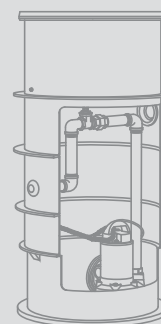
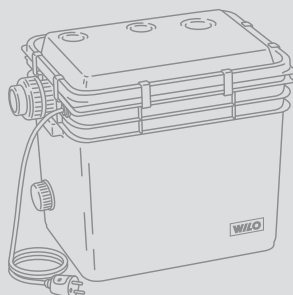
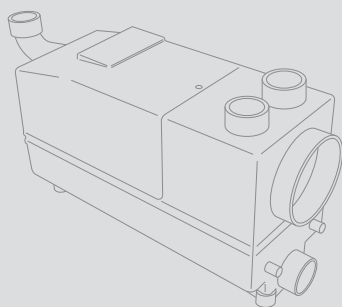


Catalogue Drainage and Sewage

# Wastewater and Sewage Lifting Units, Pumps Stations

Pump Systems  
and Accessories






Series  
Catalogue

 Wilo-Jet WJ B1	 Wilo-Sub TW5-SE PnP B1	 Wilo-SilentMaster B1	 Wilo-Sub TWU 3 B1	 Wilo-RainSystem AF Comfort B1	 Wilo-Comfort-Vario COR B4	 Wilo-Stratos ECO A1	 Wilo-Safe A1	 Wilo-Star-Z 15 TT A1	 Wilo-DrainLift Con C3	 Wilo-Stratos A1	 Wilo-Drain TM / TMW 32 Twister C1	 Wilo-DrainLift S C3
--	---	---	--	--	--	--	---	--	--	--	--	--








Series  
Catalogue

 Wilo-EMU KS C1	 Wilo-RainSystem AF 150 B1	 Wilo-Comfort-Vario COR 4 B4	 Wilo-Stratos-D A1	 Wilo-CronoLine-IL-E A2	 Wilo-TOP-Z A1	 Wilo-Stratos A1	 Wilo-CronoBloc-BL A3	 Wilo-DrainLift M C3	 Wilo-DrainLift WS C3
--	---	---	---	--	--	---	--	---	--

# Program Overview and Fields of Application

## Wastewater and sewage lifting units, pumps stations

System type	Macera- tor	Floor- mounted installa- tion	Con- cealed floor installa- tion	Main field of application						Page
										
<b>Condensate/Wastewater/Drainage</b>										<b>9</b>
Wilo-DrainLift Con	–	•	–	–	–	–	–	S/M/C		10
Wilo-DrainLift TMP	–	•	–	S	–	–	–	S		10
Wilo-DrainLift Box	–	–	•	S/M	S/M	–	–	S/M/C		10
<b>Sewage/Faeces</b>										<b>26</b>
Wilo-DrainLift KH	•	•	–	S	S	S	–	S		28
Wilo-DrainLift XS-F	–	•	–	S	S	S	–	S		28
Wilo-DrainLift S	–	•	–	S/M	S/M	S/M	–	S		28
Wilo-DrainLift M	–	•	–	S/M	S/M	S/M	C	S/M		30
Wilo-DrainLift L	–	•	–	M/C	M/C	M/C	C	M/C		30
Wilo-DrainLift XL	–	•	–	M/C	M/C	M/C	C	M/C		30
Wilo-DrainLift XXL	–	•	–	C	C	C	C	C		32
Wilo-DrainLift FTS	–	•	–	C	C	C	C	C		32
<b>Pumps stations</b>										<b>83</b>
Wilo-DrainLift WS 40-50	•	•	•	S/M/C	S/M/C	S/M/C	C	S/M/C		86
Wilo-DrainLift WS 625	•	–	•	S/M/C	S/M/C	S/M/C	C	C		86
Wilo-DrainLift WS 900/1100	•	–	•	S/M/C	S/M/C	S/M/C	C	C		86

### Legend:

- Can be used/applicable
- Cannot be used/not applicable
- S** Single- and two-family houses
- M** Multifamily houses
- C** Commercial

### Fields of application:



Wastewater/drainage



Wastewater/coarse contaminants



Sewage/faeces

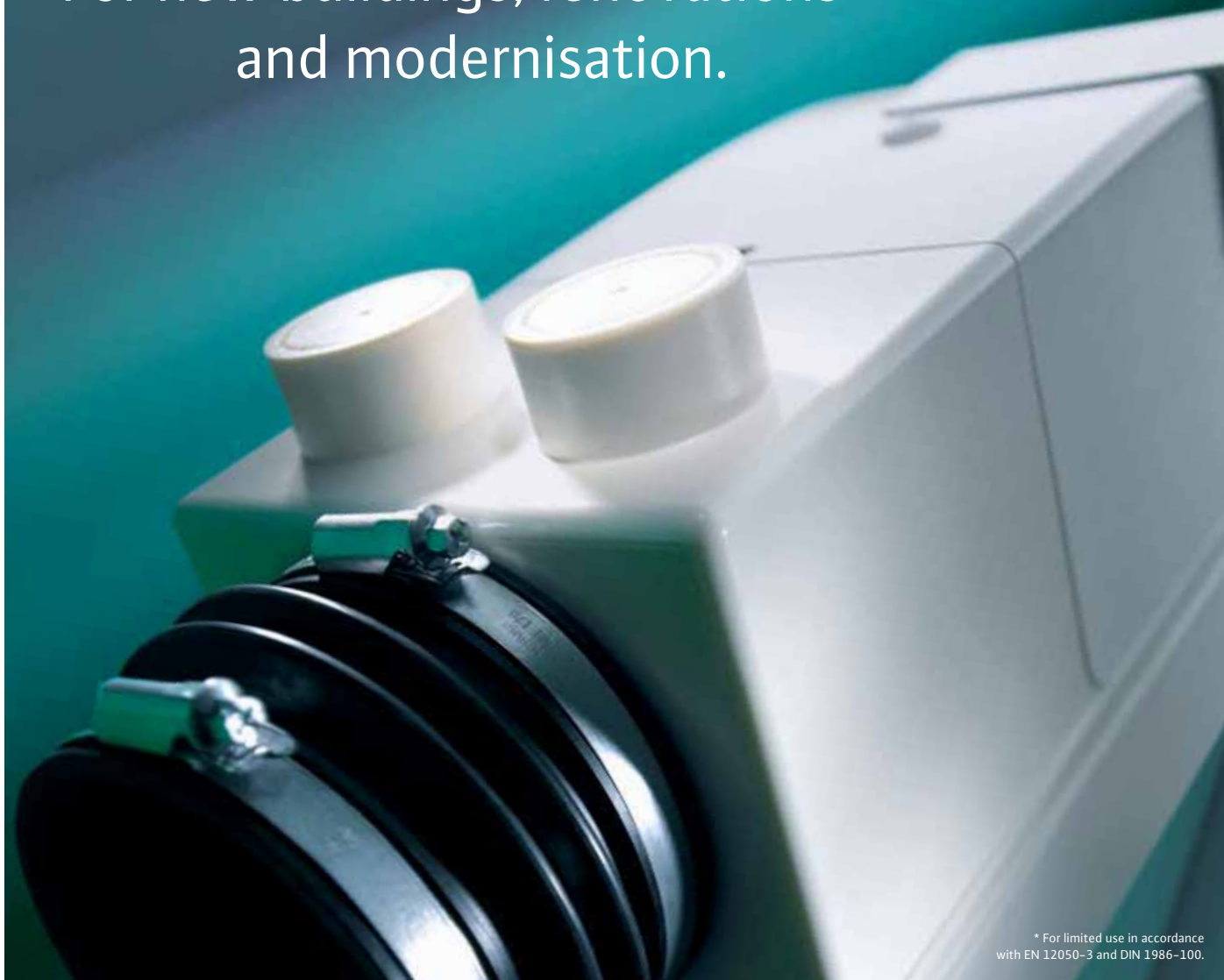


Production sewage



Condensate  
Calorific value/air-conditioning device

Automatic sewage lifting unit.\*  
For front wall installation.  
Ideal for the guest bathroom in the basement.  
For new buildings, renovations  
and modernisation.



\* For limited use in accordance  
with EN 12050-3 and DIN 1986-100.

## *Wilo-DrainLift XS-F.*

The Wilo-DrainLift XS-F is the perfect solution for complete guest bathrooms underneath the drainage pipe level, e.g., in the basement. This automatic sewage lifting unit\* is used for the disposal of sewage from wall-mounted toilets. Optionally, a wash stand, a shower and a bidet can be connected in the same room. The Wilo-DrainLift XS-F meets all requirements for a front wall installation and is thus ideally suited for new buildings, renovations and modernisation. Flexible? We call this Pumpen Intelligenz.

<b>General notes and abbreviations</b>	<b>4</b>
--	----------

<b>Planning guide</b>	<b>6</b>
-----------------------	----------

<b>Condensate/wastewater/drainage</b>	
---------------------------------------	--

<b>Contents</b>	<b>9</b>
Wilo-DrainLift Con	
Wilo-DrainLift TMP	
Wilo-DrainLift Box	

<b>Sewage/faeces</b>	
----------------------	--

<b>Contents</b>	<b>26</b>
Wilo-DrainLift KH	
Wilo-DrainLift XS-F	
Wilo-DrainLift S	
Wilo-DrainLift M, L, XL	
Wilo-DrainLift XXL	
Wilo-DrainLift FTS	

<b>Pumps stations</b>	
-----------------------	--

<b>Contents</b>	<b>83</b>
Wilo-DrainLift WS 40-50	
Wilo-DrainLift WS 625	
Wilo-DrainLift WS 900/1100	






<b>Electrical accessories Wilo-Drain</b>	
--	--

<b>Contents</b>	<b>107</b>
Recommended accessories	
Product descriptions	



# General Notes and Abbreviations

## Abbreviations and what they mean

Abbreviation	Meaning
	Operating mode of twin-head pumps: Individual operation of the respective operating pump
	Number of poles of electric motors: 2-poled motor = approx. 2900 1/min at 50 Hz
	Number of poles of electric motors: 4-poled motor = approx. 1450 1/min at 50 Hz
	Number of poles of electric motors: 6-poled motor = approx. 950 1/min at 50 Hz
	Operating mode of twin-head pumps: Parallel operation of both pumps
° d	Degree of German water hardness, unit for assessing water hardness
1/min	Revolutions per minute (rpm)
1~	1-phase alternating current
3~	3-phase alternating current
-A	Float switch attached
Autopilot	Automatic adjustment of pump performance during setback phases, e.g. boiler setback operation over-night
BA	Building automation
Cap	Capacitors
Control input 0 - 10 V	Analogue input for external control of functions
DM	3-phase AC motor
$\Delta p-c$	Control mode for constant differential pressure
$\Delta p-T$	Control mode for differential-pressure control as a function of fluid temperature
$\Delta p-v$	Control mode for variable differential pressure
$\Delta T$	Control mode for differential temperature
ECM technology	Electronically commutated motor with new wet rotor encapsulation, newly developed glandless drive concept for high-efficiency pumps
EM	1-phase AC motor
EnEV	German Energy Savings Ordinance (EnEV)
Ext. Aus	Control input "Overriding Off"
Ext. Min	Control input "Overriding Min", e.g. for setback operation without autopilot
GRD	Mechanical seal
GTW	Special cast iron: white malleable cast iron
H	Delivery head
Hz	Approval range for sprinkler pumps
IF	Interface
Installation	H = horizontal, V = vertical

Abbreviation	Meaning
Int. MS	Internal motor protection: Pumps with internal protection against unacceptably high winding temperatures
IR	Infrared interface
KTL coating	Cataphoretic painting: Paintwork with high adhesive strength for long-lasting corrosion protection
KTW	Authorisation for products with plastics, for utilisation in secondary hot water applications
LON	Local operating network (open, non-manufacturer-dependent, standardised databus system in LONWORKS networks)
MOT	Motor module (drive motor + impeller + terminal box/electronics module) for replacement in the TOP ... Series
$P_I$	Current consumption for shaft power requirement $P_w$
PLR	Pump central control, Wilo-specific data interface
PT 100	Platinum temperature sensor with a resistance of 100 $\Omega$ at 0 °C
$P_w$	Shaft power requirement
$Q (= \dot{V})$	Volume flow
Qz	Approval range for sprinkler pumps
rbc	Blocking current-proof, no motor protection
RCD	Residual-current device
RMOT	Spare motor (drive motor + impeller + terminal box/electronic module) for replacement
RV	Non-return valve
RVF	Non-return valve, spring-mounted
-S	Float switch attached
SBM	Run signal or collective run signal
SSM	Fault signal or collective fault signal
TrinkwV 2001	German Drinking Water Ordinance of 2001 (valid from 01.01.2003)
TRS	PTC thermistor sensor
TWC	Thermal winding contacts (in motor for monitoring winding temperature, full motor protection through additional tripping unit)
VDI 2035	VDI guideline for the prevention of damage in hot-water heating installations
Wilo-Control	Building automation management with pumps and accessories
WRAS	Water Regulations Advisory Scheme (secondary hot water approval for Great Britain and Northern Ireland)

## Material designations and their meaning

Material	Meaning
1.4021	Chrome steel X20Cr13
1.4057	Chrome steel X17CrNi16-2
1.4122	Chrome steel X39CrMo17-1
1.4301	Chrome nickel steel X5CrNi18-10
1.4305	Chrome nickel steel X8CrNiS18-9
1.4306	Chrome nickel steel X2CrNi19-11
1.4401	Chrome nickel molybdenum steel X5CrNiMo17-12-2
1.4408	Chrome nickel molybdenum steel GX5CrNiMo19-11-2
1.4462	Chrome nickel molybdenum steel X2CrNiMoN22-5-3
1.4541	Chrome nickel steel with titanium added X6CrNiTi18-10
1.4542	Chrome nickel steel with copper and niobium added X5CrNiCuNb16-4
1.4571	Chrome nickel molybdenum steel with titanium added X6CrNiMoTi17-12-2
Abrasite	Chilled cast iron material for use in strongly abrasive fluids
Al	Light metal material (aluminium)
Ceram	Liquid ceramic coating; Coating with very high adhesive strength for long-lasting corrosion protection
Composite	High-strength plastic material
EN-GJL	Cast iron (cast iron with lamellar graphite)
EN-GJS	Cast iron (cast iron with spheroidal graphite, also called spheroidal cast iron)
G-CuSn 10	Zinc-free bronze
GfK	Fibreglass plastic
GG	See EN-GJL
GGG	See EN-GJS
Inox	Stainless steel
NiAl-Bz	Nickel aluminium bronze
Noryl	Fibreglass-reinforced plastic
PP-GF30	Polypropylene, reinforced with 30% fibreglass
PUR	Polyurethane
SiC	Silicone carbide
ST	Steel
V2A	Material group, e.g. 1.4301, 1.4306
V4A	Material group, e.g. 1.4404, 1.4571

## 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, speed, 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](http://www.wilo.com)

# Planning Guide

## Drainage and sewage lifting units and pumps stations

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 sewer 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 this sewage, depending on the respective fluids to be conveyed.

Wilo submersible motor 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 sewer system by taking advantage of natural declines in elevation, and sewage from discharge points whose water levels in the anti-siphon 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 sewer system by means of automatically operating lifting units – Wilo sewage lifting units or Wilo submersible motor pumps.

The following details are to be observed for installation planning and construction in accordance with DIN 1986-100, EN 12050 and EN 12056, among others:

- Lifting units 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:  
Drainage 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
- Wastewater gate valves (supply and pressure sides) are to be installed 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 incline (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 $Q_p$ [l/s]:

Corresponds to the total of the incoming wastewater  $Q_S$  added to the incoming rainwater  $Q_r$ , which must be determined in accordance with EN 12050/EN 12056:

$Q_S$  = amount of wastewater [l/s] made up of the total of all sewage sources, taking into account simultaneity

$Q_r$  = 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

$H_f$  [m] in the pressure pipe.

**Note:** When selecting a lifting unit, it is necessary to take into account the fact that the pressure difference 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 (according to DIN EN 60034-1)

#### S1 = Permanent 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 year in the respective documentation.

#### S2 = Short-term operation

The motor cannot 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 max. operating period is specified in minutes, e.g. S2-15. There must be a pause until the machine temperature does not deviate by more than 2 K from the ambient temperature.

#### S3 = Intermittent duty

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 2 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

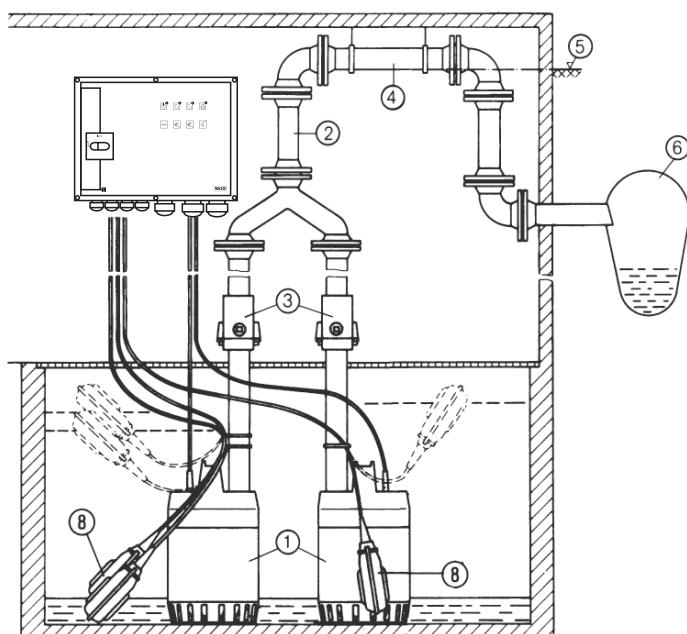
### Additional planning instructions:

See Wilo "Sewage" planning guide (must be ordered).



### Wastewater lifting unit (sewage without faeces) according to EN 12050-2

#### Double pumps – Wilo-Drain Twister



#### Double pumps–drainage station Wilo-Drain Twister

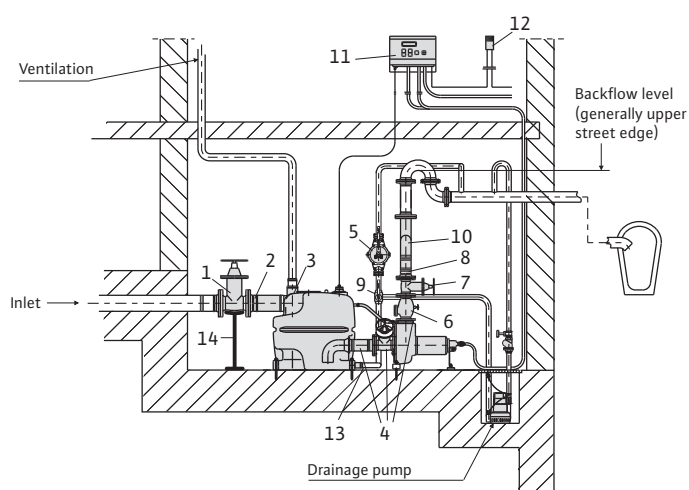
- 1 Submersible motor pump (2x)
- 2 Pressure pipe DN 32 with Y-piece
- 3 Non-return valve
- 4 Backflow loop
- 5 Backflow level
- 6 Channel
- 7 Switchgear
- 8 Float switch for monitoring levels and alarms

#### 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 sewer system.

### Drainage and sewage lifting unit (sewage with faecal content) in accordance with EN 12050-1

#### Double system – Wilo-DrainLift XXL

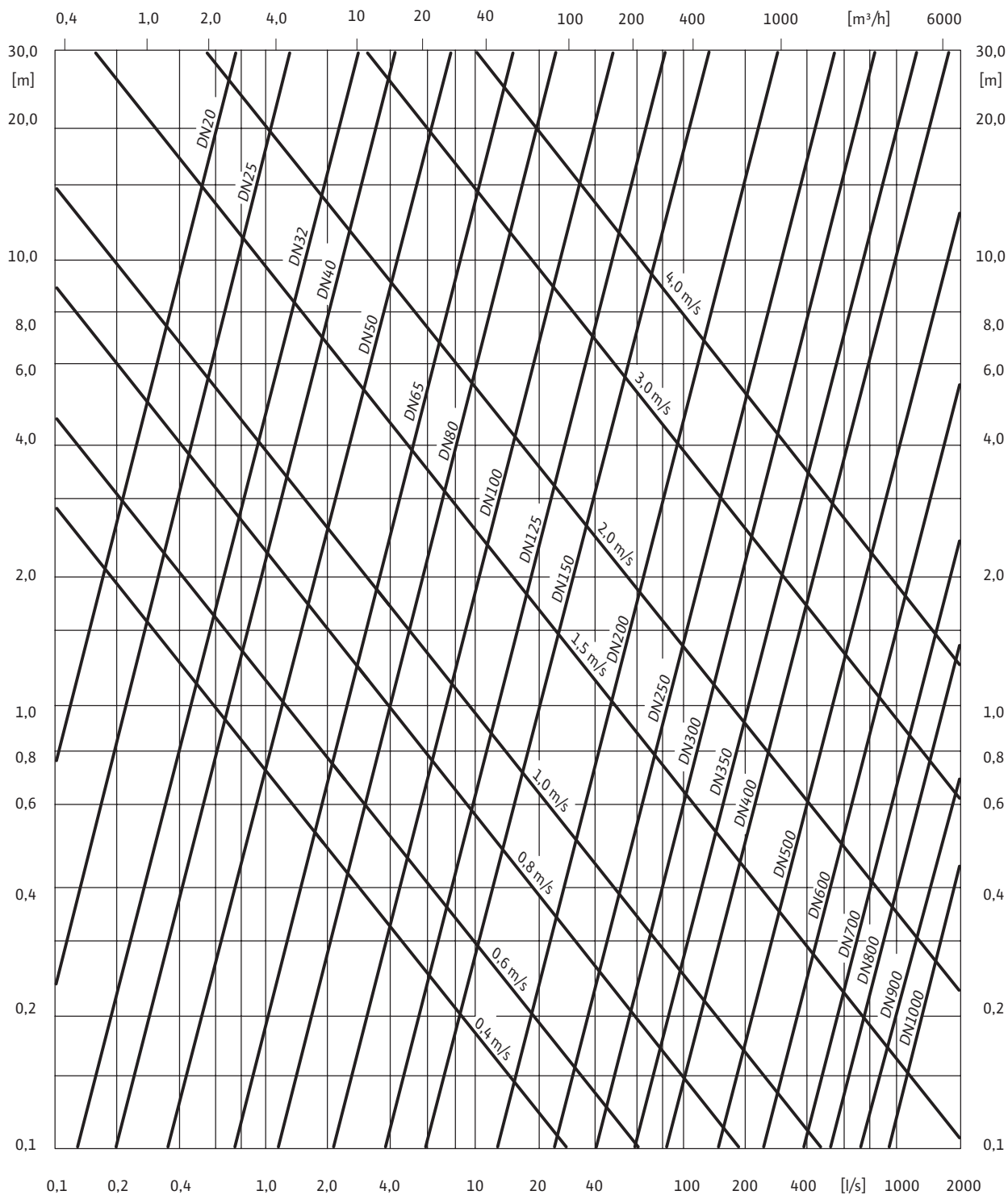


- 1 Gate valve DN 100 or DN 150
- 2 Single-ended flanged nipple with hose and hose clips DN 100 or DN 150
- 3 Elastic hose connection for ventilation
- 4 Kit containing connection between reservoir and pump, 2 gate valves and ventilation flange with hose
- 5 Diaphragm hand pump 1½"
- 6 Non-return valve 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 tap
- 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 pumps
- 14 Fitting support for weight relief

# Planning Guide

## Drainage and sewage lifting units and pumps stations

### Pressure losses in solid pipelines



## Contents

### Drainage lifting unit

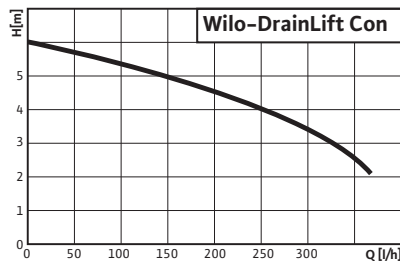
<b>Wilo-DrainLift Con, TMP, Box</b>	<b>10</b>
<b>Series overview</b>	<b>10</b>
Equipment/function Wilo-DrainLift Con, TMP, Box	12
<b>Wilo-DrainLift Con</b>	<b>13</b>
Series description	13
Technical data	14
Pump curve, dimensions	15
<b>Wilo-DrainLift TMP</b>	<b>16</b>
Series description	16
Technical data	17
Pump curves	18
Dimensions	19
Installation example	20
<b>Wilo-DrainLift Box</b>	<b>21</b>
Series description	21
Technical data	22
Pump curves	23
Dimensions	24

# Condensate/Wastewater/Drainage

## Drainage lifting unit

### Series overview Wilo-DrainLift Con, TMP, Box

#### Series: Wilo-DrainLift Con



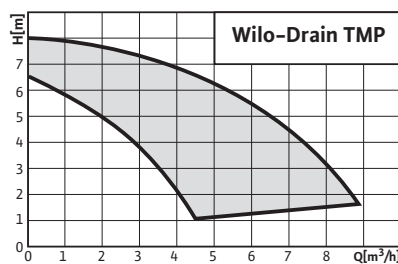
#### > Condensate lifting unit

##### > Application:

- Pumping of condensate, utilisable in
  - condensing boiler technology
  - air conditioning and refrigeration systems (such as refrigerators and evaporators)



#### Series: Wilo-DrainLift TMP



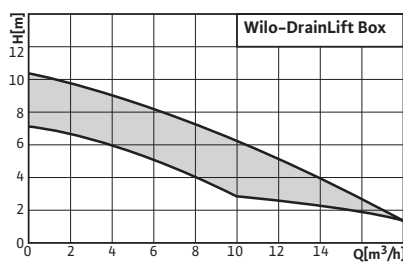
#### > Drainage lifting unit (floor-mounted installation)

##### > Application:

- Automatic drainage for showers, wash-basins, washing machines/dishwashers, etc.
- Pumping of non-aggressive rainwater, wastewater and drainage water that is free of faeces, fibres, grease and oil.



#### Series: Wilo-DrainLift Box



#### > Drainage 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 ( $\leq 43$  dB[A])
- 2 inlet openings
- Standard-equipped alarm contact (NC/NO contact)
- User-friendly installation
- The motor unit is reversible by 180°
- Variable feed lines/drains
- Suitable for condensate with a pH value of  $\geq 2.4$

##### > Additional information:

##### Page

- Equipment/function ..... 12
- Series description ..... 13
- Technical data ..... 14
- Pump curves, dimensions ..... 15

#### Series: Wilo-DrainLift TMP

##### > Product advantages

- Contemporary design
- Shower drainage is possible from a height of 110 mm (only in connection with TMP 32-0,5)
- Low-noise operation
- Service-friendly due to the built-in submersible motor pump (TMP 40)

##### > Additional information:

##### Page

- Technical data ..... 17
- Pump curves ..... 18
- Dimensions ..... 19
- Installation example ..... 20

#### Series: Wilo-DrainLiftBox

##### > Product advantages

- Easy to install due to built-in pump and non-return valve
- Large tank volume
- Easy maintenance
- Pumps with pressure pipe that can be pulled
- Stainless steel tile frame with trap

##### > Additional information:

##### Page

- Technical data ..... 22
- Pump curves ..... 23
- Dimensions ..... 24

# Condensate/Wastewater/Drainage

## Drainage lifting unit

### Equipment/function Wilo-DrainLift Con, TMP, Box

		Wilo-DrainLift ...				
		Con	TMP 32-0,5	TMP 40/8	Box 32	Box 40
<b>Sealing pumps-/motor</b>						
Fluid side:	Mechanical seal	—	—	•	•	•
Oil barrier chamber		—	—	—	•	•
<b>Construction</b>						
Pump position:	Submersible motor pump in the tank	—	•	•	•	•
Motor parts outside the tank		•	—	—	—	—
Individual pump system		•	•	•	•	•
Vortex impeller		•	•	•	•	•
Open multi-channel impeller		—	—	—	—	—
Patented turbulence apparatus		—	—	—	•	—
<b>Materials</b>						
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
<b>Equipment</b>						
Motor operation monitoring	Temperature (TWC)	—	—	•	•	•
Level control:	Float switch	•	—	•	•	•
Pneumatic pressure sensor		—	•	—	—	—
Alarm:	Mains-independent	—	—	—	—	—
Potential-free contact		•	—	—	—	—
Pump cable detachable		—	—	—	—	—
Ready-to-plug		•	•	•	•	•
Integrated non-return valve		•	•	•	•	•
Feed seal		—	—	—	—	—
Kit for pressure pipe connection		—	•	•	•	•
Fixation material		•	•	•	—	—
Active carbon filter		—	•	—	—	—
Pressure hose		•	—	—	—	—

• = available, — = not available



### Series description Wilo-DrainLift 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 worksheet 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  $\geq 2.4$  can be conveyed without any problems. For oil-fired or gas-fired boilers with an output  $> 200$  kW the lifting unit must be installed downstream from 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 inlets in the cover (19 mm or 24 mm). Hose connection on the discharge side NW 10 mm with a built-in non-return valve. The motor unit is reversible by 180°.

