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Wilo-DrainLift / 1705/EN/CHN

废水和污水

威乐污水提升系统

威乐（中国）水泵系统有限公司

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Program overview and fields of application 应用领域一览表



Wastewater and sewage lifting units, pumps stations 污水及废水提升系统，泵站系统



System type 系统类型	Macerator 切碎刀	Floor-mounted installa- tion 地板面安装	Con- cealed floor installa- tion 埋地式安装	Main field of application 主要应用场合				

Condensate/ Wastewater/ Drainage 冷凝水/废水/排污								
Wilo-DrainLift TMP		•		S				S
Wilo-DrainLift Box			•	S/M	S/M			S/M/C

Sewage/Faeces 废水/带粪便污水								
Wilo-DrainLift KH	•		•	S	S/M	S/M		S
Wilo-DrainLift S		•		S	S/M	S/M		S
Wilo-DrainLift M		•		S/M	S/M	S/M	C	S/M
Wilo-DrainLift L		•		M/C	M/C	M/C	C	M/C
Wilo-DrainLift XL		•		M/C	M/C	M/C	C	M/C
Wilo-DrainLift XXL		•		C	C	C	C	C

Pumps stations 泵站污水提升系统								
Wilo-DrainLift WS 40-50	•	•	•	S/M/C	S/M/C	S/M/C	C	S/M/C

Legend:

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

Fields of application:

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

图例:

- 可用
- S 一到两个家庭用
- M 多个家庭共用
- C 商业用途

应用场合:

- 废水/排污
- 废水/粗污染水
- 废水/粪便
- 生产过程产生的污水
- 冷凝水/供暖空调系统

“威乐，
值得信赖的
水泵专家。”



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

www.wilo.com.cn



Pioneering for You

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Planning Guide 选型指南

Wastewater and sewage lifting units, pumps stations
污水及废水提升系统，泵站系统

Planning Guide 选型指南

Pursuant to DIN 1986-100, EN12050, the following details are to be observed for installation planning and construction, among others:

-Lifting unit are to be designed in terms of performance in such a way that a minimum flow velocity of 0.7m/s is guaranteed for the prescribed nominal widths of the pressure pipe.

Prescribed minimum nominal diameters:

Wastewater lifting unit - DN 32

Sewage lifting unit - DN 80 (without separation/macerator)

-The pressure pipe of a lifting unit must be equipped with a nonreturn valve and laid with its invert above the backflow level. The pressure pipe is not permitted to be connected to wastewater downpipes.

-The installation of waste water gate valves (both supply-side and pressure-side) is to be performed in accordance with DIN 1986-100, EN 12050/EN 12056.

-Ventilation pipes from lifting units are to be guided to heights above the roof level; the minimum nominal pipe width is DN70 for sewage lifting units.

-Feed lines are to be laid with sufficient drop-off gradients (a minimum of 1:50).

-It is expedient to avoid rigidity when laying pipelines through masonry.

-An automatic standby pump is to be provided for if the sewage drain pipe does not allow for interruptions.

-Switchboxes and signalling systems are to be installed at a dry, readily accessible position. The signalling system is to be mounted at a readily noticeable position.

-Lifting units must be serviced regularly.

-The installation area is to be provided with sufficient ventilation and lighting. A working space of at least 600 mm is to be provided for above and next to all operating elements and all parts requiring servicing. The lifting unit must be provided with anti-buoyant mounting.

-Sewage containing mineral oils or explosive admixtures must be guided through oil precipitators and/or petrol precipitators; those containing fatty substances must go through grease traps and those with sand through sand catchers. Acidic sewage must be neutralised.

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依照DIN1986-100, EN12050, 以下是选型及安装注意事项:

- 提升装置在满足性能要求的前提下，保证按名义出口直径时流速最小0.7m/s。

- 最小出口管路直径
废水提升系统 DN 32
生活污水提升系统 DN 80
(不带分离器和切碎刀时)

