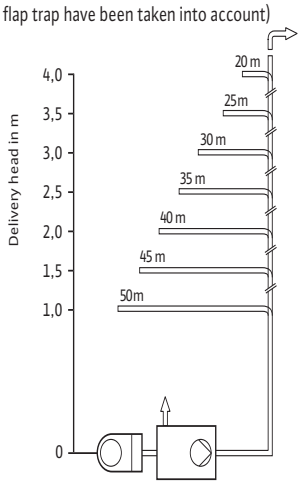
Type key

Example:	**Wilo-KH 32- 0.4 EM**
KH	Small lifting unit with macerator for sewage containing faeces
32	Nominal diameter of the pressure port (DN25/32)
– 0.4	Rated motor power [kW]
EM	AC 1~230 V, 50 Hz

Application

Connection-ready sewage lifting unit for limited application (in direct connection behind a toilet) with macerator for single-toilet disposal in addition to a hand washbasin, a shower or a bidet, the wastewater/sewage of which cannot be piped to the canalisation through the use of natural inclines and/or for disposal of wastewater that is generated below the backflow level. DIN EN 12050-3 and DIN 1986-100 must both be complied with.
We recommend using Wilo-DrainLift S-XXL series products when connecting several or different sources of wastewater.

max. pressure pipe lengths DN 32;
for optimal operation, the first section of the pressure pipe should be positioned vertically and then the rest continued horizontally if at all possible (2 90 bends and an integrated flap trap have been taken into account)



Construction

Automatically operating small lifting unit with macerator, all required switchgear and control mechanisms, built-in flap trap, active carbon filter, elastic pressure port and connection options for one WC, two additional drainage fixtures and one ventilation pipe.
The small lifting unit KH 32 is connected directly to one toilet basin with a horizontal connection port.
The connections for additional drainage fixtures and for the pressure pipe are located at the rear side of the installation and can be set up to point either to the right or to the left. Odour-free exhaust ventilation into the installation room is carried out by means of an integrated active carbon filter or by means of a ventilation pipe through the roof.

Inlet connection:
- DN 100 (direct connection via sealing collar)
- 2 feed lines – DN 40 including blank cap and a flap trap

Connection pressure side:
Pressure port hose angle DN 25/32 including flap trap

Ventilation:
Option of integrated active carbon filter with overflow protection or connection of a separate ventilation pipe at roof level by means of a self-sealing plug coupler (outer pipe Ø 25 mm).

Scope of delivery

Connection-ready lifting unit with macerator, active carbon filter, elastic pressure port and installation and operating instructions.

Technical Data Wilo-DrainLift KH

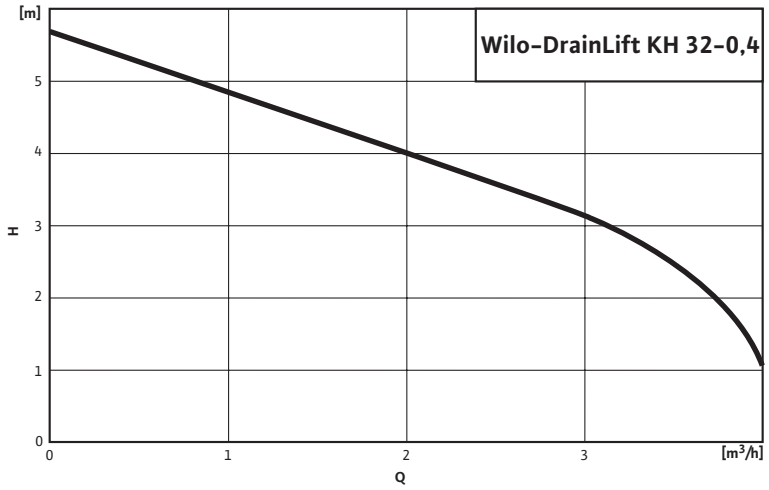
	Wilo-DrainLift KH 32-0.4 EM
Approved fluids	
Domestic sewage not containing faeces	•
Domestic sewage containing faeces	•
Washing machine soap and water mixture (without long-fibre constituents)	–
Shower water, unchlorinated	•
Electrical connection	
Mains connection [V]	1~230
Power consumption P_1 [kW]	0.45
Nominal current [A]	2.1
Mains frequency [Hz]	50
Cable length from plant to switchgear/plug [m]	1.2
Permitted field of application	
Operating mode	Intermittent duty S3, 28%/36 sec. in accordance with DIN EN 60034-1
Switching frequency max. [1/h]	100
Switch-on level (measured from the floor) [mm]	70
Max. permitted pressure in the pressure pipe [bar]	0.7
Fluid temperature, maximum [°C]	35
Ambient temperature, maximum [°C]	35
Connections	
Ball passage [mm]	10
Delivery connection [mm]	DN 25/32
Intake connection [mm]	2 x DN 40 DN 100
Ventilation [mm]	25
Min. suction head (invert to the middle of the feed line) [mm]	180
Motor	
Insulation Class	F
Protection Class	IP 44
Dimensions/weights	
Gross volume [l]	17
Switching volume [l]	2.6
Backed up volume (invert to OK feed line) [l]	15.5
Weight [kg]	7.8

• = available or authorised, – = not available or not authorised

Pump curve, Dimensions Wilo-DrainLift KH

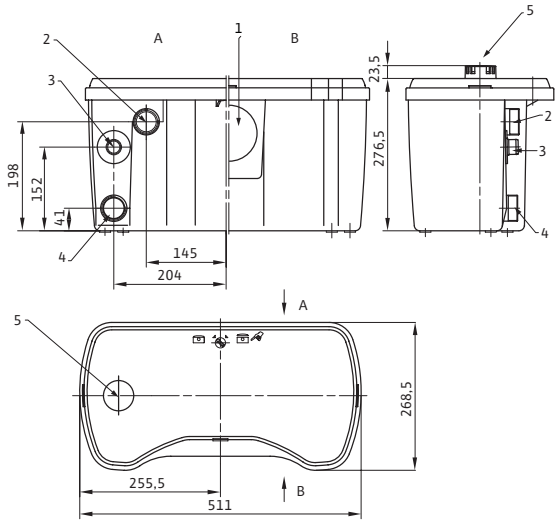
Wilo-DrainLift KH 32-0.4 EM

2-pole, 50 Hz



In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

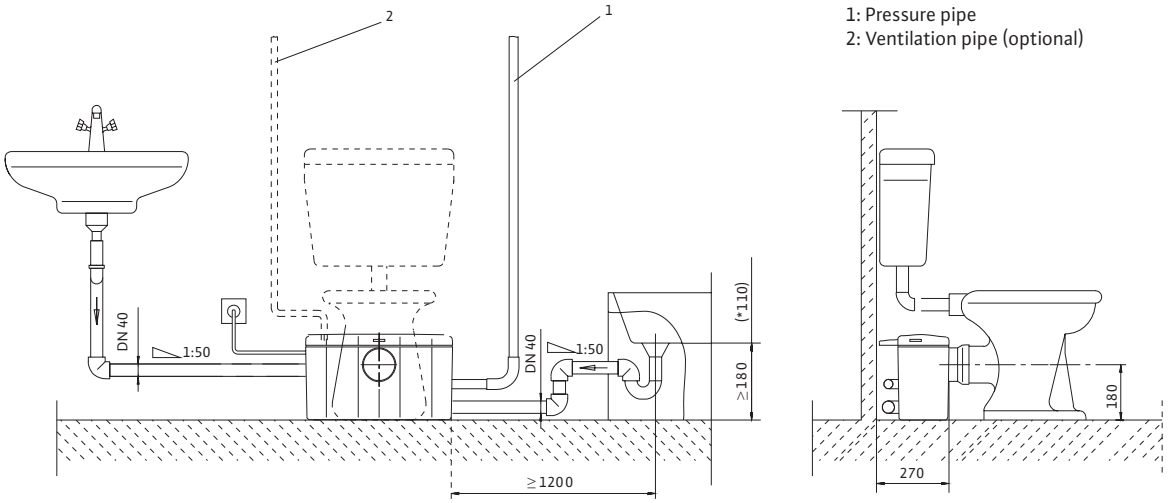
Dimension drawing



1 WC-feed line DN 100
2 Feed line DN 40
3 Pressure pipe connection
4 Feed line DN 40
5 Ventilation

Installation example Wilo-DrainLift KH

Installation example



1: Pressure pipe
2: Ventilation pipe (optional)

* Please follow the instructions in the installation and operating instructions.

Series description Wilo-DrainLift S

Wilo-DrainLift S
Sewage lifting unit

Type key
Example: **Wilo-DrainLift S**
Sewage lifting unit for front-wall installation, direct toilet connection or complete room drainage

Application
High-value sewage lifting unit ready for connection in accordance with DIN EN 12050-1.
For the pumping of raw sewage, which cannot be piped to the canalisation through the use of natural inclines.
Wilo-DrainLift S fulfils both the regulations contained in DIN EN 12050-1 and the construction and testing specifications of the Institute for Building Technology [Institut für Bautechnik].
Minimum dimensions, combined with space-optimised installation area make possible a variety of different utilisation options with:
- Retrofitting installation of showers, toilets, saunas, etc.
- Installation of toilets in basement flats
- Expansion/renovation of flats and buildings

Innovative combination of different installation options for sewage lifting units in a single system, e.g.:
- Toilet direct connection
- Drainage of individual rooms
- Front wall installation/recessed wall installation

Can be utilised in the following installation types:
As conventional sewage lifting unit for connection with wall or stand-alone WC or for complete room drainage.
Only a minimum of space required, thanks to the compact dimensions of the system.
As a sewage lifting unit in conjunction with a front wall installation/ recessed wall installation, as an integrated part of a commercially available front wall installation system, in recessed installation or in a stand-alone profile.

Note:
It must remain possible to both mount and remove the system, even after any sections of ceramic tile has been installed around it.
Observe installation instructions and accessories.

Construction

Stainless steel motor
Proven construction in modern INOX & Composite Design, including efficiency-optimised vortex impeller.

Carrying handle and fastening strap
Easy handling, secure fixation in accordance with applicable standards.

Feed line DN 40
For additional feeds from washbasins, bathtubs, etc.

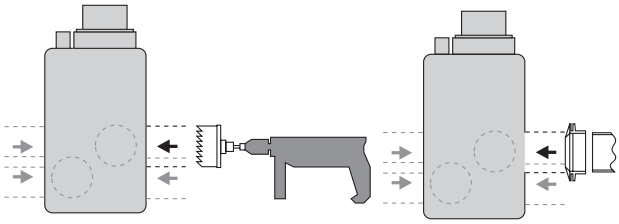
Freely selectable feed lines
Open areas on both lengthways sides and on a facing side provide the widest possible range of connection flexibility (see graphics below). Observe the minimum suction head of the drainage fixtures.

Installation beading
For commercially available front-wall installation systems.

Standard-equipped insulating mats
Prevent structure-borne noise transmission.

Large maintenance aperture. Inclined collection space for deposit-free, secure operation. Connection possibility for a DN 70 ventilation pipe and for a diaphragm hand pump.

Scope of delivery
Sewage lifting unit ready for connection, including switchgear/plug, non-return valve, single-ended flanged nipple DN 80/100 (only DrainLift S1/7), feed seal DN 100, circle-hole saw and installation and operating instructions.

Connection flexibility


Technical Data Wilo-DrainLift S

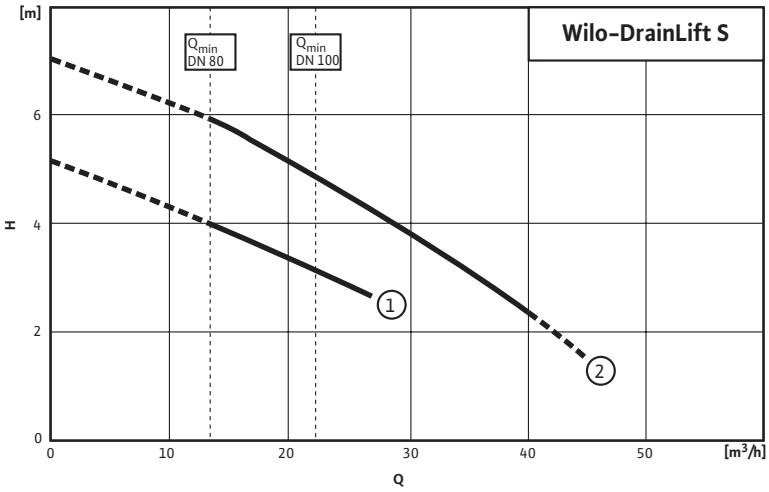
	Wilo-DrainLift ...	
	S1/5	**S1/7**
Approved fluids		
Domestic sewage not containing faeces	•	•
Domestic sewage containing faeces	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
Electrical connection		
Power consumption P_1 at 1~230 V, 50 Hz [kW]	1.25	1.6
Connected load P_1 at 3~400 V, 50 Hz [kW]	1.1	1.5
Nominal current at 1~230 V, 50 Hz [A]	6.8	7.5
Nominal current at 3~400 V, 50 Hz [A]	2.6	3.0
Mains frequency	50	50
Pump speed [rpm]	1450	1450
Cable length from plant to switchgear/plug [m]	4	4
Permitted field of application		
Operating mode	S3 15%	S3 15%
Switching frequency max. [1/h]	30	30
Switch-on level (measured from the floor) [mm]	180	180
Max. permitted pressure in the pressure pipe [bar]	1.5	1.5
Fluid temperature, maximum [°C]	35	35
Fluid temperature, short periods [°C]	60	60
Ambient temperature, maximum [°C]	40	40
Connections		
Ball passage [mm]	40	40
Delivery connection [mm]	DN 80	DN 80
Intake connection [mm]	DN 40 DN 100	DN 40 DN 100
Ventilation [mm]	DN 70	DN 70
Min. suction head (invert to the middle of the feed line) [mm]	180	180
Motor		
Insulation Class	H	H
Protection class (without switch box)	IP 67	IP 67
Dimensions/weights		
Gross volume [l]	45	45
Switching volume [l]	20	20
Weight [kg]	30	30

• = available or authorised, – = not available or not authorised

Pump curves, Dimensions Wilo-DrainLift S

Wilo-DrainLift S

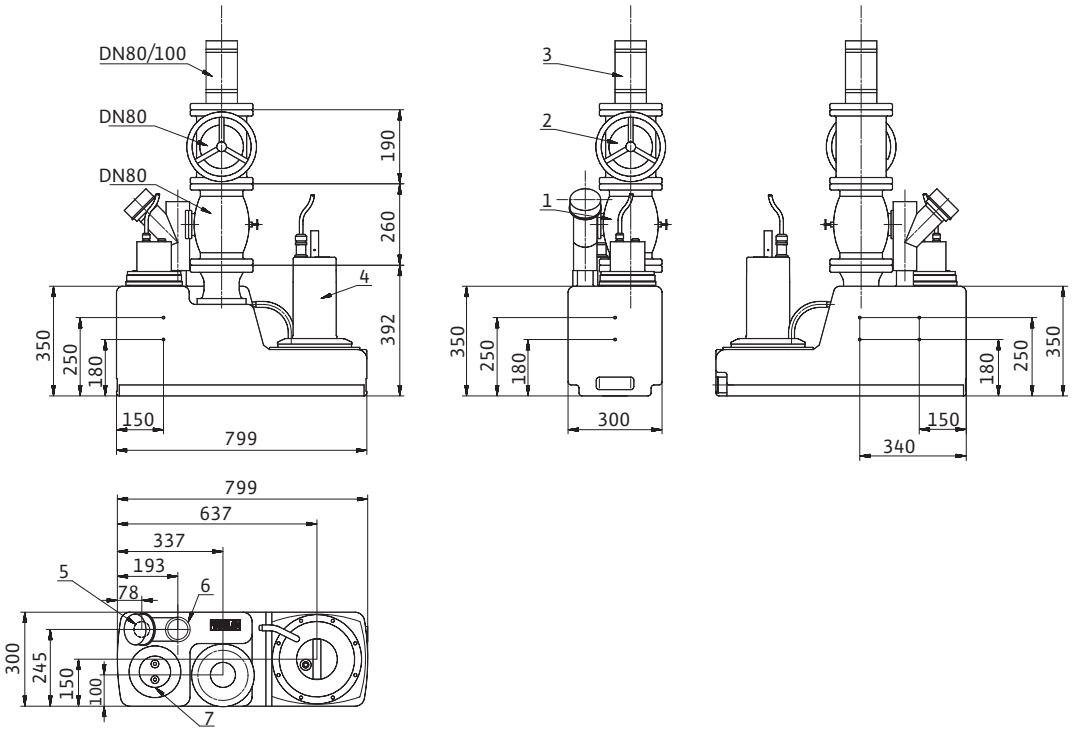
4-pole, 50 Hz



1 = DrainLift S 1/5
2 = DrainLift S 1/7

In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Dimension drawing

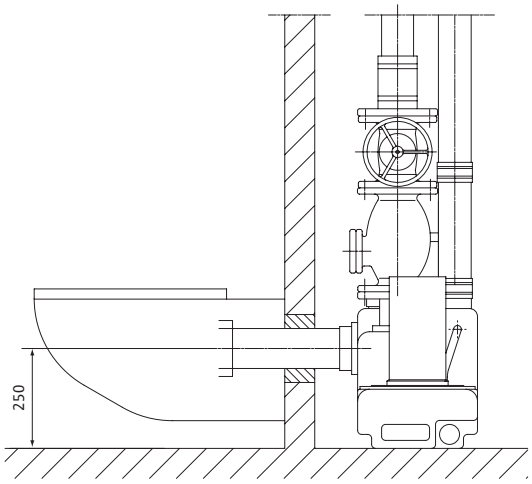


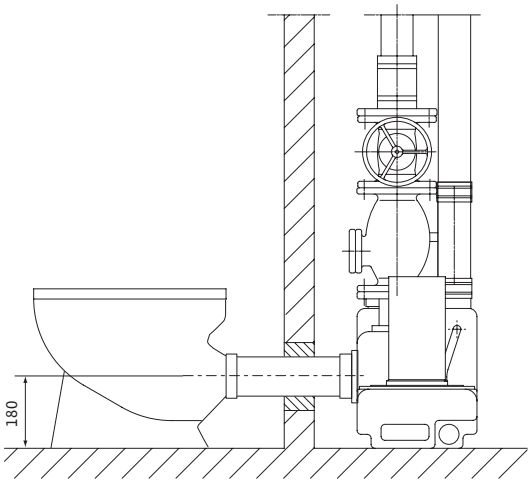
1 Ventilation combination pipe
2 Gate valve
3 Single-ended flanged nipple
4 Motor
5 Feed line DN 40
6 Ventilation
7 Pressure switch/alarm contact