#### Scope of delivery

Lifting unit ready for connection with a standard-equipped alarm contact (NC/NO contact) for connection to the condensing boiler or to the 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

- Inlet adapter  $\varnothing 24$  on 25 mm,  $\varnothing 24$  on 30 mm,  $\varnothing 24$  on 40 mm
- Pressure hose 25 m length

# Condensate/Wastewater/Drainage

## Drainage lifting unit

### Technical data Wilo-DrainLift Con

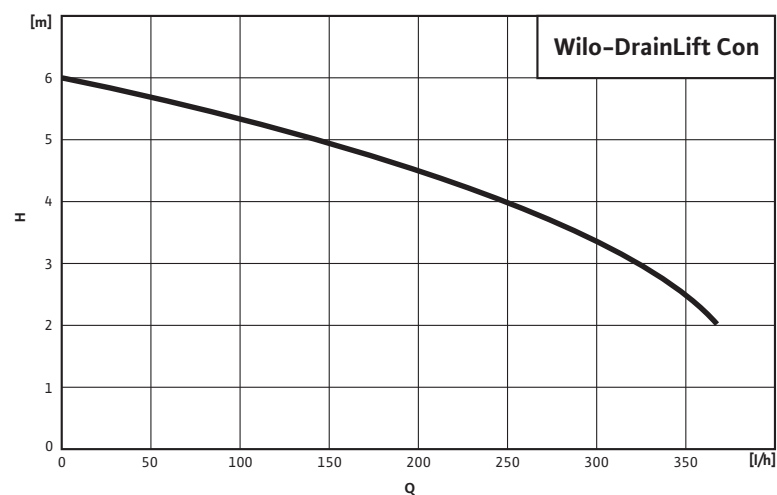
	Wilo-DrainLift Con
<b>Approved fluids</b>	
Charged condensate (pH ≥ 2.4)	•
<b>Electrical connection</b>	
Mains connection [V]	1~230
Connected load P <sub>1</sub> [kW]	0.08
Nominal current [A]	0.8
Mains frequency [Hz]	50
Cable length from plant to switchgear/plug [m]	2
<b>Permitted field of application</b>	
Operating mode	S3 - 15%
Fluid temperature, maximum [°C]	80
<b>Connections</b>	
Pressure port [mm]	12
Inlet connection [mm]	19/24
<b>Motor</b>	
Protection class	IP 20
<b>Dimensions/weights</b>	
Gross volume [l]	1.5
Weight [kg]	2

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

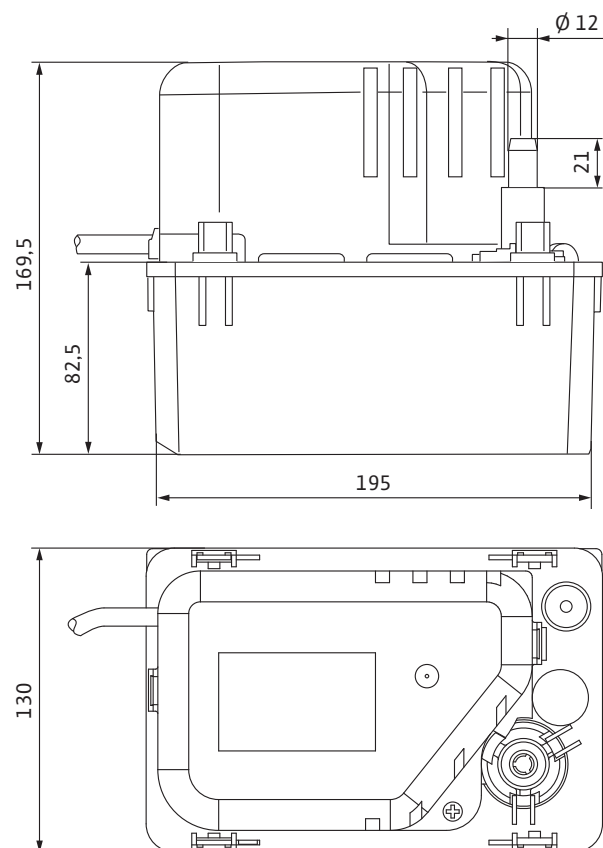
### Pump curve, dimensions Wilo-DrainLift Con

#### Wilo-DrainLift Con

2-pole, 50 Hz



#### Dimension drawing



# Condensate/Wastewater/Drainage

## Drainage lifting unit

### Series description Wilo-DrainLift TMP



#### Wilo-DrainLift TMP

Wastewater lifting unit (floor-mounted installation)

#### Type key

Example: **Wilo-DrainLift TMP 32-0,5**

<b>TMP</b>	Drainage lifting unit (floor-mounted installation)
<b>32</b>	Nominal diameter of the pressure port (DN 32 / G 1¼)
<b>- 0,5</b>	Nominal motor power [kW]

Example: **Wilo-DrainLift TMP 40/8**

<b>TMP</b>	Drainage lifting unit (floor-mounted installation)
<b>40</b>	Nominal diameter of the pressure port (DN 40)
<b>/8</b>	Maximum delivery head [m]

#### Application

Wastewater lifting unit for automatic drainage of showers, wash-basins, washing machines/dishwashers, etc., in both old and new buildings, the wastewater of which cannot be piped to the sewer system through natural inclines and/or for disposal of wastewater that is generated below the backflow level. For the pumping of non-aggressive wastewater and drainage waters that are free of faeces, fibre, grease and oil. DIN EN 12050-2 as well as DIN 1986-100 are to be observed.

#### 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 to XXL as well as FTS series.

#### Construction

Ready for connection, automatically switching wastewater lifting unit with all of the required switchgear and control mechanisms and a built-in non-return valve.

#### TMP 32

Active carbon filter with overflow protection for ventilation and exhaust, 2 DN 40 inlet connecting pieces at different height levels, DN 32 pressure port (G 1¼). Ventilation can also be carried out at roof level through the use of self-sealing plug couplers (external pipe 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.

Also available as TMP 40/11 HD for aggressive fluids.

#### Scope of delivery

Ready for connection, 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	TMP 40/8
<b>Approved fluids</b>		
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	–	–
<b>Electrical connection</b>		
Mains connection [V]	1~230	1~230
Power consumption P <sub>1</sub> [kW]	0.33	0.45
Rated motor power P <sub>2</sub> [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
<b>Permitted field of application</b>		
Operating mode	S1 (1000 h, t <sub>max</sub> 45°C) S3 - 10% (t <sub>max</sub> 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-term 3 min.	75	90
<b>Connections</b>		
Pressure port [mm]	Ø 32 (G 1¼)	Ø 40
Inlet connection [mm]	40 (2 x G 1½)	25/32/40
Ventilation [mm]	25	32
<b>Motor</b>		
Insulation class	F	F
Protection class	IP 44	IP 67
<b>Dimensions/weights</b>		
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

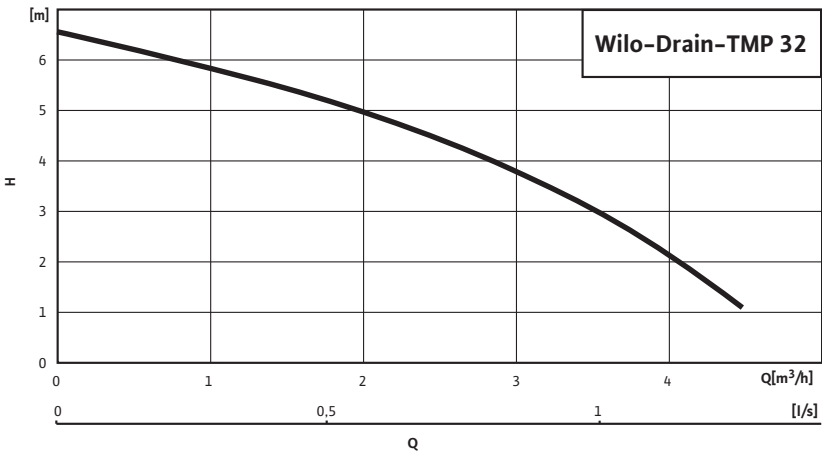
# Condensate/Wastewater/Drainage

## Drainage lifting unit

### Pump curve Wilo-DrainLift TMP

#### Wilo-DrainLift TMP 32-0,5

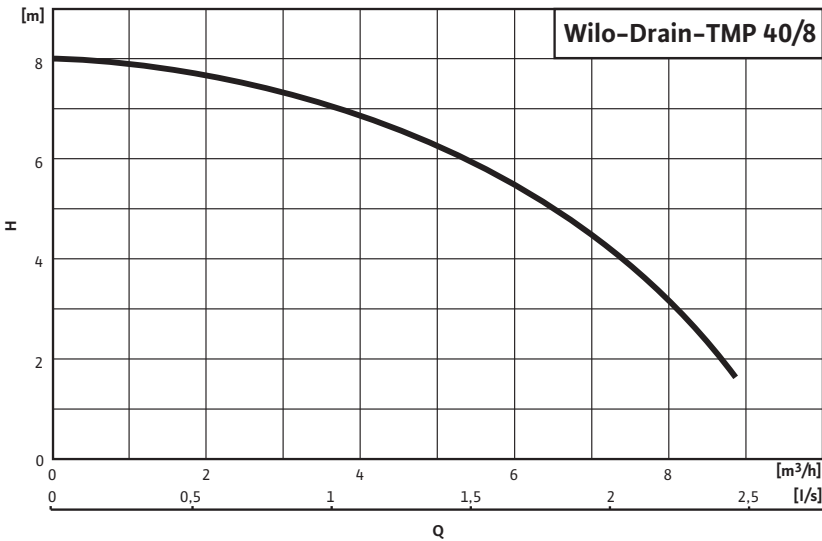
2-pole, 50 Hz



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 kept.

#### Wilo-DrainLift TMP 40/8

2-pole, 50 Hz



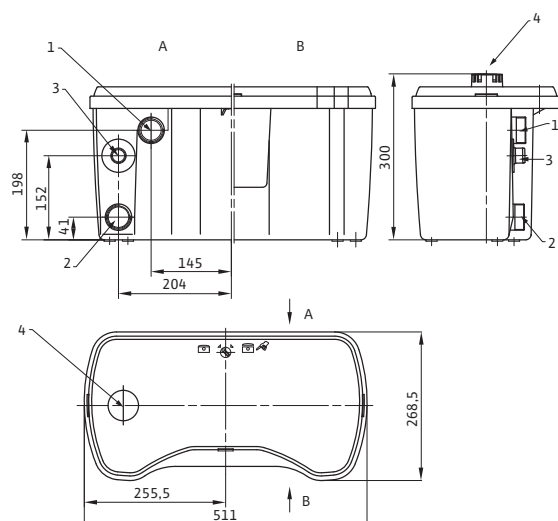
In accordance with EN 12056-4,6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be kept.



### Dimensions Wilo-DrainLift TMP

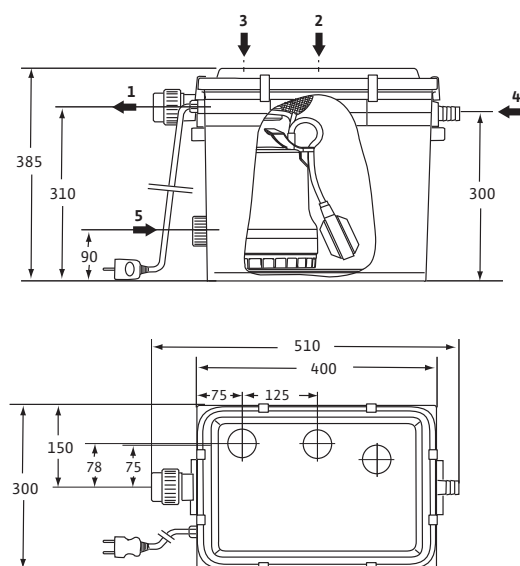
#### Dimension drawings

##### Wilo-DrainLift TMP 32-0,5



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

##### Wilo-DrainLift TMP 40/8



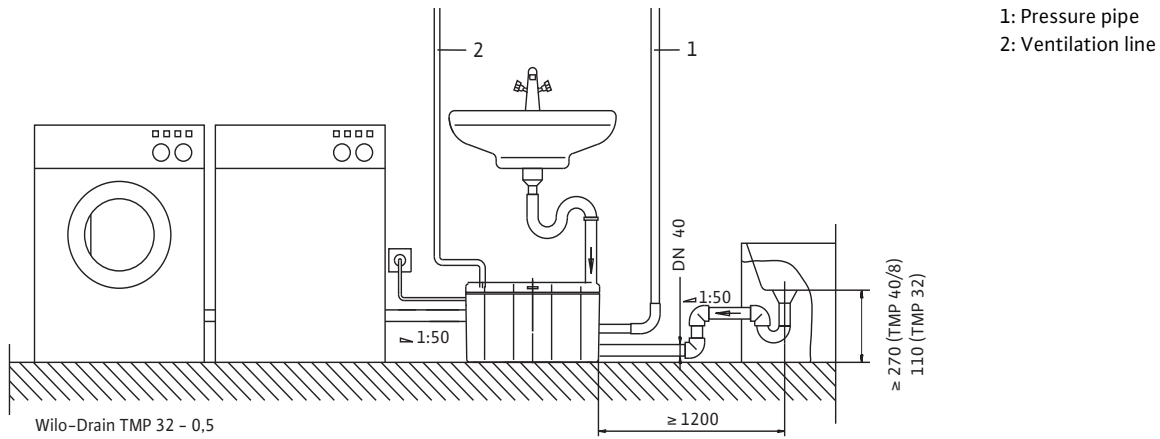
- 1 = Pressure pipe DN 40
- 2 = Ventilation DN 32
- 3 = Feed line DN 32 (wash basin)
- 4 = Feed line DN 25 (washing machine)
- 5 = Feed line DN 40 (shower)

### Drainage lifting unit

## Installation example Wilo-DrainLift TMP

## Installation example

## Wilo-DrainLift TMP 32, 40



### Series description Wilo-DrainLift Box



#### Wilo-DrainLift Box

Wastewater lifting unit (concealed floor installation)

#### Type key

Example: **Wilo-DrainLift Box 32/8**

<b>Box</b>	Drainage lifting unit (concealed floor installation)
<b>32</b>	Nominal diameter of the pressure port (DN 32, Ø 40)
<b>/8</b>	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 built-in submersible motor pump and non-return valve. Installation-ready for placement in concealed floor structures. Flexible, due to two inlet possibilities in DN 100 and a connection (DN 100) with a second tank.

#### Scope of delivery

Mounted pump ready for connection with attached float switch in impact-resistant plastic container for concealed floor installation. Completely ready for operation with pressure pipe and non-return valve already installed. Pump cable (5 m or 10 m long) with mounted shockproof plug. Installation and operating instructions.

# Condensate/Wastewater/Drainage

## Drainage lifting unit

### Technical data Wilo-DrainLift Box

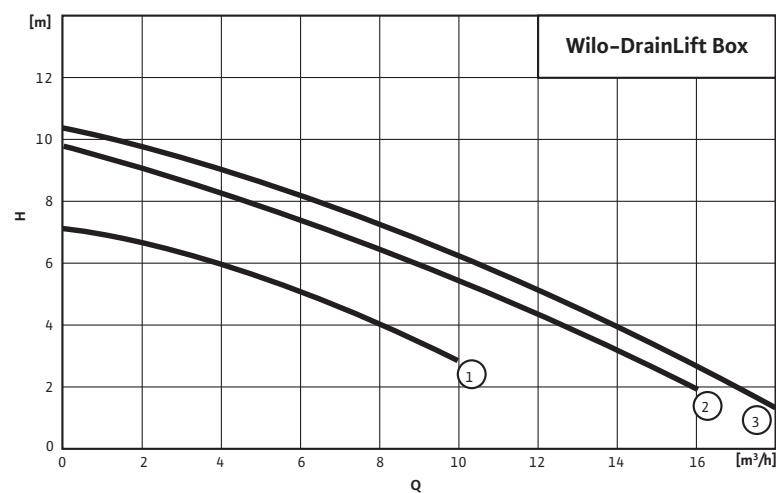
	Wilo-DrainLift...		
	Box 32/8	Box 32/11	Box 40/10
<b>Approved fluids</b>			
Domestic sewage not containing faeces	•	•	•
Domestic sewage containing faeces	–	–	–
Washing machine soap and water mixture (without long-fibre constituents)	•	•	•
Shower and bath water, unchlorinated	•	•	•
Charged condensate	–	–	–
<b>Electrical connection</b>			
Mains connection [V]	1~230	1~230	1~230
Power consumption P <sub>1</sub> [kW]	0.45	0.75	0.94
Rated motor power P <sub>2</sub> [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
<b>Permitted field of application</b>			
Operating mode	S3 –25%	S3 –25%	S3 –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-term 3 min.	90	90	–
<b>Connections</b>			
Pressure port [mm]	Ø 40	Ø 40	Ø 40
Inlet connection [mm]	100	100	100
Ventilation [mm]	100	100	100
<b>Motor</b>			
Insulation class	F	F	B
Protection class	IP 67	IP 67	IP 67
<b>Dimensions/weights</b>			
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



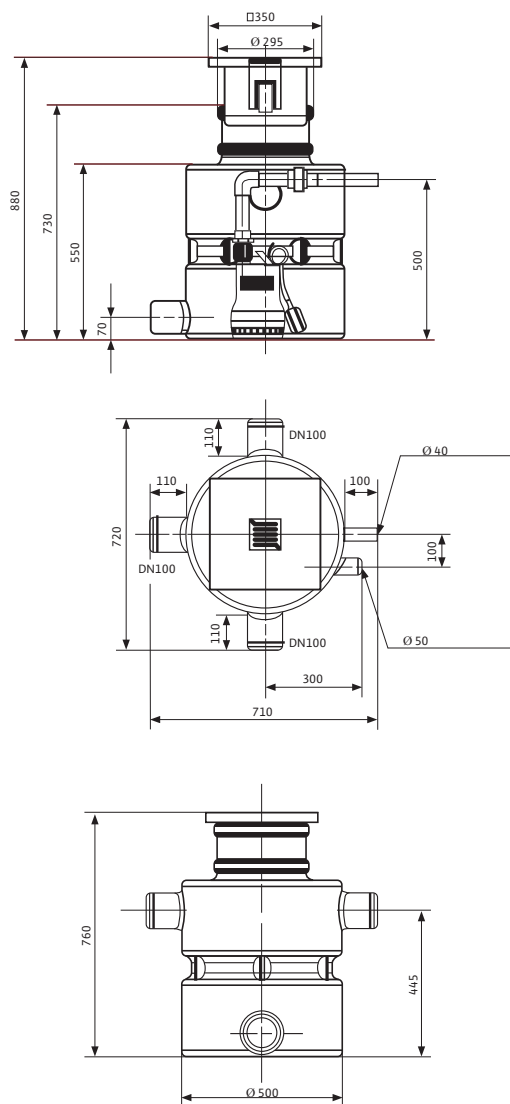
- 1 = DrainLift Box 32/8
- 2 = DrainLift Box 32/11
- 3 = DrainLift Box 40/10

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 kept.

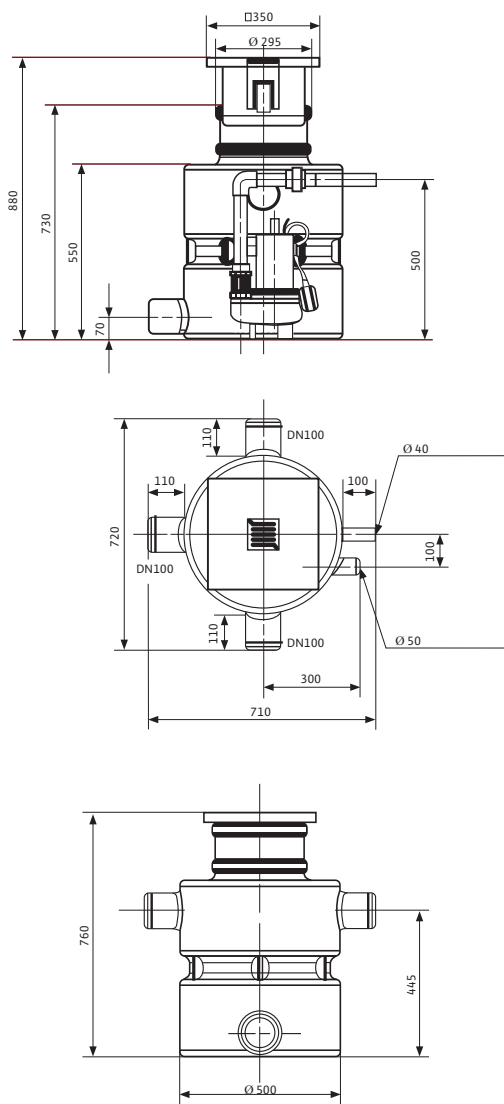
### Drainage lifting unit

### Dimension drawings

## DrainLift Box 32



## DrainLift Box 40





Automatic sewage lifting unit.\*  
For front wall installation.  
Ideal for the guest bathroom in the basement.  
For new buildings, renovations  
and modernisation.



\* For limited use in accordance with EN 12050-3 and DIN 1986-100.

## *Wilo-DrainLift XS-F.*

The Wilo-DrainLift XS-F is the perfect solution for complete guest bathrooms underneath the drainage pipe level, e.g., in the basement. This automatic sewage lifting unit\* is used for the disposal of sewage from wall-mounted toilets. Optionally, a wash stand, a shower and a bidet can be connected in the same room. The Wilo-DrainLift XS-F meets all requirements for a front wall installation and is thus ideally suited for new buildings, renovations and modernisation. Flexible? We call this Pumpen Intelligenz.

[www.wilo.com](http://www.wilo.com)

**WILO**  
*Pumpen Intelligenz.*

### Contents

#### Sewage lifting units

<b>Wilo-DrainLift KH, XS-F, S, M, L, XL, XXL, FTS</b>	<b>28</b>
<b>Series overview</b>	<b>28</b>
<b>Wilo-DrainLift KH</b>	<b>28</b>
Equipment/function	34
Series description	38
Technical data	39
Pump curve, dimensions	40
Installation example	41
<b>Wilo-DrainLift XS-F</b>	<b>28</b>
Equipment/function	34
Series description	42
Technical data	43
Pump curve, dimensions	44
Installation example	45
Mechanical accessories	46
<b>Wilo-DrainLift S</b>	<b>28</b>
Equipment/function	34
Series description	47
Technical data	48
Pump curve, dimensions	49
Installation example	50
Mechanical accessories	52
<b>Wilo-DrainLift M, L, XL</b>	<b>30</b>
Equipment/function	36
Series description	54
<b>Technical data Wilo-DrainLift M</b>	<b>55</b>
Pump curve Wilo-DrainLift M	56
Dimensions Wilo-DrainLift M	57
<b>Technical data Wilo-DrainLift L</b>	<b>59</b>
Pump curves Wilo-DrainLift L	60
Dimensions Wilo-DrainLift L	61
Installation examples Wilo-DrainLift L	63
<b>Technical data Wilo-DrainLift XL</b>	<b>64</b>
Pump curve Wilo-DrainLift XL	65
Dimensions Wilo-DrainLift XL	66
Installation example Wilo-DrainLift XL	67
Mechanical accessories Wilo-DrainLift S, M, L, XL	68

### Contents

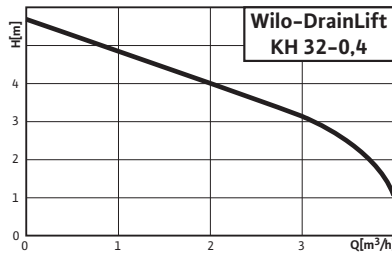
<b>Wilo-DrainLift XXL</b>	<b>32</b>
Equipment/function	36
Series description	69
Technical data	70
Pump curves, dimensions	72
Installation example	74
Mechanical accessories	75
<b>Wilo-DrainLift FTS</b>	<b>32</b>
Equipment/function	36
Series description	77
Technical data	78
Pump curves, dimensions	80
System example	81
Installation example	82

# Sewage/Faeces

## Sewage lifting units

### Series overview Wilo-DrainLift KH, XS-F, S

#### Series: Wilo-DrainLift KH



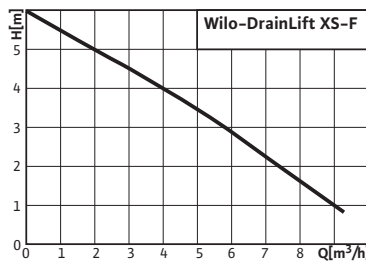
##### > Small lifting unit

##### > Applications:

- For limited application (in direct connection behind a stand-alone toilet) with macerator for disposing the sewage from an individual toilet in addition to a hand washbasin, a shower or a bidet.



#### Series: Wilo-DrainLift XS-F



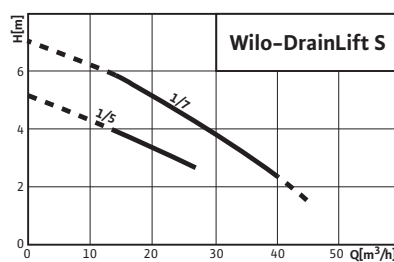
##### > Small lifting unit

##### > Application:

- For limited application (in direct connection to a wall-mounted toilet) for special installation in the front wall for sewage disposal of a individual toilet, in addition to a hand washbasin, a shower or a bidet.



#### Series: Wilo-DrainLift S



##### > Sewage lifting unit

##### > Application:

- Pumping of raw sewage, which cannot be piped to the sewer system through natural inclines.
- Drainage of individual rooms.



### Series overview Wilo-DrainLift KH, XS-F, S

#### Series: Wilo-DrainLift KH

##### > Product advantages

- Contemporary, space-saving design
- Simple and quick installation:
  - Self-sealing, direct toilet connection
  - Built-in active carbon filter
  - Ready-to-plug

##### > Additional information:

##### Page

- Equipment/function ..... 34
- Series description ..... 38
- Technical data ..... 39
- Pump curves, dimensions ..... 40
- Installation example ..... 41

#### Series: Wilo-DrainLift XS-F

##### > Product advantages

- Quiet operation for high user comfort
- Reliable due to built-in alarm
- Simple and quick installation:
  - including all connection sleeves
  - built-in active carbon filter
  - ready-to-plug

##### > Additional information:

##### Page

- Equipment/function ..... 34
- Series description ..... 42
- Technical data ..... 43
- Pump curves, dimensions ..... 44
- Installation example ..... 45

#### Series: Wilo-DrainLift S

##### > Product advantages

- Easy to install due to:
  - low weight
  - built-in non-return valve
  - large scope of delivery
- Flexible due to:
  - freely selectable feed lines
  - front-wall-like installation
  - space-saving installation (depth 30 cm)
- Safe due to:
  - reliable pneumatic level measurement

##### > Additional information:

##### Page

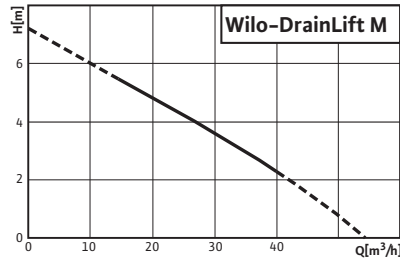
- Equipment/function ..... 34
- Series description ..... 47
- Technical data ..... 48
- Pump curves, dimensions ..... 49
- Installation examples ..... 50
- Mechanical accessories ..... 52
- Mechanical accessories ..... 68

# Sewage/Faeces

## Sewage lifting units

### Series overview Wilo-DrainLift M, L, XL

#### Series: Wilo-DrainLift M



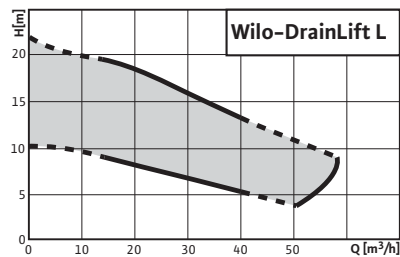
##### > Sewage lifting unit

##### > Application:

- Pumping of raw sewage, which cannot be piped to the sewer system through natural inclines.
- For drainage of single-family houses and small building complexes.



#### Series: Wilo-DrainLift L



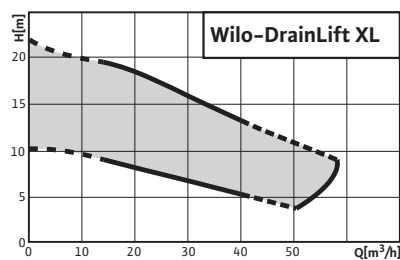
##### > Sewage lifting unit

##### > Application:

- Pumping of raw sewage, which cannot be piped to the sewer system through natural inclines.
- For drainage of multi-family houses and smaller structures (cafés, etc).



#### Series: Wilo-DrainLift XL



##### > Sewage lifting unit

##### > Application:

- Pumping of raw sewage, which cannot be piped to the sewer system through natural inclines.
- For drainage of larger structures (restaurants, department stores, etc.).



### Series overview Wilo-DrainLift M, L, XL

#### Series: Wilo-DrainLift M

##### > Product advantages

- Easy to install due to:
  - low weight
  - built-in non-return valve
  - large scope of delivery
- Flexible due to:
  - freely selectable feed lines
- Safe due to:
  - large tank volume
  - integrated mains-independent alarm function

##### > Additional information:

##### Page

- Equipment/function ..... 36
- Series description ..... 54
- Technical data ..... 55
- Pump curves ..... 56
- Dimensions ..... 57
- Mechanical accessories ..... 68

#### Series: Wilo-DrainLift L

##### > Product advantages

- Easy to install due to:
  - low weight
  - built-in non-return valve
  - large scope of delivery
- Flexible due to:
  - freely selectable feed lines
  - extensive range of services
- Safe due to:
  - large tank volume
  - mains-independent alarm function
  - optional versions “-C” with individual fault signal and follow-up time
  - additional potential-free contact

##### > Additional information:

##### Page

- Equipment/function ..... 36
- Series description ..... 54
- Technical data ..... 59
- Pump curves ..... 60
- Dimensions ..... 61
- Installation examples ..... 63
- Mechanical accessories ..... 68

#### Series: Wilo-DrainLift XL

##### > Product advantages

- Large tank volume (440 l)
- Mains-independent alarm
- Additional potential-free contact
- Only one pressure outlet (Y-pipe built-in)
- Built-in non-return valve
- Suitable for permanent operation (due to built-in sheath current cooling)

##### > Additional information:

##### Page

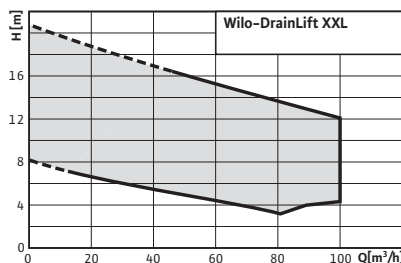
- Equipment/function ..... 36
- Series description ..... 54
- Technical data ..... 64
- Pump curves ..... 65
- Dimensions ..... 66
- Installation examples ..... 67
- Mechanical accessories ..... 68

# Sewage/Faeces

## Sewage lifting units

### Series overview Wilo-DrainLift XXL, FTS

#### Series: Wilo-DrainLift XXL



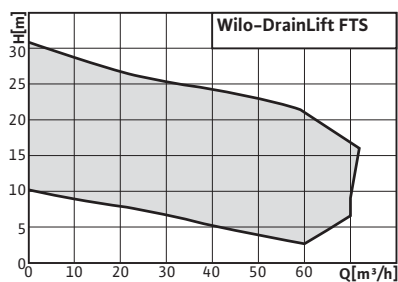
##### > Sewage lifting unit

##### > Application:

- Elimination of raw sewage, which cannot be piped to the sewer system through natural inclines.
- For the drainage of building complexes (hotels, hospitals, etc.)