- 出水管路必须配止回阀，并且要有高于排污管道的回水湾。不允许出口管路与废水向下流的管道连接。

- 安装污水闸阀（进、出口端）要按照 DIN1986-100, EN12050/EN12056

- 排气管应从最顶部位置引出。生活污水提升系统最小排气孔名义直径为DN 70

- 进水管应逐渐降低（最小斜度1: 50）

- 铺设管路通过石砌物时，应避免有坚硬物体直接挤压管路。

- 一台自动启停的备用泵，是用来保证排水系统不间断运行的。

- 控制盒和信号系统应安装在干燥和能够观测的位置。信号系统应处在能引起注意的有效位置。

- 污水提升系统必须定期维护。

- 安装空间应该保证通风和亮度。工作空间应高于或离开系统以及周围的需拆动件最少600mm。污水提升系统应保证安装在不浮动物上。

- 污水中含有的矿物油或易爆混合物必须通过分离器分离；含有脂肪的要通过油脂分离器，含沙子的应通过格栅除沙。含酸污水应中和后再进入污水提升系统。

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Planning Guide 选型指南

Wastewater and sewage lifting units, pumps stations 污水及废水提升系统，泵站系统

Planning Guide 选型指南

Determining the required pump and/or system output
Flow volume Qp [L/s]:
Corresponds to the total of the incoming waste water QS added to the incoming rainwater Qr, which must be determined in accordance with EN 12050/EN12056:
QS = amount of wastewater [l/s], made up of the total of all sewage providers, taking into account simultaneity,
Qr = amount of rainwater [l/s], totalling the productof precipitation volume, discharge coefficient and precipitation surface.
Delivery head HGes[m]:
Refers to the total derived from the height different ial between the lowest collecting tank level and the invert of the backflow loop + the entire friction losses Hf [m] in the pressure pipe.
Note: When selecting a lifting unit, it is necessary to take into account the fact that the differential between the delivery head at duty point with nominal flow rate (taking into account minimum flow volume) and delivery head with zero flow volume must still amount to approximately 2-3 m in order to open the non-return valve.
Operating modes (in accordance with DIN EN 60034-1)
S1 = continuous operation
The motor temperature increases during operation until it reaches the operating temperature (thermal persistent state). The temperature is dissipated during operation by means of coolant and/or the surrounding fluid. The machine can be operated without interruption while in this status. Specification of the installation type (surfaced/submerged) and/or of the installation is also to be taken into account! Continuous operation has no effect on this. S1 does not explicitly mean 24 h/day, 7 days/week!
Please observe the service life specifications and/or running times per years in the respective documentation.

S2 to S9
The motor can not be operated continuously, because the power dissipation that is transformed into heat in the motor exceeds the heat dissipation capacity of the cooling apparatus. The motor would overheat after a certain time and then be switched off as necessary by the motor protection feature.
S3
This operating mode represents a conventional load for sewage pumps. It describes a ratio of operating time to downtime. Both values must be indicated on the name plate and/or in the installation and operating instructions. For S3 operation, calculations are always in reference to a time period of 10 min.

Examples:
S3 - 20% means:Operating time 20% of 10 min = 2 min
Downtime 80% of 10 min = 8 min
S3 - 3 min means:Operating time 3 min
Downtime 7 min
If two values are specified, then this means, for example with:
S3 - 5 min/20 min:Operating time 5 min
Downtime 15 min
S3 - 25%/20 min:Operating time 5 min
Downtime 15 min
Additional planning instructions:
See Wilo-Planning Guide “Sewage” (must be ordered).

选型：
选流量Qp[L/s]：
所有进泵的生活污水量Qs加上进泵雨水量Qr，按 EN12050/EN12056的规定：
Qs=污水量[L/s]，所有污水排放量同时计入
Qr=雨水量[L/s]，突然的雨水总量，按排放系数和沉降面来定。

选扬程HGes[m]：
从提升系统水箱底部到排水管回水弯最高处压差+管路阻力降Hf[m]。
注：当选污水提升系统时，要考虑正常工作点时和零流量时压力要再加约2~3m，来打开止回阀。

运行模式（按DIN EN60034-1）

S1=连续运行
电机运行，温度升高至运行温度。冷却系统和/或流体降温使之电机不间断运行。所以要考虑安装方式（干式/潜入式）。连续运行对此无影响，S1不表示每天24小时，每周 7 天。请参看相关文件中的每年的运行寿命。

S2至S9
电机不能连续运行，因为电机发热超过了冷却元件。电机过热运行一段时间电机保护系统控制开关使电机停止运行。

S3
这种运行模式是排污泵常规负载时的模式，它给出了启停时间的比例。两个值必须同时标在铭牌上和/或写在操作维护说明书中。对 S3 操作模式，一般均以10分钟为参考计算。