Installation examples Wilo-DrainLift S

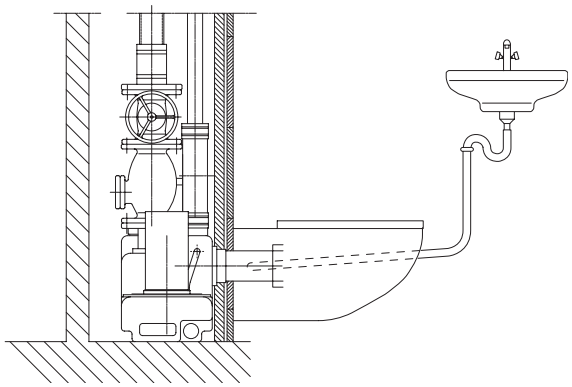
Installation examples

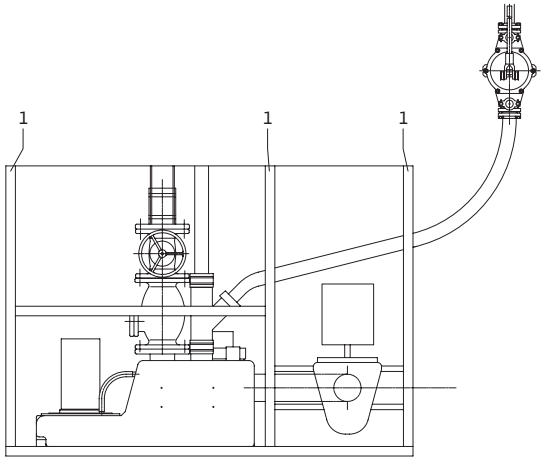
Toilet direct connection





Front wall



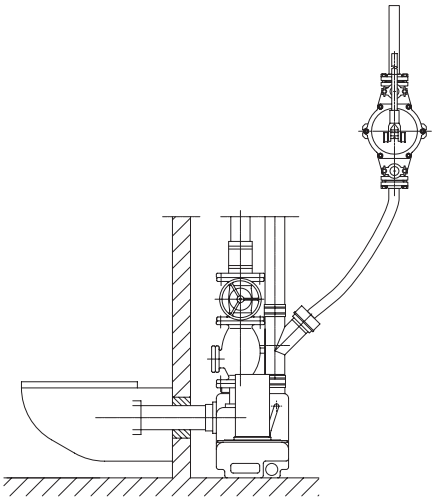


1 Front wall frame

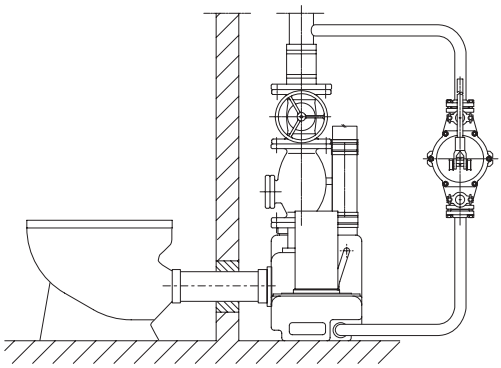
Installation examples Wilo-DrainLift S

Installation examples

Diaphragm hand pump connection where necessary

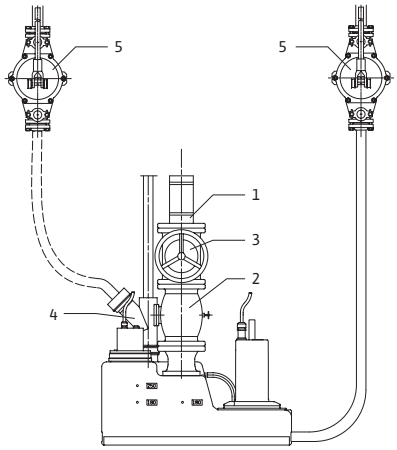


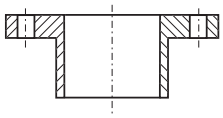
Stationary diaphragm hand pump connection



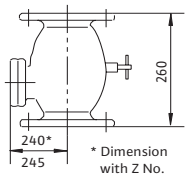
Mechanical accessories Wilo-DrainLift S

Mechanical accessories

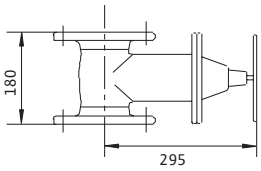




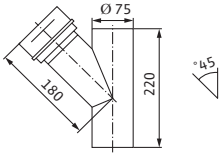
Single-ended flanged nipple (Item 1)
DN 80/100 (included in the scope of delivery of the DrainLift S system 1/7).



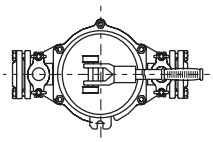
Non-return valve (Item 2)
With non-constricted passage, mounting accessories, flange PN 10/16, in accordance with DIN 2501, DN 80



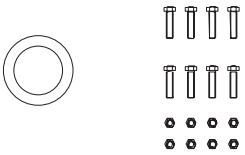
Gate valve (Item 3)
GG 25 (EN-GJL-250), mounting accessories, flange PN 10/16 in accordance with DIN 2501, DN 80



Ventilation combination pipe (Item 4)
DN 70, plastic, for connecting the diaphragm hand pump in case of disaster



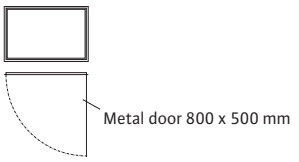
Diaphragm hand pump (Item 5)
R 1½, 16 kg



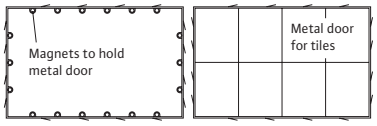
Mounting accessories
For flange connection with 8 screws and screw nuts, in addition to 1 flat gasket, for flange PN 10/16, DIN 2501, DN 80

Mechanical accessories Wilo-DrainLift S

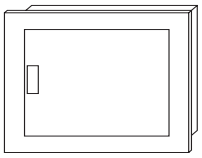
Mechanical accessories



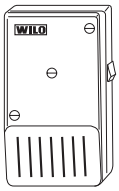
Inspection frame
(H 50 x W 85 cm) steel door, white enamel paint for frontwall installation



Inspection frame
(H 50 x B 85 cm) steel sheeting, suitable for ceramic tiling



Concealed distribution box
Including motor protection, acoustic alarm signal for Wilo-DrainLift S with bare cable end



Wilo KAS
Small alarm switchgear with 70 dBA signalling tone, signal transmitter (electrode) with 3 m cable, self-charging power supply unit (power reserve approximately 5 h) in ISO plug housing (shockproof). Protection Class IP 30, 230 V~/9 V=; 1.5 VA

Series description Wilo-DrainLift M, L, XL

Wilo-DrainLift M, L, XL
Sewage lifting unit

Type key

Example: **DrainLift L1/25(3~)**
Sewage lifting unit for the drainage of residential housing and commercial buildings
M1/L1 = Single-pump system
M2/L2/XL2 = Double pump systems
/25 Max. delivery head [m]
(1~) AC – 1~230 V, 50 Hz
(3~) Three-phase current – 3~400 V, 50 Hz

Application

Sewage lifting unit for drainage of residential housing and commercial buildings (e.g. restaurants, department stores, etc.). Raw sewage which cannot be piped to the canalisation through the use of natural inclines and sewage from toilet systems that is generated below the backflow level are, pursuant to DIN EN 12056/DIN 1986-100, to be piped to the public canalisation system by means of an automatic lifting unit. Sewage containing mineral oils or explosive admixtures must be guided through oil precipitators and/or petrol precipitators; those containing fatty substances must go through grease traps and those with sand through sand catchers. In cases where the intake flow to the lifting unit cannot be allowed to be interrupted during normal operation, one lifting unit must be equipped with a second pumping unit (DrainLift M2/L2/XL2) with the same performance capacity which can switch itself on automatically when needed (DIN EN 12050-1 A1).

Construction

Connection-ready, totally immersible sewage lifting unit (immersion height: 2 m WS, submersion time: 7 days) with a collection tank that is impermeable to gas and water and that is equipped with buoyancy safeguards. centrifugal pump with vortex impeller.

DrainLift M1/L1
Single pump system with AC or three-phase motor for automatic operation. Switchgear with shockproof or CEE plug, potential-free contact, integrated alarm and mains-independence, thanks to built-in storage battery.

DrainLift M2/L2/XL2:
Double pump system for automatic operation (with automatic duty cycling, standby and peak load operation). Thanks to the integrated double flap valve, only one pressure pipe connection is required. Switchgear with shockproof or CEE plug, potential-free contact, integrated alarm and mains-independence, thanks to built-in storage battery.

Option

DrainLift L1/L2 C model, switchgear with individual fault signal and adjustable after-running time.

Scope of delivery

See “Equipment/Function” Table.

Technical Data Wilo-DrainLift M

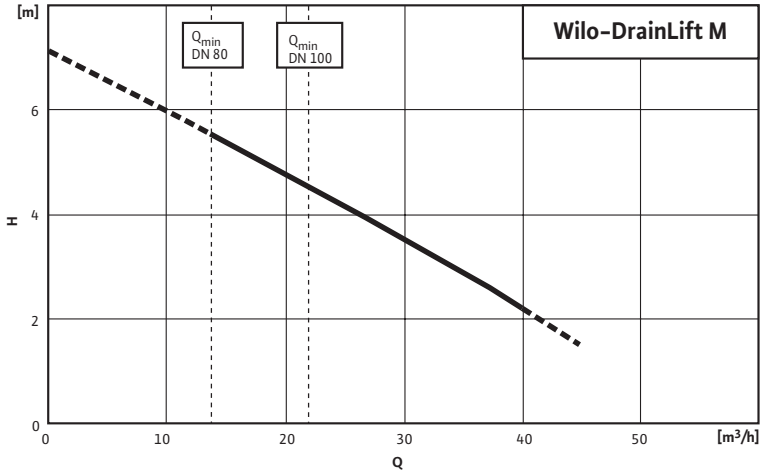
	Wilo-DrainLift ...	
	M1	**M2**
Approved fluids		
Domestic sewage not containing faeces	•	•
Domestic sewage containing faeces	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
Electrical connection		
Power consumption P_1 at 1~230 V, 50 Hz [kW]	1.6	1.6
Connected load P_1 at 3~400 V, 50 Hz [kW]	1.5	1.5
Nominal current at 1~230 V, 50 Hz [A]	7.5	7.5
Nominal current at 3~400 V, 50 Hz [A]	3.0	3.0
Mains frequency	50	50
Pump speed [rpm]	1450	1450
Cable length from plant to switchgear/plug [m]	4	4
Permitted field of application		
Operating mode (for each pump)	S3 15%	S3 15%
Switching frequency max. [1/h]	30	60
Switch-on level (measured from the floor) [mm]	170	180
Max. permitted pressure in the pressure pipe [bar]	1.5	1.5
Fluid temperature, maximum [°C]	40	40
Fluid temperature, short periods [°C]	60	60
Ambient temperature, maximum [°C]	40	40
Connections		
Ball passage [mm]	45	45
Delivery connection [mm]	DN 65, DN 80	DN 65, DN 80
Intake connection [mm]	DN 40, DN 100, DN 150	DN 40, DN 100, DN 150
Ventilation [mm]	DN 70	DN 70
Min. suction head (invert to the middle of the feed line) [mm]	180	180
Motor		
Insulation Class	H	H
Protection class (without switch box)	IP 67	IP 67
Dimensions/weights		
Gross volume [l]	90	130
Switching volume [l]	30	40
Weight [kg]	45	72

• = available or authorised, – = not available or not authorised

Pump curve Wilo-DrainLift M

Wilo-DrainLift M

4-pole, 50 Hz

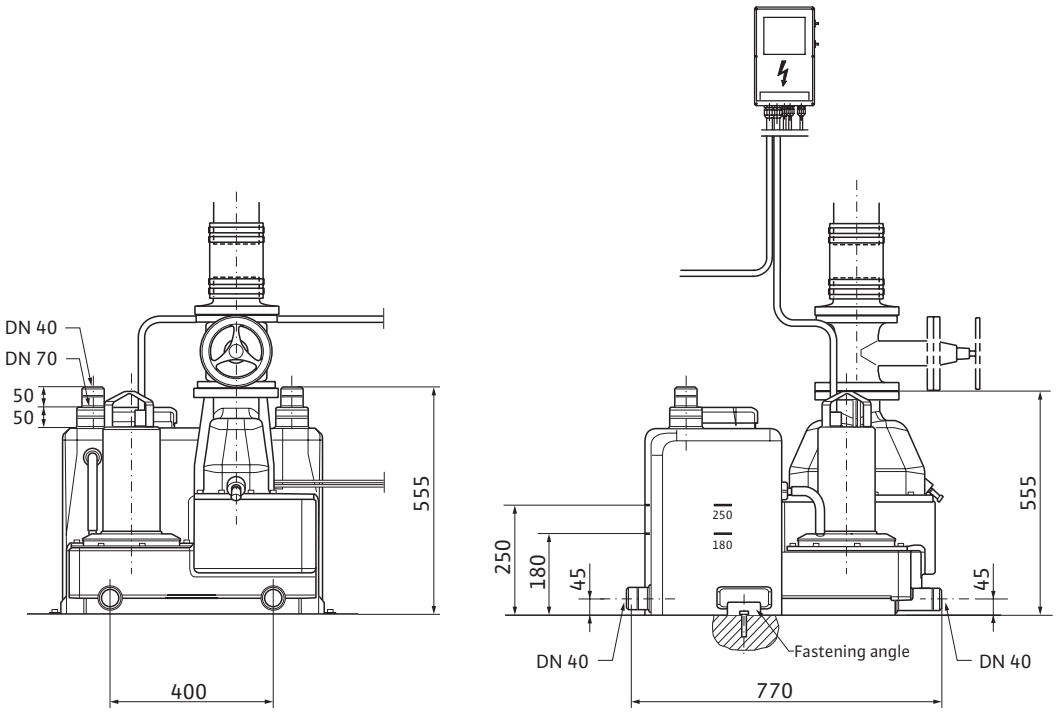


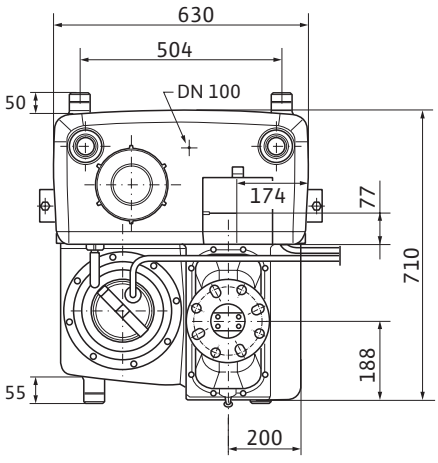
In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Dimensions Wilo-DrainLift M

Dimension drawing

Wilo-DrainLift M1

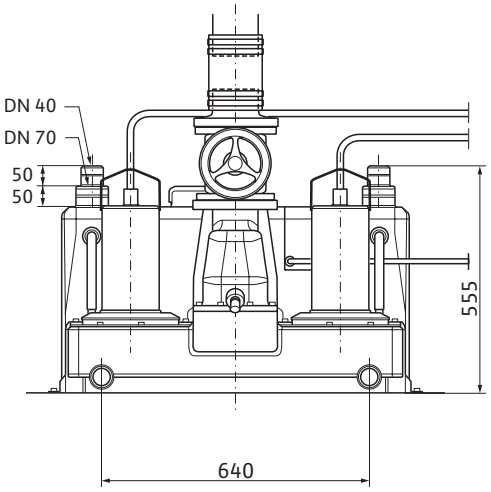


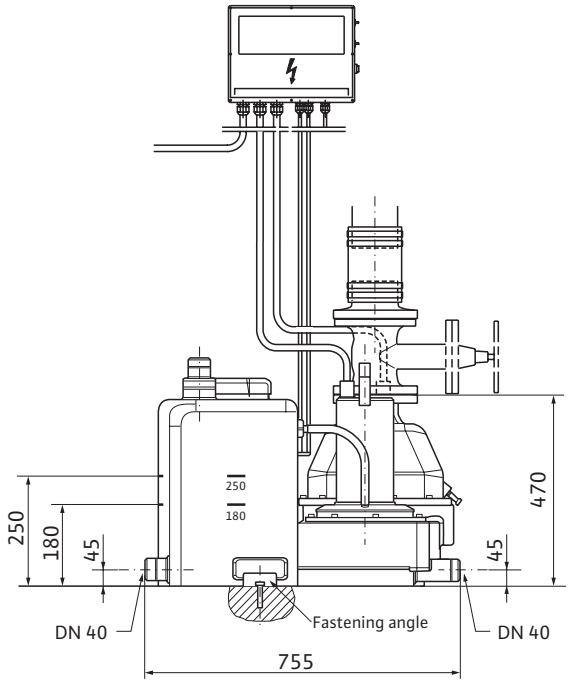


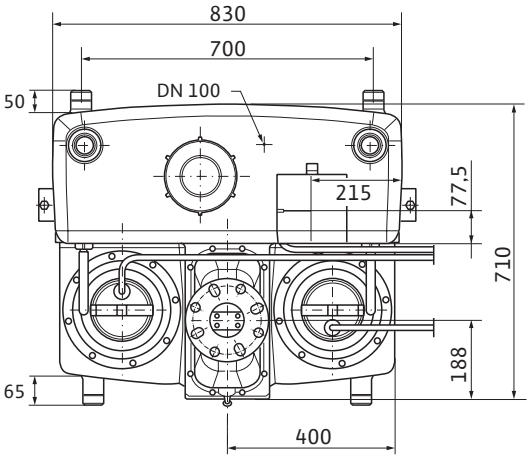
Dimensions Wilo-DrainLift M

Dimension drawing

Wilo-DrainLift M2







Technical Data Wilo-DrainLift L

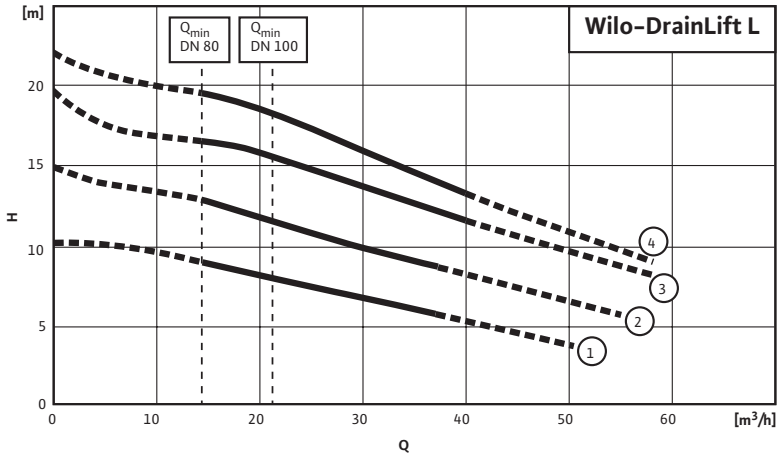
	Wilo-DrainLift ...	
	L1/ 10/15/20/25	**L2/ 10/15/20/25**
Approved fluids		
Domestic sewage not containing faeces	•	•
Domestic sewage containing faeces	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
Electrical connection		
Power consumption P_1 at 1~230 V, 50 Hz [kW]	–	–
Connected load P_1 at 3~400 V, 50 Hz [kW]	2.95/3.8/4.9/5.3	2.95/3.8/4.9/5.3
Nominal current at 1~230 V, 50 Hz [A]	–	–
Nominal current at 3~400 V, 50 Hz [A]	5.95/6.9/8.5/8.9	5.95/6.9/8.5/8.9
Mains frequency	50	50
Pump speed [rpm]	2900	2900
Cable length from plant to switchgear/plug [m]	4	4
Permitted field of application		
Operating mode (for each pump)	S3 15%	S3 15%
Switching frequency max. [1/h]	30	60
Switch-on level (measured from the floor) [mm]	170	180
Max. permitted pressure in the pressure pipe [bar]	2.5	2.5
Fluid temperature, maximum [°C]	40	40
Fluid temperature, short periods [°C]	60	60
Ambient temperature, maximum [°C]	40	40
Connections		
Ball passage [mm]	45	45
Delivery connection [mm]	DN 65, DN 80	DN 65, DN 80
Intake connection [mm]	DN 40, DN 100, DN150	DN 40, DN 100, DN150
Ventilation [mm]	DN 70	DN 70
Min. suction head (invert to the middle of the feed line) [mm]	180	180
Motor		
Insulation Class	H	H
Protection class (without switch box)	IP 67	IP 67
Dimensions/weights		
Gross volume [l]	90	130
Switching volume [l]	30	40
Weight [kg]	55	85