#### Series: Wilo-DrainLift FTS



##### > Sewage lifting unit

##### > Application:

- Pumping of raw sewage, which cannot be piped to the sewer system through natural inclines.
- For drainage of building complexes (hotels, hospitals, etc.).





### Series overview Wilo-DrainLift XXL, FTS

#### Series: Wilo-DrainLift XXL

##### > Product advantages

- Large tank volume
- Low weight
- Wide performance range
- Suitable for permanent operation (due to built-in sheath current cooling)

##### > Additional information:

##### Page

- Equipment/function ..... 36
- Series description ..... 69
- Technical data ..... 70
- Pump curves, dimensions ..... 72
- Installation examples ..... 74
- Mechanical accessories ..... 75

#### Series: Wilo-DrainLift FTS

##### > Product advantages

- High efficiency, due to pumps with small free ball passage
- Large delivery heads
- System non-susceptible to plugging, due to solids separation
- Large tank volume

##### > Additional information:

##### Page

- Equipment/function ..... 36
- Series description ..... 77
- Technical data ..... 78
- Pump curves, dimensions ..... 80
- System example ..... 81
- Installation example ..... 82

# Sewage/Faeces

## Sewage lifting units

### Equipment/function Wilo-DrainLift KH, XS-F, S

		Wilo-DrainLift...			
		KH 32-0,4	XS-F	S1/5	S1/7
<b>Sealing pumps-/motor</b>					
Fluid side:	Mechanical seal	–	–	•	•
Oil barrier chamber		–	–	•	•
<b>Construction</b>					
Pump position:	Motor part outside the tank	–	–	•	•
	Submersible motor pump, dry, external	–	–	–	–
	Submersible motor pump in the tank	•	•	–	–
Inlet position freely selectable		–	–	•	•
Individual pump system		•	•	•	•
Double pump system		–	–	–	–
Single-channel impeller		–	–	–	–
Vortex impeller		•	•	•	•
Macerator		•	–	–	–
<b>Materials</b>					
Motor housing	Stainless steel	1.4301 (AISI 304)	1.4301 (AISI 304)	1.4404 (AISI 316L)	1.4404 (AISI 316L)
	Grey cast iron	–	–	–	–
Hydraulics	Plastic	PP-GF30	PP-GF30	PUR	PUR
	Grey cast iron	–	–	–	–
Tank	Plastic	ABS	ABS	PE	PE
<b>Equipment</b>					
Sheath current cooling		–	–	–	–
Motor operation monitoring:	Temperature (TWC)	•	•	•	•
	Impermeability	–	–	–	–
Level control:	Float switch	–	–	–	–
	Pneumatic pressure sensor	•	•	•	•
	Level sensor	–	–	–	–
Alarm: Mains-independent		–	–	–	–
Potential-free contact		–	•	•	•
Pump cable detachable		–	–	•	•
Ready-to-plug		•	•	•	•
Non-return valve		•	•	•	•
Feed seal		•	•	•	•
Curve cutter for inlet borehole		–	–	•	•
Hose connection for ventilation		–	•	•	•

• = available, – = not available

## Equipment/function Wilo-DrainLift KH, XS-F, S

	Wilo-DrainLift...			
	KH 32-0,4	XS-F	S1/5	S1/7
<b>Equipment (continued)</b>				
Hose connection for diaphragm hand pump	–	–	•	•
Kit for pressure pipe connection	•	•	–	•
Fixation material	•	•	•	•
Sound insulation material	–	•	•	•
Switchgear	–	–	–	–
Active carbon filter	•	•	–	–

• = available, – = not available

# Sewage/Faeces

## Sewage lifting units

### Equipment/function Wilo-DrainLift M, L, XL, XXL, FTS

		Wilo-DrainLift...							
		M1	M2	L1	L2	XL2	XXL	FTS (STS 65)	FTS (FA 08)
<b>Sealing pumps-/motor</b>									
Fluid side:	Mechanical seal	•	•	•	•	•	•	•	•
Oil barrier chamber		•	•	•	•	•	•	•	•
<b>Construction</b>									
Pump position:	Motor part outside the tank	•	•	•	•	•	•	•	•
	Submersible motor pump, dry external	–	–	–	–	–	•	•	•
	Submersible motor pump in the tank	–	–	–	–	–	–	–	–
Inlet position freely selectable		•	•	•	•	–	–	–	–
Individual pump system		•	–	•	–	–	–	–	–
Double pump system		–	•	–	•	•	•	•	•
Single-channel impeller		–	–	–	–	–	•	–	•
Vortex impeller		•	•	•	•	•	–	•	–
Macerator		–	–	–	–	–	–	–	–
<b>Materials</b>									
Motor housing	Stainless steel	1.4404 (AISI 316L)							–
	Grey cast iron	–	–	–	–	–	–	–	•
Hydraulics	Plastic	PUR	PUR	PUR	PUR	PUR	PUR	–	–
	Grey cast iron	–	–	–	–	–	–	•	•
Tank	Plastic	PE	PE	PE	PE	PE	PE	PE	PE
<b>Equipment</b>									
Sheath current cooling		–	–	–	–	•	•	•	–
Motor operation monitoring:	Temperature (TWC)	•	•	•	•	•	•	•	•
	Impermeability	–	–	–	–	–	•	–	–
Level control:	Float switch	•	•	•	•	•	•	–	–
	Pneumatic pressure sensor	–	–	–	–	–	–	–	–
	Level sensor	–	–	–	–	–	–	•	•
Alarm: Mains-independent		•	•	•	•	•	–	–	–
Potential-free contact		•	•	•	•	•	•	•	•
Pump cable detachable		•	•	•	•	•	•	•	–
Ready-to-plug		•	•	•	•	•	–	–	–
Non-return valve		•	•	•	•	•	–	•	•
Feed seal		•	•	•	•	–	–	•	•
Curve cutter for inlet borehole		•	•	•	•	–	–	–	–
Hose connection for ventilation		•	•	•	•	•	•	–	–

• = available, – = not available

## Equipment/function Wilo-DrainLift M, L, XL, XXL, FTS

	Wilo-DrainLift...							
	M1	M2	L1	L2	XL2	XXL	FTS (STS 65)	FTS (FA 08)
<b>Equipment (continued)</b>								
Hose connection for diaphragm hand pump	•	•	•	•	•	•	—	—
Kit for pressure pipe connection	•	•	•	•	•	•	—	—
Fixation material	•	•	•	•	•	•	•	•
Sound insulation material	•	•	•	•	—	—	—	—
Switchgear	•	•	•	•	•	•	•	•
Active carbon filter	—	—	—	—	—	—	—	—

• = available, — = not available

# Sewage/Faeces

## Sewage lifting units

### Series description Wilo-DrainLift KH



#### Wilo-DrainLift KH

Small lifting unit

#### Type key

Example: Wilo-DrainLift KH 32-0,4

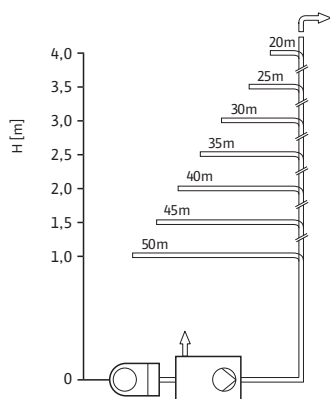
<b>KH</b>	Small lifting unit with macerator for sewage containing faeces
<b>32</b>	Nominal diameter of the pressure port (DN 25/32)
<b>- 0,4</b>	Rated motor power [KW]

#### Application

Sewage lifting unit ready for connection for limited application (in direct connection behind a stand-alone toilet) with macerator for sewage disposal of an individual toilet, in addition to a hand washbasin, a shower or a bidet, the wastewater/sewage of which cannot be piped to the sewer system through natural inclines and/or for disposal of wastewater that is generated below the backflow level.

DIN EN 12050-3 as well as DIN 1986-100 are to be observed.

We recommend using Wilo-DrainLift S to XXL as well as FTS 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 bends of 90° and a built-in non-return valve are taken into account).

#### Construction

Automatically operating small lifting unit with macerator, all required switchgear and control mechanisms, built-in non-return valve, active carbon filter, elastic pressure port and connection options for one WC, two additional drainage fixtures and one ventilation pipe.

The small lifting unit DrainLift 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 non-return valve

#### Connection pressure side:

Pressure port hose angle DN 25/32 incl. non-return valve

#### 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 (external pipe Ø 25 mm).

#### Scope of delivery

Lifting unit ready for connection with macerator, active carbon filter, elastic pressure port and installation and operating instructions.

## Technical data Wilo-DrainLift KH

Wilo-DrainLift KH 32-0,4	
<b>Approved fluids</b>	
Domestic sewage not containing faeces	•
Domestic sewage containing faeces	•
Washing machine soap and water mixture (without long-fibre constituents)	–
Shower water, unchlorinated	•
<b>Electrical connection</b>	
Mains connection [V]	1~230
Power consumption P <sub>1</sub> [kW]	0.45
Nominal current [A]	2.1
Mains frequency [Hz]	50
Cable length from plant to switchgear/plug [m]	1.2
<b>Permitted field of application</b>	
Operating mode	Intermittent duty S3 – 28%/36 sec. in acc. 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
<b>Connections</b>	
Ball passage [mm]	10
Pressure port [mm]	DN 25/32
Inlet connection [mm]	2 x DN 40 DN 100
Ventilation [mm]	25
Min. suction head (invert to the middle of the feed line) [mm]	180
<b>Motor</b>	
Insulation class	F
Protection class	IP 44
<b>Dimensions/weights</b>	
Gross volume [l]	17
Switching volume [l]	2.6
Weight [kg]	7.8

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

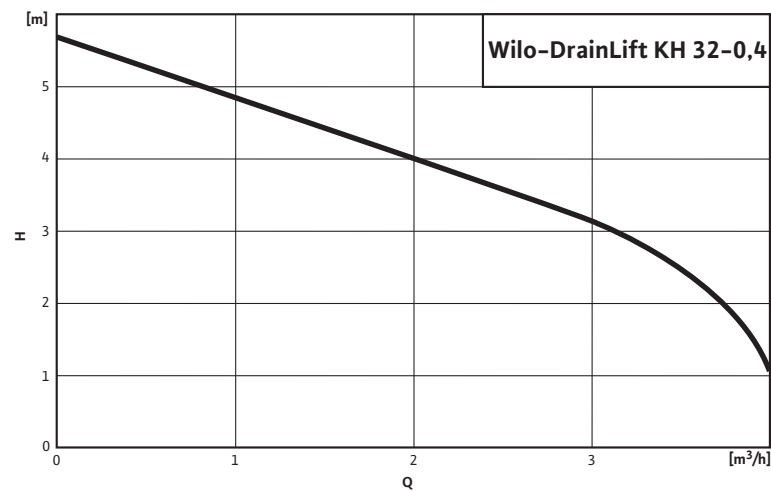
# Sewage/Faeces

## Sewage lifting units

### Pump curve, dimensions Wilo-DrainLift KH

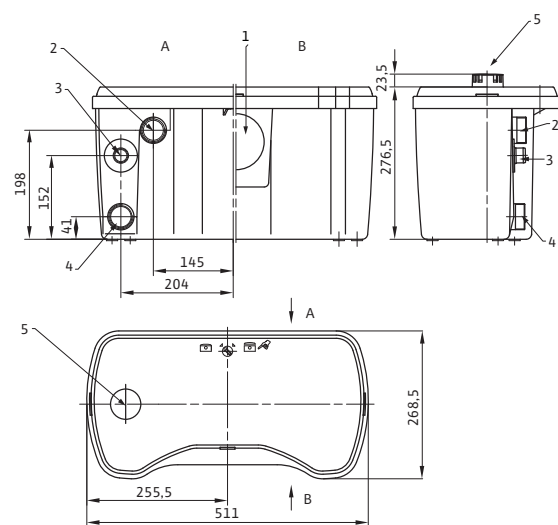
#### Wilo-DrainLift KH 32-0,4

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 kept.

#### Dimension drawing

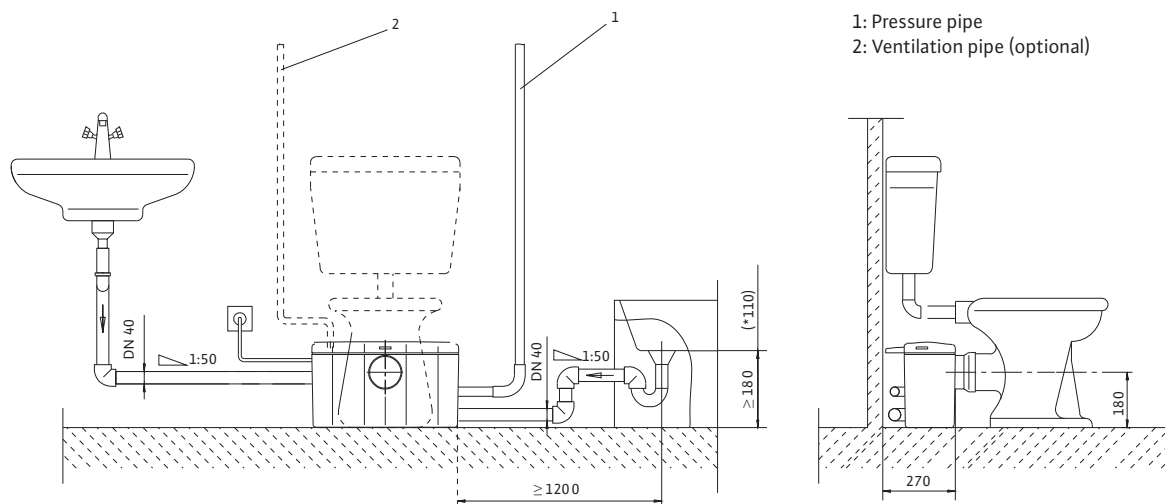


- 1 WC-feed line DN 100
- 2 Feed line DN 40
- 3 Pressure pipe connection
- 4 Feed line DN 40
- 5 Ventilation



### Installation example Wilo-DrainLift KH

#### Installation example



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

# Sewage/Faeces

## Sewage lifting units

### Series description Wilo-DrainLift XS-F



#### Wilo-DrainLift XS-F

Sewage lifting unit for limited use for front wall installation

#### Type key

Example: **Wilo-DrainLift XS-F**

<b>XS</b>	Series description
<b>F</b>	Front-wall

#### Application

Sewage lifting unit ready for connection for limited use (directly connected to a wall-mounted toilet) for special installation in the front wall.

For the sewage disposal of a individual toilet, in addition to a hand washbasin, a shower or bidet, the wastewater/sewage of which cannot be piped to the sewer system through natural inclines and/or for disposal of wastewater/sewage that is generated below the backflow level. DIN EN 12050-3 as well as DIN 1986-100 are to be observed. We recommend using Wilo-DrainLift S to XXL as well as FTS series products when connecting several or different sources of wastewater.

#### Construction

Automatically operating small lifting unit incl. all required switchgear and control mechanisms, included non-return valve, active carbon filter, elastic pressure port and connection options for one WC, two additional drainage fixtures and one ventilation pipe. The small lifting unit DrainLift XS-F is connected directly to a wall-mounted toilet. The toilet direct connection as well as connection options for additional drainage objects are located on the longitudinal side of the system. The two optional ventilation connection pieces are on the top side of the tank. The fluid is conducted out through an elastic pressure pipe which can be swivelled.

The ventilation exhaust is conducted odour-free into the installation room via an included active carbon filter or is conducted over the roof by means of a ventilation line.

Any malfunction is signalised quickly by a built-in, mains-independent alarm signal. This signal can be passed on via an additional potential-free contact.

#### Inlet connection:

- DN 100 (direct connection)
- 2 inlets, DN 50

#### Connection pressure side:

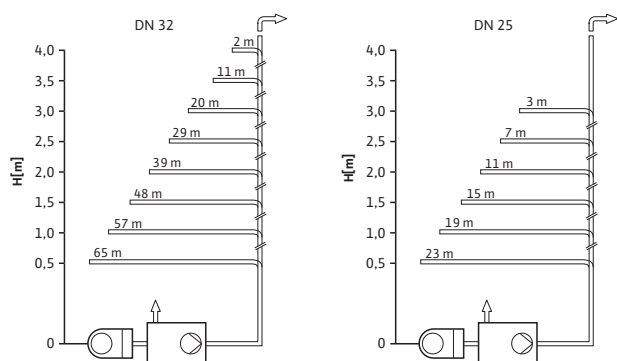
Pressure port incl. DN 32

#### Ventilation:

- 2 x DN 50
- Optionally via included active carbon filter in the installation room or via pipe above the roof

#### Scope of delivery

Lifting unit ready for connection incl. connection sleeves, non-return valve 1¼", reducer DN 32, active carbon filter, insertion screen for the ventilation, accessories for the buoyancy safeguards, drain hose with sealing plugs, elastic pressure outlet which can be swivelled and installation and operating instructions.



Max. pressure pipe lengths DN 32/DN 25, 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 bends of 90° and a built-in non-return valve are taken into account)

## Technical data Wilo-DrainLift XS-F

Wilo-DrainLift XS-F	
<b>Approved fluids</b>	
Domestic sewage not containing faeces	•
Domestic sewage containing faeces	•
Washing machine soap and water mixture (without long-fibre constituents)	–
Shower water, unchlorinated	•
<b>Electrical connection</b>	
Mains connection [V]	1~230
Power consumption P <sub>1</sub> [kW]	0.4
Nominal current [A]	1.8
Mains frequency [Hz]	50
Cable length from plant to switchgear/plug [m]	1.5
<b>Permitted field of application</b>	
Operating mode	Intermittent duty S3 – 30% (3 min operation/7 min pause)
Switching frequency max. [1/h]	100
Switch-on level (measured from the floor) [mm]	125
Max. permitted pressure in the pressure pipe [bar]	0.4
Fluid temperature, maximum [°C]	35
Ambient temperature, maximum [°C]	35
<b>Connections</b>	
Ball passage [mm]	25
Pressure port [mm]	DN 32
Inlet connection [mm]	2 x DN 50 1 x DN 100
Ventilation [mm]	2x DN 50
Min. suction head (invert to the middle of the feed line) [mm]	220
<b>Motor</b>	
Insulation class	B
Protection class	IP 44
<b>Dimensions/weights</b>	
Gross volume [l]	7.9
Switching volume [l]	1.2
Weight [kg]	6.5

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

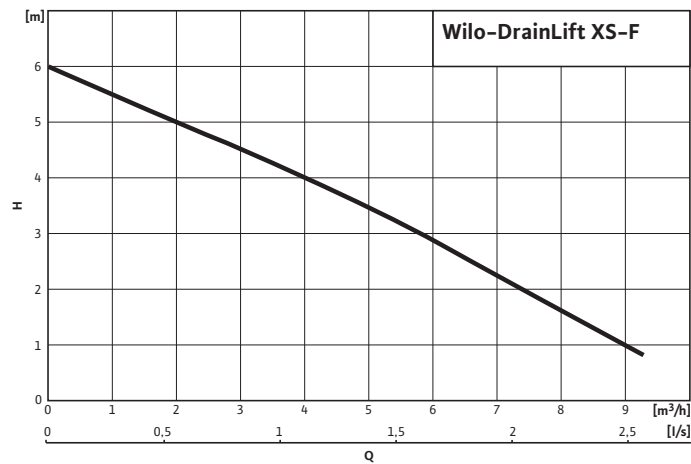
# Sewage/Faeces

## Sewage lifting units

### Pump curves, dimensions Wilo-DrainLift XS-F

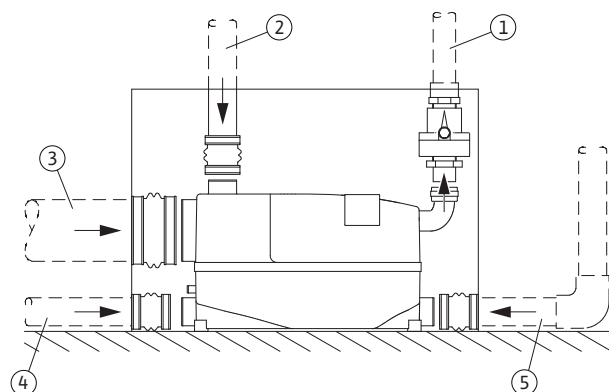
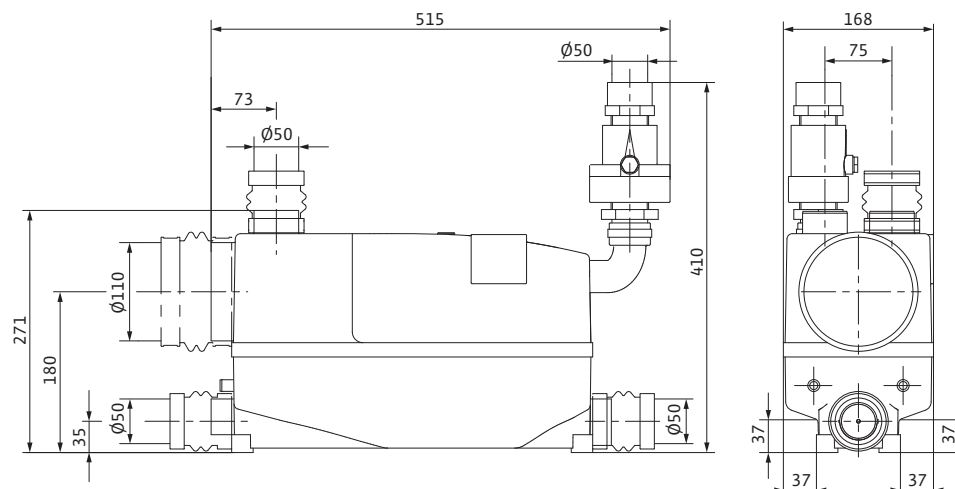
#### Wilo-DrainLift XS-F

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 kept.

#### Dimension drawing

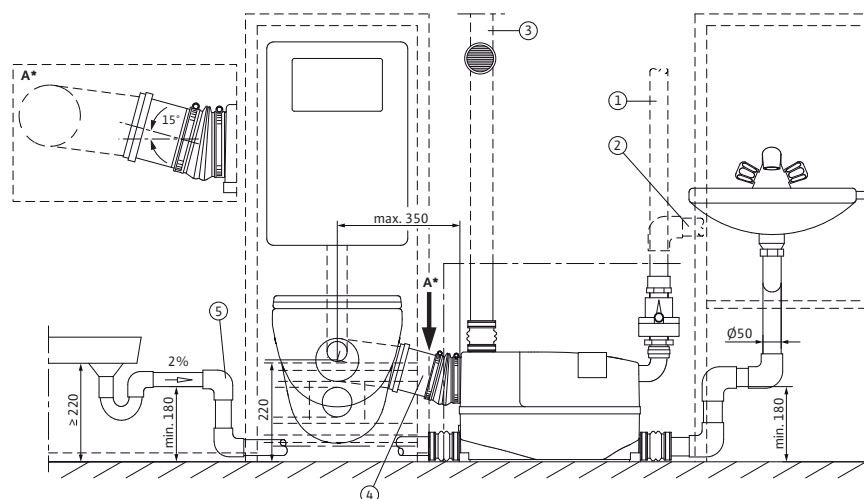


- 1 Pressure pipe
- 2 Ventilation line
- 3 Inlet for wall-mounted toilet and HT pipe  
DN 100, min. 15° incline.
- 4 Inlet pipe, shower/bidet
- 5 Inlet pipe, washbasin

The system is put in the installation space through the installation opening and is connected to the inlets with the sleeves and clamps.

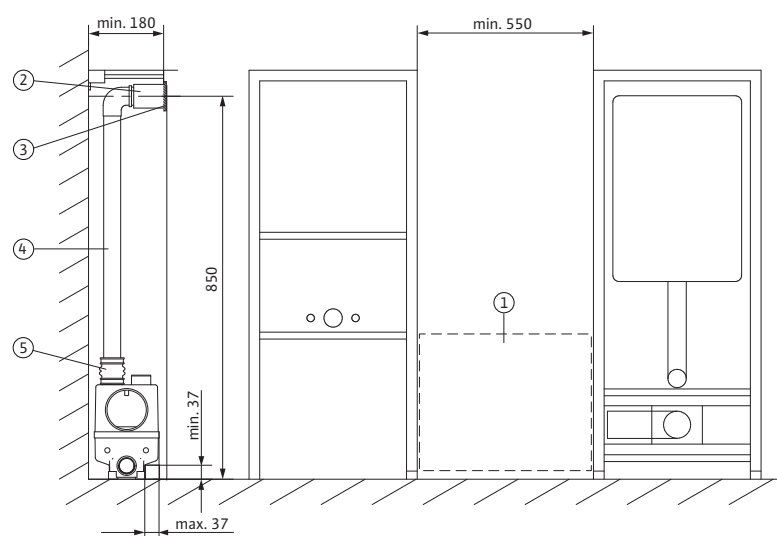
### Installation example Wilo-DrainLift XS-F

#### Installation example



- 1 Perpendicular pressure pipe with non-return valve and loop to be conducted above the locally determined backflow level.
- 2 Pressure pipe, alternatively horizontally installed.
- 3 Ventilation via active carbon filter in the installation room, or alternatively above the roof.
- 4 Inlet bend, wall-mounted toilet and HT pipe DN 100, min. 15° incline.
- 5 Back-up bend, to be installed as close as possible to the system.

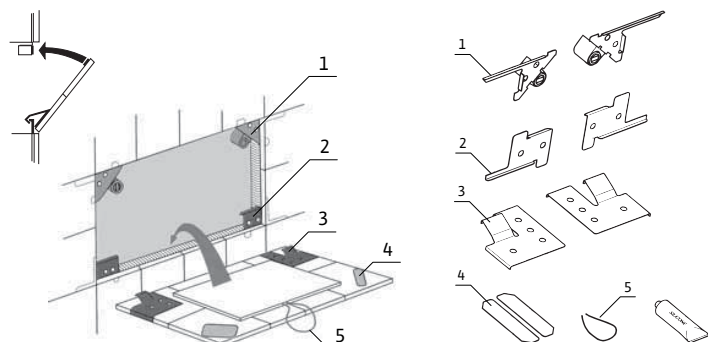
#### Installation information, front wall installation



- 1 Inspection opening min. 500 x 400.
- 2 Use for ventilation with active carbon filter.
- 3 Ventilation screen (for changing the active carbon filter, only the ventilation screen has to be removed).
- 4 Ventilation pipe (HT) DN 50 connection sleeve DN 50.

### Mechanical accessories Wilo-DrainLift XS-F

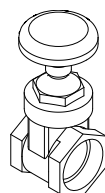
#### Mechanical accessories



#### Tile flap

Installation accessories for frameless tile flap, with invisible suspension technology and release safeguard. Suitable for sizes from 150 x 150 mm up to max. 0.5 m<sup>2</sup>.

- 1 Magnetic angle
- 2 Suspension bracket
- 3 Suspension unit
- 4 Metal strip
- 5 Opening cord



#### Gate valve set

Consisting of gate valve, designed as a coupling sleeve slider female/female thread Rp 1¼" PN 16 RG,



and adapter joint  
Male/male thread 1¼" x 1¼", for mounting the gate valve directly behind the non-return valve (scope of delivery) at the pressure outlet.

### 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

Complete sewage lifting unit ready for connection in accordance with DIN EN 12050-1.

For pumping untreated sewage, which cannot be fed to the sewer system via the natural fall.

Wilo-DrainLift S meets the requirements of DIN EN 12050-1 as well as the building and testing regulations 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, due 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

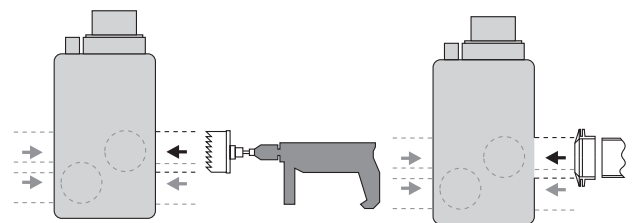
Prevent structure-borne noise transmission.

Large inspection opening. 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 (DrainLift S1/7) only, inlet seal DN 100, circle-hole saw and installation and operating instructions.