例:
S3-20%表示：
10分钟运行时间的20%=2分钟
10分钟停机时间的80%=8分钟

S3-3分钟表示：
开机时间3分钟
停机时间7分钟

如果有2个数字，则如下例表示：
S3-5m/20min：开机5分钟,停机15分钟
S3-25%/20min：开机5分钟,停机15分钟

其余选型工具：
见wilo选型软件Sewage “生活污水” 部分。

Sewage/faeces 废水/粪便

Sewage lifting units 废水提升系统



Equipment/Function Wilo-DrainLift KH, S, M, L, XL, XXL 配置及功能

	Wilo-DrainLift...							
	KH 32-0.4 EM	S1/5	M1	M2	L1	L2	XL2	XXL
Sealing Pumps-/motor 密封的泵/电机								
Fluid side: 介质端:								
Mechanical seal 机械密封	-	•	•	•	•	•	•	•
Oil barrier chamber 油	-	•	•	•	•	•	•	•
Construction 结构								
Pump position: 泵位置								
Motor part outside the tank 干式安装	-	•	•	•	•	•	•	•
Submersion pump dry external 潜水泵干式安装	-	-	-	-	-	-	-	•
Submersion pump in the tank 潜污泵湿式安装	•	-	-	-	-	-	-	-
Intake position freely selectable 进口位置任选	-	•	•	•	•	•	-	-
Single-pump system 单泵系统	•	•	•	-	•	-	-	-
Double-pump system 双泵系统	-	-	-	•	-	•	•	•
Open single-channel impeller 开式单流道叶轮	-	-	-	-	-	-	-	•
Vortex impeller 涡流式叶轮	•	•	•	•	•	•	•	-
Macerator 带切碎刀	•	-	-	-	-	-	-	-
Materials 材质								
Motor housing 泵腔 Stainless steel 不锈钢	1.4301	1.4404	1.4404	1.4404	1.4404	1.4404	1.4404	1.4404
Hydraulics 水力部件 Plastic 塑料	PP-GF30	PUR	PUR	PUR	PUR	PUR	PUR	PUR
Tank 水箱 Plastic 塑料	ABS	PE	PE	PE	PE	PE	PE	PE
Equipment 配置								
Sheath current colling 外壳冷却	-	-	-	-	-	-	•	•
Motor operation monitoring：电机运行监控								
Temperature (WSK) 温度	•	•	•	•	•	•	•	•
Imper meability 叶轮	-	-	-	-	-	-	-	•
Level control: 水位控制								
Float switch 浮子开关	-	-	•	•	•	•	•	•
Pneumatic pressure sensor 气压感应	•	•	-	-	-	-	-	-
Alarm: mains-independent 报警方式:主机独立	-	-	•	•	•	•	•	-
Potential-free contact 无源触点	-	•	•	•	•	•	•	•
Pump cable detachable 可拔插电缆	-	•	•	•	•	•	•	•
Ready-to-plug 带插头	•	•	•	•	•	•	•	-
Non-return valve 止回阀	•	•	•	•	•	•	•	-
Feed seal 进口管密封	•	•	•	•	•	•	-	-
Curve cutter for intake borehole 开口用圆弧锯齿刀	-	•	•	•	•	•	-	-

• = available 有， - = not available 无。
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Equipment/Function Wilo-DrainLift KH, S, M, L, XL, XXL 配置及功能

	Wilo-DrainLift							
	KH 32-0.4 EM	S1/5	M1	M2	L1	L2	XL2	XXL
Equipment (continued) 配置 (续)								
Hose connection for ventilation 排气软管连接	-	•	•	•	•	•	•	•
Hose connection for diaphragm hand pump 手动泵软管连接	-	•	•	•	•	•	•	•
Kit for pressure pipe connection 出口管连接全套之	•	-	•	•	•	•	•	•
Fixation material 固定件	•	•	•	•	•	•	•	•
Sound insulation material 隔音材料	-	•	•	•	•	•	-	-
Switchgear 开关	-	-	•	•	•	•	•	-
Active carbon filter 活性碳过滤器	•	-	-	-	-	-	-	-

• = available 有, - = not available 无。

Series description Wilo-DrainLift S 产品概述

Series: Wilo-DrainLift S



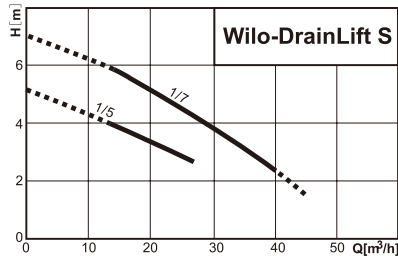
>Sewage lifting unit

>Application:

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

>Product advantages

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



> 污水提升系统:

> 应用:

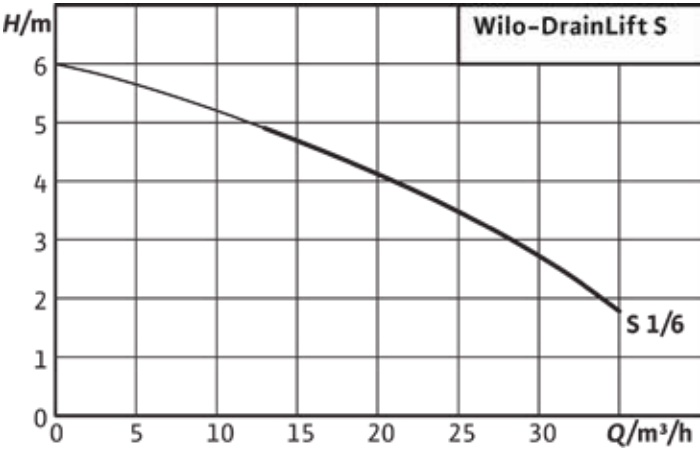
- 用于不能靠重力自流排放到市管网的初级污水
- 或单独房间内的污水排放

> 产品特点:

- 自由选择进水管线
- 墙面前安装
- 重量轻
- 节省安装空间
- 供货范围包含止回阀

Wilo-DrainLift S

4-pole, 50 Hz



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

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

根据标准EN12056–4.6.1
(压力管)流速保持在0.7至2.3m/s。

Series description Wilo-DrainLift S 产品概述



Wilo-DrainLift S
Sewage lifting unit

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

Application
High-value sewage lifting unit ready for connection in accordance with DIN EN 12050-1. For the pumping of raw sewage, which cannot be piped to the canalisation through the use of natural inclines. Wilo-DrainLift S fulfils both the regulations contained in DIN EN 12050-1 and the construction and testing specifications of the Institute for Building Technology [Institut fr Bautechnik].

- Minimum dimensions, combined with space-optimised installationarea make possible a variety of different utilisationoptions with:
- Retrofitting installation of showers, toilets, saunas, etc.
 - Installation of toilets in basement flats
 - Expansion/renovation of flats and buildings
- Innovative combination of different installation options for sewage lifting units in a single system, e.g.:
- Toilet direct connection
 - Drainage of individual rooms
 - Front wall installation/recessed wall installation

Can be utilised in the following installation types:
As conventional sewage lifting unit for connection with wall or stand-alone WC or for complete room drainage.
Only a minimum of space required, thanks to the compact dimensions of the system. As a sewage lifting unit inconjunction 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.

污水提升系统

型号说明

例：**Wilo-DrainLift S**

可在墙面前安装，直接安装在座便器后或整个房间的废水排放

应用范围

大流量的污水提升系统，符合DINEN-12850-1
用于不能靠重力自流的污水排放。Wilo–DrainLift S
符合DIN EN12050–1及德国建筑学会的规范。

- 最小的尺寸方便不同空间的要求：**
- 淋浴房、坐便器、桑拿房的翻新改进
 - 地下室中的坐便器
 - 改扩建的新房排污
 - 改造建筑中增加的排污系统
 - 与坐便器直接连接
 - 独栋房的污水排放
 - 墙体外安装/隐藏式安装

可安装在以下场合：

与房间总的排污口相连

占地极小，水箱尺寸与整个污水提升器一般大

可墙体外安装，或进行隐蔽式安装。

注意：

要留安装和拆卸整个提升系统的空间，即使系统上方有水泥块等物体。请参阅系统及附件安装指导。

Series description Wilo-DrainLift S 产品概述

Construction

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

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

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

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

Installation beading
For commercially available front-wall installation systems.

Standard-equipped insulating mats
Prevent structure-borne noise transmission.
Large maintenance aperture. Inclined collection space for deposit-free, secure operation. Connection possibility for a DN 70 ventilation pipe and for a diaphragm hand pump.