• = available or authorised, – = not available or not authorised

Pump curves Wilo-DrainLift L

Wilo-DrainLift L

2-pole, 50 Hz



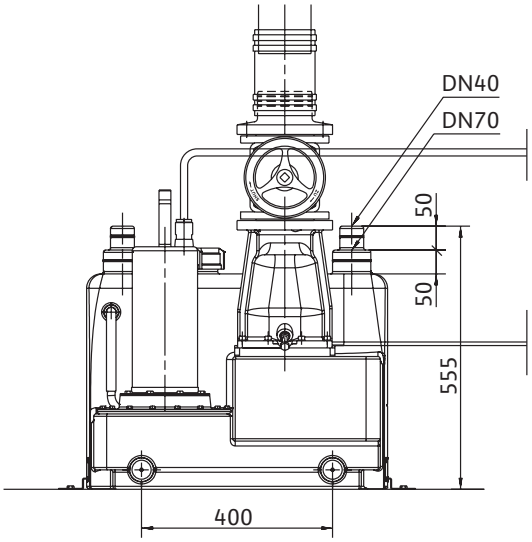
1 = DrainLift L 1/10 and L 2/10
2 = DrainLift L 1/15 and L 2/15
3 = DrainLift L 1/20 and L 2/20
4 = DrainLift L 1/25 and L 2/25

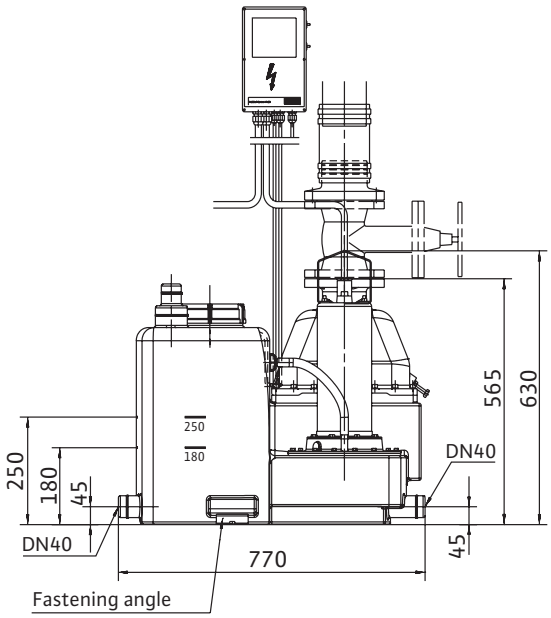
In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

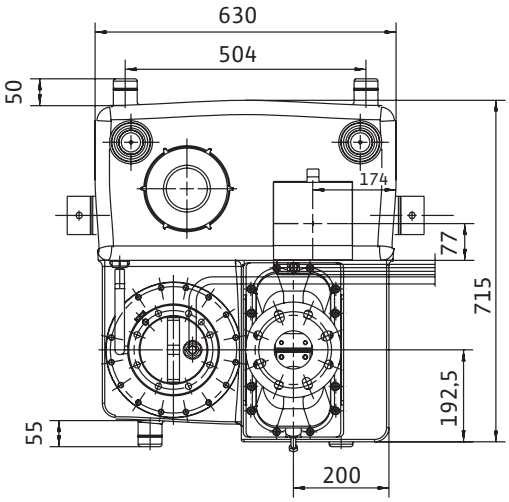
Dimensions Wilo-DrainLift L

Dimension drawing

Wilo-DrainLift L1



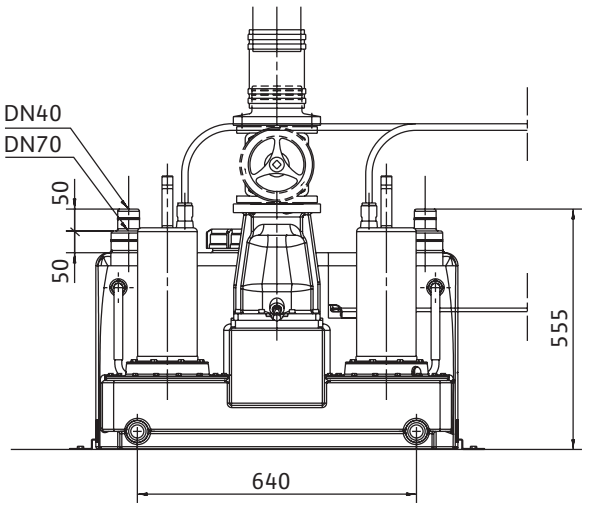


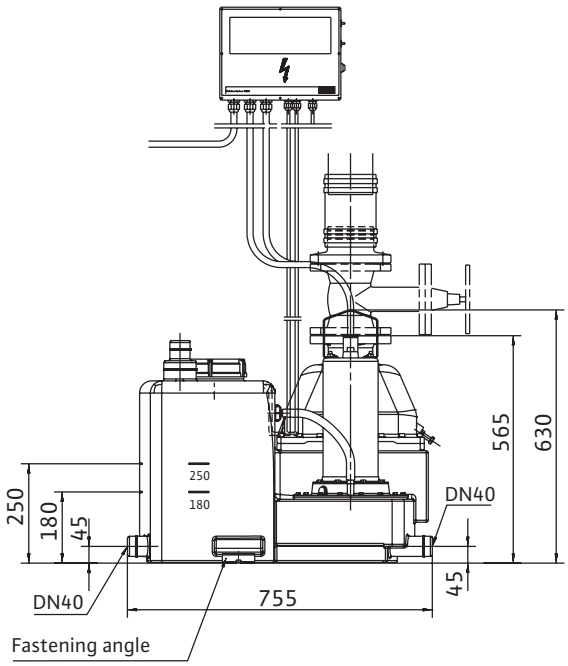


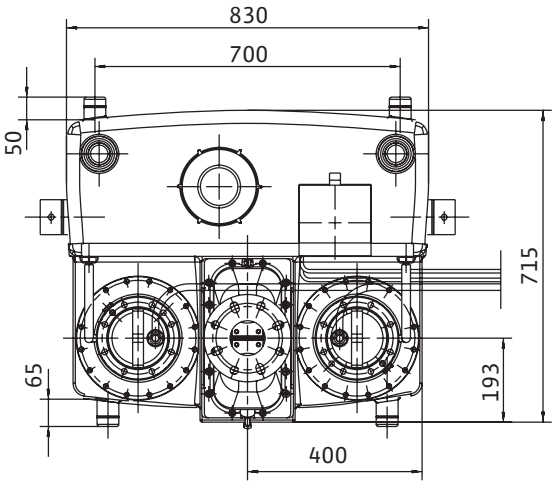
Dimensions Wilo-DrainLift L

Dimension drawing

DrainLift L2

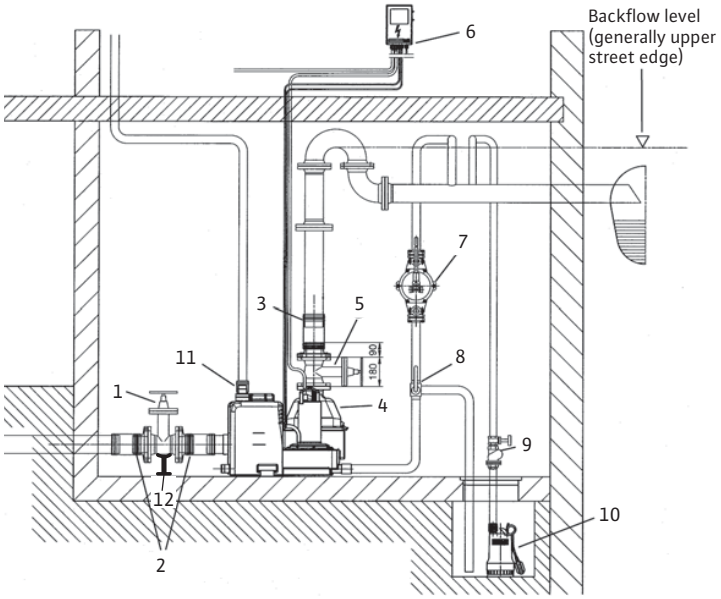




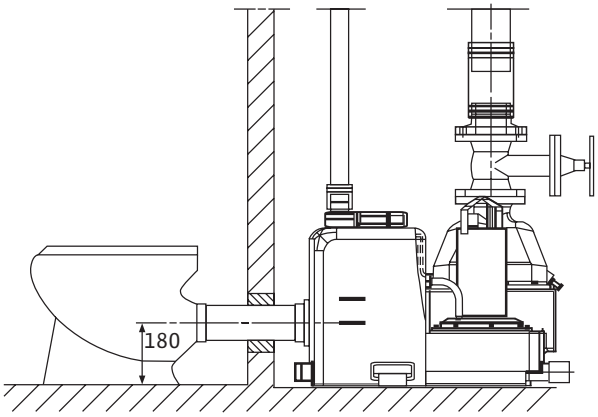


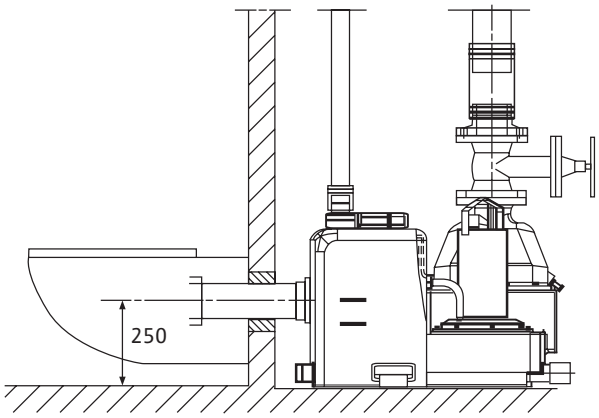
Installation examples Wilo-DrainLift L

Installation examples



1 Gate valve DN 100 or DN 150 (accessories)
2 Single-ended flanged nipple DN 100 or DN 150 with hose (accessories)
3 Single-ended flanged nipple DN 80/100
4 Non-return valve (built into pressure port)
5 Gate valve DN 80 (accessories)
6 Switchgear DrainLift L
7 Diaphragm hand pump (accessories)
8 3-way spigot (accessories)
9 Non-return valve (accessories)
10 Drainage pump (Twister)
11 Vent connection (DN 70)
12 Armature support for weight relief





Technical Data Wilo-DrainLift XL

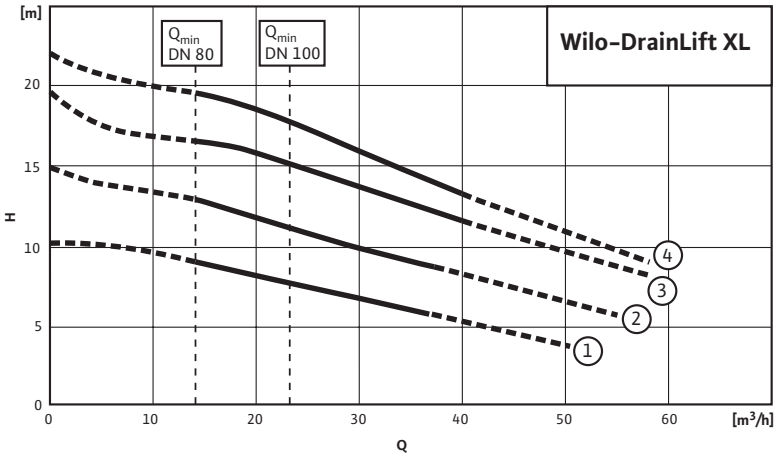
	Wilo-DrainLift XL10/15/20/25
Approved fluids	
Domestic sewage not containing faeces	•
Domestic sewage containing faeces	•
Washing machine soap and water mixture (without long-fibre constituents)	•
Shower and bath water, unchlorinated	•
Electrical connection	
Power consumption P_1 at 1~230 V, 50 Hz [kW]	–
Connected load P_1 at 3~400 V, 50 Hz [kW]	2.95/3.8/4.9/5.3
Nominal current at 1~230 V, 50 Hz [A]	–
Nominal current at 3~400 V, 50 Hz [A]	5.95/6.9/8.5/8.9
Mains frequency	50
Pump speed [rpm]	2900
Cable length from plant to switchgear/plug [m]	4
Permitted field of application	
Operating mode (for each pump)	S1 S3 60%
Switching frequency max. [1/h]	60
Switch-on level (measured from the floor) [mm]	650
Max. permitted pressure in the pressure pipe [bar]	2.5
Fluid temperature, maximum [°C]	40
Fluid temperature, short periods [°C]	60
Ambient temperature, maximum [°C]	40
Connections	
Ball passage [mm]	45
Delivery connection [mm]	DN 65 DN 80
Intake connection [mm]	DN 100 DN 150
Ventilation [mm]	DN 70
Min. suction head (invert to the middle of the feed line) [mm]	700
Motor	
Insulation Class	H
Protection class (without switch box)	IP 67
Dimensions/weights	
Gross volume [l]	440
Switching volume [l]	220
Weight [kg]	135

• = available or authorised, – = not available or not authorised

Pump curve Wilo-DrainLift XL

Wilo-DrainLift XL

2-pole, 50 Hz

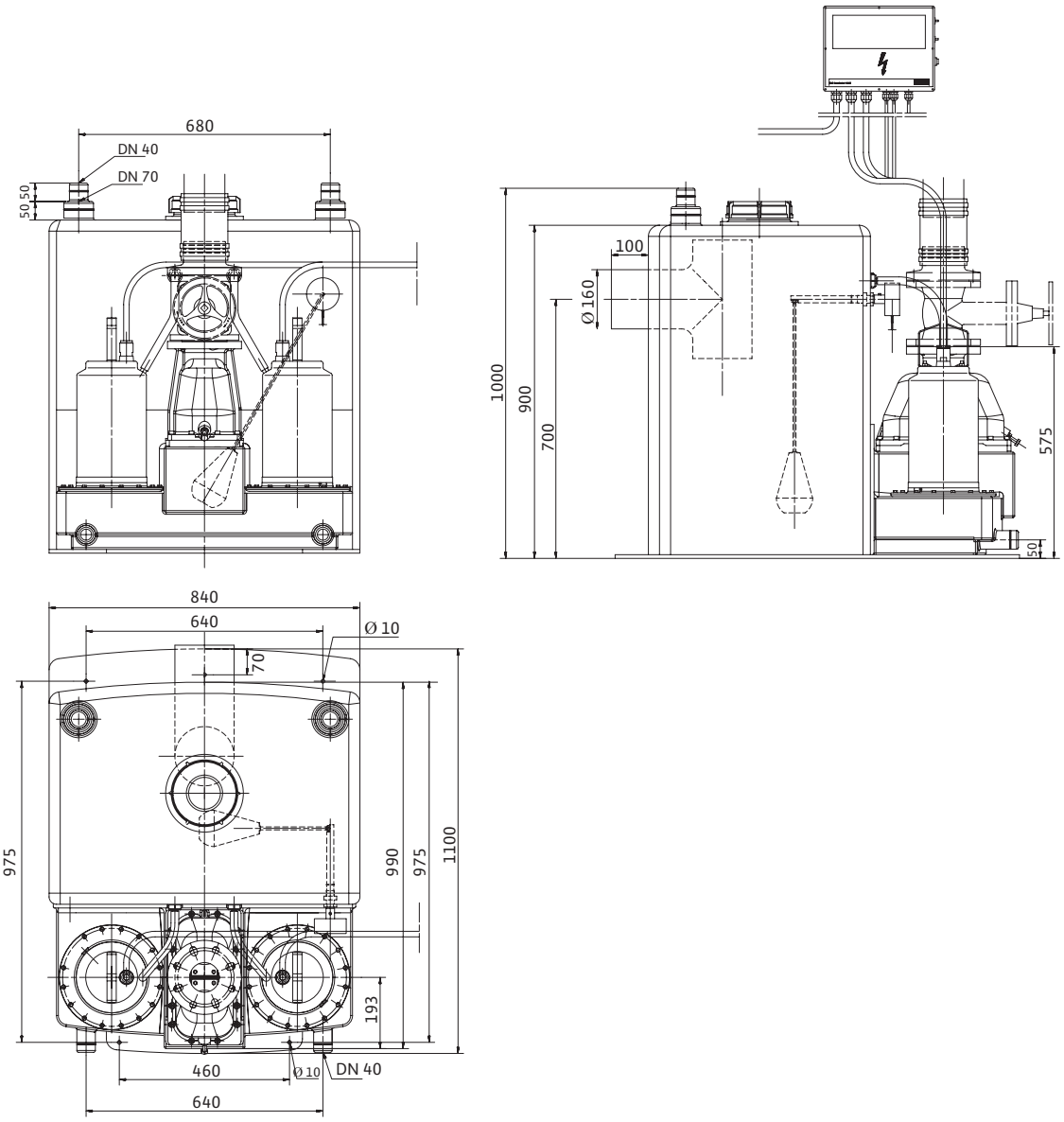


1 = DrainLift XL 2/10
2 = DrainLift XL 2/15
3 = DrainLift XL 2/20
4 = DrainLift XL 2/25