#### Connection flexibility



# Sewage/Faeces

## Sewage lifting units

### Technical data Wilo-DrainLift S

	Wilo-DrainLift ...	
	S1/5	S1/7
<b>Approved fluids</b>		
Domestic sewage not containing faeces	•	•
Domestic sewage containing faeces	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
<b>Electrical connection</b>		
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
<b>Permitted field of application</b>		
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
<b>Connections</b>		
Ball passage [mm]	40	40
Pressure port [mm]	DN 80	DN 80
Inlet 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
<b>Motor</b>		
Insulation class	H	H
Protection class (without switch box)	IP 67	IP 67
<b>Dimensions/weights</b>		
Gross volume [l]	45	45
Switching volume [l]	20	20
Weight [kg]	30	30

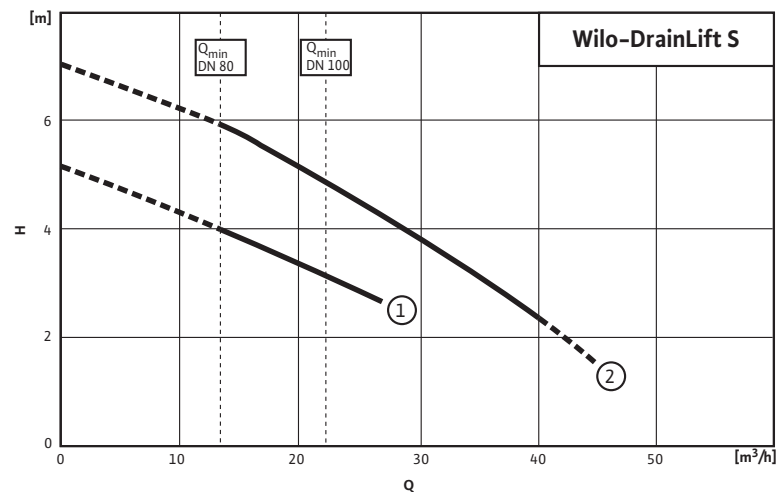
• = available or authorised, – = not available or not authorised



### Pump curves, dimensions Wilo-DrainLift S

#### Wilo-DrainLift S

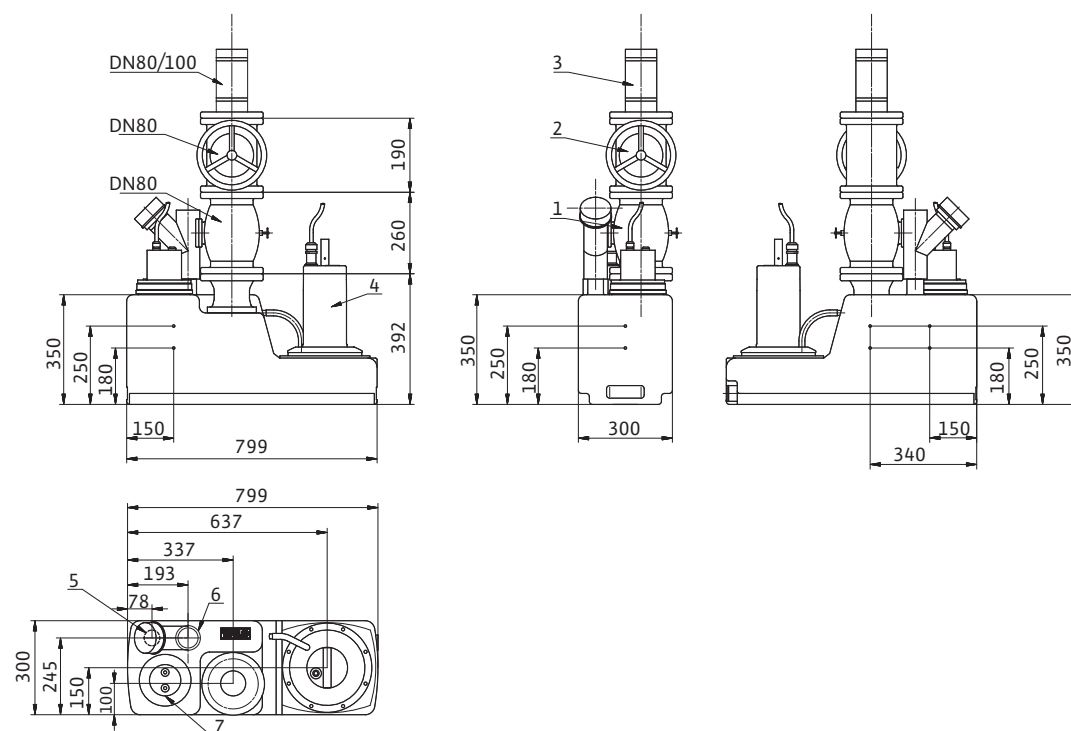
4-pole, 50 Hz



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 kept.

#### 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

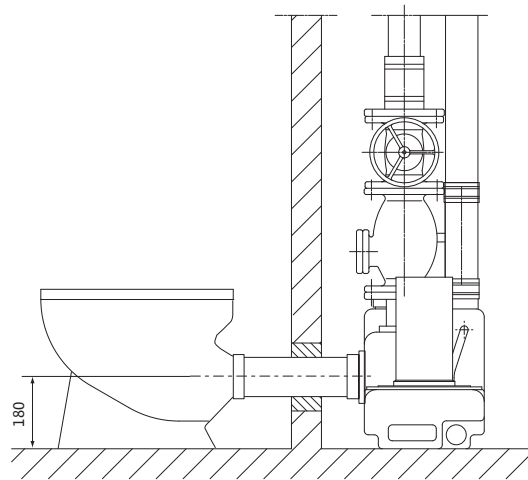
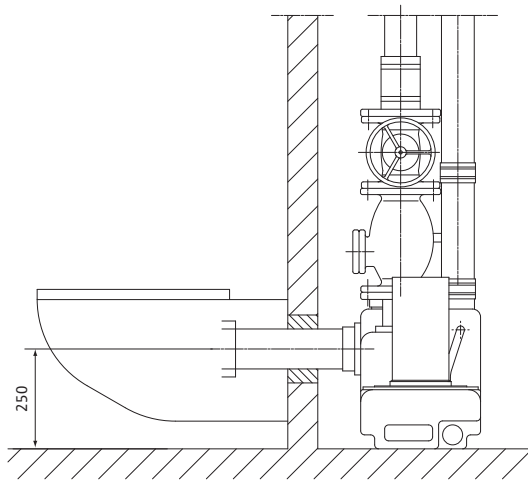
# Sewage/Faeces

## Sewage lifting units

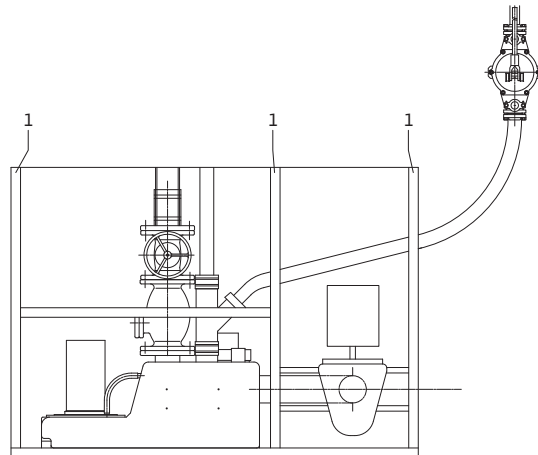
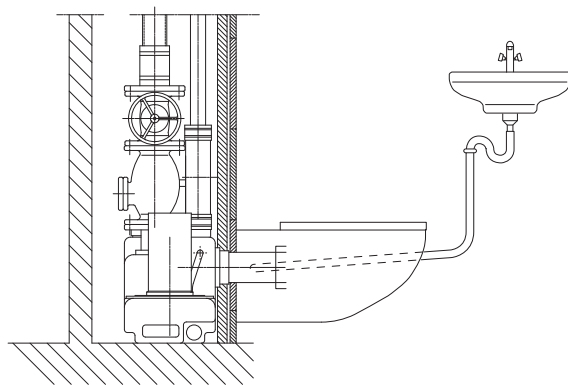
### Installation examples Wilo-DrainLift S

#### Installation examples

##### Toilet direct connection



##### Front wall

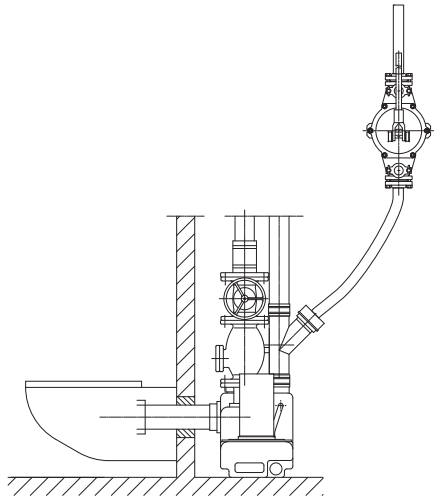


1 Front wall frame

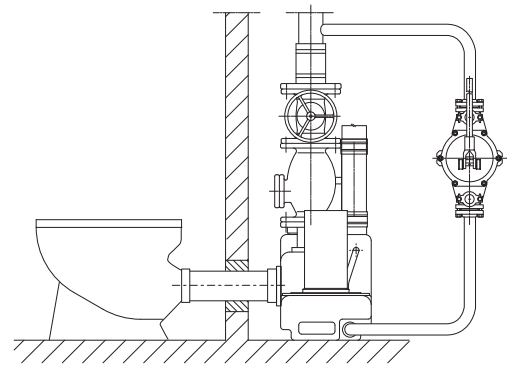
## Installation examples Wilo-DrainLift S

### Installation examples

Diaphragm hand pump connection where necessary



Stationary diaphragm hand pump connection

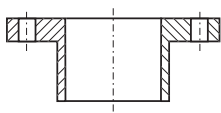
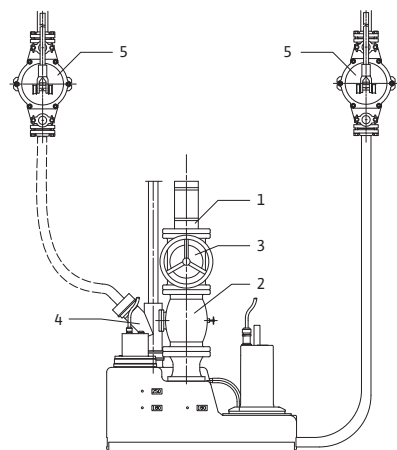


# Sewage/Faeces

## Sewage lifting units

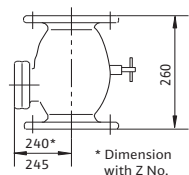
### Mechanical accessories Wilo-DrainLift S

#### Mechanical accessories



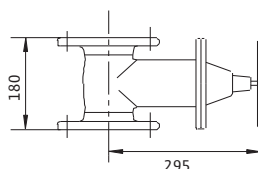
#### Single-ended flanged nipple (Item 1)

DN 80/100 (included in the scope of delivery of the DrainLift S system 1/7).



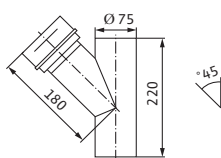
#### Non-return valve (Item 2)

With non-constricted passage, installation accessories, flange PN 10/16, in acc. with DIN 2501, DN 80



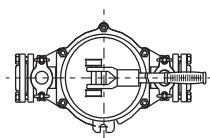
#### Gate valve (Item 3)

GG 25 (EN-GJL-250), installation accessories, flange PN 10/16 in acc. with DIN 2501, DN 80



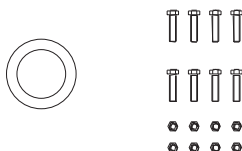
#### Ventilation combination pipe (Item 4)

DN 70, plastic, for connecting the diaphragm hand pump in case of disaster



#### Diaphragm hand pump (Item 5)

R 1½, 16 kg

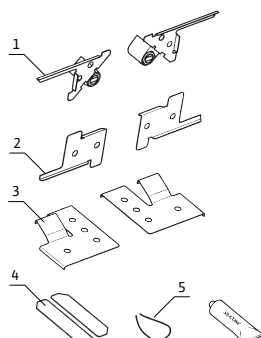
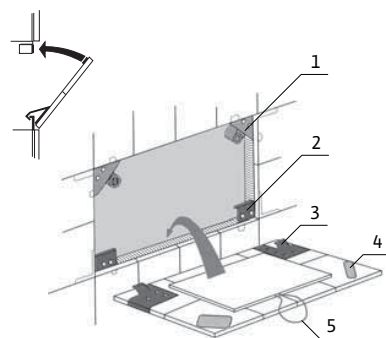


#### Mounting accessories

For flange connection with 8 screws and nuts, as well as 1 flat gasket, for flange PN 10/16, DIN 2501, DN 80

### Mechanical accessories Wilo-DrainLift S

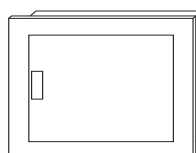
#### Mechanical accessories



#### Tile flap

Installation accessories for frameless tile flap, with invisible suspension technology and release safeguard. Suitable for sizes from 150 x 150 mm up to max. 0.5 m<sup>2</sup>.

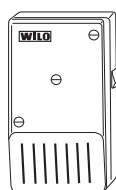
- 1 Magnetic angle
- 2 Suspension bracket
- 3 Suspension unit
- 4 Metal strip
- 5 Opening cord



Installation depth 85 mm

#### 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

# Sewage/Faeces

## Sewage lifting units

### Series description Wilo-DrainLift M, L, XL



#### Wilo-DrainLift M, L, XL

Sewage lifting unit

#### Type key

Example: **Wilo-DrainLift L1/25(3~)**  
Sewage lifting unit for drainage of residential housing and commercial buildings

<b>L1</b>	M1/L1 = Individual pump systems M2/L2/XL2 = Double pump systems
<b>/25</b>	Max. delivery head [m]
<b>(1~)</b>	AC current – 1~230 V, 50 Hz
<b>(3~)</b>	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 sewer system through natural inclines and sewage from toilet systems that is generated below the backflow level are, according to DIN EN 12056/DIN 1986-100, to be piped to the public sewer 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 inlet 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

Ready for connection, totally immersible sewage lifting unit (immersion height: 2 mWS, overflow 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, due to built-in storage battery.

#### DrainLift M2, L2, XL2:

Double pump system for automatic operation (with automatic duty cycling, standby and peak load operation). Due 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, due to built-in storage battery.

Wilo-DrainLift XL2: Pumps with built-in sheath current cooling

#### Option

Version DrainLift L1-C, L2-C: Switchgear with individual fault signal and adjustable follow-up time.

#### Scope of delivery

See "Equipment/function" Table.

## Technical data Wilo-DrainLift M

	Wilo-DrainLift ...	
	M1	M2
<b>Approved fluids</b>		
Domestic sewage without faeces	•	•
Domestic sewage containing faeces	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
<b>Electrical connection</b>		
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
<b>Permitted field of application</b>		
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
<b>Connections</b>		
Ball passage [mm]	45	45
Pressure port [mm]	DN 65, DN 80	DN 65, DN 80
Inlet 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
<b>Motor</b>		
Insulation class	H	H
Protection class (without switch box)	IP 67	IP 67
<b>Dimensions/weights</b>		
Gross volume [l]	90	130
Switching volume [l]	30	40
Weight [kg]	45	72

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

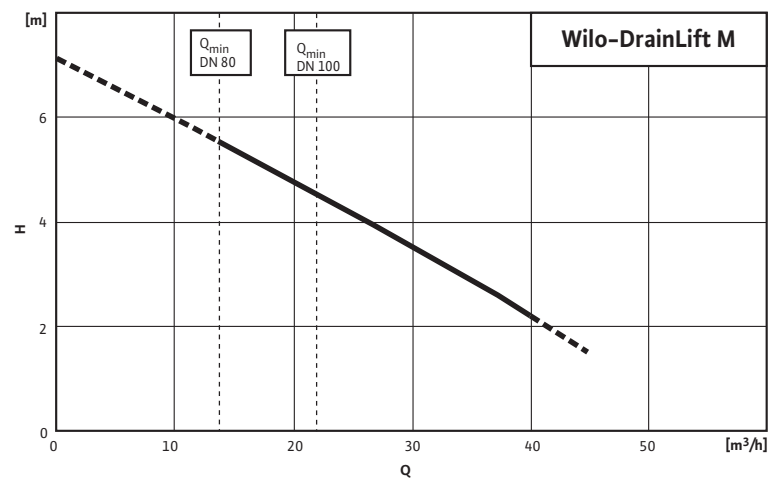
# Sewage/Faeces

## Sewage lifting units

### Pump curve Wilo-DrainLift M

#### Wilo-DrainLift M

4-pole, 50 Hz



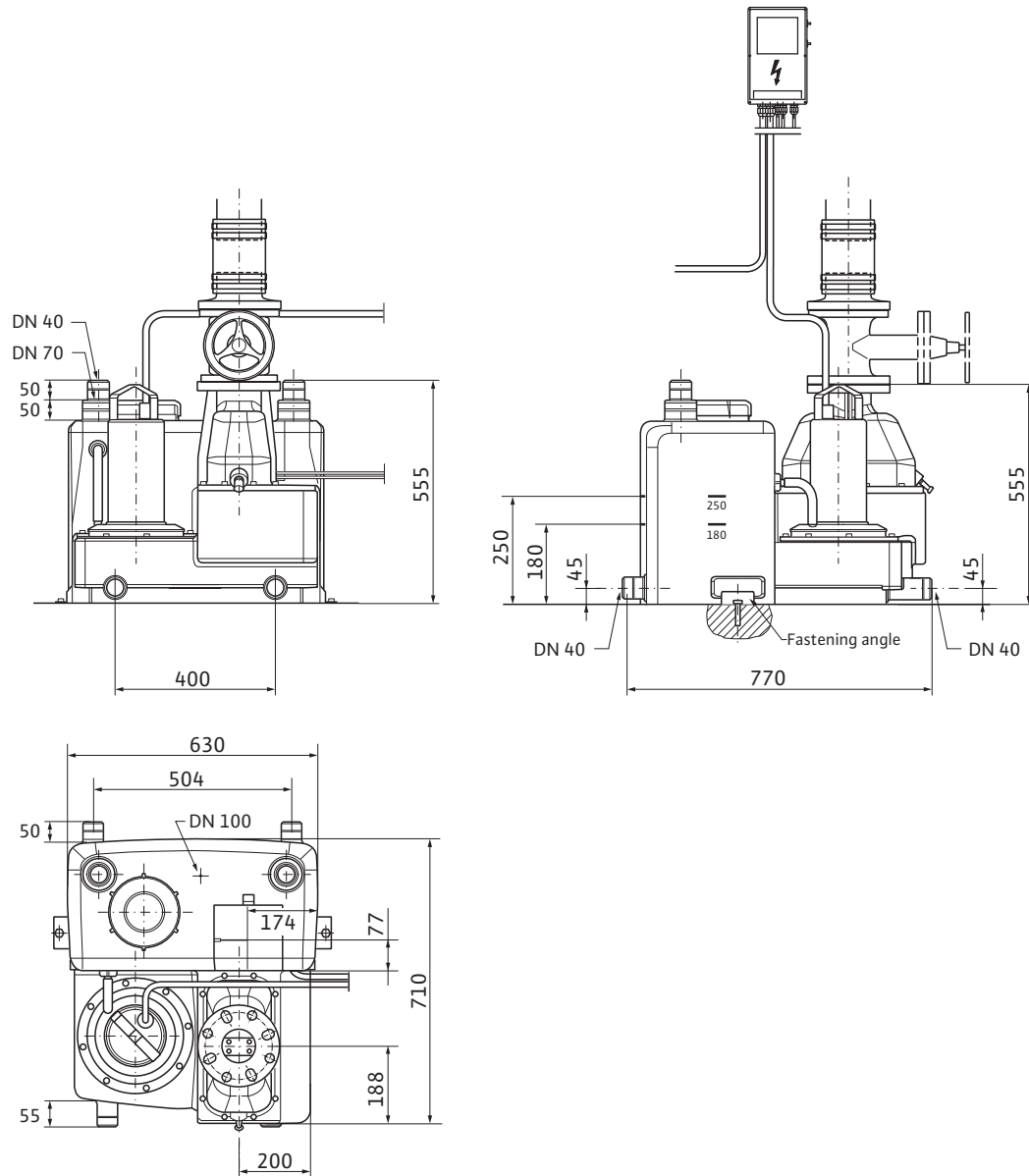
In accordance with EN 12056-4,6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be kept.



### Dimensions Wilo-DrainLift M

#### Dimension drawing

##### Wilo-DrainLift M1



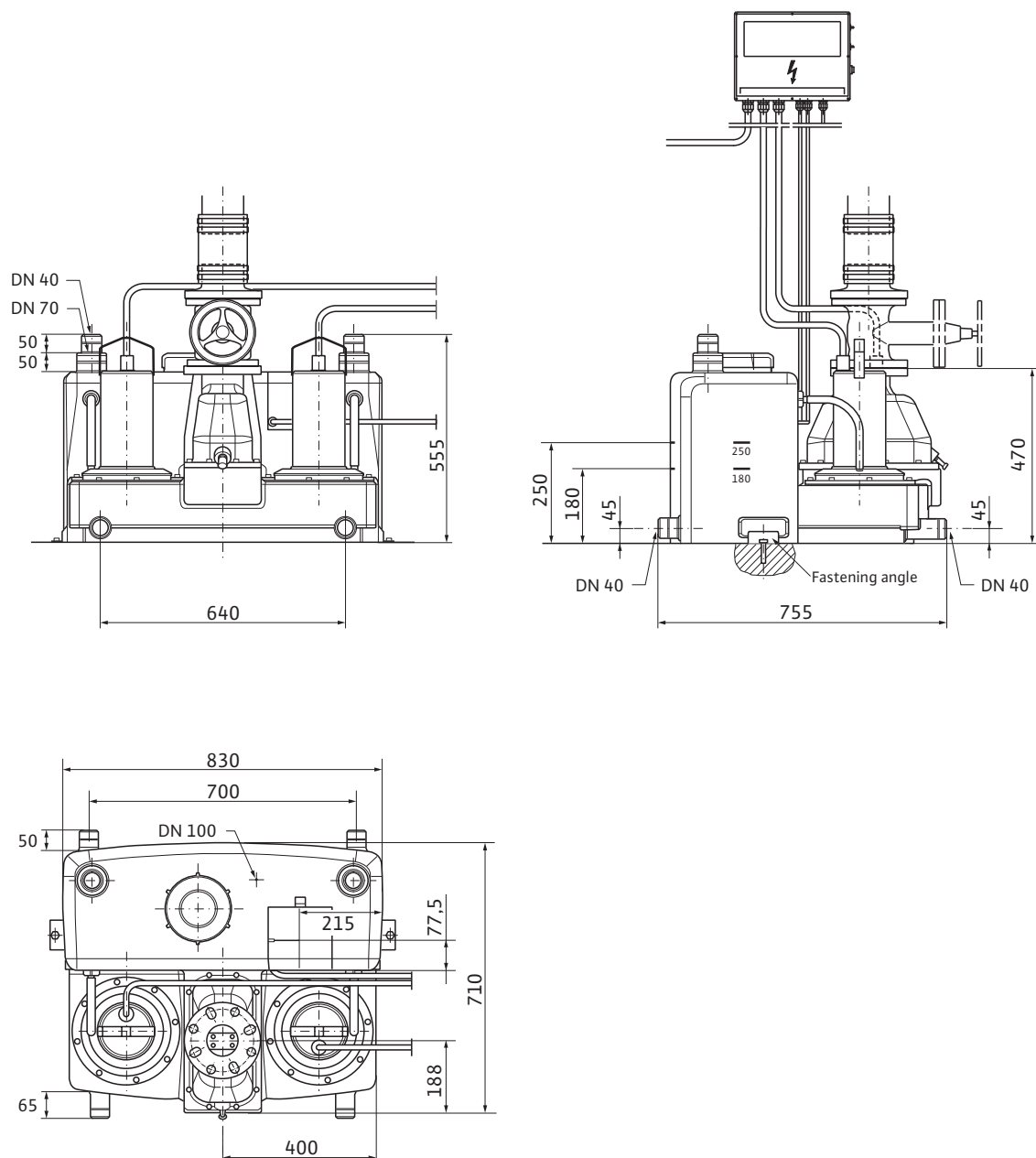
# Sewage/Faeces

## Sewage lifting units

### 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
<b>Approved fluids</b>		
Domestic sewage without faeces	•	•
Domestic sewage containing faeces	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•
Shower and bath water, unchlorinated	•	•
<b>Electrical connection</b>		
Power consumption P <sub>1</sub> at 1~230 V, 50 Hz [kW]	–	–
Connected load P <sub>1</sub> 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
<b>Permitted field of application</b>		
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
<b>Connections</b>		
Ball passage [mm]	45	45
Pressure port [mm]	DN 65, DN 80	DN 65, DN 80
Inlet 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
<b>Motor</b>		
Insulation class	H	H
Protection class (without switch box)	IP 67	IP 67
<b>Dimensions/weights</b>		
Gross volume [l]	90	130
Switching volume [l]	30	40
Weight [kg]	55	85

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

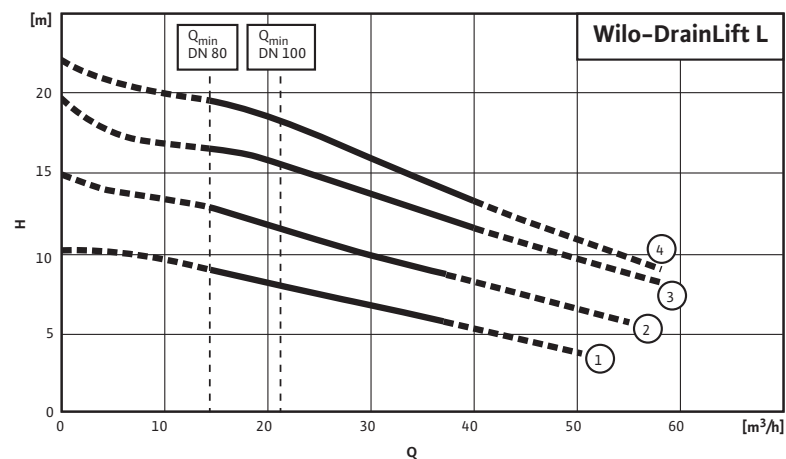
# Sewage/Faeces

## Sewage lifting units

### Pump curves Wilo-DrainLift L

#### Wilo-DrainLift L

2-pole, 50 Hz



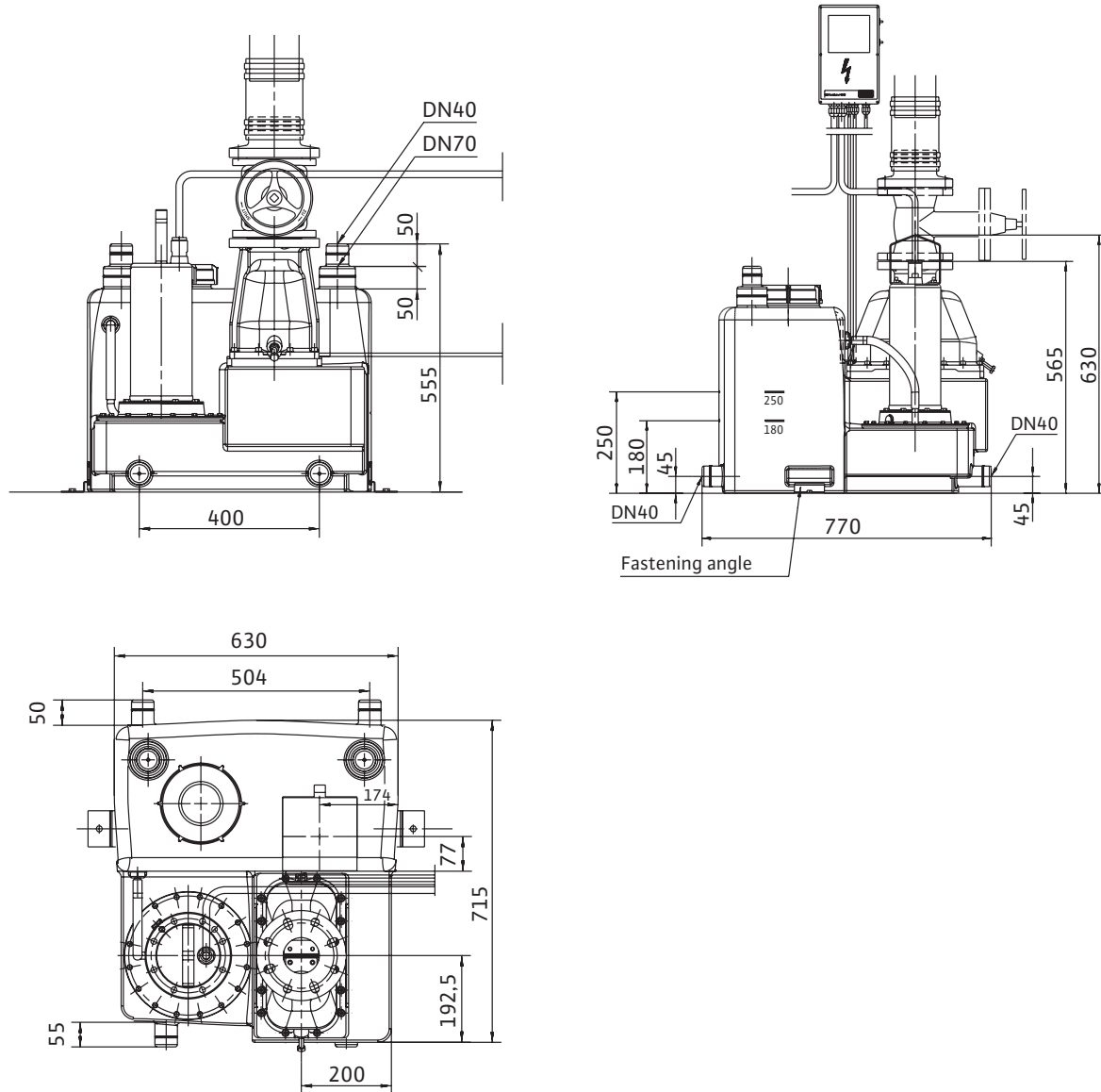
- 1 = DrainLift L 1/10 and 2/10
- 2 = DrainLift L 1/15 and 2/15
- 3 = DrainLift L 1/20 and 2/20
- 4 = DrainLift L 1/25 and 2/25

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 kept.