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

Connection flexibility

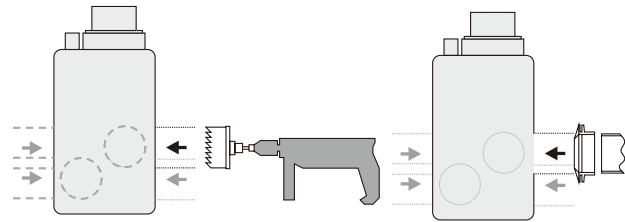
构造

不锈钢电机
最现代化的INOX补偿设计,及高效的涡流式叶轮.

带把手位及捆扎带
易于移动,可靠安全固定。

进口管线DN40
用于洗脸池、浴池等排污等。

可自由选择进口管线位置
长度方向两侧有足够的地方开孔，用于连接进口管线，（见下图）。
并可判断最低吸入水位。



安装
可用于商用房墙体前安装。

标配隔振垫
防止产生的噪音传播
维护简单，带有倾角的防止淤积的腔室，运行安全。
有DN70的排气孔，可连接手动隔膜泵。

供货范围
本污水提升泵系统带全套安装用品，如开关盒/插头、止回阀、单端法兰DN80/100（仅DrainLift S1/7）进水口密封DN100，圆形开孔锯齿刀，安装使用说明书等。