In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

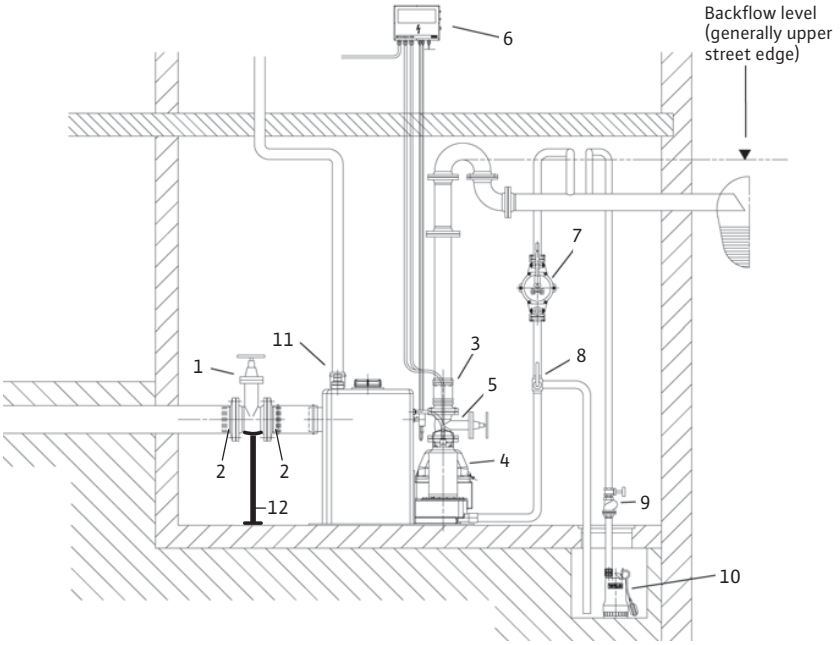
Dimensions Wilo-DrainLift XL

Dimension drawing



Installation example Wilo-DrainLift XL

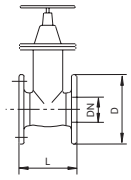
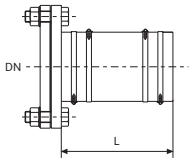
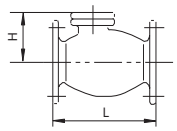
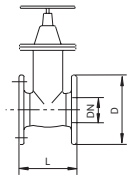
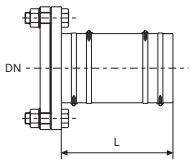
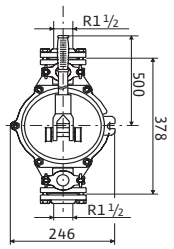
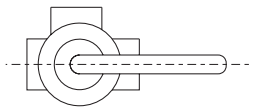
Installation example



1 Gate valve DN 100 or DN 150 (accessories)
2 Single-ended flanged nipple DN 100 or DN 150 with hose (accessories)
3 Single-ended flanged nipple DN 80/100
4 Non-return valve (built into pressure port)
5 Gate valve DN 80 (accessories)
6 Switchgear DrainLift XL
7 Diaphragm hand pump (accessories)
8 3-way spigot (accessories)
9 Non-return valve (accessories)
10 Drainage pump (e.g. Twister)
11 Vent connection (DN 70)
12 Armature support for weight relief

Mechanical accessories Wilo-DrainLift S, M, L, XL

Connection accessories

					Wilo-DrainLift ...			
					S	M	L	XL
Inlet connection		**Gate valve** * (Item 1)			DN 100	DN 100 or DN 150		
		DN	L [mm]	D [mm]				
		100	190	325				
		150	210	425				
		**Single-ended flanged nipple** with hose and hose clips * (Item 2)			2x DN 100	2x DN 100 or 2x DN 150		
		DN	L [mm]					
		100	190					
		150	210					
Discharge side connection		**Non-return valve** * (Item 4)			integrated			
		DN	H [mm]	D [mm]				
		80	155	260				
		**Gate valve*** (Item 5)			DN 80	DN 80	DN 80	DN 80
		DN	L [mm]	D [mm]				
		80	180	295				
		**Single-ended flanged nipple** with hose and hose clips * (Item 3)			S 1/5 DN 80 S 1/7 DN 80/100 built-in	80/100 built-in		
		DN	L [mm]					
		80	180					
		100	190					
Other connections/ accessories		**Diaphragm hand pump** 1 1/2 (Item 7)			•	•	•	•
		**3-way spigot** (Item 8)			–	–	–	–

* Required for installation in accordance with norms/recommendations in force.
• = available or authorised, – = not available or not authorised

Sewage/faeces

Sewage lifting units

Series description Wilo-DrainLift XXL

Wilo-DrainLift XXL
Sewage lifting unit

Type key

Example:	**DrainLift XXL 1080-2/8.4**
XXL	Sewage lifting unit for large objects
10(8)	Pressure port DN 100(80)
80	Total volume 800 l 40 = Total volume 400 l
2	Double pump system
8.4	Performance P_2 for each pump [kW]

Application

Sewage lifting unit for drainage of residential housing and commercial buildings (e.g. restaurants, department stores, etc.). Raw sewage which cannot be piped to the canalisation through the use of natural inclines and sewage from toilet systems that is generated below the backflow level are, pursuant to DIN EN 12056/DIN 1986-100, to be piped to the public canalisation system by means of an automatic lifting unit. Sewage containing mineral oils or explosive admixtures must be guided through oil precipitators and/or petrol precipitators; those containing fatty substances must go through grease traps and those with sand through sand catchers.

Construction

Connection-ready, totally immersible compact unit (immersion height: 2 m WS, submersion time: 7 days), with one or two collection tanks that is/are impermeable to gas and water.
Equipped with two sewage pumps of the Wilo-Drain TP 80 or TP 100 series (material: Inox and Composite). Easy handling on the basis of low total weight for the system, e.g. double system with TP 80 pump only 160 kg in weight (heaviest individual weight: pump at 62 kg).
Optimal tank draining, thanks to depth suction.
Note: Switchgear is not submersible and must for that reason be aligned in such a way that it is secure against flooding.

Scope of delivery

- Microprocessor-controlled switchgear with automatic duty cycling, standby and peak load operation, potential-free contacts and indicator lights for operation and malfunctions for each pump.
- Elastic hose connection for ventilation DN 70.
- Elastic hose connection for connecting a diaphragm hand pump. Kit for connecting the tank with a pump (including ventilation flange with hose).
- (See also "Equipment/Function" Table)

Sewage/faeces

Sewage lifting units

Technical Data Wilo-DrainLift XXL

	Wilo-DrainLift XXL...					
	840-2/1.4 880-2/1.4	840-2/1.8 880-2/1.8	1040-2/3.9 1080-2/3.9	1040-2/5.2 1080-2/5.2	1040-2/7.0 1080-2/7.0	1040-2/8.4 1080-2/8.4
Approved fluids						
Domestic sewage not containing faeces	•	•	•	•	•	•
Domestic sewage containing faeces	•	•	•	•	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•	•	•	•	•
Shower and bath water, unchlorinated	•	•	•	•	•	•
Electrical connection						
Mains connection [V]	3~400	3~400	3~400	3~400	3~400	3~400
Power consumption P_1 [kW]	1.9	2.3	4.4	6.2	8.4	10.0
Connected load P_2 [kW]	1.4	1.8	3.9	5.2	7.0	8.4
Nominal current [A]	4.5	5.1	10.5	12.8	15.6	18.1
Mains frequency	50	50	50	50	50	50
Pump speed [rpm]	1450	1450	1450	1450	1450	1450
Cable length from plant to switchgear/plug [m]	10	10	10	10	10	10
Permitted field of application						
Operating mode	S3	S3	S3	S3	S3	S3
Switching frequency max. [1/h]	60	60	60	60	60	60
Switch-on level (measured from the floor) [mm]	560	560	560	560	560	560
Max. permitted pressure in the pressure pipe [bar]	2.5	2.5	2.5	2.5	2.5	2.5
Fluid temperature, maximum [°C]	40	40	40	40	40	40
Fluid temperature, short periods [°C]	65	65	65	65	65	65
Ambient temperature, maximum [°C]	40	40	40	40	40	40
Connections						
Ball passage [mm]	78	78	95	95	95	95
Delivery connection [mm]	DN 80	DN 80	DN 100	DN 100	DN 100	DN 100
Intake connection [mm]	3 x DN 100/150 1 x DN 100					
Ventilation [mm]	70	70	70	70	70	70
Min. suction head (invert to the middle of the feed line) [mm]	700	700	700	700	700	700
Motor						
Insulation Class	F	F	F	F	F	F
Protection class (without switch box)	IP 68	IP 68	IP 68	IP 68	IP 68	IP 68

• = available or authorised, – = not available or not authorised

Technical Data Wilo-DrainLift XXL

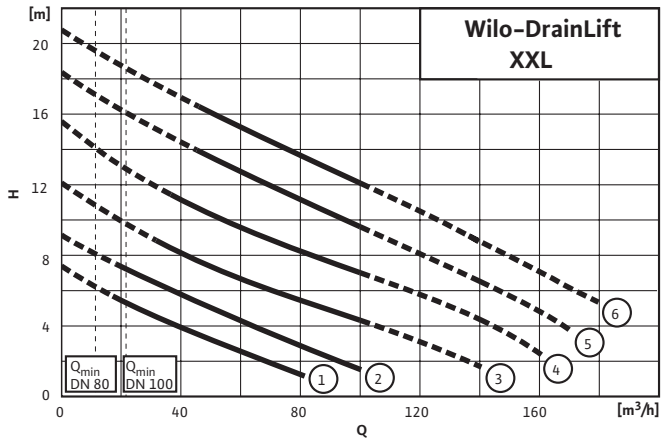
	Wilo-DrainLift XXL...					
	840-2/1.4 880-2/1.4	840-2/1.8 880-2/1.8	1040-2/3.9 1080-2/3.9	1040-2/5.2 1080-2/5.2	1040-2/7.0 1080-2/7.0	1040-2/8.4 1080-2/8.4
Dimensions/weights						
Gross volume [l]	400/800	400/800	400/800	400/800	400/800	400/800
Switching volume [l]	200/400	200/400	200/400	200/400	200/400	200/400
Tank volume [l]	400/2 x 400	400/2 x 400	400/2 x 400	400/2 x 400	400/2 x 400	400/2 x 400
Weight [kg]	160/195	160/195	195/230	195/230	195/230	195/230

• = available or authorised, – = not available or not authorised

Pump curves, Dimensions Wilo-DrainLift XXL

Wilo-DrainLift XXL

4-pole, 50 Hz

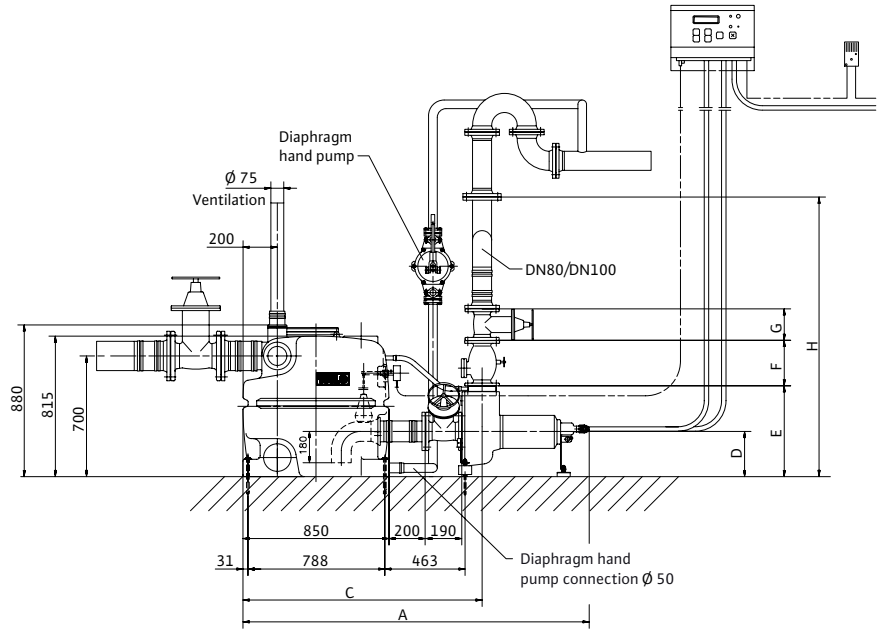


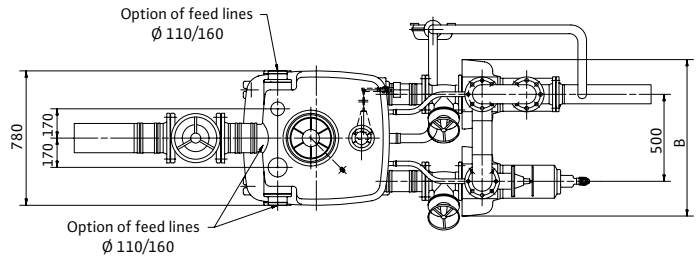
1 = DrainLift XXL 840-2/1.4 and 880-2/1.4
2 = DrainLift XXL 840-2/1.8 and 880-2/1.8
3 = DrainLift XXL 1040-2/3.9 and 1080-2/3.9
4 = DrainLift XXL 1040-2/5.2 and 1080-2/5.2
5 = DrainLift XXL 1040-2/7.0 and 1080-2/7.0
6 = DrainLift XXL 1040-2/8.4 and 1080-2/8.4

In accordance with EN 12056-4.6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Dimension Drawings

Wilo-DrainLift XXL with a tank

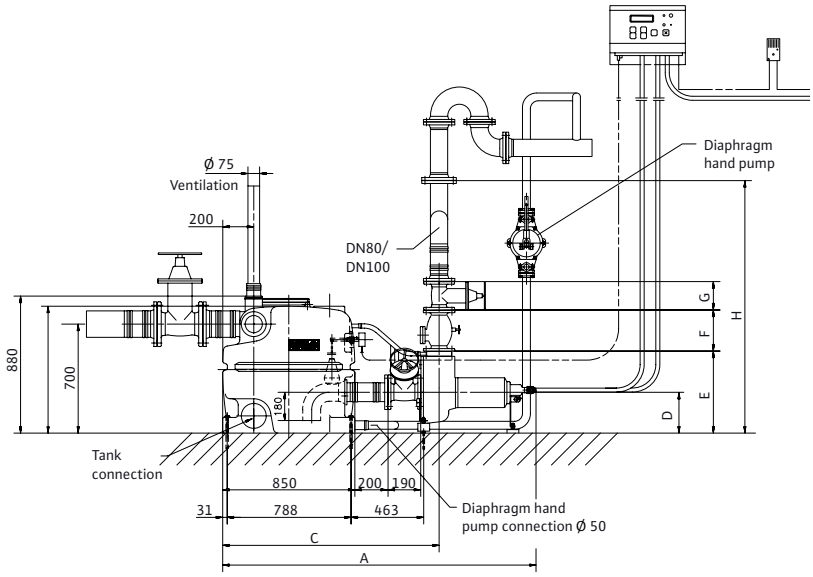


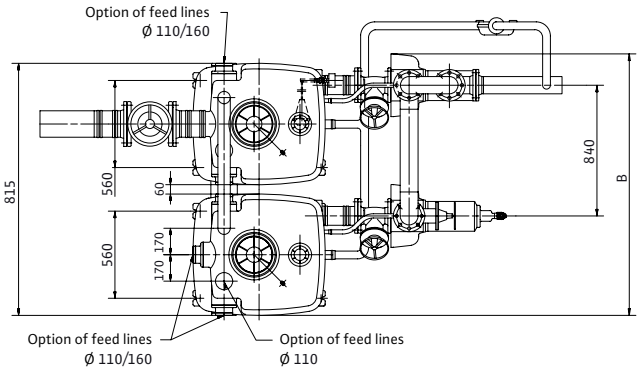


Pump curves, Dimensions Wilo-DrainLift XXL

Dimension Drawings

Wilo-DrainLift XXL with two tanks





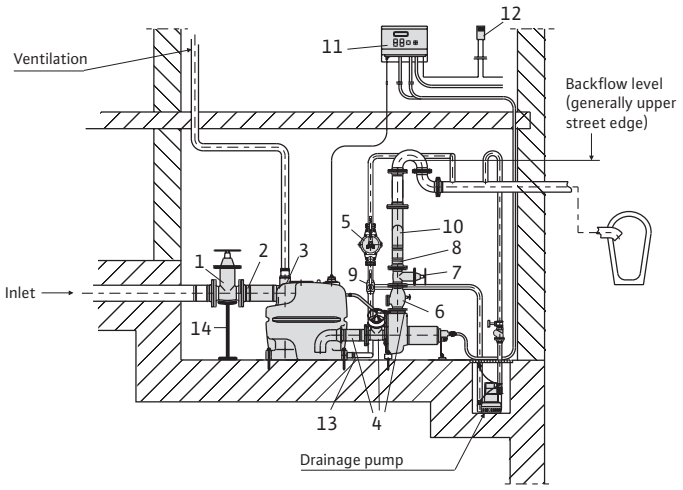
Dimensions

Wilo-DrainLift XXL...	Dimensions [mm]									
	A	B with 1 tank	B with 2 tanks	C	D	E	F	G	$H_{DN\ 80}$	$H_{DN\ 100}$
840 and 880-2/1.4 840 and 880-2/1.8	1965	930	1695	1345	238	500	260	180	1470	1550
1040 and 1080-2/3.9 1040 and 1080-2/5.2 1040 and 1080-2/7.0 1040 and 1080-2/8.4	1990	960	1710	1355	260	547	300	190	–	1650

Installation example Wilo-DrainLift XXL

Installation example

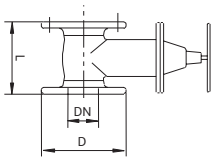
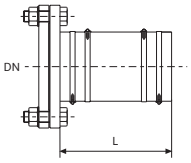
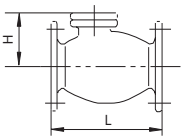
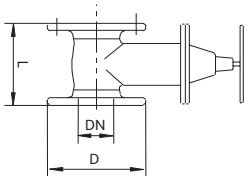
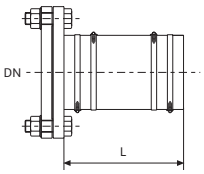
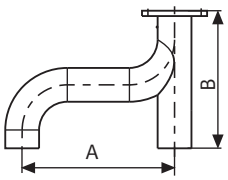
Wastewater and sewage lifting unit (sewage with faecal content); Double system – Wilo-DrainLift XXL



1 Gate valve DN 100 or DN 150 (accessories)
2 Single-ended flanged nipple with hose and hose clips
3 Elastic hose connection for ventilation
4 Connection kit
4a Gate valve DN 100
5 Diaphragm hand pump (accessories)
6 Non-return valve
7 Gate valve
8 Single-ended flanged nipple with hose and hose clips
9 3-way spigot (accessories)
10 Y-pipe
11 Microprocessor-controlled switchgear
12 Small alarm switchgear
13 Elastic hose connection for diaphragm hand pump
14 Armature support for weight relief

Mechanical accessories Wilo-DrainLift XXL

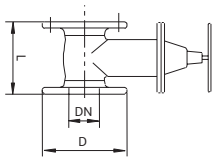
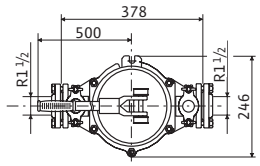
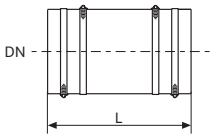
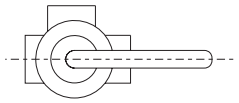
Connection accessories

					Pump curves 1 and 2 Pump: TP 80 Pressure port DN 80	Pump curve 3 to 6 Pump: TP 100 Pressure port DN 100
Inlet connection		**Gate valve** * (Item 1)			DN 100 or DN 150	
		DN	L [mm]	D [mm]		
		100	190	220		
		150	210	285		
		**Single-ended flanged nipple** with hose and hose clips * (Item 2)			DN 100 or DN 150	
		DN	L [mm]			
		100	190			
		150	210			
Discharge side connection		**Non-return valve** * (Item 6)			DN 80 (x 2)	DN 100 (x 2)
		DN	H [mm]	L [mm]		
		80	155	260		
		100	170	300		
		**Gate valve** * (Item 7)			DN 80 (x 2)	DN 100 (x 2)
		DN	H [mm]	L [mm]		
		80	180	180		
		100	190	190		
		**Single-ended flanged nipple** with hose and hose clips * (Item 8)			DN 80 (x 2) or DN 80/100 (2x)	DN 100 (x 2)
		DN	L [mm]			
		80	180			
		100	190			
		80/100	190			
		**Y-pipe** (Item 10)			DN 80/80/80	DN 100/100/100
		DN	A [mm]	B [mm]	Number of tanks	
		80	500	260	1	
		100	500	465	1	
		80		260	2	
		100		465	2	

* Required for installation in accordance with norms/recommendations in force.