### Dimensions Wilo-DrainLift L

#### Dimension drawing

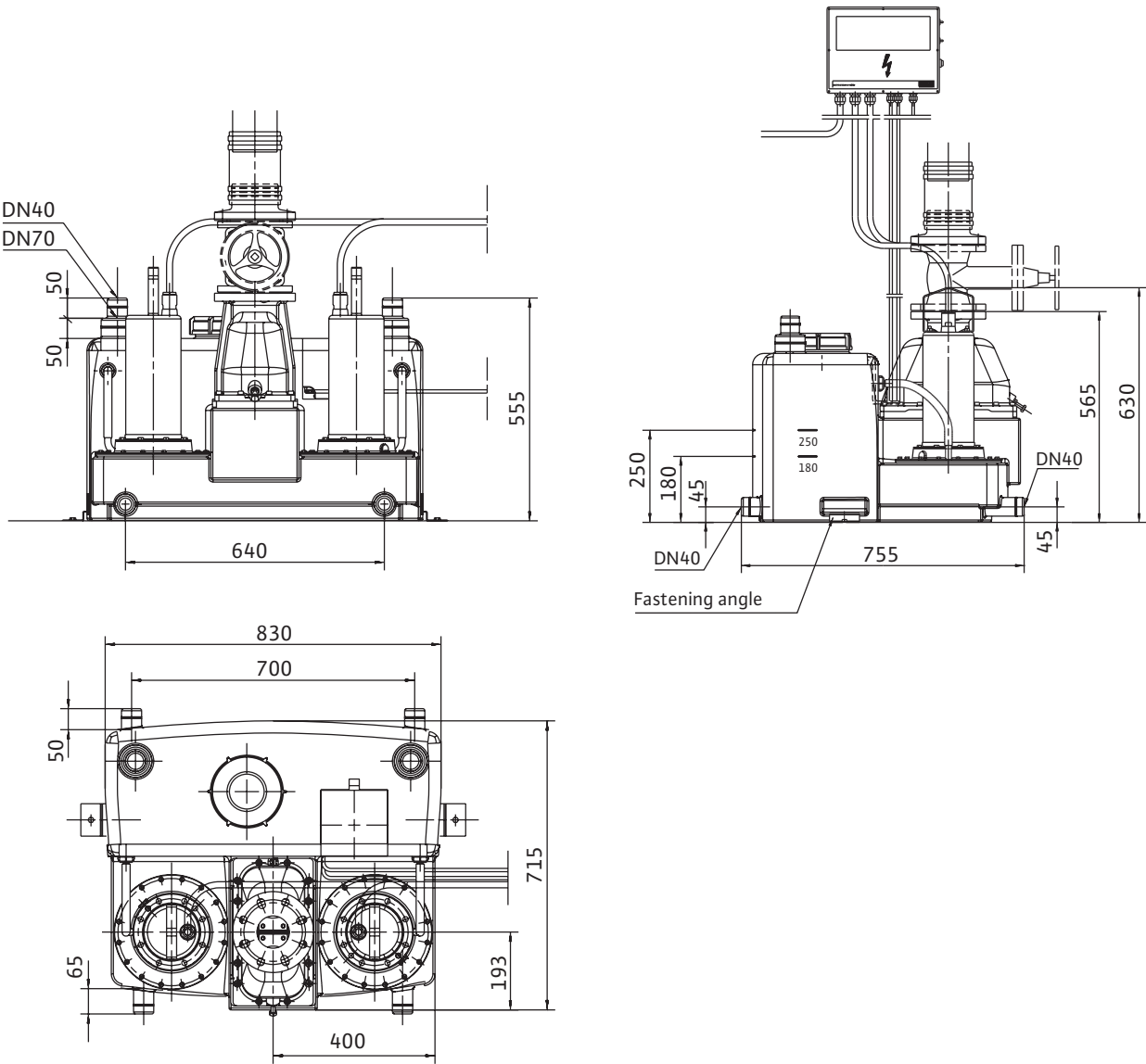
##### Wilo-DrainLift L1



Dimensions Wilo-DrainLift L

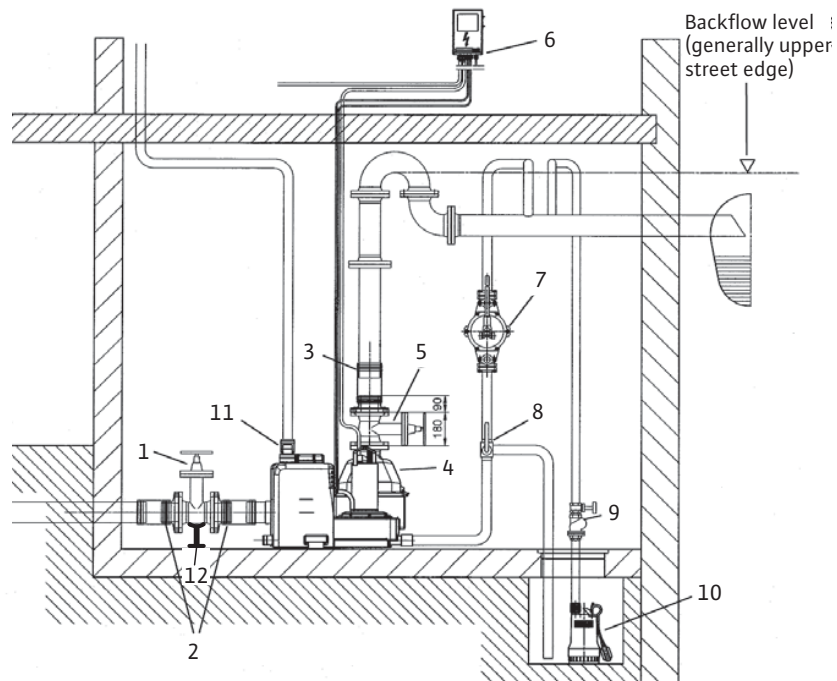
Dimension drawing

DrainLift L2

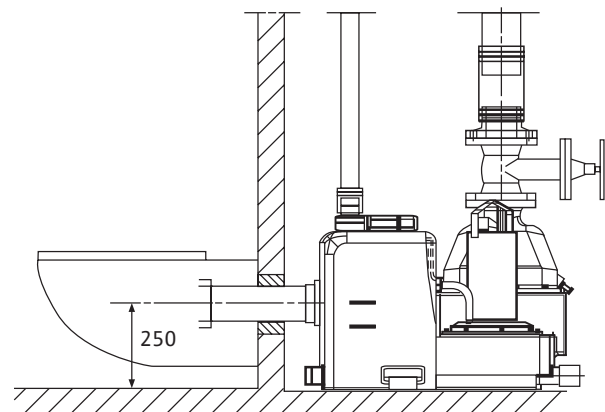
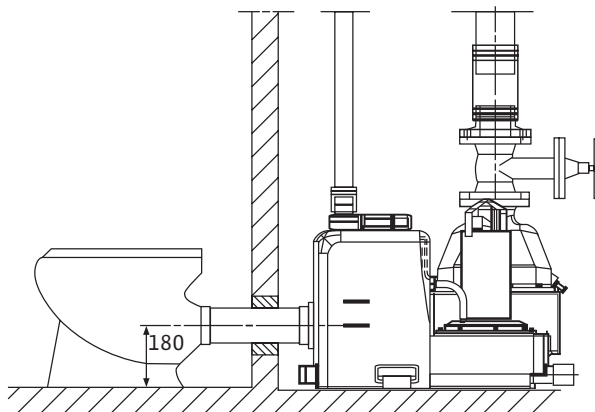


### Installation examples Wilo-DrainLift L

#### 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 tap (accessories)
- 9 Non-return valve (accessories)
- 10 Drainage pump (Twister)
- 11 Ventilation connection (DN 70)
- 12 Fitting support for weight relief



# Sewage/Faeces

## Sewage lifting units

### Technical data Wilo-DrainLift XL

Wilo-DrainLift XL10/15/20/25	
<b>Approved fluids</b>	
Domestic sewage not containing faeces	•
Domestic sewage containing faeces	•
Washing machine soap and water mixture (without long-fibre constituents)	•
Shower and bath water, unchlorinated	•
<b>Electrical connection</b>	
Power consumption P <sub>1</sub> at 1~230 V, 50 Hz [kW]	–
Connected load P <sub>1</sub> 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
<b>Permitted field of application</b>	
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
<b>Connections</b>	
Ball passage [mm]	45
Pressure port [mm]	DN 65 DN 80
Inlet connection [mm]	DN 100 DN 150
Ventilation [mm]	DN 70
Min. suction head (invert to the middle of the feed line) [mm]	700
<b>Motor</b>	
Insulation class	H
Protection class (without switch box)	IP 67
<b>Dimensions/weights</b>	
Gross volume [l]	440
Switching volume [l]	220
Weight [kg]	135

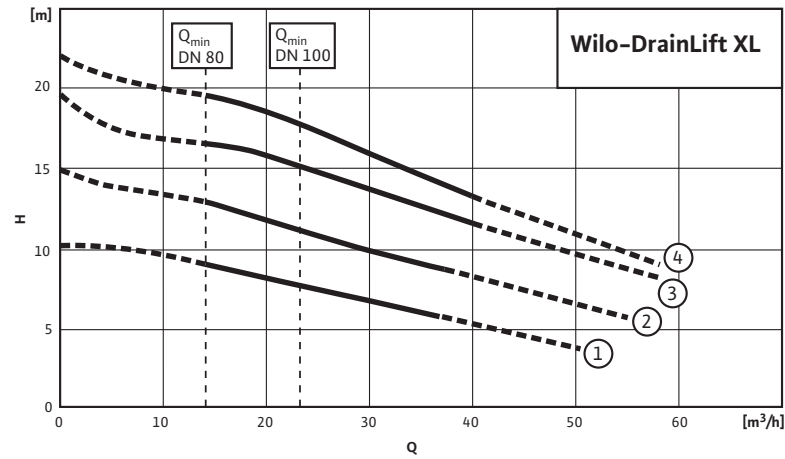
• = available or authorised, – = not available or not authorised



### 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

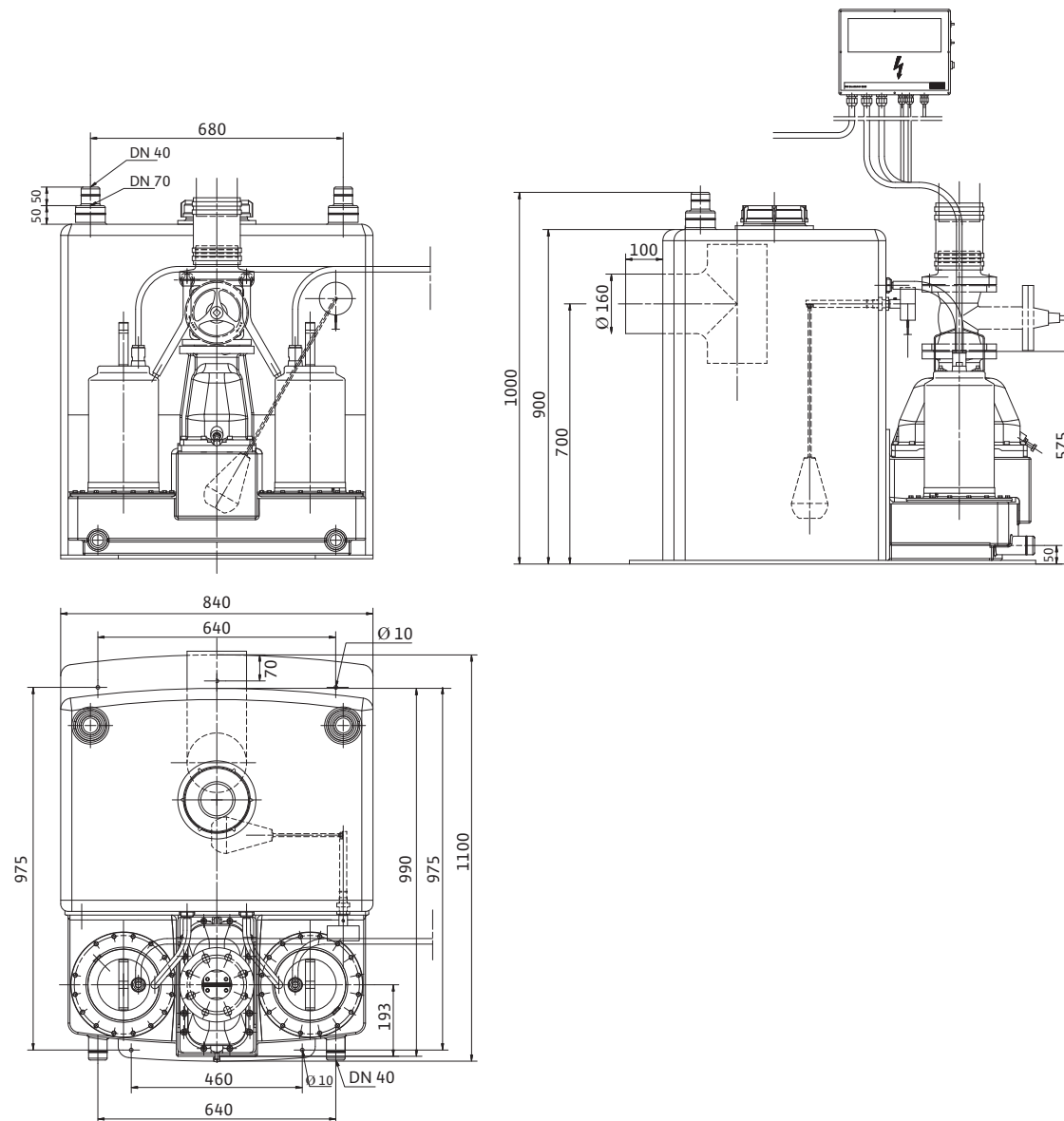
In accordance with EN 12056-4,6.1 a flow speed (in the pressure pipe) between 0.7 and 2.3 m/s is to be kept.

# Sewage/Faeces

## Sewage lifting units

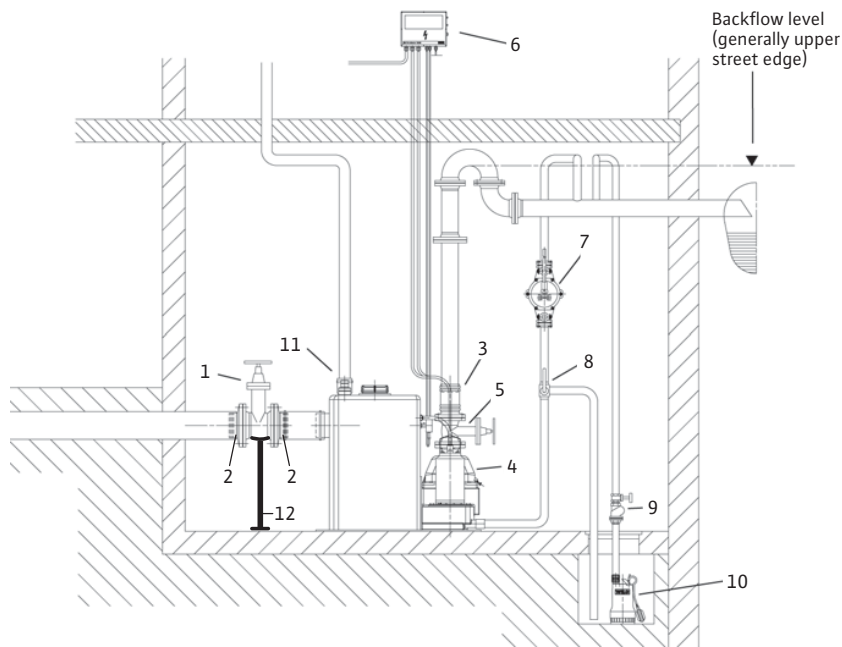
### Dimensions Wilo-DrainLift XL

#### Dimension drawing



### Installation example Wilo-DrainLift XL

#### Installation example



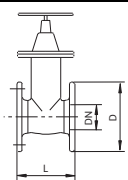
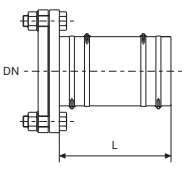
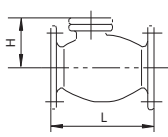
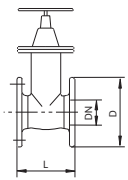
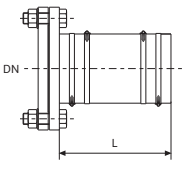
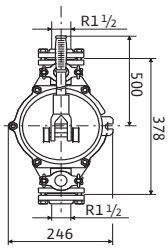
- 1 Gate valve DN 100 or DN 150 (accessories)
- 2 Single-ended flanged nipple DN 100 or DN 150 with hose (accessories)
- 3 Single-ended flanged nipple DN 80/100
- 4 Non-return valve (built into pressure port)
- 5 Gate valve DN 80 (accessories)
- 6 Switchgear DrainLift XL
- 7 Diaphragm hand pump (accessories)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

# Sewage/Faeces

## Sewage lifting units

### 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	220					
		150	210	285					
		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	220					
		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 connec- tions/accessories		Diaphragm hand pump R 1½ (Item 7)			•	•	•	•	
		3-way tap (Item 8)			—	—	—	—	

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

• = available or authorised, — = not available or not authorised

### Series description Wilo-DrainLift XXL



#### Wilo-DrainLift XXL

Sewage lifting unit

#### Type key

Example: **Wilo-DrainLift XXL 1080-2/8,4**

<b>XXL</b>	Sewage lifting unit for large objects
<b>10(8)</b>	Pressure port DN 100(80)
<b>80</b>	Total volume 800 l
	40 = Total volume 400 l
<b>2</b>	Double pump system
<b>8,4</b>	Power $P_2$ per 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 sewer system through natural inclines and sewage from toilet systems that is generated below the backflow level are, according to DIN EN 12056/DIN 1986-100, to be piped to the public sewer 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

Ready for connection, totally immersible compact unit (immersion height: 2 mWS, overflow time: 7 days), with one or two collection tanks that is/are impermeable to gas and water.

Equipped with two sewage pumps of the series Wilo-Drain TP 80 or TP 100 (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 (heaviest individual weight: pump at 62 kg). Optimal tank draining, due 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...					
	840-2/1.7 880-2/1.7	840-2/2.1 880-2/2.1	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
<b>Approved fluids</b>						
Domestic sewage not containing faeces	•	•	•	•	•	•
Domestic sewage containing faeces	•	•	•	•	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•	•	•	•	•
Shower and bath water, unchlorinated	•	•	•	•	•	•
<b>Electrical connection</b>						
Mains connection [V]	3~400	3~400	3~400	3~400	3~400	3~400
Power consumption P <sub>1</sub> [kW]	2.3	2.7	4.4	6.2	8.4	10.0
Connected load P <sub>2</sub> [kW]	1.7	2.1	3.9	5.2	7.0	8.4
Nominal current [A]	6.7	7.1	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
<b>Permitted field of application</b>						
Operating mode	S1, S3	S1, S3	S1, S3	S1, S3	S1, S3	S1, 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
<b>Connections</b>						
Ball passage [mm]	78	78	95	95	95	95
Pressure port [mm]	DN 80	DN 80	DN 100	DN 100	DN 100	DN 100
Inlet 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
<b>Motor</b>						
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...					
	840-2/1.7 880-2/1.7	840-2/2.1 880-2/2.1	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
<b>Dimensions/weights</b>						
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

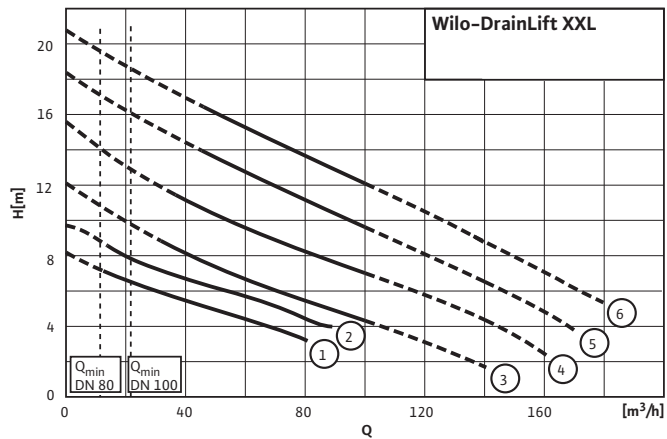
# Sewage/Faeces

## Sewage lifting units

### Pump curves, dimensions Wilo-DrainLift XXL

#### Wilo-DrainLift XXL

4-pole, 50 Hz

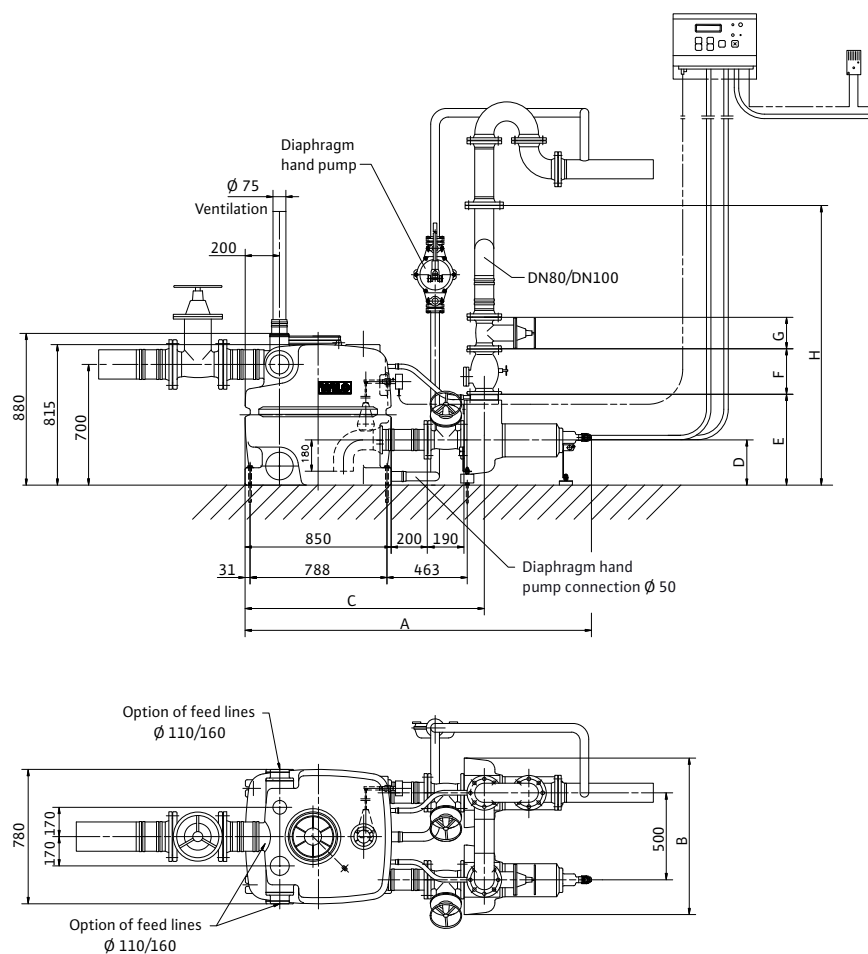


- 1 = DrainLift XXL 840-2/1,7 and 880-2/1,7
- 2 = DrainLift XXL 840-2/2,1 and 880-2/2,1
- 3 = DrainLift XXL 1040-2/3,9 and 1080-2/3,9
- 4 = DrainLift XXL 1040-2/5,2 and 1080-2/5,2
- 5 = DrainLift XXL 1040-2/7,0 and 1080-2/7,0
- 6 = DrainLift XXL 1040-2/8,4 and 1080-2/8,4

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 kept.

#### Dimension drawings

##### Wilo-DrainLift XXL with one tank

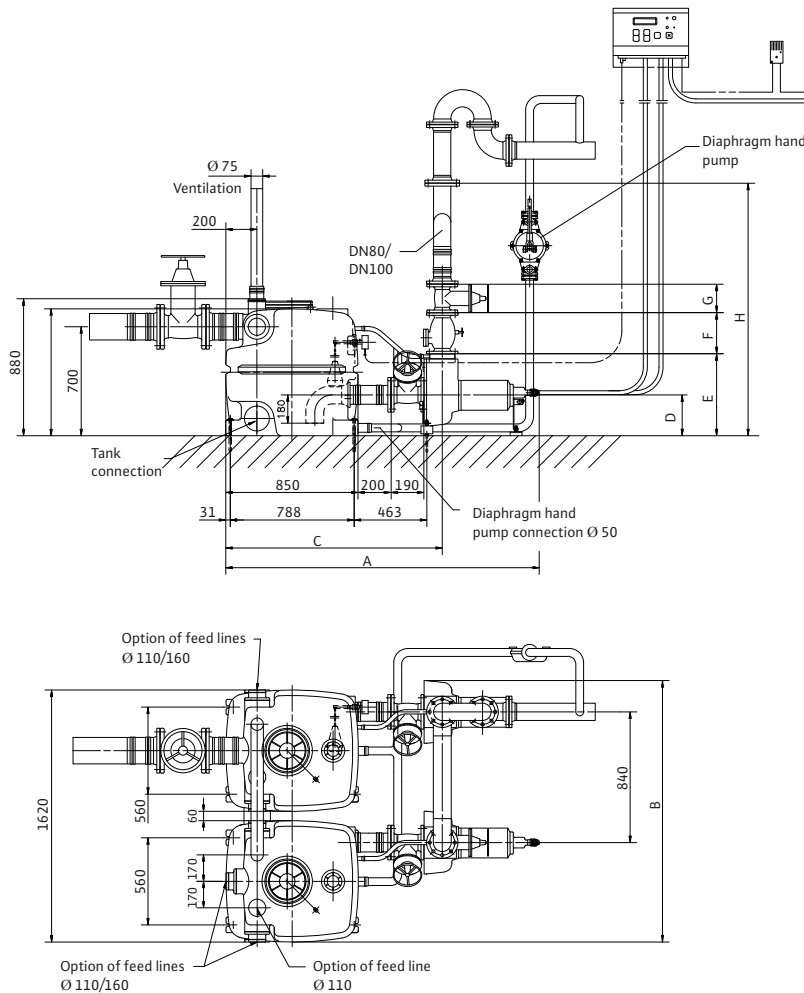




### Pump curves, dimensions Wilo-DrainLift XXL

#### 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 <sub>DN 80</sub>	H <sub>DN 100</sub>
840 and 880-2/1,7 840 and 880-2/2,1	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

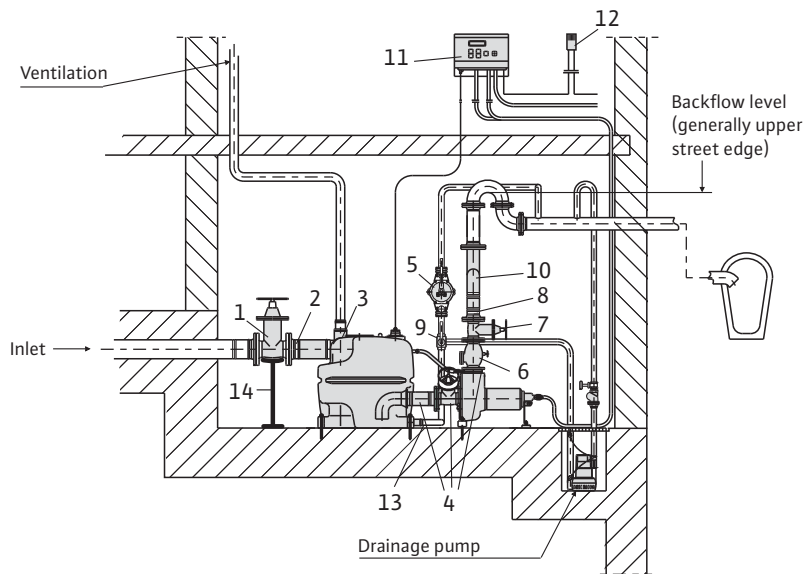
# Sewage/Faeces

## Sewage lifting units

### Installation example Wilo-DrainLift XXL

#### Installation example

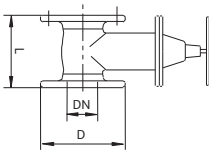
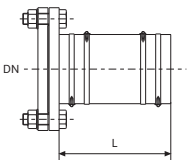
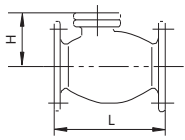
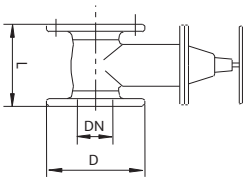
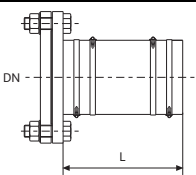
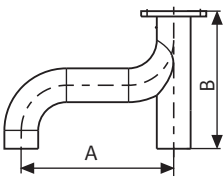
Wastewater and sewage lifting unit (sewage with faecal content); double system Wilo-DrainLift XXL



- 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 tap (accessories)
- 10 Y-pipe
- 11 Microprocessor-controlled switchgear
- 12 Small alarm switchgear
- 13 Elastic hose connection for diaphragm hand pump
- 14 Fitting support for weight relief

## Mechanical accessories Wilo-DrainLift XXL

## Connection accessories

				Pump curve 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				
		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

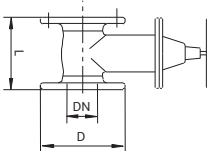
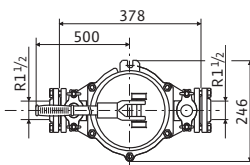
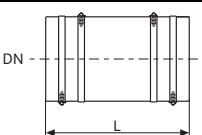
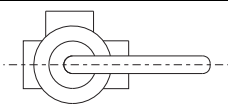
\* Required for installation in accordance with norms/recommendations in force

# Sewage/Faeces

## Sewage lifting units

### Mechanical accessories Wilo-DrainLift XXL

#### Connection accessories

				<b>Pump curve 1 and 2 Pump: TP 80 Pressure port DN 80</b>	<b>Pump curve 3 to 6 Pump: TP 100 Pressure port DN 100</b>
<b>Other connections</b>		<b>Gate valve*</b> (Item 4a) (between pump + tank)			DN 100 (x 2)
		DN	L [mm]	D [mm]	
		100	190	220	
		<b>Diaphragm hand pump</b> R 1½ (Item 5)			Accessories
		<b>Elastic hose connection</b> for ventilation (Item 3)			Included in the scope of delivery
DN		L [mm]			
70		130			
	<b>3-way tap</b> (Item 9)			Accessories	

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

### Series description Wilo-DrainLift FTS



#### Wilo-DrainLift FTS

Sewage lifting unit with solids separation system

#### Type key

Example: **Wilo-DrainLift FTS MG 750 STS 65/18**

<b>FTS</b>	Solids separation system for the drainage of large objects
<b>MG</b>	Installation in buildings
<b>750</b>	Height to the bottom of the inlet pipe, tank volume 400 l
<b>STS 65/18</b>	Used pump types STS65/... or FA08.43E

#### Application

The DrainLift FTS solids separation system is a sewage lifting unit for the drainage of commercial buildings and building complexes (e.g. hotels, shopping centres, etc.).