Mechanical accessories Wilo-DrainLift XXL

Connection accessories

			Pump curves 1 and 2 Pump: TP 80 Pressure port DN 80	Pump curve 3 to 6 Pump: TP 100 Pressure port DN 100
Other Connections		**Gate valve** * (Item 4a) (between pump + tank) DN: 100 / L [mm]: 190 / D [mm]: 220	DN 100 (x 2)	
		**Diaphragm hand pump** R 1 $^{1}/_{2}$ (Item 5)	Accessories	
		**Elastic hose connection** for ventilation (Item 3) DN: 70 / L [mm]: 130	included in the scope of delivery	
		**3-way spigot** (Item 9)	Accessories	

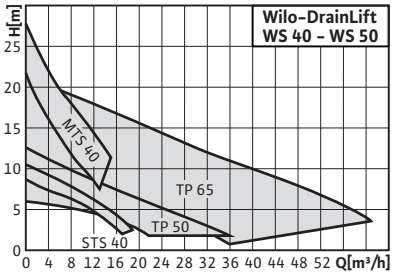
* Required for installation in accordance with norms/recommendations in force.

Contents

Wastewater and sewage pumping stations

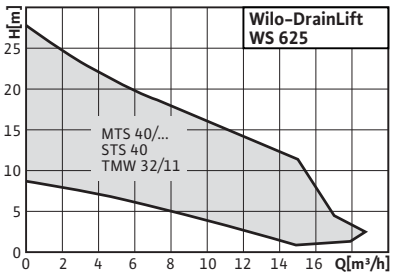
Series overview Wilo-DrainLift WS

Series: Wilo-DrainLift WS 40-50



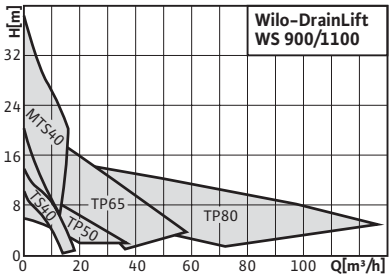
> Synthetic pumps stations
> Application:
- Wastewater and sewage pumping station for drainage and pressurised drainage:
  - In the building as lifting unit in accordance with EN 12050
  - Outside the building as pumps station in accordance with EN 752

Series: Wilo-DrainLift WS 625



> Synthetic pumps stations
> Application:
- Wastewater and sewage pumping station for drainage and pressurised drainage, outside the building as pumps station in accordance with EN 752.

Series: Wilo-DrainLift WS 900/1100



> Synthetic pumps stations
> Application:
- Wastewater and sewage pumping station for drainage and pressurised drainage, outside the building as pumps station in accordance with EN 752.

Series overview Wilo-DrainLift WS

Series: Wilo-DrainLift WS 40-50

> Product advantages
- Feed line freely selectable
- Flexible installation through optional shaft length extension
- Easy installation and maintenance of the pumps, thanks to above-water coupling when utilising the Wilo-Drain TP50, TP65, MTS40/... pumps
- Also with Wilo-Drain MTS 40/... macerator pumps

> Additional information: **Page**

Series: Wilo-DrainLift WS 625

> Product advantages
- Smaller shaft diameter (625 mm)
- Flexible utilisation thanks to different installation heights
- Complete through integrated fittings and seals
- Can be walked over or driven over, depending on the covering (accessories)
- Also with Wilo-Drain MTS 40/... macerator pumps

> Additional information: **Page**

Series: Wilo-DrainLift WS 900/1100

> Product advantages
- Deposit-free collection room
- Highest degree of stability through hemispherical shaft floor
- 2/4 Feed lines can be selected onsite
- V4A stainless steel pipework
- Also with Wilo-Drain MTS 40/... macerator pumps

> Additional information: **Page**

Series description Wilo-DrainLift WS 40 Basic

Wilo-DrainLift WS 40 Basic
Synthetic pumps station

Type key
Example: **WS 40E/STS 40/8 DM-BV**

WS	Synthetic pumps station
40	System pressure outlet
E	Single pump systems
STS 40/8	Selected pump type
DM	Three-phase motor
BV	Non-return ball valve/ without BV with integrated flap trap

Application
Wilo-DrainLift WS 40 Basic is, in accordance with EN 12050-2, an automatically operating wastewater lifting unit for backup-free drainage of sewage that contains no faeces and that originates from building discharge points below the backflow level.
The system can be installed in buildings as well as outside of buildings, like a plastic shaft in the ground. The system is perfectly suitable for applications that involve seasonal wastewater (such as at camping sites, weekend homes, etc.) or in regions where the earth does not freeze to very deep levels.

Built-in pump
STS 40
For severely contaminated fluids; 40 mm free ball passage.

Construction
- For service pipe in DN 100
- Ventilation pipe connection in DN 70
- Maximum pressure in the pressure pipe 4 bar.
- Synthetic pumps station made of recyclable PE
- Highest degree of upward pressure reliability and inherent stability through the use of ribbing
- Feed lines can be freely selected onsite

Scope of delivery
- Tank (for single or double pump system)
- Built-in pipework
- Flap trap, version BV with non-return ball valve
- Pump
- Level switching
- Switchgear (for three-phase pump or double system)
- Cover with seal
- Hole saw Ø 124 mm, feed seal DN 100 (for pipe Ø 110 mm)
- 1 Hose piece PVC Ø 50 mm with clamps for the connection of a diaphragm hand pump
- Fixation material for the floor anchoring
- Installation and operating instructions

Series description Wilo-DrainLift WS 40-50

Wilo-DrainLift WS 40-50
Synthetic pumps station

Type key
Example:**WS 40E/MTS 40/...**

WS	Synthetic pumps station
40	System pressure outlet
E	Single pump system
MTS 40/...	utilisable pump With WS 50 for the pumps TP 50, TP 65.

Application
Wilo-DrainLift WS 40-50 is, in accordance with EN 12050, an automatically operating sewage lifting unit for backup-free drainage of sewage that either contains faeces or contains no faeces (depending on the type) and that originates from building discharge points below the backflow level.
The system can be installed in buildings as well as outside of buildings, like a plastic shaft in the ground. The system is perfectly suitable for applications that involve seasonal wastewater (such as at camping sites, weekend homes, etc.), for utilisation in regions where the earth does not freeze to very deep levels or also for use with pressurised drainage.

Applicable pumps
TP 50
For severely contaminated fluids; 44 mm free ball passage, detachable connection cable.
TP 65
For severely contaminated fluids; 44 mm free ball passage, detachable connection cable.
MTS 40/...
For severely contaminated fluids and faeces. Standard-equipped explosion protection (only 3~400 V), detachable connection cable. With a spherical macerator non-susceptible to plugging that contains an internal rotating blade.

Construction
- For service pipe in DN 100
- Ventilation pipe connection in DN 70
- Maximum pressure in the pressure pipe 6 bar.
- Synthetic pumps station made of recyclable PE
- Highest degree of upward pressure reliability and inherent stability through the use of ribbing
- Feed lines freely selectable onsite.

Scope of delivery:
- Tank (for single or double pump system)
- Built-in stainless steel pipework
- Red bronze gate valve
- Above-water coupling made of corrosion-free plastic (PUR) with integrated non-return valve
- Cover with seal
- Hole saw Ø 124 mm, feed seal DN 100 (for pipe Ø 110 mm)
- 1 Hose piece PVC Ø 50 mm with clamps for the connection of a diaphragm hand pump
- Fixation material for floor anchoring
- Installation and operating instructions

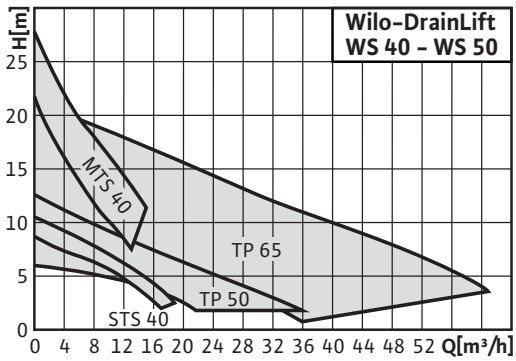
Pump, switchgear and level sensor can be freely selected as accessories.

Recommendations for electrical accessories are described in the “Electrical accessories Wilo-Drain” Chapter.

Pump curves Wilo-DrainLift WS 40-50

Wilo-DrainLift WS 40-50

Duty chart for applicable pump types Wilo-Drain (50 Hz)



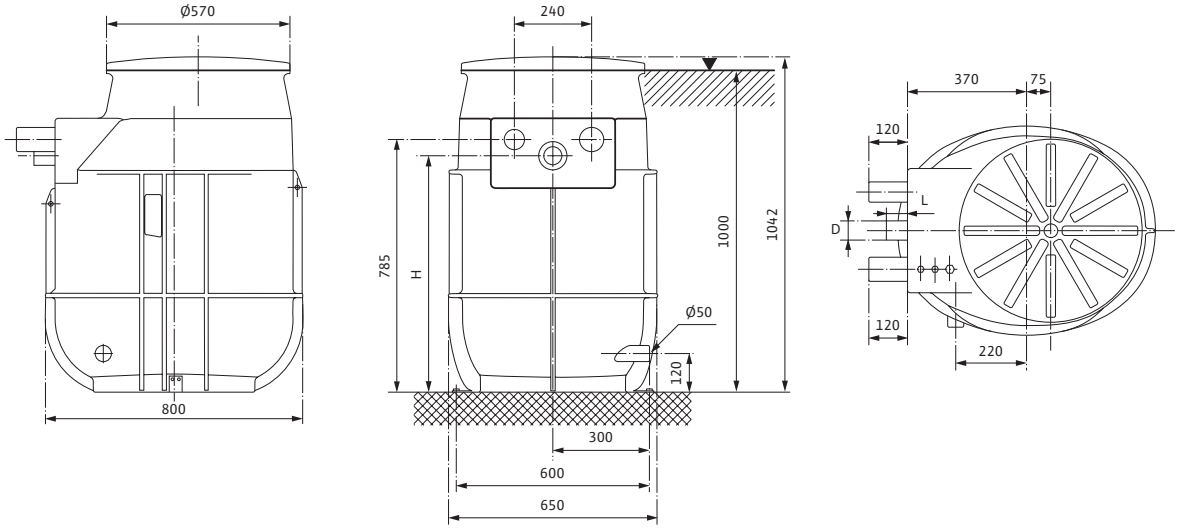
For individual pump curves, see the Technical Data for the selected pump.

In accordance with EN 12056-4, a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

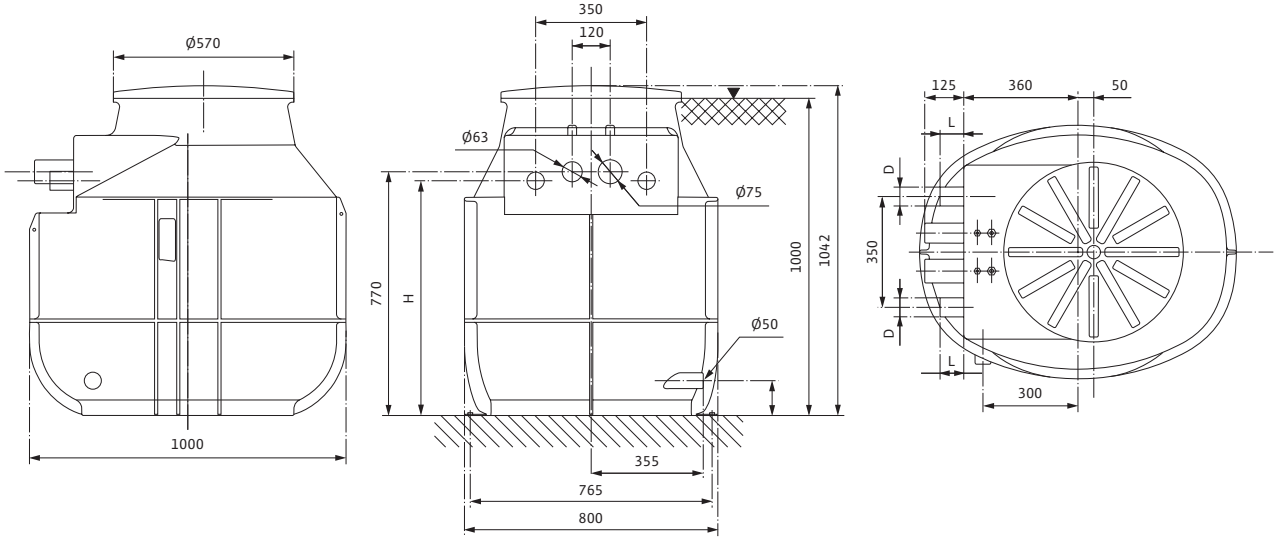
Dimensions Wilo-DrainLift WS 40-50

Dimension Drawings

Single pump station



Double pump station



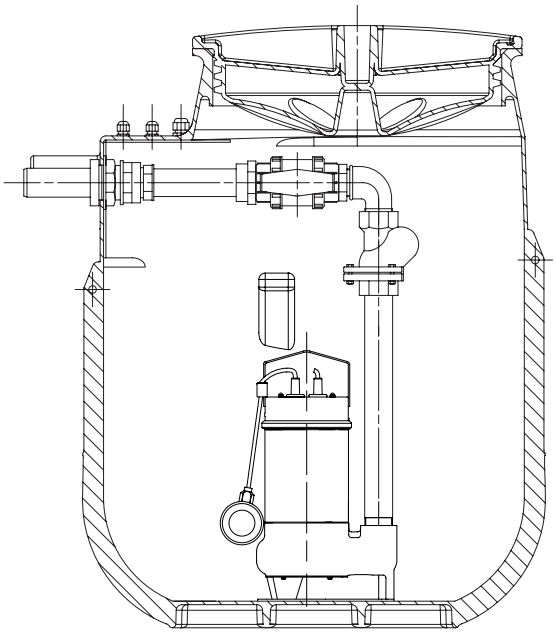
Dimensions

	Wilo-DrainLift WS 40 Basic with pump				Wilo-DrainLift WS 40 for pump		Wilo-DrainLift WS 50 for pump	
	STS 40		STS 40 BV		MTS 40/...		TP 50, TP 65	
	Single	Double	Single	Double	Single	Double	Single	Double
Total volume [l]	255	400	255	400	255	400	255	400
H [mm]	770	770	770	770	735	745	735	745
L [mm]	130	130	100/75	100/75	95	100	65	75
D	Ø 50	Ø 50	inside Ø 50/G 2		$G/1^1_2$	$G/1^1_2$	G 2	G 2

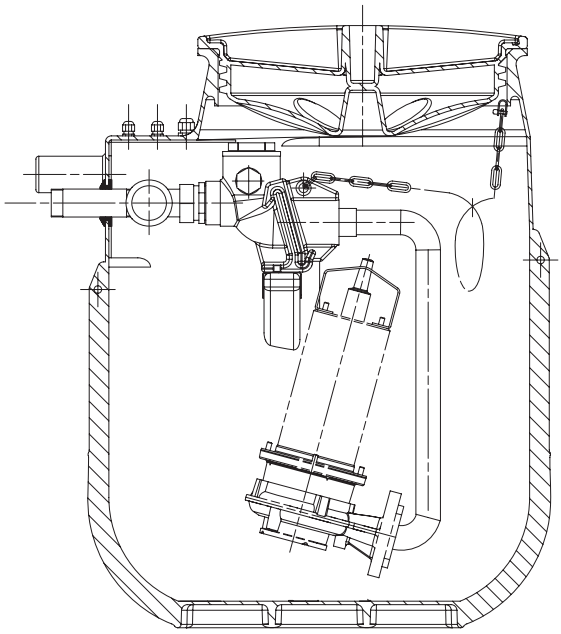
Version examples Wilo-DrainLift WS 40-50

Version examples

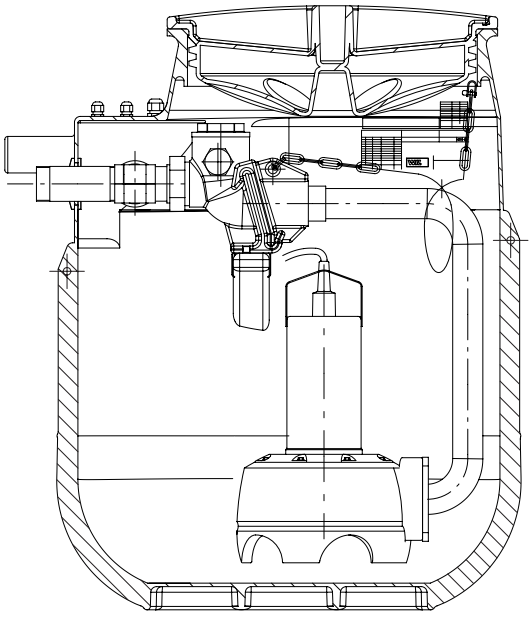
Wilo-Drain WS 40 Basic
e.g. WS 40E/STS 40...



Wilo-Drain WS 40
e.g. WS 40E/MTS 40/...



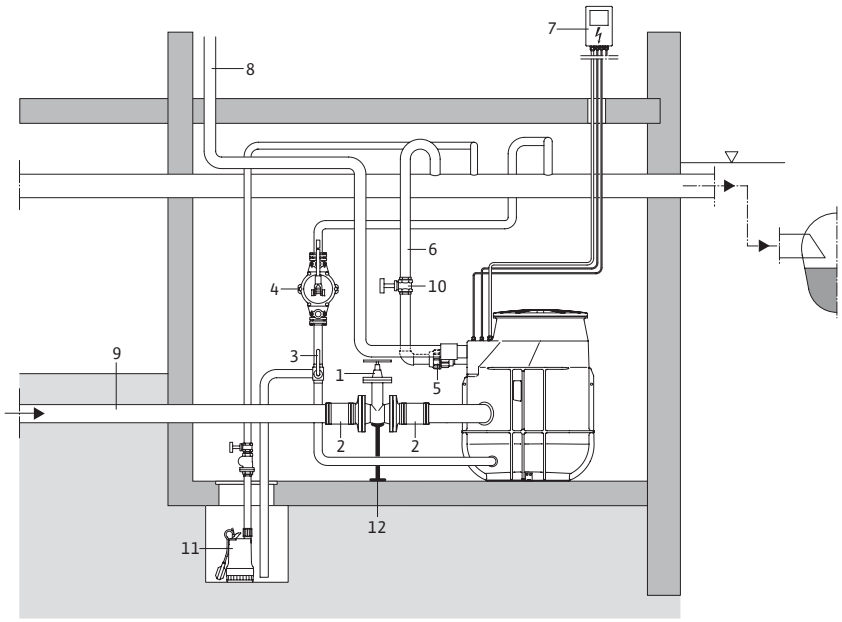
Wilo-Drain WS 50
e.g. WS 50E/TP 65...



Installation examples Wilo-DrainLift WS 40-50

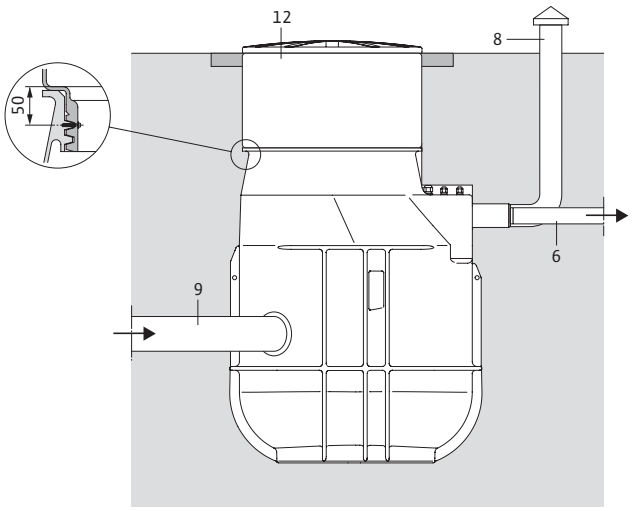
Installation examples

Floor-mounted installation



- ∇ Backflow level (generally street level)
- 1 Gate valve DN 100 (accessories)
- 2 Single-ended flanged nipple DN 100 (accessories)
- 3 3-way spigot (accessories)
- 4 Diaphragm hand pump (accessories)
- 5 Clamp bolting (accessories)
- 6 Pressure pipe for the main collection line.
- 7 Wilo-Drain switchgear (see electrical accessories)
- 8 Ventilation (connection DN 70)
- 9 Feed line (DN 100 connection)
- 10 Gate valve (accessories)
- 11 Drainage pump (e.g. Twister)
- 12 Armature support for weight relief

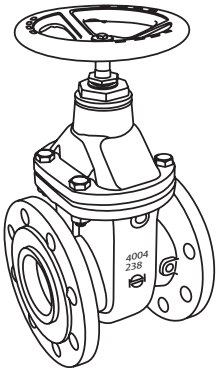
Concealed floor installation



- 6 Pressure outlet
- 8 Ventilation (connection DN 70)
- 9 Feed line (DN 100 connection)
- 12 Shaft length extension (accessories)

Mechanical accessories Wilo-DrainLift WS 40-50

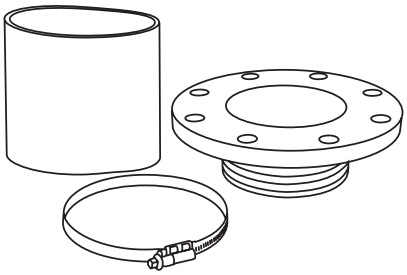
Mechanical accessories



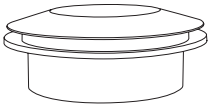
Gate valve DN 100 (Item 1)
For installation in the DN 100 feed line in accordance with applicable standards
(incl. fixation material).

(no illustration available)

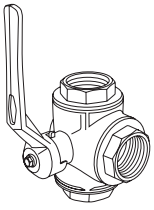
Gate valve (Item 10)
Gate valve 1 ½" or 2" for pressure outlet



Single-ended flanged nipple DN 100 (Item 2)
For connecting the gate valve DN 100 in the
Feed line



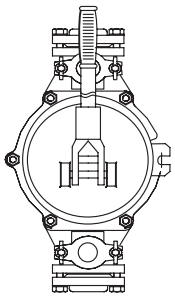
Feed seal set DN 100 (to Item 9)
Seal for pipe Ø 110 mm and hole saw (Ø 124 mm) for freely selectable intake connection on the shaft.



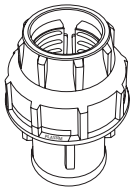
3-way spigot (Item 3)
for connecting a diaphragm hand pump for the evacuation of both the system tank and an existing pump sump

Mechanical accessories Wilo-DrainLift WS 40-50

Mechanical accessories

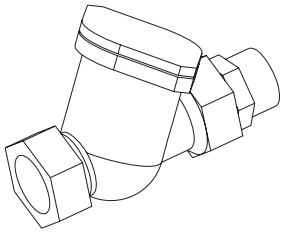


Diaphragm hand pump R 1 ½ (Item 4)
For the evacuation for the evacuation of both the system tank and an existing pump sump.

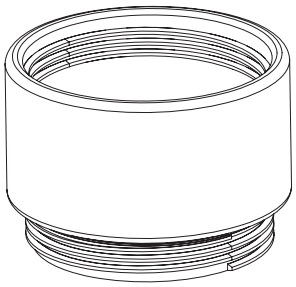


Clamp bolting (Item 5)
For connecting the WS 40-50 to a PE pressure pipe:
1½" (IG) on 50 mm outside Ø
1½" (IG) on 63 mm outside Ø
2" (IG) on 63 mm outside Ø
2" (IG) on 75 mm outside Ø

For connecting the WS 40 Basic to a PE pressure pipe*:
50 mm outside Ø on 50 mm outside Ø
50 mm outside Ø on 63 mm outside Ø
*) not required with version BV



Vacuum interrupter (Non-return valve 1")
For retrofitting in WS 40-50 when there are negative pressures in the onsite pressure pipe



Shaft length extension (Item 12)
300 mm extension with seal and fastening screws

Series description Wilo-DrainLift WS 625

Wilo-DrainLift WS 625
Synthetic pumps station

Type key
Example: **WS 625 E / 1800 MTS 40**

WS	Synthetic pumps station
625	Inside diameter of the shaft
E	Single pump shaft
1800	Shaft height
MTS 40/...	Selected pump type

Application
Wilo-DrainLift WS625 is a one-pump shaft for pumping wastewater and sewage in building engineering/building services out of rooms and areas below the backflow level (EN752). It is suitable as a connection-ready pumps station for pressurised drainage and as a pump station for drainage dewatering. The WS625 is utilised in the ground outside of the building. A timesaving, easy-installation, low-cost solution for all planners and building contractors.

Applicable pump types

TMW 32/
Slightly soiled media (free of faeces), 10 mm free ball passage.

STS 40
For severely contaminated fluids (free of faeces); 40 mm free ball passage.

MTS 40/...
For severely contaminated fluids and faeces. Standard-equipped explosion protection (only 3~ 400 V), detachable connection cable. With a spherical macerator non-susceptible to plugging that contains an internal rotating blade.

Construction
Wilo-DrainLift WS 625 is available in 4 lengths: 1200, 1500, 1800 and 2100 mm.
The shaft can be equipped not only with a standard covering that can be walked on, but also with coverings of Class A (can be walked on) or Class B/D (can be driven over).

- Maximum pressure in the pressure pipe 6 bar in conjunction with MTS40, 4 bar with other pumps
- Synthetic pumps station made of recyclable PE
- Highest degree of upward pressure reliability and inherent stability through the use of ribbing

Scope of delivery:
- PE shaft with internal pipework including 1¼" coupling sleeve
- Seal mounted for feed line DN 100 (DN 150 optional)
- Seal mounted for ventilation/electrical connection (DN100).
- Seal mounted for pressure pipe line (DN40/ Ø50).
- Installation and operating instructions.

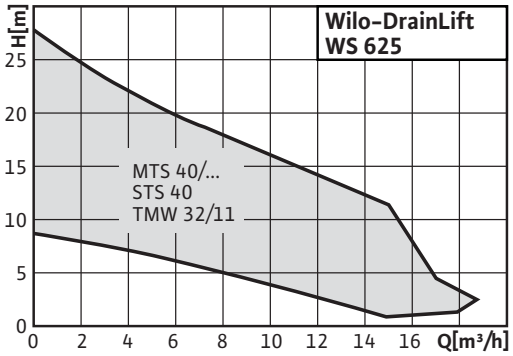
Pump, pressure pipe, switchgear and level sensor are all freely selectable as accessories.

Recommendations for electrical accessories are described in the "Electrical accessories Wilo-Drain" Chapter.

Pump curves, Dimensions Wilo-DrainLift WS 625

Wilo-DrainLift WS 625

Duty chart for applicable Wilo-Drain (50 Hz) pump types

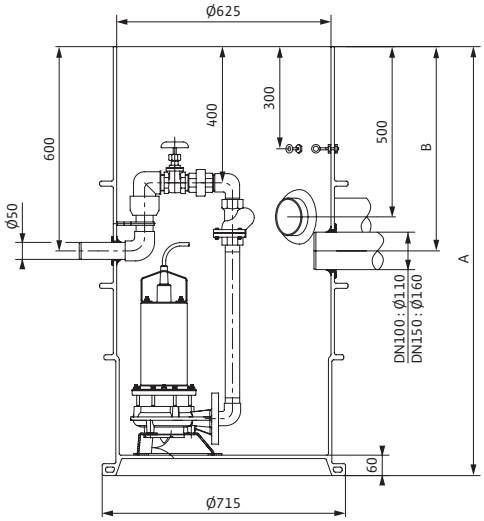


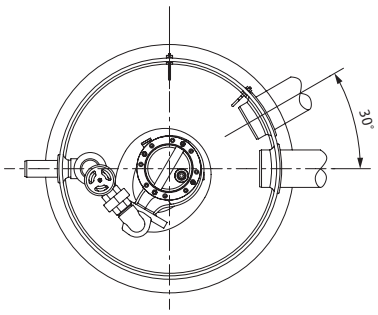
For individual pump curves, see the Technical Data for the selected pump.

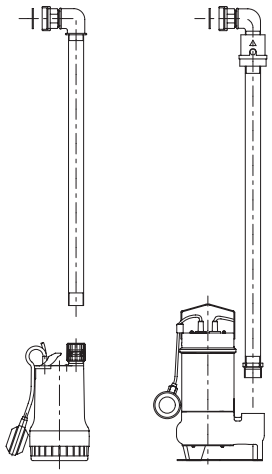
In accordance with EN 12056-4, a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Dimension drawing

Wilo-DrainLift WS 625 E/1200







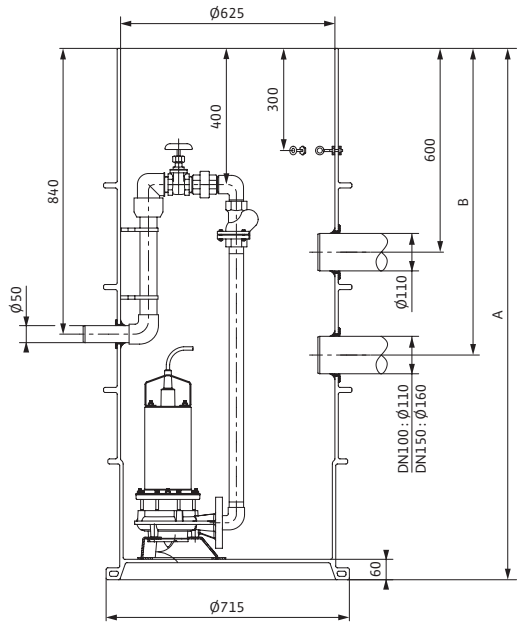
TMW 32/11

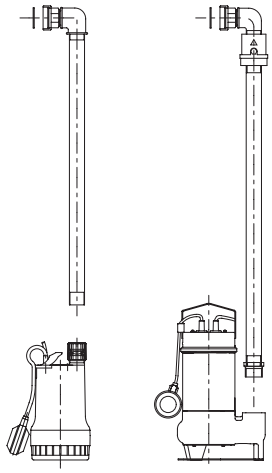
STS 40

Dimensions Wilo-DrainLift WS 625

Dimension drawing

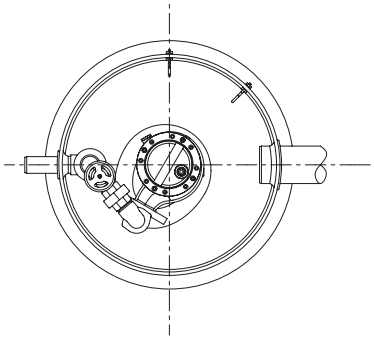
Wilo-DrainLift WS 625 E/1500-2100...





TMW 32/11

STS 40



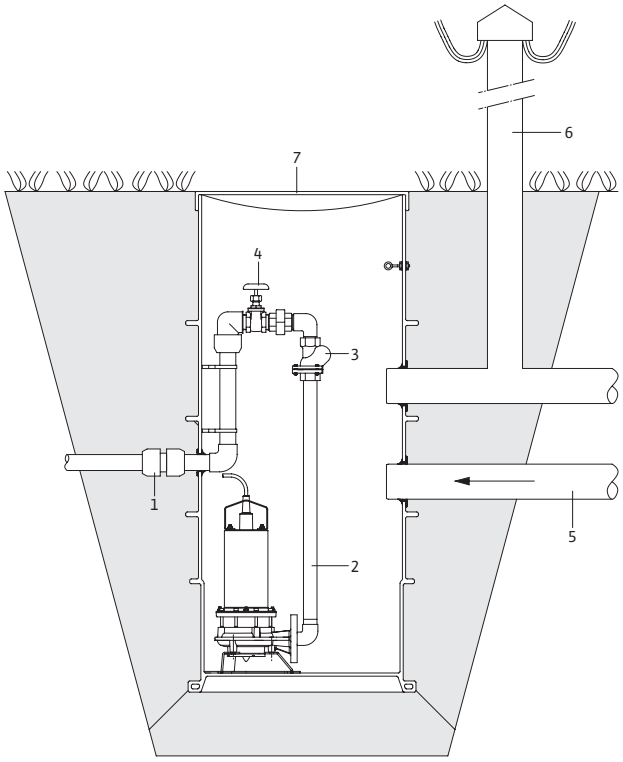
Dimensions

Wilo-DrainLift ...	Dimensions		
	A [mm]	B [mm]	
		DN 100	DN 150
WS 625 E / 1200	1260	600	552
WS 625 E / 1500	1560	900	852
WS 625 E / 1800	1860	1200	1152
WS 625 E / 2100	2160	1800	1452

Installation example Wilo-DrainLift WS 625

Installation example

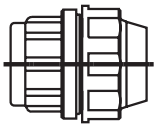
Concealed floor installation: WS 625



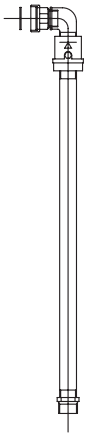
1 Clamp bolting (accessories)
2 Pressure pipe (accessories, incl. non-return valve Item 3)
3 Non-return valve R1 ¼
4 Gate valve 1 ¼" (scope of delivery)
5 Feed line DN 100 (DN 150)
6 Ventilation DN 100
7 Shaft covering (accessories)

Mechanical accessories Wilo-DrainLift WS 625

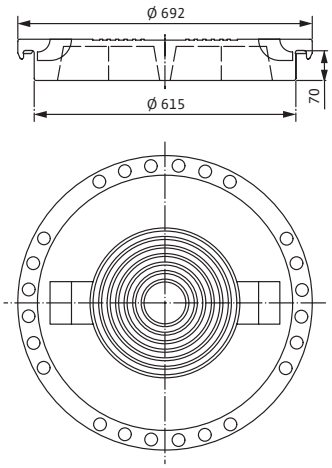
Mechanical accessories



Terminal threads (Item 1)
For pressure pipe connection outside the shaft
50 mm outside Ø on 50 mm outside Ø
50 mm outside Ø on 63 mm outside Ø



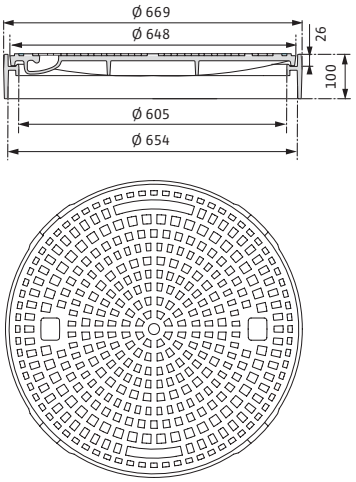
Pressure pipe (Pos. 2) including non-return valve R1 ¼ (Item 3)
In accordance with the selected pump.
The non-return valve is built into the pump with the TMW 32/11



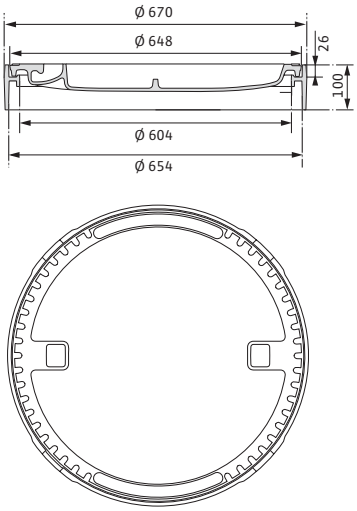
Shaft covering (Item 7)
Shaft covering, Standard made of PE,
can be walked on

Mechanical accessories Wilo-DrainLift WS 625

Mechanical accessories



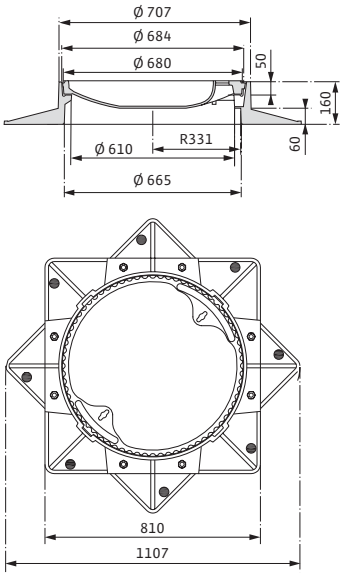
Shaft covering, Class A (EN 124) (Item 7),
can be walked on



Shaft covering, Class B (EN 124) (Item 7),
can be driven over (125 kN)

Mechanical accessories Wilo-DrainLift WS 625

Mechanical accessories



Shaft covering, Class D (EN 124) (Item 7)
can be driven over (400 kN)

Series description Wilo-DrainLift WS 900/1100

Wilo-DrainLift WS 900/1100
Synthetic pumps station

Type key
Example: **WS 900 E/ MTS 40**

WS	Synthetic pumps station
900	Diameter shaft
	900 = 900 mm
	1100 = 1100 mm
E	E = individual pump
	D = twin-head pump
MTS 40	Selected pump type

Application
Wilo-DrainLift WS 900/1100 is a one-pump/double-pump shaft for pumping wastewater and sewage in building engineering/building services out of rooms and from areas below the backflow level (EN752).
It is suitable as a connection-ready pumps station for pressurised drainage and as a pump station for drainage dewatering.
Die WS 900/1100 is utilised in the ground outside of the building. A timesaving, easy-installation, low-cost solution for all planners and building contractors.