Raw sewage which cannot be piped to the sewer system through natural inclines and sewage that is generated below the backflow level are, according to DIN EN 12056/DIN 1986-100, to be piped to the public sewer 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

Fully submersible sewage lifting unit ready for connection with built-in solids separation system. Equipped as a double pump system with two Wilo-Drain STS 65 or FA08.43E pumps.

When solids separation tanks are used, the pumps do not come into contact with the solids. This way, pumps with optimised pumps for transporting sewage can be used.

The dry sump installation of the pump and being equipped as a redundant double pump system ensures a maximum level of maintenance-friendliness and operating safety. The complete system, except for the pumps and non-return valve, is made of corrosion-resistant PE-HD.

The fully submersible compact unit ready for connection with a gas- and watertight collection tank.

Easy handling and optimum tank drainage by means of 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

Sewage lifting unit ready for connection with solids separation system incl. pumps, switchgear, non-return valve and Y-piece. Optional, individual blocking of the solids separation tank.

# Sewage/Faeces

## Sewage lifting units

### Technical data Wilo-DrainLift FTS

	Wilo-DrainLift FTS MG 750...					
	STS 65/10	STS 65/14	STS 65/18	STS 65/22	FA08.43E 140	FA08.43E 150
<b>Approved fluids</b>						
Domestic sewage not containing faeces	•	•	•	•	•	•
Domestic sewage containing faeces	•	•	•	•	•	•
Washing machine soap and water mixture (without long-fibre constituents)	•	•	•	•	•	•
Shower and bath water, unchlorinated	•	•	•	•	•	•
<b>Electrical connection</b>						
Mains connection [V]	3~400	3~400	3~400	3~400	3~400	3~400
Power consumption P <sub>1</sub> [kW]	3.5	4.1	5.4	8.5	4.7	6
Connected load P <sub>2</sub> [kW]	1.5	2.5	3.5	4	3.75	5
Nominal current [A]	5.4	6.5	8.5	9.1	7.6	9.7
Mains frequency	50	50	50	50	50	50
Pump speed [rpm]	2900	2900	2900	2900	2900	2900
Cable length from plant to switchgear/plug [m]	10	10	10	10	10	10
<b>Permitted field of application</b>						
Operating mode	S2 – 10 min	S2 – 10 min	S2 – 10 min	S2 – 10 min	S2 – 15 min	S2 – 15 min
Switching frequency max. [1/h]	50	50	50	50	15	15
Switch-on level (measured from the floor) [mm]	700	700	700	700	700	700
Max. permitted pressure in the pressure pipe [bar]	10	10	10	10	10	10
Fluid temperature, maximum [°C]	40	40	40	40	40	40
Ambient temperature, maximum [°C]	40	40	40	40	40	40
<b>Connections</b>						
Ball passage [mm]	65	65	65	65	70	70
Pressure port [mm]	DN 100	DN 100	DN 100	DN 100	DN 100	DN 100
Inlet connection [mm]	DN 150	DN 150	DN 150	DN 150	DN 150	DN 150
Ventilation [mm]	DN 100	DN 100	DN 100	DN 100	DN 100	DN 100
Min. suction head (invert to the middle of the feed line) [mm]	750	750	750	750	750	750
<b>Motor</b>						
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 FTS

	Wilo-DrainLift FTS MG 750...					
	STS 65/10	STS 65/14	STS 65/18	STS 65/22	FA08.43E 140	FA08.43E 150
<b>Dimensions/weights</b>						
Gross volume [l]	400	400	400	400	400	400
Switching volume [l]	300	300	300	300	300	300
Tank volume [l]	400	400	400	400	400	400
Weight [kg]	240	242	246	250	292	299

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

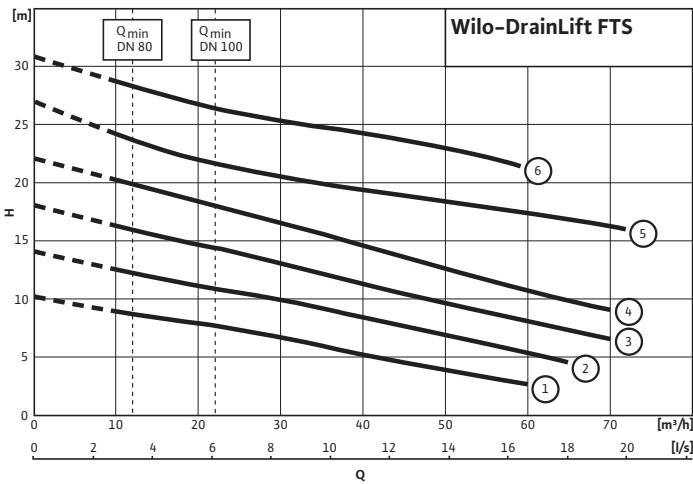
# Sewage/Faeces

## Sewage lifting units

### Pump curves, dimensions Wilo-DrainLift FTS

#### Wilo-DrainLift FTS

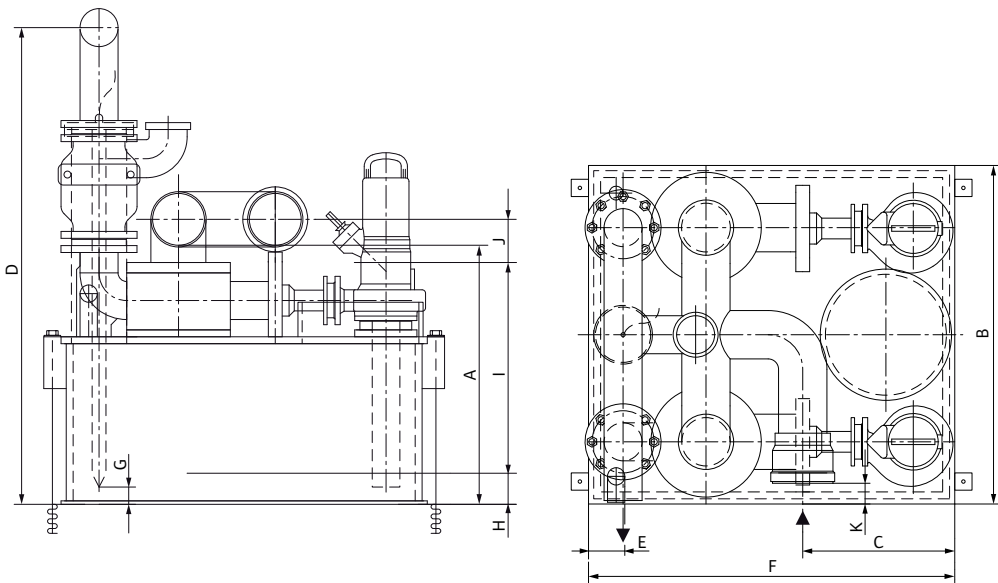
2-pole, 50 Hz



- 1 = DrainLift FTS MG 750 STS 65/10
- 2 = DrainLift FTS MG 750 STS 65/14
- 3 = DrainLift FTS MG 750 STS 65/18
- 4 = DrainLift FTS MG 750 STS 65/22
- 5 = DrainLift FTS MG 750 FA08.43E 140
- 6 = DrainLift FTS MG 750 FA08.43E 150

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 kept.

#### Dimension drawings



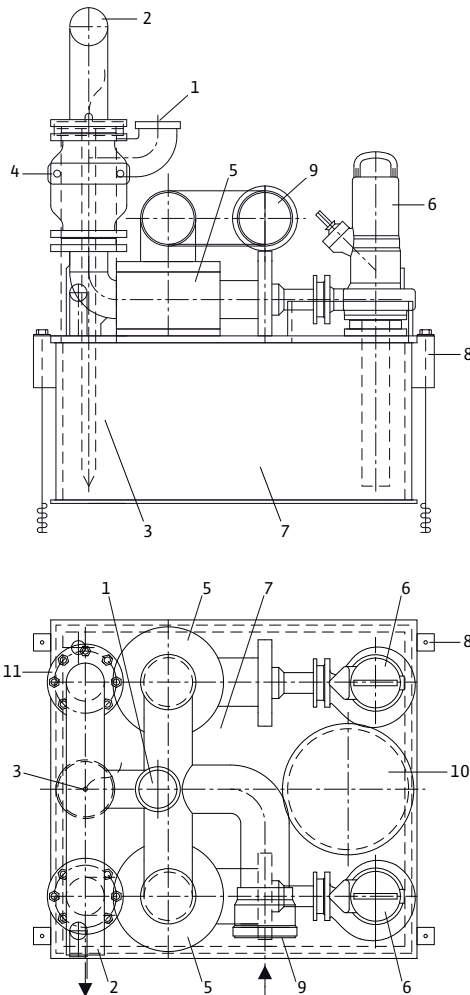
#### Dimensions

	Dimensions								Pump		
									OFF	ON	ALARM
	A	B	C	D	E	F	G	K	H	I	J
[mm]											
Wilo-DrainLift FTS	750	980	330	1380	110	1060	40	60	90	610	125



### System example Wilo-DrainLift FTS

#### System example



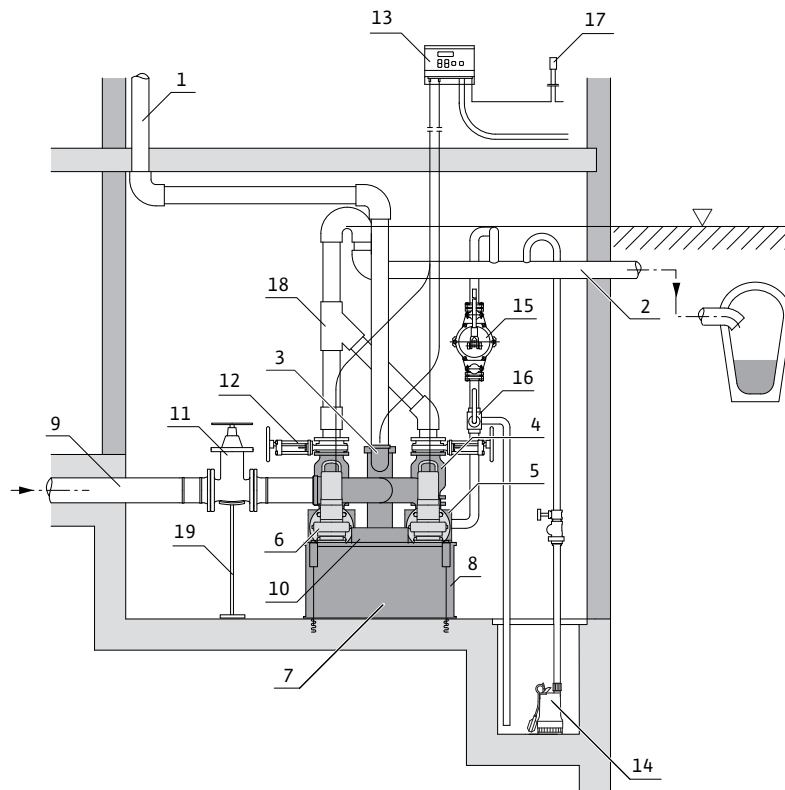
- 1 Ventilation and exhaust, DN 100 for KG pipe
- 2 Pressure pipeline PE 110 x 606
- 3 Filling level sensor
- 4 Non-return valve DN 100
- 5 Solids tank
- 6 Sewage pump
- 7 Collection reservoir
- 8 Floor fixation M16
- 9 Inlet DN 150 for KG pipe
- 10 Cleaning opening
- 11 Suction connection ½" AG

# Sewage/Faeces

## Sewage lifting units

### Installation example I Wilo-DrainLift FTS

#### Installation example



#### ▽ Backflow level (usually street level)

- 1 Ventilation and exhaust
- 2 Pressure pipeline
- 3 Filling level sensor
- 4 Non-return valve
- 5 Solids tank
- 6 Sewage pump
- 7 Collection reservoir
- 8 Floor fixation
- 9 Feed line DN 150
- 10 Cleaning opening
- 11 Inlet valve (accessories)
- 12 Gate valve (accessories)
- 13 Switchgear Wilo-Drain (see electr. accessories)
- 14 Drainage pump (e.g. Twister)
- 15 Diaphragm hand pump (accessories)
- 16 3-way tap (accessories)
- 17 Small alarm switchgear
- 18 Y-pipe
- 19 Fitting support for weight relief

### Contents

#### Pumps Stations

<b>Planning guide</b>	<b>84</b>
<b>Wilo-DrainLift WS 40-50, WS 625, WS 900/1100</b>	<b>86</b>
Series overview	86
<b>Wilo-DrainLift WS 40 Basic, WS 40-50</b>	<b>86</b>
Series description Wilo-DrainLift WS 40 Basic	88
Series description Wilo-DrainLift WS 40-50	89
Pump curves	90
Dimensions	91
Version examples	92
Installation examples	93
Mechanical accessories	<b>94</b>
<b>Wilo-DrainLift WS 625</b>	<b>86</b>
Series description	96
Pump curves, dimensions	97
Dimensions	98
Installation example	99
Mechanical accessories	100
<b>Wilo-DrainLift WS 900/1100</b>	<b>86</b>
Series description	103
Technical data	104
Mechanical accessories	105

# Planning Guide

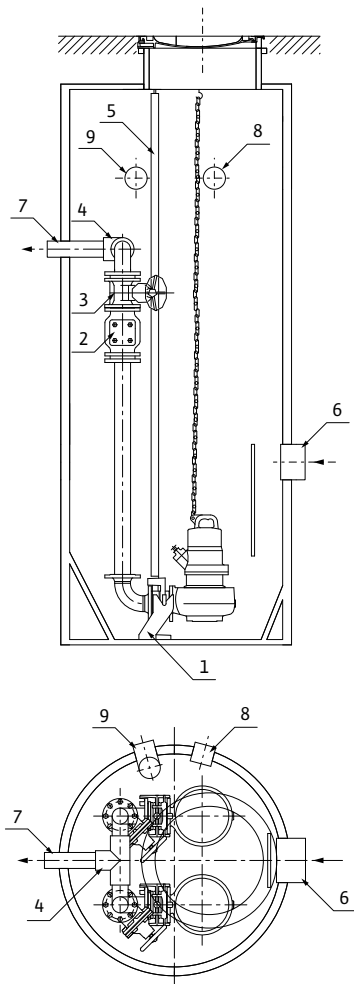
## Pumps stations

### General information:

- Backflow fittings and slide valves are to be generally placed high up in the sump in the pressure pipe since deposits are avoided this way and the fittings for maintenance, cleaning and testing are easily accessible.
- Check valves are to be generally provided for service and repair work. These are sometimes required by the standards.
- Pressure pipes are to be dimensioned according to the parameters specified in the relevant standards, e.g. flow speeds and pressure stage.
- The pump sump is to be designed as small as possible around the pump.
- At the inlet of the sump, strong surge currents on the pump and components of the level sensors are to be avoided.
- During the building phase, a foundation or earthing strip are to be provided for potential compensation.
- If the outlet of the pressure pipeline lies underneath the suction piece of the pump, a ventilator, e.g. vacuum interrupter (accessories) is to be installed in the common pressure pipeline in order to avoid the pump sump being suctioned out up to underneath the suction piece.

### Double pump pumps station

- 1 Foot elbow
- 2 Non-return valve
- 3 Gate valve
- 4 Y-piece (Y-pipe)
- 5 Guide pipe
- 6 Feed line
- 7 Pressure outlet
- 8 Empty conduit for cables
- 9 Ventilator pipe



### Determining the flow

The accumulated domestic sewage volumes are approximately calculated based on the water consumption of the community in question. It depends on the number of residents "E" as well as the wastewater outflow "a" in litres [l] per resident and day (l/ET, empirically approx. 120 l/ET). Under the condition that the maximum hourly outflow  $Q_{\max}$  is of the average daily outflow, the following results:

$$Q_{\max} = \frac{E \times a \text{ [in l/s]}}{14 \times 60 \times 60}$$

When dimensioning the pressure pipeline, make sure that the minimum flow speed of 0.7 m/s is maintained. To take the rainwater and ground water into account, which accumulates on the sewage side even when the drainage system is separate, the calculated value is to be increased by 50 - 130%. Further information about this can be found in the planning guide "Sewage technology" (can be ordered).

### Determining the size of the usable suction space of sewage pump stations

The usable impoundment volume of the suction space depends on the permissible switching frequency and the flow of the largest installed pump. For two identical pumps and automatically switching activation, the volume can be cut in half.

The permissible switching frequency "S" for each pump is not to be exceeded (depends on the selected pump type. See "Equipment/function").

For larger motor capacities or higher switching frequencies, consultation with us is required.

The volumes indicated in the diagram are minimum values in order to guarantee smooth pump operation under unfavourable conditions.

This is the case when the flow for a pump is half of the flow volume.

This results in a maximum number of activation operations per hour.

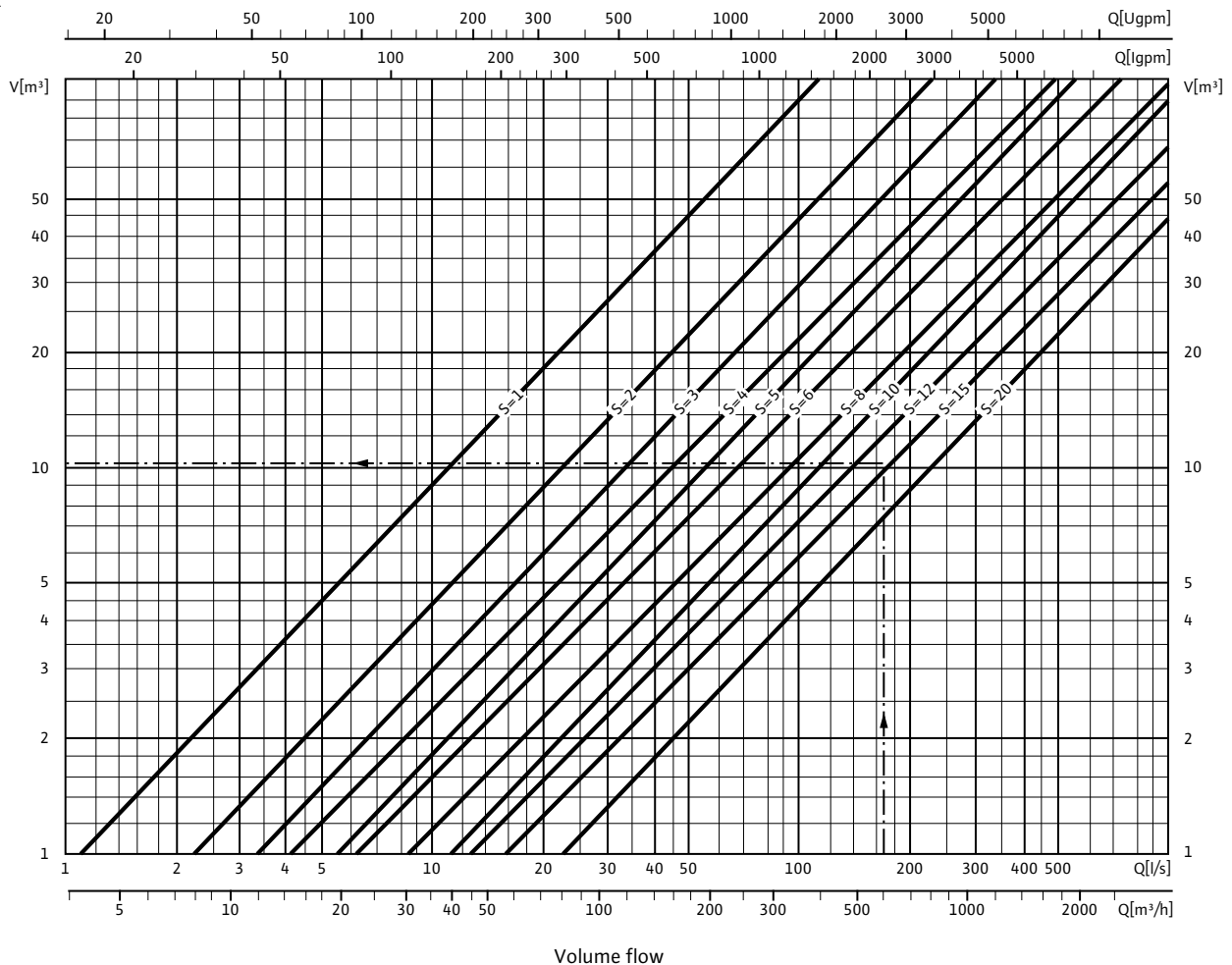
For Wilo synthetic sumps WS 40-50, 625, 900, 1100 the usable impoundment volume, depending on the selected pump type, is defined as follows:

WS 40-50: 55 - 160 l

WS 625: 95 - 150 l

WS 900: 110 - 150 l

WS 1100: 200 - 280 l

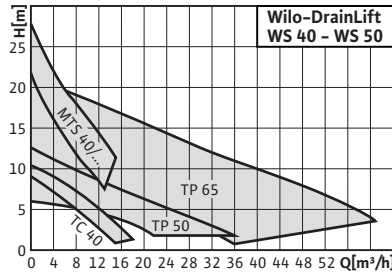


# Pumps Stations

## Wastewater and sewage pumping stations

### Series overview Wilo-DrainLift WS

#### Series: Wilo-DrainLift WS 40-50



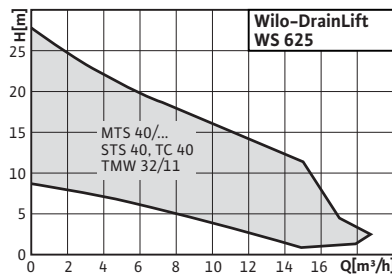
#### > Synthetic pumps stations

##### > 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



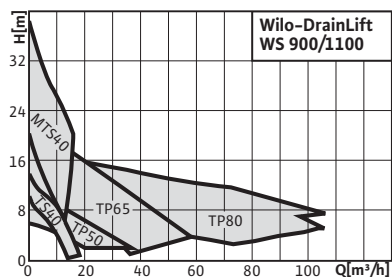
#### > Synthetic pumps stations

##### > 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 sump length extension
- Easy installation and maintenance of the pumps by surface coupling when the pumps are used Wilo-Drain TP50, TP65, MTS40/...
- Also with macerator pumps Wilo-Drain MTS 40/...

##### > Additional information:

##### Page

- Series description ..... 88
- Pump curves ..... 90
- Dimensions ..... 91
- Version example ..... 92
- Installation example ..... 93
- Mechanical accessories ..... 94

#### Series: Wilo-DrainLift WS 625

##### > Product advantages

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

##### > Additional information:

##### Page

- Series description ..... 96
- Pump curves ..... 97
- Dimensions ..... 98
- Installation example ..... 99
- Mechanical accessories ..... 100

#### Series: Wilo-DrainLift WS 900/1100

##### > Product advantages

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

##### > Additional information:

##### Page

- Series description ..... 103
- Technical data ..... 104
- Mechanical accessories ..... 105

# Pumps Stations

## Wastewater and sewage pumping stations

### Series description Wilo-DrainLift WS 40 Basic



#### Wilo-DrainLift WS 40 Basic

Synthetic pumps station

#### Type key

Example: Wilo-DrainLift WS 40E/TC40/8 (3~)-BV

<b>WS</b>	Synthetic pumps station
<b>40</b>	System pressure outlet
<b>E</b>	Single pump system
<b>TC 40/8</b>	Selected pump type
<b>(3~)</b>	Phase motor
<b>BV</b>	Non-return ball valve/without BV with integrated non-return valve

#### Application

The Wilo-DrainLift WS 40 Basic is, in accordance with EN 12050-2, an automatically operating drainage 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 sump 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 ground does not freeze to very deep levels.

#### Built-in pump

##### TC 40

For severely contaminated fluids; 35 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
- In the case of double pump systems, the pressure line union must be established onsite.

#### Scope of delivery

- Tank (for single or double pump system)
- Built-in pipework
- Non-return valve, version BV with non-return ball valve
- Pump
- Level switching
- Switchgear (for three-phase pump or double system)
- Cover with seal (can be walked on up to 200 kg)
- 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 fixation
- Installation and operating instructions



### Series description Wilo-DrainLift WS 40-50



#### Wilo-DrainLift WS 40-50

Synthetic pumps station

#### Type key

Example: Wilo-DrainLift WS 40E/MTS 40/...

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

#### Application

The 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 sump 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.  
In the case of double pump systems, the pressure line union must be established 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 (can be walked on up to 200 kg)
- 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 fixation
- Installation and operating instructions

Pump, switchgear (DrainControl PL) and level sensor can be freely chosen in the accessories.

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

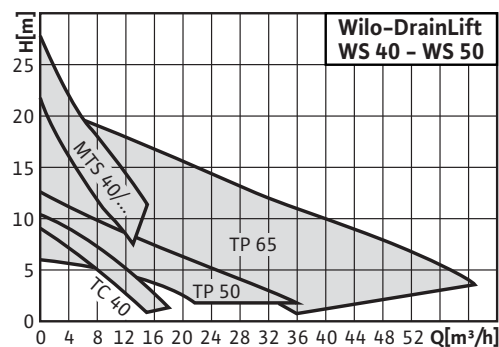
# Pumps Stations

## Wastewater and sewage pumping stations

### Pump curves Wilo-DrainLift WS 40-50

#### Wilo-DrainLift WS 40-50

Duty chart of usable pump types Wilo-Drain (50 Hz)



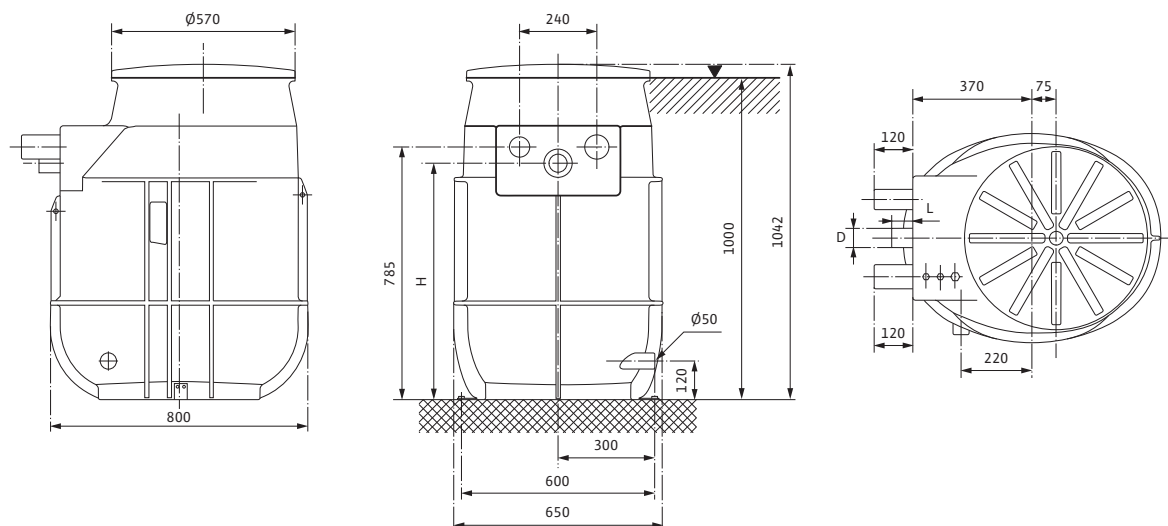
For individual pump curves, see the technical data for the selected pump.