Applicable pump types

TS 40
Slightly soiled media (free of faeces), 10 mm free ball passage, detachable connection cable.

TP 50
For severely contaminated fluids (free of faeces); 44 mm free ball passage, detachable connection cable.

TP 65
For severely contaminated fluids (free of faeces); 44 mm free ball passage, detachable connection cable.

TP 80
For severely contaminated fluids and faeces; 78 mm free ball passage. Standard-equipped explosion protection, detachable connection cable (only when used as a single pump station).

STS 80
For severely contaminated fluids and faeces; 78 mm free ball passage, detachable connection cable

MTS 40
For severely contaminated fluids and faeces. Standard-equipped explosion protection (only 3~400 V), detachable connection cable.
With patented macerator:
- internal rotating blade
- spherically formed macerator
- absolutely reliable

Construction
- Maximum live load 5 kN/m² (in accordance with DIN EN 124, Group 1)
- Maximum pressure in the pressure pipe 6 bar
- Synthetic pumps station made of recyclable PE
- Highest degree of upward pressure reliability through the use of 2/4 (WS 900 = 2 pcs., WS 1100 = 4 pcs.) standard-equipped lateral fins (no concrete rings necessary)
- 2/4 Feed lines can be selected onsite
- Highest degree of stability through moulded hemispherical shape of the shaft floor
- Wilo-Above-water coupling
- 2 DN 100 connection pieces for ventilation and connection cable
- Deposit-free collector room thanks to moulded hemispherical form of the pump sump
- Ready accessibility of the level sensor, thanks to installation with hinged supporting bar

Scope of delivery
- Pipework made of stainless steel, from the pump pressure joints to approximately 10 cm outside the shaft
- Above-water coupling system including seals
- Non-return valve, gate valve completely mounted
- Flushing connection G $1^1/_2$
- Stainless steel chain including fixing hook
- Supporting bar for level monitoring (level sensor, float switch) including mounting accessories
- Installation and operating instructions
  Double pump units are supplied with respectively double quantities of above-water couplings and fittings.
- Coupling material for two DN 150 KG intake pipes
- Installation and operating instructions

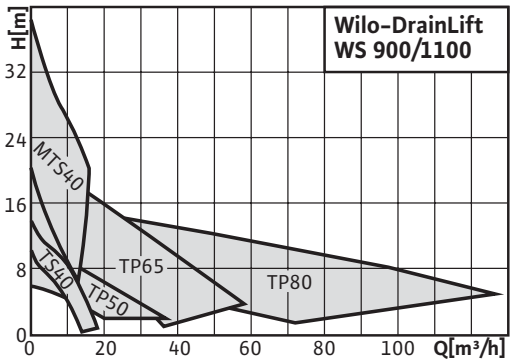
Technical Data Wilo-DrainLift WS 900/1100

	Wilo-DrainLift WS 900 with pump					Wilo-DrainLift WS 1100 with pump						
	TS 40		TP 50	TP 65	MTS 40	TP 50		TP 65		TP 80	MTS 40	
	Single	Double	Single	Single	Single	Double	Single	Double	Single	Single	Single	Double
Total volume [l]	890	880	890	890	880	1230	1230	1230	1220	1220	1215	1220
Backed-up volume [l] (invert to OK feed line)	300	290	300	300	290	550	540	550	540	520	535	510
Switching volume [l] max.	150	110	140	130	150	270	200	250	200	200	280	250
Feed line [DN]	150	150	150	150	150	150	150	150	150	150	150	150
Pressure outlet	1 1/2"	1 1/2"	2"	2 1/2"	1 1/2"	2"	2"	2 1/2"	2 1/2"	DN 80	1 1/2"	1 1/2"
Ventilation/cable [DN]	100	100	100	100	100	100	100	100	100	100	100	100
Non-return valve GG25	1 1/2"	1 1/2"	2"	2 1/2"	1 1/2"	2"	2"	2 1/2"	2 1/2"	DN 80	1 1/2"	1 1/2"
Gate valve made of material	1 1/2" red bronze	1 1/2" red bronze	2" red bronze	2 1/2" red bronze	1 1/2" red bronze	2" red bronze	2" red bronze	2 1/2" red bronze	2 1/2" red bronze	DN 80 GG25	1 1/2" red bronze	1 1/2" red bronze
Weight [kg]	70	95	73	75	72	95	113	97	115	125	94	110

Pump curves, Dimensions Wilo-DrainLift WS 900, WS 1100

Wilo-DrainLift WS 900/1100

Duty chart for applicable Wilo-Drain (50 Hz) pump types

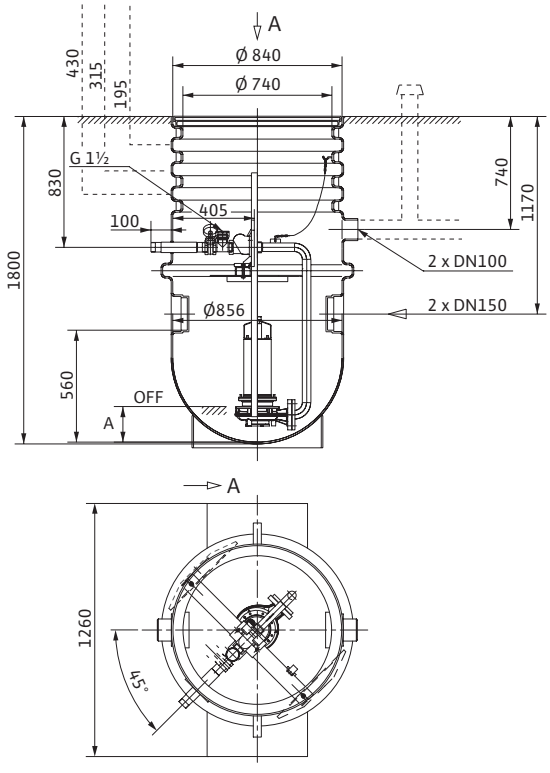


For individual pump curves, see the Technical Data for the selected pump.

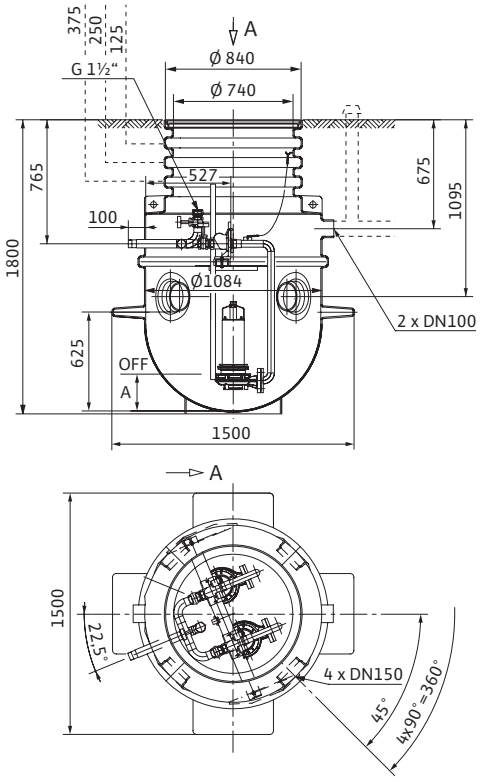
In accordance with EN 12056-4, a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be maintained.

Dimension Drawings

Wilo-DrainLift WS 900 – Dimensions for shaft length reductions single pump station



Wilo-DrainLift WS 1100 – Dimensions for shaft length reductions double pump station

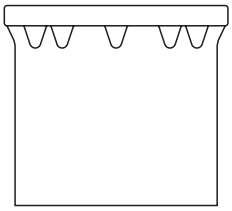


Dimensions

	Wilo-DrainLift WS 900 with pump					Wilo-DrainLift WS 1100 with pump						
	TS 40		TP 50	TP 65	MTS 40	TP 50		TP 65		TP 80	MTS 40	
	Single	Double	Single	Single	Single	Double	Single	Double	Single	Single	Single	Double
High pump "Stop" Dimension A [mm]	200	354	220	285	200	230	310	260	360	330	220	260

Mechanical accessories Wilo-DrainLift WS 900, WS 1100

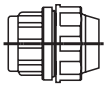
Mechanical accessories



Shaft length extension made of PE
(Ø 730 x 800 mm), including mounting accessories, seal and supporting bar extension for level sensor (special lengths on request). Extensions are **not** to be connected with one another. A maximum of 1 extension per shaft is possible.

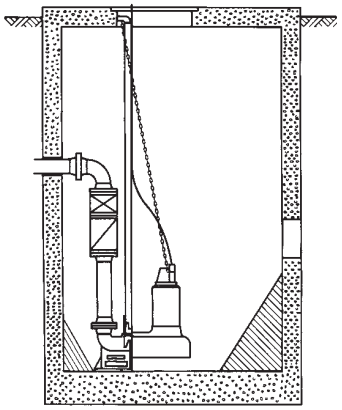
Shaft covering made of PE
"Standard" Ø 830 mm, including non-slip profile on the upper side and two internal locks, can be walked on

Shaft covering made of PE
"Safe from flooding" Ø 960 x 100 mm, including non-slip profile on the upper side and six exterior locking mechanisms made of stainless steel, can be walked on



Clamp bolting made of PE
for pressure pipe connection outside the shaft
- $1^1/_2$"(Rp (IG)) on 50 mm outer Ø
- $1^1/_2$"(Rp (IG)) on 63 mm outer Ø
- 2" Rp (IG)) on 63 mm outer Ø

Pumps station Concrete



Pumps stations

Wastewater and sewage pumping stations

Contents

Electrical accessories Wilo-Drain

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Recommended accessories

	Wilo-EC-Drain [1]	Wilo SK 530 [2]	Wilo-Drain-Control PL1 [1]	Wilo-Drain-Control PL1 WS [1]	Wilo-Drain-Control PL2 [2]	Wilo-Drain-Control PL2 WS [2]	Wilo-Drain-Control 1 [1]	Wilo-Drain-Control 2 [2]
Lifting units								
Wilo-DrainLift Con	–	–	–	–	–	–	–	–
Wilo-DrainLift TMP	–	–	–	–	–	–	–	–
Wilo-DrainLiftBox	–	◦	–	–	–	–	–	–
Wilo-DrainLift KH 32	–	–	–	–	–	–	–	–
Wilo-DrainLift S	–	–	–	–	–	–	–	–
Wilo-DrainLift M	–	–	–	–	–	–	–	–
Wilo-DrainLift L	–	–	–	–	–	–	–	–
Wilo-DrainLift XL	–	–	–	–	–	–	–	–
Wilo-DrainLift XXL	–	–	–	–	–	–	–	–
Pumps stations								
Wilo-DrainLift WS 40 Basic	–	–	–	–	–	–	–	–
Wilo-DrainLift WS 40-50	–	–	◦	•	◦	•	–	–
Wilo-DrainLift WS 625	–	–	◦	•	◦	•	◦	◦
Wilo-DrainLift WS 900 / 1100	–	–	◦	•	◦	•	◦	◦

• = recommended, ◦ = optional, – = not required
[1] Switchgear for 1 pump, [2] switchgear for 2 pumps

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Recommended accessories

	Wilo KAS	Wilo-Drain-Alarm 2	Wilo-Alarm-Control 1	Wilo-Alarm - Control 2	Motor protection plug CEE	Level sensor	Float switchMS1	Float switch WA
Lifting units								
Wilo-DrainLift Con	–	–	–	–	–	–	–	–
Wilo-DrainLift TMP	–	–	o	•	–	–	–	–
Wilo-DrainLiftBox	o	o	o	•	–	–	–	o
Wilo-DrainLift KH 32	–	–	o	•	–	–	–	–
Wilo-DrainLift S	o	o	o	o	–	–	–	–
Wilo-DrainLift M	–	–	–	–	–	–	–	–
Wilo-DrainLift L	–	–	–	–	–	–	–	–
Wilo-DrainLift XL	–	–	–	–	–	–	–	–
Wilo-DrainLift XXL	–	–	–	–	–	–	–	–
Pumps stations								
Wilo-DrainLift WS 40 Basic	o	o	o	o	–	–	–	o
Wilo-DrainLift WS 40-50	o	o	o	o	–	•	o	o
Wilo-DrainLift WS 625	o	o	o	o	–	•	o	o
Wilo-DrainLift WS 900 / 1100	o	o	o	o	–	•	o	o

• = recommended, ◦ = optional, – = not required

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Recommended accessories

	Dynamic pressure system	Bubbling-through system	Ex-uncoupling relay	Breakdown barrier	Switch cabinet	Flash light	Signal horn
Lifting units							
Wilo-DrainLift Con	–	–	–	–	–	o	o
Wilo-DrainLift TMP	–	–	–	–	–	o	o
Wilo-DrainLiftBox	–	–	–	–	–	o	o
Wilo-DrainLift KH 32	–	–	–	–	–	o	o
Wilo-DrainLift S	–	–	–	–	–	o	o
Wilo-DrainLift M	–	–	–	–	–	o	o
Wilo-DrainLift L	–	–	–	–	–	o	o
Wilo-DrainLift XL	–	–	–	–	–	o	o
Wilo-DrainLift XXL	–	–	–	–	–	o	o
Pumps stations							
Wilo-DrainLift WS 40 Basic	–	–	–	–	o	o	o
Wilo-DrainLift WS 40-50	–	–	o	o	o	o	o
Wilo-DrainLift WS 625	o	o	o	o	o	o	o
Wilo-DrainLift WS 900 / 1100	o	o	o	o	o	o	o

• = recommended, ◦ = optional, – = not required

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Equipment/Function

		Wilo-EC-Drain	Wilo SK 530	Wilo-DrainControl PL 1/PL 1 WS	Wilo-DrainControl PL 2/PL 2 WS	Wilo-DrainControl 1	Wilo-DrainControl 2	Wilo KAS
Application								
Switchgear for pump control		•	•	•	•	•	•	–
Alarm switchgear		–	–	–	–	–	–	•
Number of pumps to be controlled		1	2	1	2	1	2	–
Electrical connection								
Direct activation [A]		max. 12	max. 2 x 8	max. 12	max. 2 x 12	max. 10	max. 2 x 10	–
Star/delta switching		–	–	–	–	> 10 A	> 10 A	–
Construction								
Microprocessor-controlled		–	–	•	•	•	•	–
Electronic		•	•	–	–	–	–	•
Housing material								
Plastic		•	•	•	•	•	•	•
Metal		–	–	–	–	–	–	–
Equipment								
Test run		–	–	•	•	–	–	–
Pump starts counter/impulse counter		–	–	•	•	–	–	–
LCD display		–	–	•	•	•	•	–
LED control lamp		•	•	•	•	•	•	–
Main switch		•	–	• (only with PL 1 WS)	• (only with PL 2 WS)	•	•	–
Ampere display		–	–	•	•	•[2]	•[2]	–
Voltmeter		–	–	–	–	–	–	–
Adjustable after-running time		–	–	•	•	•	•	–
Operating hours counter		–	–	•	•	•	•	–
Level-registering	Float switch	•	•[3]	•[3]	•[3]	•[3]	•[3]	–
	Pneumatic pressure sensor	–	–	•	•	–	–	–
	Level sensor (4-20 mA)	–	–	•[4]	•[4]	•[4]	•[4]	–
	Electrodes	–	–	–	–	–	–	•
Alarm	Mains-dependent	•	•	•	•	•	•	–
	Built-in (buzzer)	•	–	•	•	–	–	•
Pump duty cycling		–	•	–	•	–	•	–

[1] for other motor power ratings upon request
[2] only for direct-switch-on devices (up to 4 kW)
[3] in the Ex area only with Ex-uncoupling relay
[4] in the Ex area only with breakdown barrier

• = available, – = not available

Equipment/Function

	Wilo-EC-Drain	Wilo SK 530	Wilo-DrainControl PL 1/PL 1 WS	Wilo-DrainControl PL 2/PL 2 WS	Wilo-DrainControl 1	Wilo-DrainControl 2	Wilo KAS
Message/display function							
Collective run signal (SBM)	•	•	–	–	–	–	–
Collective fault signal (SSM)	•	•	•	•	•	•	–
Individual run signal (EBM)	–	optional	–	–	•	•	–
Individual fault signal (ESM)	–	optional	–	•	–	–	–
Control functions (motor operation monitoring)							
WSK	•	•	•	•	•	•	–
PTC	–	–	–	–	•	•	–
Impermeability (DI)	–	–	–	–	•	•	–
Electronic	•	•	•	•	• (to 10 A)	• (to 10 A)	–
Motor protection switch	–	–	optional	optional	• (starting with 10 A)	• (starting with 10 A)	–
Scope of delivery							
Float switch	–	•	–	–	–	–	–
Horn	–	•Electrical accessories Wilo-Drain	–	–	–	–	–

[1] for other motor power ratings upon request
[2] only for direct-switch-on devices (up to 4 kW)
[3] in the Ex area only with Ex-uncoupling relay
[4] in the Ex area only with breakdown barrier

• = available, – = not available

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

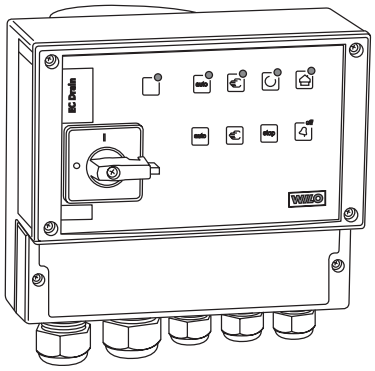
Equipment/Function

		Wilo Drain-Alarm 2	Wilo-AlarmControl 1	Wilo-AlarmControl 2	Motor protection plug CEE	Ex-uncoupling relay	Breakdown barrier	Flash light	Signal horn	Wilo SK 545
Application										
Switchgear for pump control		–	–	–	•	–	–	–	–	–
Alarm switchgear		•	•	•	–	–	–	–	–	–
Number of pumps to be controlled		–	1	1	1	–	–	–	–	2
Electrical connection										
Direct activation [A]		–	16	16	•	–	–	–	–	– External power section
Star/delta switching		–	–	–	–	–	–	–	–	– External power section
Construction										
Electronic		•	•	•	–	•	•	•	–	•
Electromechanical		–	–	–	•	–	–	–	•	–
Housing material										
Plastic		•	•	•	•	•	•	•	•	•
Equipment										
LED control lamp		•	–	–	•	•	–	–	–	•
Level-registering	Float switch	•	•	•	•	•	–	–	–	–
	Pneumatic pressure sensor	–	–	–	–	–	–	–	–	–
	Level sensor (4-20 mA)	–	–	–	–	–	•	–	–	–
	Electrodes	–	–	–	–	–	–	–	–	–
Alarm	Mains-independent	•	•	•	–	–	–	–	–	–
	Mains-dependent	•	•	•	–	–	–	–	–	–
	Built-in (buzzer)	•	•	•	–	–	–	–	–	–
Outlet 1~230 V		–	–	•	–	–	–	–	–	–
Message/display function										
Individual fault signal (ESM)		•	•	–	–	–	–	–	–	–
Control functions (motor operation monitoring)										
WSK		–	–	–	•	–	–	–	–	•
Impermeability (DI)		–	–	–	–	–	–	–	–	•
Motor protection switch		–	–	–	•	–	–	–	–	–

• = available, – = not available

Product descriptions

Switchgear Wilo-EC-Drain

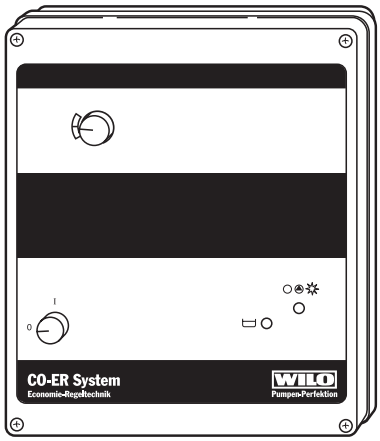


Switchgear for automatic, transmitter-dependent control of 1 wastewater/sewage submersible motor pump of the Wilo-Drain series.
- Motor protection via WSK and electronic motor protection switch
- Transmitter connection for float switch Type WA 65, WA 95
- "Manual-0-Automatic" pushbutton
- Connection for high water alarm
- Forced switch-on with high water
- Potential-free fault signal (changeover contact) and potential-free operating signal (changeover contact)

Technical Data:
- Operating voltage: 1~230 V, 3~400 V, 3~230 V
- Frequency: 50/60 Hz
- Protection Class: IP 65
- Dimensions (W x H x D): 215 x 220 x 125 mm

Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. Ex-uncoupling relays are to be provided for pump control in potentially explosive areas.