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

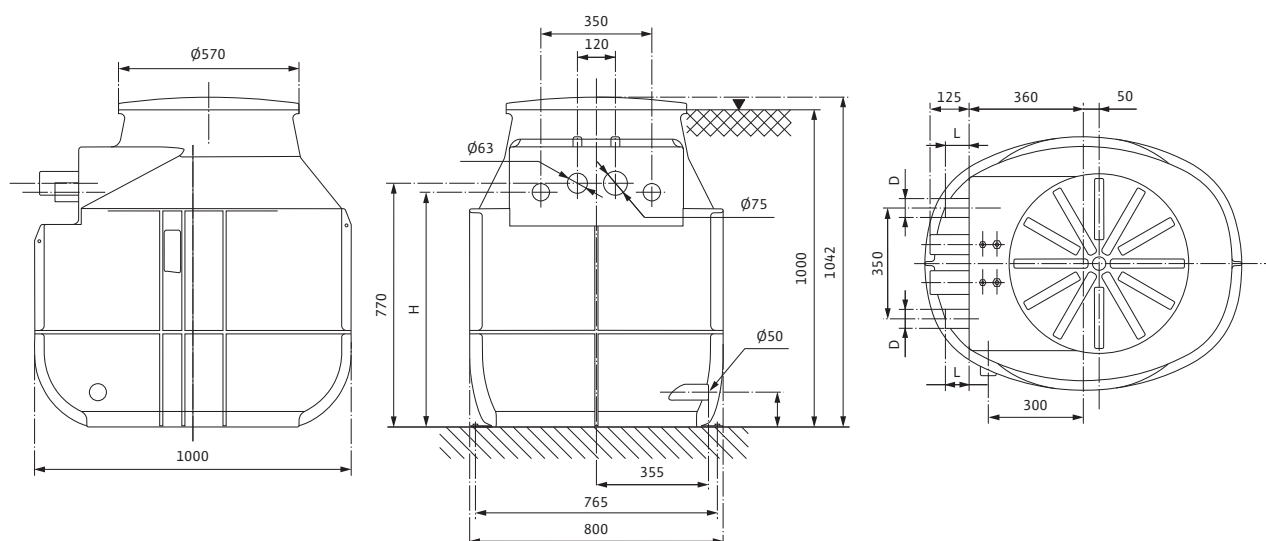
### Dimensions Wilo-DrainLift WS 40-50

#### 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	
	TC 40		TC 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 1½	G 1½	G 2	G 2

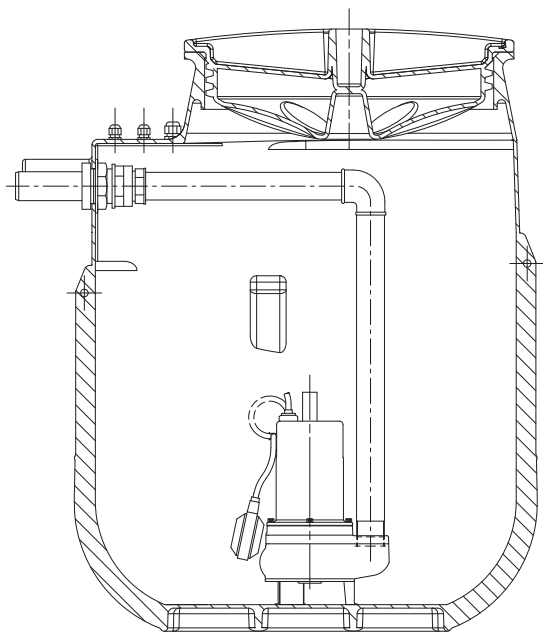
# Pumps Stations

## Wastewater and sewage pumping stations

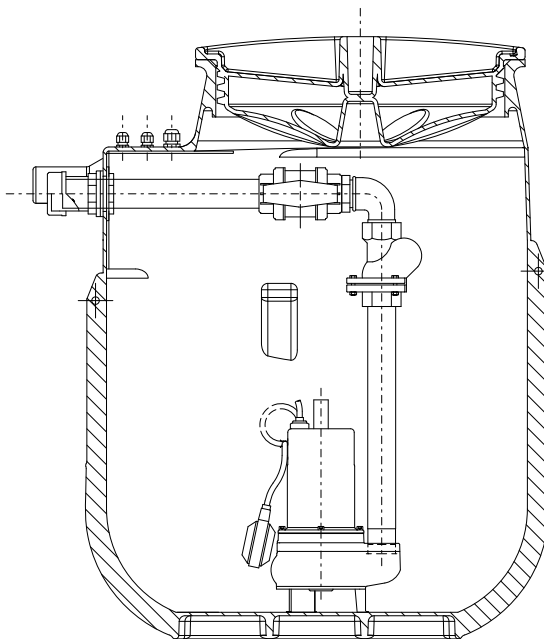
### Version examples Wilo-DrainLift WS 40-50

#### Version examples

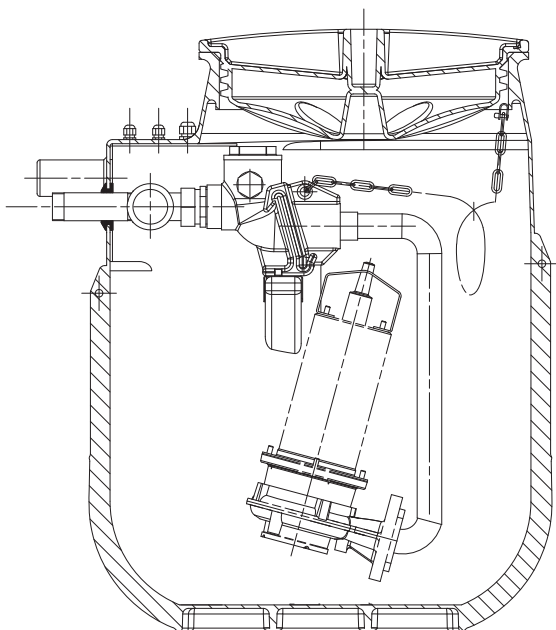
**Wilo-DrainLift WS 40 Basic:**  
e.g.: WS 40E/TC 40...



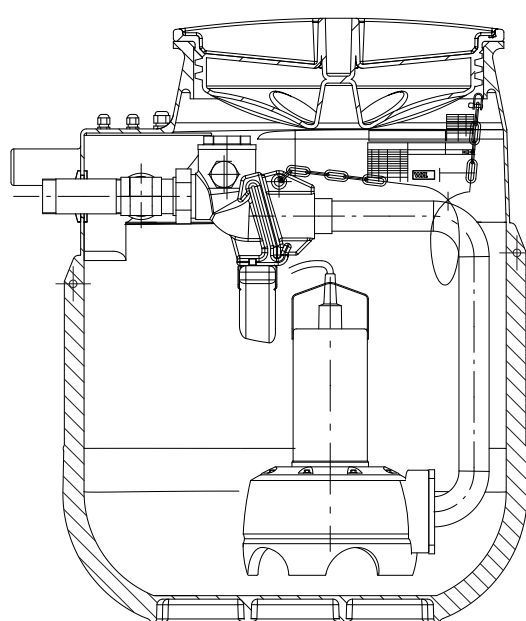
**Wilo-DrainLift WS 40 Basic:**  
e.g.: WS 40E/TC 40...BV



**Wilo-DrainLift WS 40**  
e.g.: WS 40E/MTS 40/...



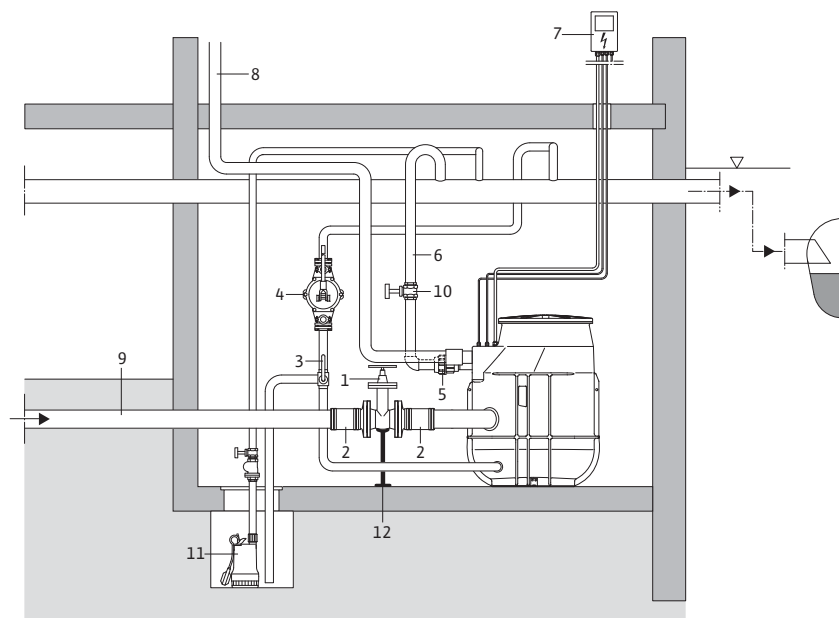
**Wilo-DrainLift WS 40-50:**  
e.g.: WS 50E/TP 65...



### Installation examples Wilo-DrainLift WS 40-50

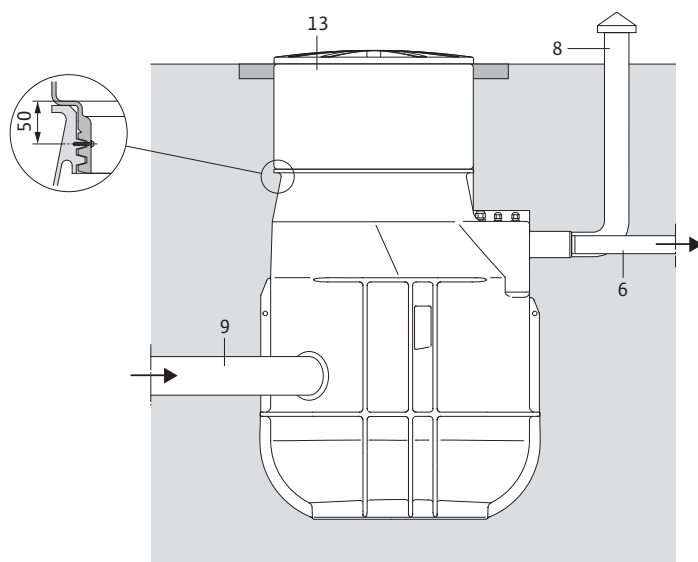
#### Installation examples

##### 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 tap (accessories)
- 4 Diaphragm hand pump (accessories)
- 5 Clamp bolting (accessories)
- 6 Pressure pipe to the main collection line.
- 7 Switchgear Wilo-Drain (see electr. accessories)
- 8 Ventilation (connection DN 70)
- 9 Feed line (DN 100 connection)
- 10 Gate valve (accessories)
- 11 Drainage pump (e.g. Twister)
- 12 Fitting support for weight relief

##### Concealed floor installation



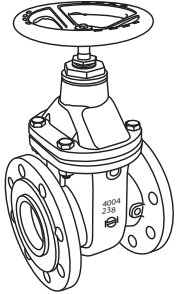
- 6 Pressure outlet
- 8 Ventilation (connection DN 70)
- 9 Feed line (DN 100 connection)
- 13 Sump length extension (accessories)

# Pumps Stations

## Wastewater and sewage pumping stations

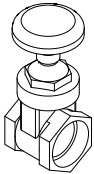
### Mechanical accessories Wilo-DrainLift WS 40-50

#### Mechanical accessories



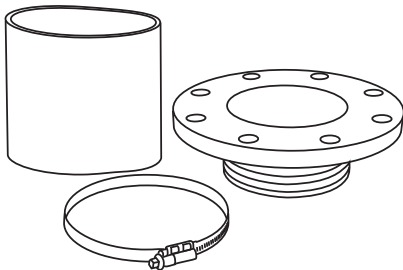
##### Gate valve DN 100 (Item 1)

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



##### Gate valve (Item 10)

Gate valve 1½" or 2" for pressure outlet.



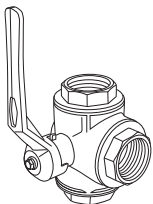
##### Single-ended flanged nipple DN 100 (Item 2)

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 the freely selectable inlet connection on the sump.

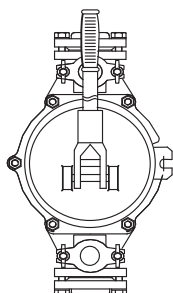


##### 3-way tap (Item 3)

For connecting a diaphragm hand pump for the evacuation of both the system tank and an existing pump sump

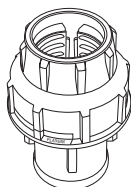
### Mechanical accessories Wilo-DrainLift WS 40-50

#### Mechanical accessories



##### Diaphragm hand pump R 1 1/2 (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:

1 1/2" (IG) to 50 mm outside Ø

1 1/2" (IG) to 63 mm outside Ø

2" (IG) to 63 mm outside Ø

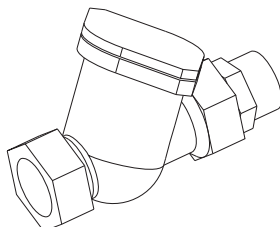
2" (IG) to 75 mm outside Ø

For connecting the WS 40 Basic to a PE pressure pipe\*:

50 mm outside Ø to 50 mm outside Ø

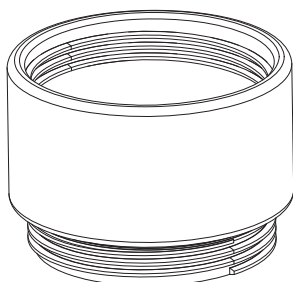
50 mm outside Ø to 63 mm outside Ø

\*1) 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.



##### Sump length extension (Item 12)

Extension 300 mm with seal and fastening screws.

# Pumps Stations

## Wastewater and sewage pumping stations

### Series description Wilo-DrainLift WS 625



#### Wilo-DrainLift WS 625

Synthetic pumps station

#### Type key

Example: **Wilo-DrainLift WS 625 E/1800 MTS 40**

<b>WS</b>	Synthetic pumps station
<b>625</b>	Inside diameter of the sump
<b>E</b>	Single pump sump
<b>1800</b>	Sump height
<b>MTS 40/...</b>	Selected pump type

#### Application

Wilo-DrainLift WS625 is a single pump sump for pumping wastewater and sewage in building services out of rooms and areas underneath the backflow level (EN 752). Suitable as a pumps station for drainage and pressurised drainage. The WS625 is utilised in the ground outside of the building. A time-saving, easy-installation, low-cost solution for all planners and building contractors.

#### Applicable pump types

##### TMW 32/

Slightly contaminated fluids (free of faeces), 10 mm free ball passage.

##### STS 40 and TC 40

For severely contaminated fluids (free of faeces);

STS 40: free ball passage 40 mm

TC 40: free ball passage 35 mm

##### 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

The Wilo-DrainLift WS 625 is available in 4 lengths, 1200, 1500, 1800 and 2100 mm.

The sump 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 connection with MTS 40, other pumps 4 bar
- Synthetic pumps station made of recyclable PE
- Highest degree of upward pressure reliability and inherent stability by means of finning up to a ground water level above the entire sump height (upper edge of site)

#### Scope of delivery:

- PE sump with internal pipework, including 1¼" coupling sleeve
- Seal mounted for feed line DN 100 (DN 150 optional)
- Seal mounted for ventilation/electrical connection (DN 100).
- Seal mounted for pressure pipeline (DN 40/Ø50).
- Installation and operating instructions

Pump (for MTS 40 a ground support foot is required), discharge pipe, switchgear and level sensor are freely selectable as accessories.

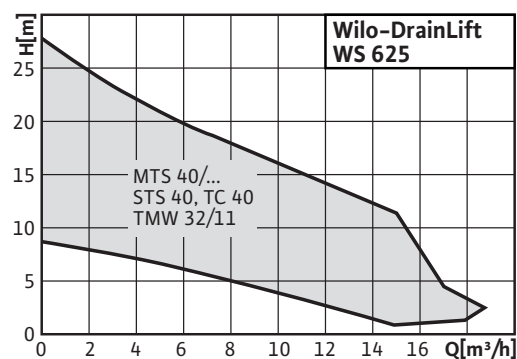
Recommendations for electrical accessories are described in the "Electrical Accessories Wilo-Drain" chapter.



### Pump curves, dimensions Wilo-DrainLift WS 625

#### Wilo-DrainLift WS 625

Duty chart of usable pump types Wilo-Drain (50 Hz)

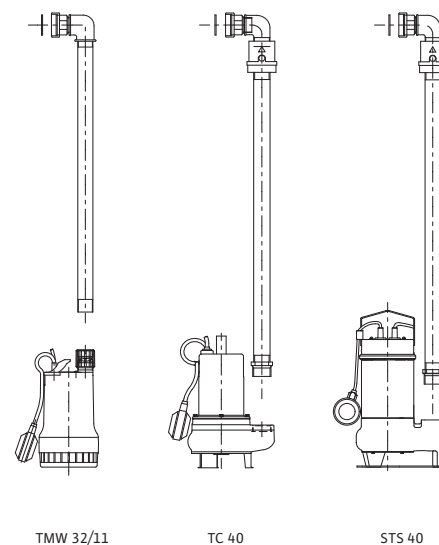
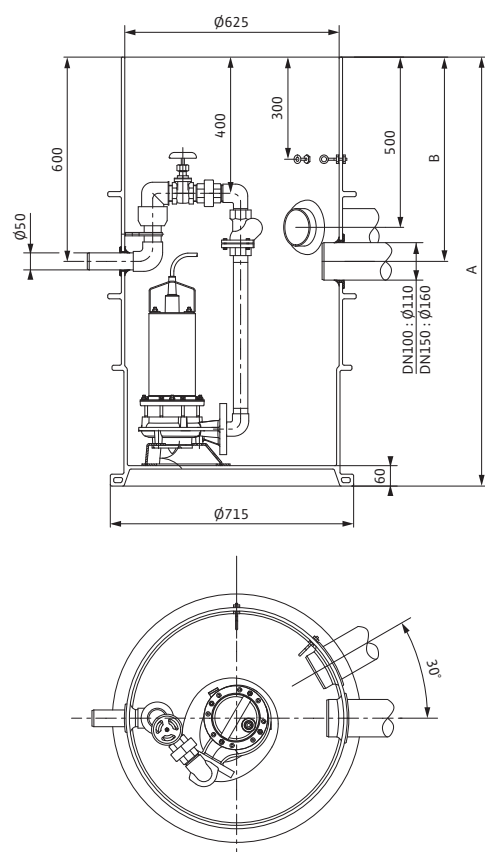


For individual pump curves, see the technical data for the selected pump.

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

#### Dimension drawing

Wilo-DrainLift WS 625 E/1200



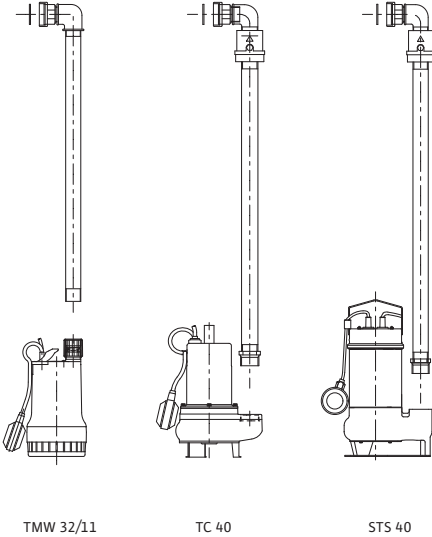
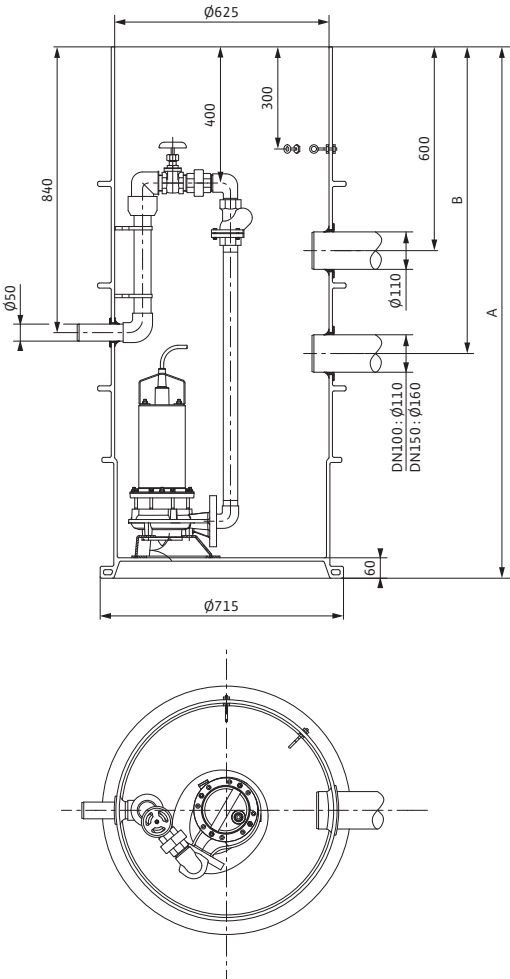
# Pumps Stations

## Wastewater and sewage pumping stations

### Dimensions Wilo-DrainLift WS 625

#### Dimension drawing

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



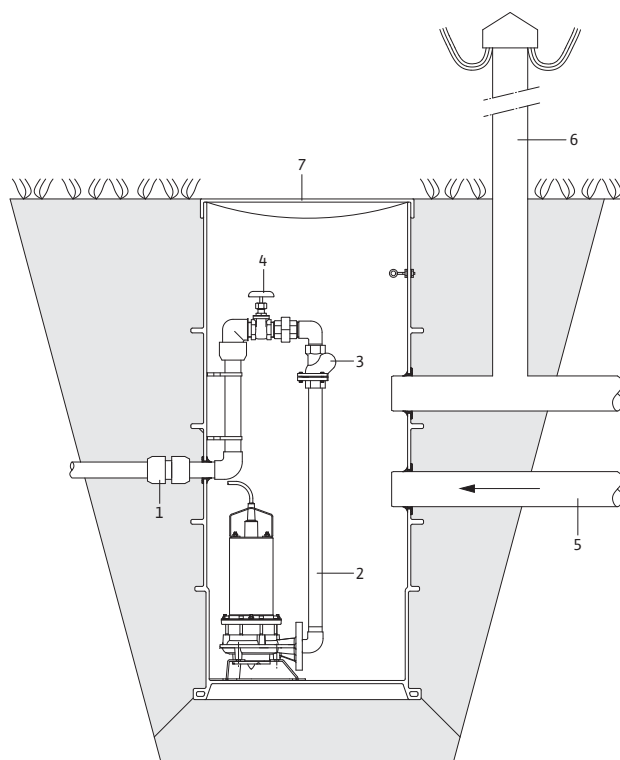
#### Dimensions

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	1500	1452

### Installation example Wilo-DrainLift WS 625

#### Installation example

##### Concealed floor installation: WS 625



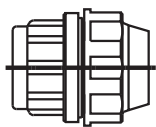
- 1 Clamp bolting (accessories)
- 2 Pressure pipe (accessories, incl. non-return valve Item 3)
- 3 Non-return valve R 1¼
- 4 Gate valve 1¼" (scope of delivery)
- 5 Inlet DN 100 (DN 150)
- 6 Ventilation DN 100
- 7 Sump covering (accessories)

# Pumps Stations

## Wastewater and sewage pumping stations

### Mechanical accessories Wilo-DrainLift WS 625

#### Mechanical accessories



##### Terminal threads (Item 1)

For pressure pipe connection outside the sump

50 mm outside  $\varnothing$  to 50 mm outside  $\varnothing$

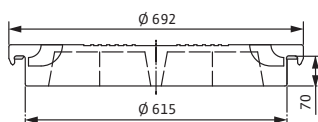
50 mm outside  $\varnothing$  to 63 mm outside  $\varnothing$



##### Pressure pipe (Item 2) including non-return valve R 1 1/4 (Item 3)

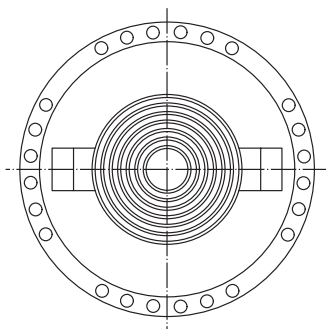
In accordance with the selected pump.

For TMW 32/11 the non-return valve is built into the pump.



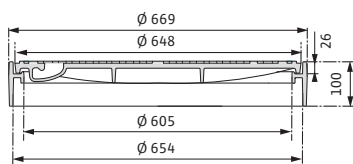
##### Sump covering (Item 7)

Sump cover, standard made of PE,  
can be walked on

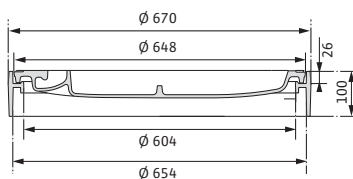
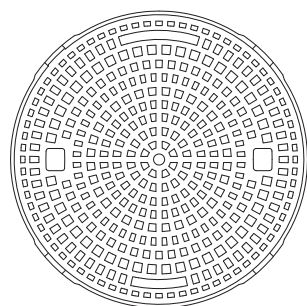


### Mechanical accessories Wilo-DrainLift WS 625

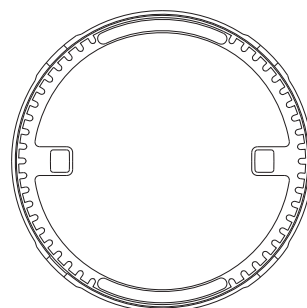
#### Mechanical accessories



**Sump covering, class A (EN 124) (Item 7)**  
can be walked on (15 kN)



**Sump covering, class B (EN 124) (Item 7)**  
can be driven over (125 kN)

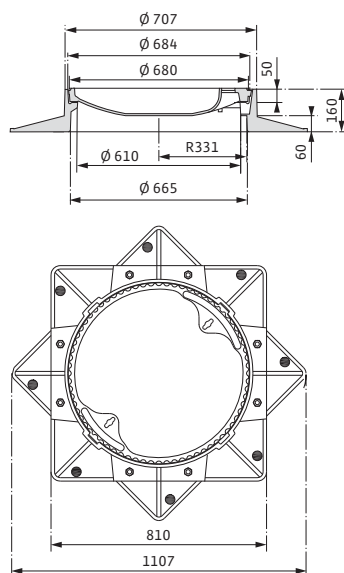


# Pumps Stations

## Wastewater and sewage pumping stations

### Mechanical accessories Wilo-DrainLift WS 625

#### Mechanical accessories



**Sump 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: **Wilo-DrainLift WS 900 E/MTS 40**

<b>WS</b>	Synthetic pumps station
<b>900</b>	Sump diameter 900 = 900 mm 1100 = 1100 mm
<b>E</b>	E = Individual pump D = Double pump
<b>MTS 40</b>	Selected pump type

#### Application

Wilo-DrainLift WS 900/1100 is a individual/double pump sump for pumping wastewater and sewage in building services our of rooms and from areas underneath the backflow level (EN 752). It is suitable as a pumps station ready for connection for pressurised drainage and as a pump station for drainage dewatering. The WS 900/1100 is buried in the ground outside of the building. A time-saving, easy-installation, low-cost solution for all planners and building contractors.

#### Applicable pump types

##### TS 40

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

#### 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 traffic load 5 kN/m<sup>2</sup> (in acc. 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 sump floor, up to an immersion depth of 1.20 m into the ground water.
- Wilo surface coupling
- 2 DN 100 connection pieces for ventilation and connection cable
- Deposit-free collector room due to moulded hemispherical form of the pump sump
- Ready accessibility of the level sensor, due to installation with hinged supporting bar

#### Scope of delivery

- Pipework made of stainless steel, from the pump pressure joints to approximately 10 cm outside of the sump
- Above-water coupling system including seals
- Non-return valve, gate valve completely mounted
- Flushing connection G 1½
- Stainless steel chain including fixing hook
- Supporting bar for level monitoring (level sensor, float switch) including mounting accessories
- Double pump units are supplied with respectively double quantities of above-water couplings and fittings.
- Coupling material for two DN 150 KG inlet pipes
- Installation and operating instructions

# Pumps Stations

## Wastewater and sewage pumping stations

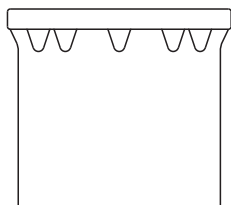
### Technical data Wilo-DrainLift WS 900/1100

	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
Impoundment volume [l] (bottom to upper edge of inlet)	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	1½"	1½"	2"	2½"	1½"	2"	2"	2½"	2½"	DN 80	1½"	1½"
Ventilation/cable [DN]	100	100	100	100	100	100	100	100	100	100	100	100
Non-return valve GG25	1½"	1½"	2"	2½"	1½"	2"	2"	2½"	2½"	DN 80	1½"	1½"
Gate valve made of material	1½" red brass	1½" red brass	2" red bronze	2½" red brass	1½" red brass	2" red bronze	2" red bronze	2½" red brass	2½" red brass	DN 80 GG25	1½" red brass	1½" red brass
Weight [kg]	70	95	73	75	72	95	113	97	115	125	94	110



### Mechanical accessories Wilo-DrainLift WS 900, WS 1100

#### Mechanical accessories



##### Sump length extension made of PE

(Ø 730 x 800 mm), incl. mounting accessories, seal and supporting bar extension for level sensor (special lengths on request).

Extensions are **not** to be connected to each other.

Max. 1 extension per sump possible.



##### Sump covering made of PE

"Standard" Ø 830 mm incl. non-slip profile on the upper side and two internal locks, can be walked on.



##### Sump covering made of PE

"Safe from flooding" Ø 960 x 100 mm incl. 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 sump

- 1½" (Rp (IG)) on 50 mm outside Ø
- 1½" (Rp (IG)) on 63 mm outside Ø
- 2" (Rp (IG)) on 63 mm outside Ø

# Pumps Stations

Wastewater and sewage pumping stations

Mechanical accessories Wilo-DrainLift WS 900, WS 1100

### Contents

#### Electrical accessories Wilo-Drain

<b>Recommended accessories</b>	<b>108</b>
Equipment/function	112
<b>Product descriptions</b>	<b>115</b>
Switchgear Wilo-EC-Drain 1x4,0	115
Switchgear Wilo-EC-Drain 2x4,0	115
Switchgear Wilo-DrainControl PL 1	116
Switchgear Wilo-DrainControl PL 1 WS	116
Switchgear Wilo-DrainControl PL 2	117
Switchgear Wilo-DrainControl PL 2 WS	117
Switchgear Wilo-DrainControl 1/2	118
Small alarm switchgear Wilo KAS	118
Wilo Drain-Alarm 2	118
Alarm switchgears Wilo-AlarmControl 1/2	119
Motor protection plug CEE	119
Level sensor	119
Float switch MS1	120
Float switch WA	120
Ex-uncoupling relay	120
Breakdown barrier	120
Switch cabinet, outdoor installation for Wilo-DrainControl	121
Flash light	121
Signal horn	121
Dynamic pressure system	121
Bubbling-through system	122
Tripping unit Wilo-SK 545	122

# Electrical Accessories Wilo-Drain

Drainage and sewage lifting units, pumps stations

## Recommended accessories

	Wilo-EC-Drain 1x4, 0 <sup>1)</sup>	Wilo-EC-Drain 2x4, 0 <sup>2)</sup>	Wilo-Drain- Control PL1 <sup>1)</sup>	Wilo-Drain- Control PL1 WS <sup>1)</sup>	Wilo-Drain- Control PL2 <sup>2)</sup>	Wilo-Drain- Control PL2 WS <sup>2)</sup>	Wilo-Drain- Control 1 <sup>1)</sup>	Wilo-Drain- Control 2 <sup>2)</sup>
<b>Lifting units</b>								
Wilo-DrainLift Con	—	—	—	—	—	—	—	—
Wilo-DrainLift TMP	—	—	—	—	—	—	—	—
Wilo-DrainLiftBox	—	°	—	—	—	—	—	—
Wilo-DrainLift KH 32	—	—	—	—	—	—	—	—
Wilo-DrainLift XS-F	—	—	—	—	—	—	—	—
Wilo-DrainLift S	—	—	—	—	—	—	—	—
Wilo-DrainLift M	—	—	—	—	—	—	—	—
Wilo-DrainLift L	—	—	—	—	—	—	—	—
Wilo-DrainLift XL	—	—	—	—	—	—	—	—
Wilo-DrainLift XXL	—	—	—	—	—	—	—	—
Wilo-DrainLift FTS	—	—	—	—	—	—	—	—
<b>Pumps stations</b>								
Wilo-DrainLift WS 40 Basic	—	—	—	—	—	—	—	—
Wilo-DrainLift 40-50	—	—	°	•	°	•	—	—
Wilo-DrainLift WS 625	—	—	°	•	°	•	°	°
Wilo-DrainLift WS 900/1100	—	—	°	•	°	•	°	°

• = recommended, ° = optional, — = not required

<sup>1)</sup> Switchgear for 1 pump, <sup>2)</sup> switchgear for 2 pumps

# Electrical Accessories Wilo-Drain

Drainage 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 switch MS1	Float switch WA
<b>Lifting units</b>								
Wilo-DrainLift Con	—	—	—	—	—	—	—	—
Wilo-DrainLift TMP	—	—	°	•	—	—	—	—
Wilo-DrainLiftBox	°	°	°	•	—	—	—	°
Wilo-DrainLift KH 32	—	—	°	•	—	—	—	—
Wilo-DrainLift XS-F	—	—	—	—	—	—	—	—
Wilo-DrainLift S	°	°	°	°	—	—	—	—
Wilo-DrainLift M	—	—	—	—	—	—	—	—
Wilo-DrainLift L	—	—	—	—	—	—	—	—
Wilo-DrainLift XL	—	—	—	—	—	—	—	—
Wilo-DrainLift XXL	—	—	—	—	—	—	—	—
Wilo-DrainLift FTS	°	°	°	°	—	—	—	—
<b>Pumps stations</b>								
Wilo-DrainLift WS 40 Basic	°	°	°	°	—	—	—	°
Wilo-DrainLift 40-50	°	°	°	°	—	•	°	°
Wilo-DrainLift WS 625	°	°	°	°	—	•	°	°
Wilo-DrainLift WS 900/1100	°	°	°	°	—	•	°	°

• = recommended, ° = optional, — = not required

# Electrical Accessories Wilo-Drain

Drainage 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
<b>Lifting units</b>							
Wilo-DrainLift Con	–	–	–	–	–	o	o
Wilo-DrainLift TMP	–	–	–	–	–	o	o
Wilo-DrainLiftBox	–	–	–	–	–	o	o
Wilo-DrainLift KH 32	–	–	–	–	–	o	o
Wilo-DrainLift XS-F	–	–	–	–	–	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
Wilo-DrainLift FTS	–	–	–	o	–	o	o
<b>Pumps stations</b>							
Wilo-DrainLift WS 40 Basic	–	–	–	–	o	o	o
Wilo-DrainLift 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, o = optional, – = not required

Ready-to-install synthetic sump.  
For wastewater and sewage disposal.  
Can be walked on and driven over.  
Can be operated easily from above.