Switchgear Wilo SK 530



Switchgear for automatic, transmitter-dependent control of 2 wastewater/sewage submersible motor pump of the Wilo-Drain series.
- Switchover pump 1 – pump 2
- Motor protection via WSK or electronic motor protection switch
- Transmitter connection for float switch Type WA 65, WA 95
- Pump duty cycling
- Control switch:
  Manual-2-manual-1-0-Automatic
- Connection for high water alarm
- Potential-free fault signal (changeover contact) and potential-free operating signal (changeover contact)
- Phase failure monitoring (can be switched off)
- Optionally including three float switches, WA 65 cable length 5 m and horn 230 V (external power supply is to be provided), which are supplied in separate packaging.

Technical Data:
Operating voltage: 1~230 V, 3~400 V
Frequency: 50 Hz
Protection Class: IP 41
Dimensions (W x H x D): 228 x 265 x 74 mm

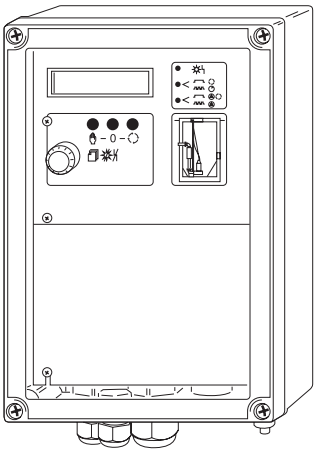
Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. Ex-uncoupling relays are to be provided for pump control in potentially explosive areas.

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Product descriptions

Switchgear Wilo-DrainControl PL 1



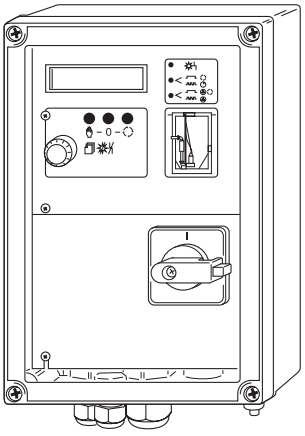
Switchgear for regulating the levels of 1 submersible pump. Level measurement can be carried out with either the bubbling-through or the dynamic pressure procedure, with float switches or electronic level sensors.

- LCD display
- LED for Alarm, Operation/After-running time, Manual/Automatic operation
- Input terminals for connecting float switches (WA 65, WA 95 or MS1) and/or for connecting a level sensor 0-1 mWs (4-20 mA)
- Potential-free contact for collective fault signal and high water alarm
- Forced switch-on of the pump
- Pump switch-off with after-running time
- Integrated buzzer
- Operating hours counter, pump starts

Technical Data:
Operating voltage: 1~230 V, 3~400 V
Frequency: 50/60 Hz
Protection Class: IP 65
Dimensions (W x H x D): 180 x 255 x 180 mm

Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

Switchgear Wilo-DrainControl PL 1 WS



Switchgear for regulating levels of 1 submersible pump in conjunction with the pumps stations Wilo-DrainLift WS... Level measurement can be carried out with either the bubbling-through or the dynamic pressure procedure, with float switches or electronic level sensors.

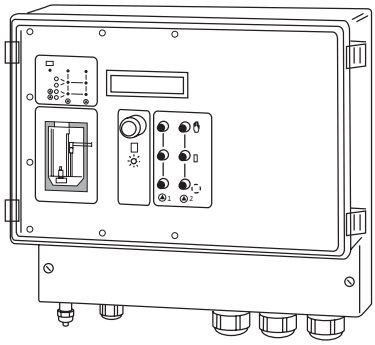
- LCD display
- LED for Alarm, Operation/After-running time, Manual/Automatic operation
- Input terminals for connecting float switches (WA 65, WA 95 or MS1) and/or for connecting a level sensor 0-1 mWs (4-20 mA)
- Potential-free contact for collective fault signal and high water alarm
- Forced switch-on of the pump
- Pump switch-off with after-running time
- Integrated buzzer
- Operating hours counter, pump starts
- Main switch
- 3~mains no neutral conductor required

Technical Data:
Operating voltage: 1~230 V, 3~400 V
Frequency: 50/60 Hz
Protection Class: IP 65
Dimensions (W x H x D): 180 x 255 x 180 mm

Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

Product descriptions

Switchgear Wilo-DrainControl PL 2



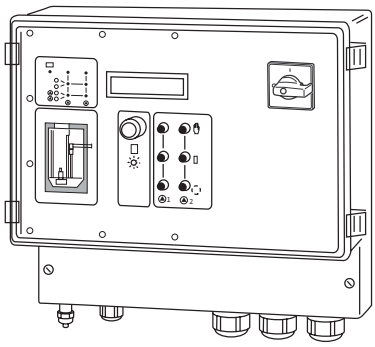
Switchgear for regulating the levels of 2 submersible pumps. Level measurement can be carried out with either the bubbling-through or the dynamic pressure procedure, by means of an electronic level sensor 0-2.5 mWs (4-20 mA) or float switches (WA 65, WA 95 or MS1).

- LCD display, multi-language switching
- LED for Alarm, Operation/After-running time, Manual/Automatic operation
- Potential-free contact for collective fault signal and high water alarm, Malfunction Pump 1, Malfunction Pump 2
- Forced switch-on of the pump
- Pump switch-off with after-running time
- Automatic fault-actuated switchover
- Integrated buzzer
- Operating hours counter, pump starts

Technical Data:
Operating voltage: 1~230 V, 3~400 V
Frequency: 50/60 Hz
Protection Class: IP 65
Dimensions (W x H x D): 320 x 300 x 120 mm

Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

Switchgear Wilo-DrainControl PL 2 WS



Switchgear for regulating the levels of 2 submersible pumps. Level measurement can be carried out with either the bubbling-through or the dynamic pressure procedure, by means of an electronic level sensor 0-1 mWs (4-20 mA) or float switches (WA 65, WA 95 or MS1).

- LCD display, multi-language switching
- LED for Alarm, Operation/After-running time, Manual/Automatic operation
- Potential-free contact for collective fault signal and high water alarm, Malfunction Pump 1, Malfunction Pump 2
- Forced switch-on of the pump
- Pump switch-off with after-running time
- Automatic fault-actuated switchover
- Integrated buzzer
- Operating hours counter, pump starts
- Main switch
- 3~mains no neutral conductor required

Technical Data:
Operating voltage: 1~230 V, 3~400 V
Frequency: 50/60 Hz
Protection Class: IP 65
Dimensions (W x H x D): 320 x 300 x 120 mm

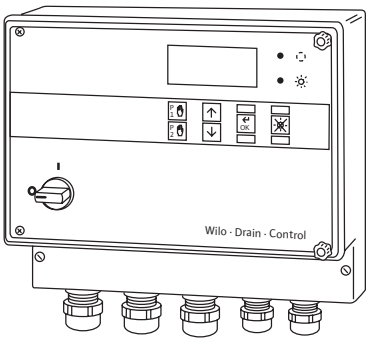
Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

Product descriptions

Switchgear Wilo-DrainControl 1/2



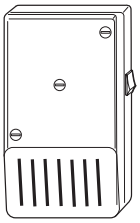
Microprocessor-controlled switchgear for fully automatic control of 1 or 2 wastewater/sewage submersible motor pumps of the Wilo-Drain series.

- Manual-0-Automatic switch using membrane keyboard
- Two-line LCD-display with 2 x 16 characters, multilingual, switchable, menu-driven operating feature via membrane keyboard
- Input terminals for connecting a level sensor
  - Standard: 0 - 2.5 mWs (4-20 mA)
  - Optional: 0 - 1 mWs (4-20 mA) or 0 - 5 mWs (4-20 mA)
- Input terminals for connecting the float switches WA 65, WA 95 or MS1
- Automatic phase failure and rotating field control
- Operating hours counter
- Pump cycling (Control 2) after each pumping procedure
- Potential-free contacts for:
  - Collective fault signal
  - Signal horn (NO contact)
  - Operation pump 1 (NO contact)
  - Operation pump 2 (NO contact) only Control 2
- Main switch
- Integrated electronic motor current monitoring
- Maximum ambient temperature 40 °C
- Housing: Plastic for wall-mounted installation
- Starting mode: Direct or Star/delta

Technical Data:
Operating voltage: 1~230 V, 3~400 V, 3~230 V
Frequency: 50 Hz
Protection Class: IP 54
Dimensions (W x H x D): model-dependent

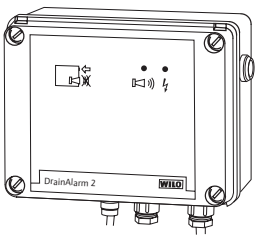
Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

Small alarm switchgear Wilo KAS



Small alarm switchgear with 70 dBA signalling tone, signal transmitter (electrode) with 3 m cable, self-charging power supply unit (power reserve approximately 5 h) in ISO plug housing (shockproof), Protection Class IP 30, 230 V~ / 9V=; 1.5 VA.

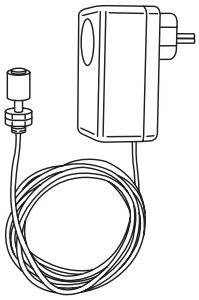
Wilo Drain-Alarm 2



Alarm switchgear for wall-mounted installation with optical and acoustic alarm signal (85dBA buzzer self-charging power supply unit, potential-free contact, ISO housing, Protection Class IP 54, 1~230 V. A Type WA float switch is required as transmitter.

Product descriptions

Alarm switchgears Wilo-AlarmControl 1/2



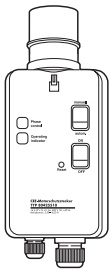
Wilo-AlarmControl 1:
Mains-independent alarm system with shockproof plug. Storage battery, acoustic alarm signal (buzzer), mini floater switch with 3 m cable mounted on the device. With potential-free contact and ISO housing IP 20.

Wilo-AlarmControl 2:
Mains-independent alarm system with shockproof plug and integrated outlet for connecting an appliance, e.g. a washing machine. Storage battery, acoustic alarm signal (buzzer), mini floater switch with 3 m cable mounted on the device. With ISO housing IP 20.

Technical Data:
- Operating voltage: 1~230 V/50 Hz
- Control voltage: 12 V DC (non-stabilised)
- Alarm contact with AlarmControl 1: potential-free NO contact, contact load max. 1 A (230 V AC)
- Contact outlet: Contact load max. 16 A (250 V AC)
- Protection Class: IP 20
- Housing: ABS
- Cable length Mini-float switch: 3 m (2x 0.75 mm²)
- Maximum ambient temperature: + 60°C
- Dimensions (W x H x D): 68 x 112 x 53 mm

Note: Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas.

Motor protection switch CEE



Motor protection switch (only up to rated motor power P_2 < 4 kW) with phase inverter and display of direction of rotation, thermal motor protection of the motor. Performance ranges:
- 2.6 – 3.7 A
- 3.7 – 5.5 A
- 5.5 – 8 A
- 8 – 11.5 A

Optional with TP 80/TP 100: assessment of thermal motor protection and leakage detection possible.

Level sensor

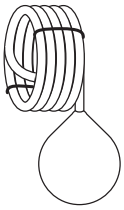
For level determination.
- Protection class 68
- Measuring range 0 - 1 m WS; 0 - 2.5 m WS
- Cable lengths 10, 30 or 50 m
- Output signal 4 - 20 mA
- ATEX-certified

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

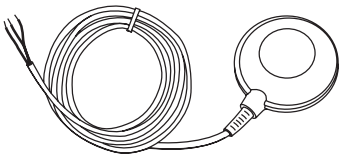
Product descriptions

Float switch MS1



Cable length 10 m, for sewage containing faeces, for connection to a Wilo-DrainControl 1 or 2.

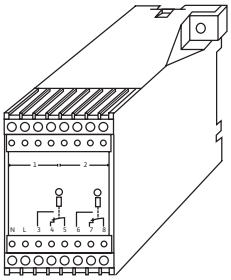
Float switch WA



Cable length 5 m, 10 m, 20 m, 30 m, switching: up ON/down OFF.

- WA 65 for media up to 60°C
- WA 95 for media up to 90°C

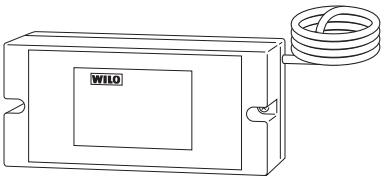
Ex-uncoupling relay



For the installation of float switches in potentially explosive areas.
Suitable for the connection of 2 to 5 float switches. Installed in an ISO housing, Protection Class IP 54, with transparent cover, for wall mounting.
Dimensions (W x H x D): 182 x 180 x 165 mm

- 2-circuit (connection of 2 float switches possible)
- 3-circuit (connection of 3 float switches possible)
- 4-circuit (connection of 4 float switches possible)
- 5-circuit (connection of 5 float switches possible)

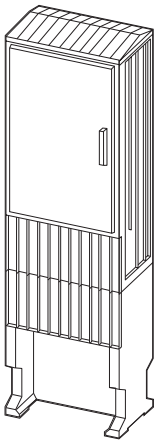
Breakdown barrier



For the installation of a level sensor in potentially explosive areas.
Suitable for the connection of a level sensor.
Protection Class IP40, housing for installation in non-explosive area.
Dimensions (W x H x D): 75 x 150 x 106 mm
1 m cable premounted.

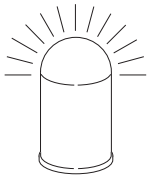
Product descriptions

Switch cabinet, outdoor installation for Wilo-DrainControl



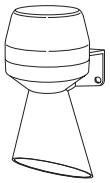
Empty housing for outdoor installation, made of fibreglass-reinforced polyester, with lock, provided with ventilation and exhaust. For pedestal mounting. Additional options such as ammeter, voltmeter, heating, etc. are available on request and can be immediately installed in the switch cabinet in conjunction with a Wilo-DrainControl, if desired (additional charge).
Dimensions (W x H x D): 590 x 875 x 320 mm

Flash light



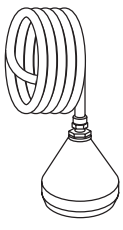
For installation on switch cabinets, outdoor installation, 230 VAC

Signal horn



For connection to Wilo-DrainControl, 230 VAC

Dynamic pressure system



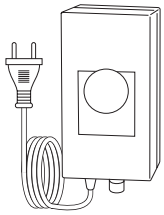
The pressure sensor (bell) detects changes in the fluid level in the shaft. The modifications of the pressure value in the bell is transmitted via a leak-proof hose to the Wilo-DrainControl PL switchgear and evaluated using measuring elements in the switchbox.
Scope of delivery: Submersion bell with 10 m hose

Electrical accessories Wilo-Drain

Wastewater and sewage lifting units, pumps stations

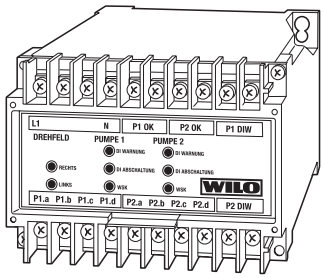
Product descriptions

Bubbling-through system



Dynamic pressure principle with compressed air permanently introduced by small compressor.
The submersion bell (dynamic pressure system) is to be ordered separately.
Scope of delivery: Small compressor 3 m hose with T-piece and flap trap

Wilo-SK Tripping unit 545



Tripping unit for the monitoring of a maximum of 2 Wilo-Submersible pumps TP 80, 100 or 150

- Installation in existing switchgears or as a module for switchgears of conventional design construction, installation on a 35 mm top-hat rail
- Monitoring of the rotating field
- Leakage detection
- Thermal monitoring (WSK)
- Operational voltage 3~400 V maximum 6 A fuse protection
- Potential-free outlet contacts maximum charge 250 V/1 A
- Dimensions (W x H x D): 100 x 72 x 113 mm

Pumpen Intelligenz.

Worldwide the name Wilo is synonymous with the tradition of first class German engineering. Our pumps and pump systems for heating, air conditioning, cooling, water supply and sewage are used in all areas of public life: in commercial buildings, communal facilities, industry as well as in private homes. In close cooperation with our customers, we have over the decades further developed our know-how from pumps and beyond to system competence. This know-how is the basis for solutions which are geared towards meeting the special needs of our customers: that is what we call Pumpen Intelligenz.

WILO

Pumpen Intelligenz.

WILO

Pumpen Intelligenz.

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