### *Wilo-DrainLift WS 625.*

The Wilo-DrainLift WS 625 wastewater and sewage sump is a pumps station with a small diameter: optimal for pressurised drainage. Installation is quick and easy: in addition, this anti-buoyant shaft is easily installed outside of the building in the ground. In combination with the submersible motor pumps Wilo-Drain TMW 32/11, TC 40 and MTS 40/ ... , it is perfectly suited for the disposal of wastewater and sewage which accumulates underneath the backflow level. Powerful? We call this Pumpen Intelligenz.



[www.wilo.com](http://www.wilo.com)

**WILO**  
Pumpen Intelligenz.

# Electrical Accessories Wilo-Drain

Drainage and sewage lifting units, pumps stations

Equipment/function							
	Wilo-EC-Drain 1x4,0	Wilo-EC-Drain 2x4,0	Wilo-DrainControl PL 1/PL 1 WS	Wilo-DrainControl PL 2/PL 2 WS	Wilo-DrainControl 1	Wilo-DrainControl 2	Wilo KAS
<b>Application</b>							
Switchgear for pump control	•	•	•	•	•	•	–
Alarm switchgear	–	–	–	–	–	–	•
Number of pumps to be controlled	1	2	1	2	1	2	–
<b>Electrical connection</b>							
Direct activation [A]	max. 12	maximum 2 x 12	max. 12	maximum 2 x 12	maximum 10	maximum 2 x 10	–
Star/delta switching	–	–	–	–	> 10 A	> 10 A	–
<b>Construction</b>							
Microprocessor-controlled	–	•	•	•	•	•	–
Electronic	•	–	–	–	–	–	•
<b>Housing material</b>							
Plastic	•	•	•	•	•	•	•
Metal	–	–	–	–	–	–	–
<b>Equipment</b>							
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 follow-up 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		•	–	•	–	•	–

<sup>1)</sup> For other motor power ratings upon request

<sup>2)</sup> Only for direct-switch-on devices (up to 4 kW)

<sup>3)</sup> In the explosive area only with Ex cut-off relay

<sup>4)</sup> In the explosive area, only with breakdown barrier

• = available, – = not available



Equipment/function							
	Wilo-EC-Drain 1x4,0	Wilo-EC-Drain 2x4,0	Wilo-DrainControl PL 1/PL 1 WS	Wilo-DrainControl PL 2/PL 2 WS	Wilo-DrainControl 1	Wilo-DrainControl 2	Wilo KAS
<b>Message/display function</b>							
Collective run signal (SBM)	•	•	–	–	–	–	–
Collective fault signal (SSM)	•	•	•	•	•	•	–
Individual run signal (EBM)	–	–	–	–	•	•	–
Individual fault signal (ESM)	–	–	–	•	–	–	–
<b>Control functions (motor operation monitoring)</b>							
TWC	•	•	•	•	•	•	–
PTC	–	–	–	–	•	•	–
Impermeability (DI)	–	–	–	–	•	•	–
Electronic	•	•	•	•	• (to 10 A)	• (to 10 A)	–
Motor protection switch	–	–	optional	optional	• (starting with 10 A)	• (starting with 10 A)	–
<b>Scope of delivery</b>							
Float switch	–	•/-	–	–	–	–	–
Horn	–	–	–	–	–	–	–

<sup>1)</sup> For other motor power ratings upon request

<sup>2)</sup> Only for direct-switch-on devices (up to 4 kW)

<sup>3)</sup> In the explosive area only with Ex cut-off relay

<sup>4)</sup> In the explosive area, only with breakdown barrier

• = available, – = not available

# Electrical Accessories Wilo-Drain

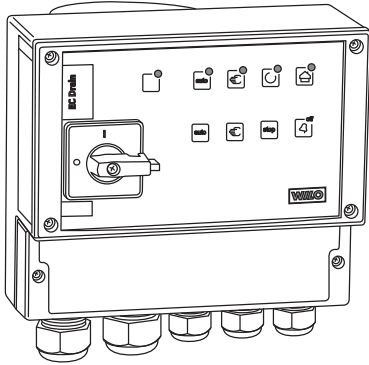
Drainage and sewage lifting units, pumps stations

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
<b>Application</b>									
Switchgear for pump control	-	-	-	•	-	-	-	-	-
Alarm switchgear	•	•	•	-	-	-	-	-	-
Number of pumps to be controlled	-	-	-	1	-	-	-	-	2
<b>Electrical connection</b>									
Direct activation [A]	-	-	-	•	-	-	-	-	- External power section
Star/delta switching	-	-	-	-	-	-	-	-	- External power section
<b>Construction</b>									
Electronic	•	•	•	-	•	•	•	-	•
Electromechanical	-	-	-	•	-	-	-	•	-
<b>Housing material</b>									
Plastic	•	•	•	•	•	•	•	•	•
<b>Equipment</b>									
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	-	-	•	-	-	-	-	-	-
<b>Message/display function</b>									
Individual fault signal (ESM)	•	•	-	-	-	-	-	-	-
<b>Control functions (motor operation monitoring)</b>									
TWC	-	-	-	•	-	-	-	-	•
Impermeability (DI)	-	-	-	-	-	-	-	-	•
Motor protection switch	-	-	-	•	-	-	-	-	-

• = available, - = not available

### Product descriptions

#### Switchgear Wilo-EC-Drain 1x4,0



- Electronically controlled switchgear for the automatic, transmitter-dependent control of 1 wastewater/sewage submersible motor pumps of the Wilo-Drain series.
- Full motor protection with integrated motor current monitoring and thermal winding contact assessment
  - Lockable main switch
  - Transmitter connection for float switch, type WA 65, WA 95
  - Button for manual mode of the pump
  - High water alarm
  - Forced switch-on with high water
  - Potential-free fault signal (changeover contact) and potential-free operating signal (change-over contact)
  - Integrated mains-dependent alarm buzzer
  - Operation, high water and malfunction display via LEDs in the front panel

**Technical data:**

Operating voltage: 1~230 V, 3~400 V, 3~230 V

Connected load  $P_2$ : 4,0 kW

Maximum current: 12 A

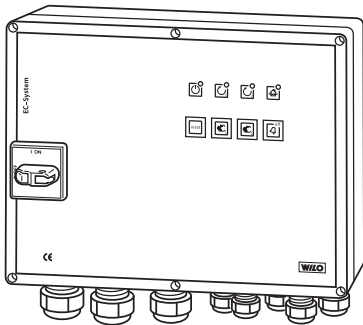
Frequency: 50/60 Hz

Protection class: IP 65 (within buildings/switch cabinets)

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-EC-Drain 2x4,0



- Microprocessor-controlled switchgear for the automatic, transmitter-dependent control of 2 wastewater/sewage submersible motor pumps of the Wilo-Drain series.
- Motor protection by means of built-in thermal winding contact assessment
  - Lockable main switch
  - Transmitter connection for float switch, types WA 65, WA 95 and MS 1
  - 2 button for manual mode of the pumps
  - Adjustable pump kick function for a pump start of 3 sec. after a standstill time of 7 days
  - High water alarm
  - Forced switch-on with high water
  - Potential-free fault signal (changeover contact) and potential-free operating signal (change-over contact)
  - Integrated mains-dependent alarm buzzer
  - Operation, high water and malfunction display via LEDs in the front panel
  - Optional for control of explosion-protected pumps

**Technical data:**

Operating voltage: 1~230 V, 3~400 V, 3~230 V

Connected load  $P_2$ : 2 x 4,0 kW

Maximum current: 2 x 12 A

Frequency: 50/60 Hz

Protection class: IP 54

Dimensions (W x H x D): 300 x 230 x 113 mm

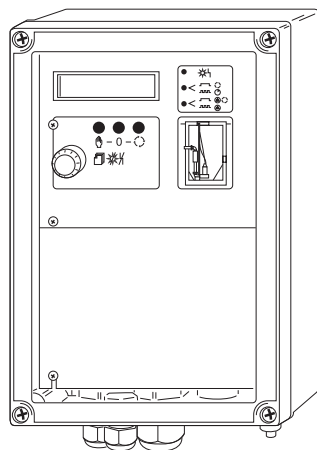
**Note:** Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. Ex-uncoupling relays are to be provided for pump control in potentially explosive areas.

# Electrical Accessories Wilo-Drain

## Drainage and sewage lifting units, pumps stations

### Product descriptions

#### Switchgear Wilo-DrainControl PL 1



Switchgear for regulating the levels of 1 submersible motor 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/follow-up time, manual/automatic operation
- Input terminals for connecting float switches (WA 65, WA 95 or MS1) 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 follow-up time
- Integrated buzzer
- Operating hours counter, pump starts

Technical data:

Operating voltage: 1~230 V, 3~400 V

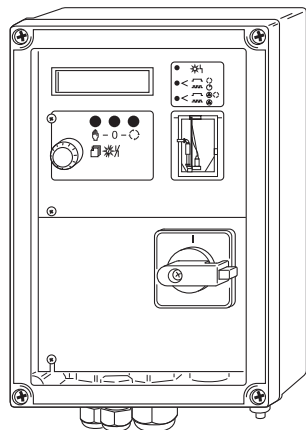
Frequency: 50/60 Hz

Protection class: IP 65 (within buildings/switch cabinets)

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 motor 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/follow-up time, manual/automatic operation
- Input terminals for connecting float switches (WA 65, WA 95 or MS1) 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 follow-up time
- Integrated buzzer
- Operating hours counter, pump starts
- Lockable main switch
- 3~mains, no neutral conductor required

Technical data:

Operating voltage: 1~230 V, 3~400 V

Frequency: 50/60 Hz

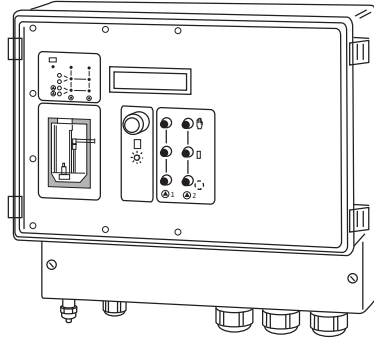
Protection class: IP 65 (within buildings/switch cabinets)

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 motor pumps. Level measurement can be carried out with either the bubbling-through or the dynamic pressure procedure, via an electronic level sensor **0–2.5 mWs** (4–20 mA) or float switch (WA 65, WA 95 or MS1).

- LCD display, multi-language switching
- LED for alarm, operation/follow-up 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 follow-up time
- Automatic fault-actuated switchover
- Integrated buzzer
- Operating hours counter, pump starts

Technical data:

Operating voltage: 1~230 V, 3~400 V

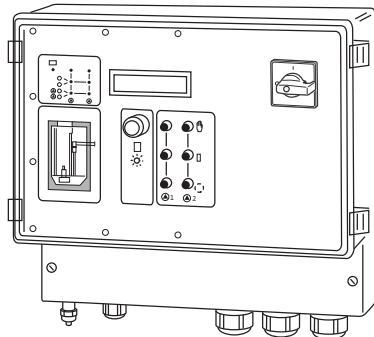
Frequency: 50/60 Hz

Protection class: IP 65 (within buildings/switch cabinets)

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 motor pumps. Level measurement can be carried out with either the bubbling-through or the dynamic pressure procedure, via an electronic level sensor **0–1 mWs** (4–20 mA) or float switch (WA 65, WA 95 or MS1).

- LCD display, multi-language switching
- LED for alarm, operation/follow-up 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 follow-up time
- Automatic fault-actuated switchover
- Integrated buzzer
- Operating hours counter, pump starts
- Lockable 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 (within buildings/switch cabinets)

Dimensions (W x H x D): 320 x 300 x 120 mm

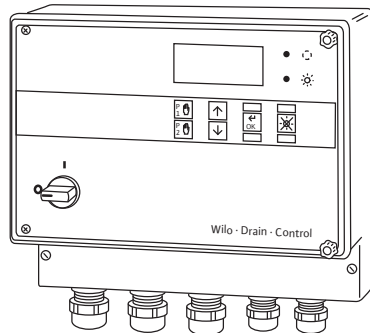
**Note:** Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

# Electrical Accessories Wilo-Drain

Drainage 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

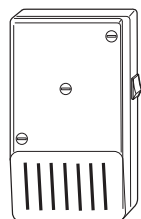
Frequency: 50 Hz

Protection class: IP 54

Dimensions (W x H x D): depends on model

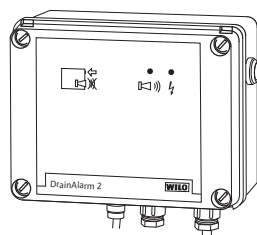
**Note:** Switchgears are not protected against explosions and may not be utilised except outside of potentially explosive areas. A level sensor in the Ex area (with breakdown barrier!) or a float switch (in the Ex area with Ex-uncoupling relay) is to be provided for pump control.

### Small alarm switchgear Wilo KAS



Small alarm switchgear with signalling tone 70 dBA, signal transmitter (electrode) with 3 m cable, self-charging power supply (battery backup approx. 5 h) in ISO plug housing (shock-proof), protection class IP 30, 230 V~/9 V=; 1.5 VA.

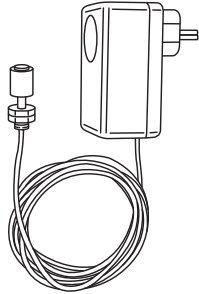
### Wilo Drain-Alarm 2



Alarm switchgear for wall-mounted installation with optical and acoustical alarm signal (buzzer) 85 dBA self-charging power supply, potential-free contact, ISO housing, protection class IP 54, 1~230 V. A float switch of type WA is required as a 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:

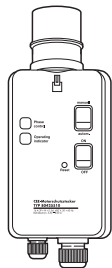
Mains-independent alarm system with shockproof plug and integrated outlet for connecting an appliance, e.g. a washing machine. Storage battery, acoustic alarm signal (buzzer), mini floater switch with 3 m cable mounted on the device. With insulated housing IP 20.

#### Technical data:

- Operating voltage: 1~230 V, 50 Hz
- Control voltage: 12 VDC (non-stabilised)
- Alarm contact with AlarmControl 1: potential-free normally open contact, contact load max. 1 A (230 VAC)
- Contact outlet: contact load max. 16 A (250 VAC)
- Protection class: IP 20
- Housing: ABS
- Cable length mini-floater switch: 3 m (2 x 0.75 mm<sup>2</sup>)
- 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 plug CEE



Motor protection switch (only up to a nominal motor power of  $P_2 < 4$  kW) with phase inverter and rotation direction indicator, 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.

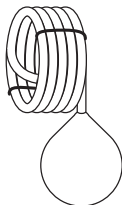
- Protection class: IP 68
- Measurement range 0 – 1 mWS; 0 – 2.5 mWS
- Cable lengths 10, 30 or 50 m
- Output signal 4 – 20 mA
- ATEX-certified

# Electrical Accessories Wilo-Drain

Drainage and sewage lifting units, pumps stations

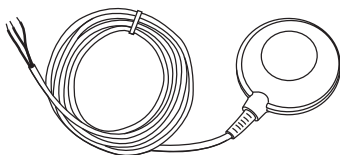
## Product descriptions

### Float switch MS1



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

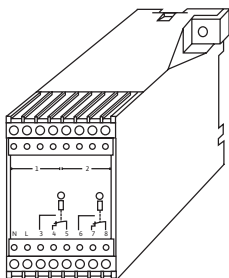
### Float switch WA



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

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

### Ex-uncoupling relay

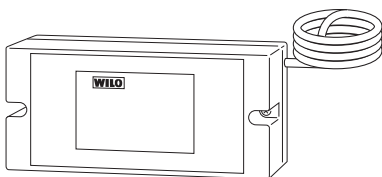


For the installation of float switches in potentially explosive areas.  
Suitable for the connection of 2 to 5 float switches. Installed in an ISO housing, protection class IP 54, with transparent cover, for wall mounting.

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 IP 40, housing for installation in non-explosive area.

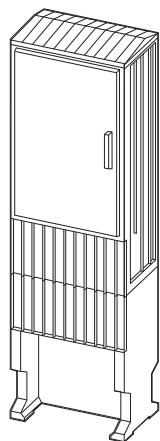
Dimensions (W x H x D): 75 x 150 x 106 mm

1 m cable premounted.



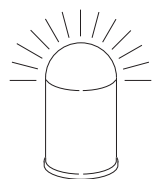
## Product descriptions

### Switch cabinet, outdoor installation for Wilo-DrainControl



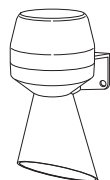
Empty housing for outdoor installation, made of fibreglass-reinforced polyester, with lock, provided with ventilation and exhaust. For pedestal mounting. Additional options such as ammeter, voltmeter, heating, etc. are available on request and can be immediately installed in the switch cabinet in conjunction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

### Flash light



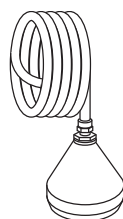
For installation on switch cabinets, outdoor installation, 230 VAC

### Signal horn



For connection to Wilo-DrainControl, 230 VAC, 92 dBA

### Dynamic pressure system



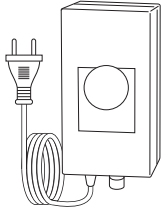
The pressure sensor (bell) detects changes in the fluid level in the sump. The modifications of the pressure value in the bell is transmitted via a leak-proof hose to the Wilo-DrainControl switchgear and evaluated using measuring elements in the switchbox.  
Scope of delivery: Submersion bell with 10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

# Electrical Accessories Wilo-Drain

Drainage and sewage lifting units, pumps stations

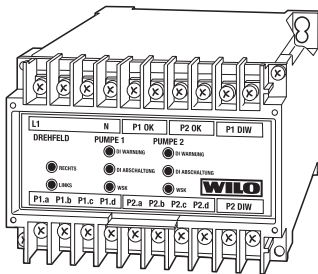
## Product descriptions

### 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 non-return valve

### Tripping unit Wilo-SK 545



Tripping unit for monitoring max. 2 Wilo submersible motor 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 DIN rail
- Monitoring of the rotating field
- Leakage detection
- Thermal monitoring (TWC)
- Operational voltage 3~400 V maximum 6 A fuse protection
- Potential-free output contacts max. load 250 V, 1 A
- Dimensions (W x H x D): 100 x 72 x 113 mm

# Wilo Catalogue System 2008

Heating, air-conditioning, cooling

Water supply

Drainage and sewage

**Heating, air-conditioning, cooling**  
**Circulating pumps**  
 Glandless pumps and accessories, package heat exchanger assembly

Catalogue A1



**Heating, air-conditioning, cooling**  
**Glanded pumps**  
 Pumps in in-line design and accessories

Catalogue A2



**Heating, air-conditioning, cooling, water supply**  
**Monobloc and norm pumps, axially split case pumps**  
 Pumps and accessories

Catalogue A3



**Water supply**  
**Domestic water supply, rainwater utilisation**  
 Pumps, systems and accessories

Catalogue B1



**Water supply**  
**Borehole pumps 3" to 24"**  
 Pumps and systems for building engineering / building services,  
 domestic, municipal and industrial water supply



Catalogue B2



**Water supply**  
**High-pressure multistage centrifugal pumps**  
 Pumps and accessories

Catalogue B3



**Water supply**  
**Pressure boosting systems**  
 Single and multiple-pump systems in dry sump installations and accessories

Catalogue B4



**Water supply**  
**Sprinkler pumps with VdS-approval**  
 Borehole pumps and accessories



Catalogue B5



**Drainage and sewage**  
**Drainage pumps**  
 Submersible pumps, self-priming pumps and accessories



Catalogue C1



**Drainage and sewage**  
**Sewage pumps DN 32 to DN 600**  
 Submersible pumps and accessories for building engineering / services,  
 municipal and industrial applications



Catalogue C2



**Drainage and sewage**  
**Wastewater and sewage lifting units, pumps stations**  
 Pump systems and accessories

Catalogue C3



**Drainage and sewage**  
**Submersible mixers**  
 Mixers, re-circulation pumps, jet cleaners, grit collector pumps  
 and accessories for municipal applications in water treatment systems



Catalogue C4





Pumpen Intelligenz.

WILO AG  
Nortkirchenstraße 100  
44263 Dortmund  
Germany  
T +49 231 4102-0  
F +49 231 4102-7363  
www.wilo.com

## Wilo – International (Subsidiaries)

### Argentina

WILO SALMSON  
Argentina S.A.  
C1270ABE Ciudad  
Autónoma de Buenos Aires  
T +54 11 43015955  
info@salmon.com.ar

### Austria

WILO Handelsges. m.b.H.  
1230 Wien  
T +43 5 07507-0  
office@wilo.at

### Azerbaijan

WILO Caspian LLC  
1065 Baku  
T +994 12 5962372  
info@wilo.az

### Belarus

WILO Bel OOO  
220035 Minsk  
T +375 17 2503393  
wilobel@wilo.by

### Belgium

WILO SA/NV  
1083 Ganshoren  
T +32 2 4823333  
info@wilo.be

### Bulgaria

WILO Bulgaria Ltd.  
1125 Sofia  
T +359 2 9701970  
info@wilo.bg

### Canada

WILO Canada Inc.  
Calgary, Alberta T2A 5L4  
T +1 403 2769456  
bill.lowe@wilo-na.com

### China

WILO China Ltd.  
101300 Beijing  
T +86 10 80493900  
wilobj@wilo.com.cn

### Croatia

WILO Hrvatska d.o.o.  
10090 Zagreb  
T +38 51 3430914  
wilo-hrvatska@wilo.hr

### Czech Republic

WILO Praha s.r.o.  
25101 Cestlice  
T +420 234 098711  
info@wilo.cz

### Denmark

WILO Danmark A/S  
2690 Karlslunde  
T +45 70 253312  
wilo@wilo.dk

### Estonia

WILO Eesti OÜ  
12618 Tallinn  
T +372 6509780  
info@wilo.ee

### Finland

WILO Finland OY  
02330 Espoo  
T +358 207401540  
wilo@wilo.fi

### France

WILO S.A.S.  
78390 Bois d'Arcy  
T +33 1 30050930  
info@wilo.fr

### Great Britain

WILO (U.K.) Ltd.  
DE14 2WJ Burton-  
Upon-Trent  
T +44 1283 523000  
sales@wilo.co.uk

### Greece

WILO Hellas AG  
14569 Anixi (Attika)  
T +302 10 6248300  
wilo.info@wilo.gr

### Hungary

WILO Magyarország Kft  
2045 Törökbálint  
(Budapest)  
T +36 23 889500  
wilo@wilo.hu

### Ireland

WILO Engineering Ltd.  
Limerick  
T +353 61 227566  
sales@wilo.ie

### Italy

WILO Italia s.r.l.  
20068 Peschiera  
Borromeo (Milano)  
T +39 25538351  
wilo.italia@wilo.it

### Kazakhstan

WILO Central Asia  
050002 Almaty  
T +7 3272 785961  
in.pak@wilo.kz

### Korea

WILO Pumps Ltd.  
621-807 Gimhae  
Gyeongnam  
T +82 55 3405800  
wilo@wilo.co.kr

### Latvia

WILO Baltic SIA  
1019 Riga  
T +371 7 145229  
mail@wilo.lv

### Lebanon

WILO SALMSON  
Lebanon  
12022030 El Metn  
T +961 4 722280  
wsl@cyberia.net.lb

### Lithuania

WILO Lietuva UAB  
03202 Vilnius  
T +370 5 2136495  
mail@wilo.lt

### The Netherlands

WILO Nederland b.v.  
1948 RC Beverwijk  
T +31 251 220844  
info@wilo.nl

### Norway

WILO Norge AS  
0901 Oslo  
T +47 22 804570  
wilo@wilo.no

### Poland

WILO Polska Sp. z o.o.  
05-090 Raszyn  
T +48 22 7026161  
wilo@wilo.pl

### Portugal

Bombas Wilo-Salmson  
Portugal Lda.  
4050-040 Porto  
T +351 22 2080350  
bombas@wilo.pt

### Romania

WILO Romania s.r.l.  
077040 Com. Chiajna  
Jud. Ilfov  
T +40 21 3170164  
wilo@wilo.ro

### Russia

WILO Rus ooo  
123592 Moscow  
T +7 495 7810690  
wilo@orc.ru

### Saudi Arabia

WILO ME - Riyadh  
Riyadh 11465  
T +966 1 4624430  
wshoula@wataniind.com

### Serbia and Montenegro

WILO Beograd d.o.o.  
11000 Beograd  
T +381 11 2850242  
office@wilo.co.yu

### Slovakia

WILO Slovakia s.r.o.  
82008 Bratislava 28  
T +421 2 45520122  
wilo@wilo.sk

### Slovenia

WILO Adriatic d.o.o.  
1000 Ljubljana  
T +386 1 5838130  
wilo.adriatic@wilo.si

### South Africa

Salmson South Africa  
1610 Edenvale  
T +27 11 6082780  
errol.cornelius@  
salmson.co.za

### Spain

WILO Ibérica S.A.  
28806 Alcalá de Henares  
(Madrid)  
T +34 91 8797100  
wilo.iberica@wilo.es

### Sweden

WILO Sverige AB  
35246 Växjö  
T +46 470 727600  
wilo@wilo.se

### Switzerland

EMB Pumpen AG  
4310 Rheinfelden  
T +41 61 8368020  
info@emb-pumpen.ch

### Taiwan

WILO-EMU Taiwan Co. Ltd.  
110 Taipei  
T +886 227 391655  
nelson.wu@  
wiloemutaiwan.com.tw

### Turkey

WILO Pompa Sistemleri  
San. ve Tic. A.Ş.  
34530 Istanbul  
T +90 216 6610211  
wilo@wilo.com.tr

### Ukraine

WILO Ukraina t.o.w.  
01033 Kiev  
T +38 044 2011870  
wilo@wilo.ua

### Vietnam

Pompes Salmson Vietnam  
Ho Chi Minh-Ville Vietnam  
T +84 8 8109975  
nkm@salmson.com.vn

### United Arab Emirates

WILO ME - Dubai  
Dubai  
T +971 4 3453633  
info@wilo.com.sa

### USA

WILO-EMU USA LLC  
Thomasville,  
Georgia 31792  
T +1 229 5840097  
info@wilo-emu.com

### USA

WILO USA LLC  
Melrose Park, Illinois 60160  
T +1 708 3389456  
mike.easterley@  
wilo-na.com

## Wilo – International (Representation offices)

### Algeria

Bad Ezzouar, Dar El Beida  
T +213 21 247979  
chabane.hamdad@salmson.fr

### Armenia

375001 Yerevan  
T +374 10 544336  
info@wilo.am

### Bosnia and Herzegovina

71000 Sarajevo  
T +387 33 714510  
zeljko.cvjetkovic@wilo.ba

### Georgia

0177 Tbilisi  
T +995 32317813  
info@wilo.ge

### Macedonia

1000 Skopje  
T +389 2 3122058  
valerij.vojneski@wilo.com.mk

### Moldova

2012 Chisinau  
T +373 2 223501  
sergiu.zagurean@wilo.md

### Rep. Mongolia

Ulaanbaatar  
T +976 11 314843  
wilo@magicnet.mn

### Tajikistan

734025 Dushanbe  
T +992 37 2232908  
farhod.rahimov@wilo.tj

### Turkmenistan

744000 Ashgabad  
T +993 12 345838  
wilo@wilo-tm.info

### Uzbekistan

700046 Taschkent  
sergej.arakelov@wilo.uz

January 2008

Subject to change without prior notice. In appliance of our General Terms of Delivery and Service (see [www.wilo.com](http://www.wilo.com))

W2932/3T/0709/GB/MP