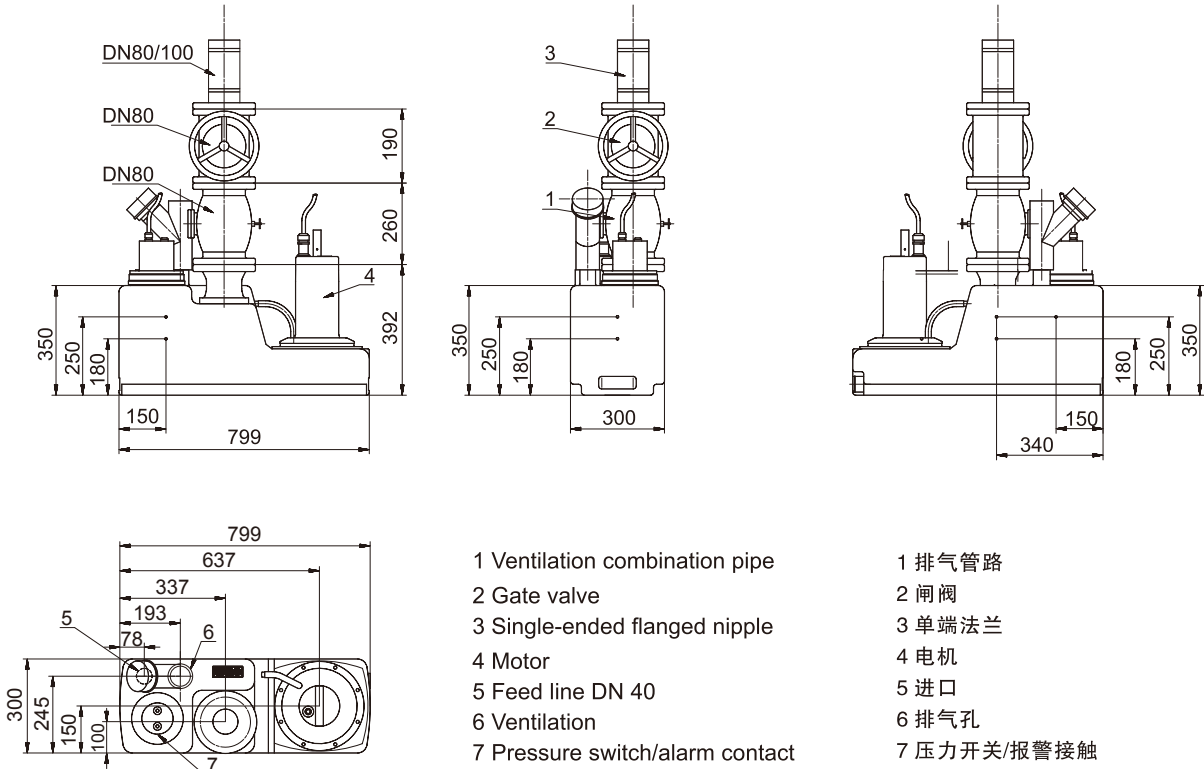
可自由选择连接位置。

Technical Data Wilo-DrainLift S 技术数据			
		Wilo-DrainLift	
		S1/5	S1/7
Approved fluids 允许输送流体			
Domestic sewage not containing faeces 不含粪便的生活污水		•	•
Domestic sewage containing faeces 含粪便的生活污水		•	•
Washing machine soap and water mixture (without long-fibre constituents) 洗衣机肥皂水 (不含较长纤维)		•	•
Shower and bath water, unchlorinated 淋浴和浴池废水, 不含氯离子		•	•
Electrical connection 电气连接			
Power consumption P _i at 1~230 V, 50 Hz [kW] 输出功率		1.25	1.6
Connected load P _i at 3~400 V, 50 Hz [kW] 功率		1.1	1.5
Nominal current at 1~230 V, 50 Hz [A] 额定电流		6.8	7.5
Nominal current at 3~400 V, 50 Hz [A] 额定电流		2.6	3.0
Mains frequency 频率		50	50
Pump speed [rpm] 转速		1450	1450
Cable length from plant to switchgear/plug [m] 从泵站到控制开关的电缆线长度		4	4
Permitted field of application 允许应用场合			
Operating mode 运行模式		S 315%	S 315%
Switching frequency max. [1/h] 最大开启频度 (次/小时)		30	30
Switch-on level (measured from the floor) [mm] 开启水位		180	180
Max. permitted pressure in the pressure pipe [bar] 出水管最大许用压力 (bar)		1.5	1.5
Fluid temperature, maximum [°C] 最大流体温度		35	35
Fluid temperature, short periods [°C] 最大流体温度 (短时)		60	60
Ambient temperature, maximum [°C] 最大环境温度		40	40
Connections 连接			
Ball passage [mm] 可通过球状物体		40	40
Delivery connection [mm] 出口连接		DN 80	DN 80
Intake connection [mm] 入口连接		DN 40 DN 100	DN 40 DN 100
Ventilation [mm] 排气管		DN70	DN70
Min. suction head (invert to the middle of the feed line)[mm] 最小吸上高度 (从进口中心线算起)		180	180
Motor 电机			
Insulation class 绝缘等级		H	H
Protection class (with out switch box) 防护等级		IP 67	IP 67
Dimensions/Weights 尺寸/重量			
Gross volume[l] 总容积		45	45
Swiching volume[l] 有效容积		20	20
weight[kg] 重量		30	30

• = available or authorised 可用或确定， – = not available or not authorised 不可用或不确定。

Dimensions Wilo-DrainLift S 尺寸

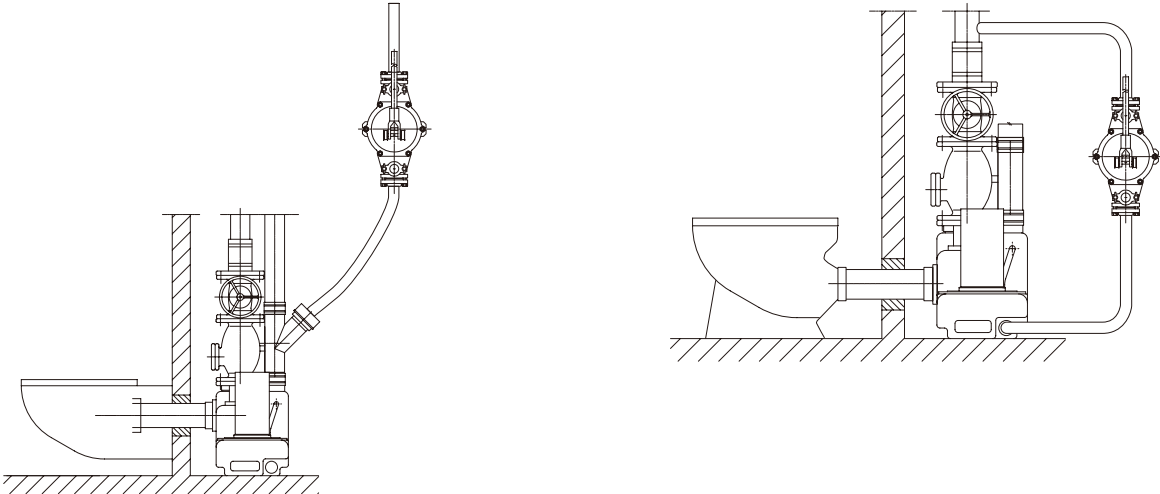
Dimension drawing 尺寸图



Installation examples 安装示意

Diaphragm hand pump connection where necessary
需要时装手动隔膜泵

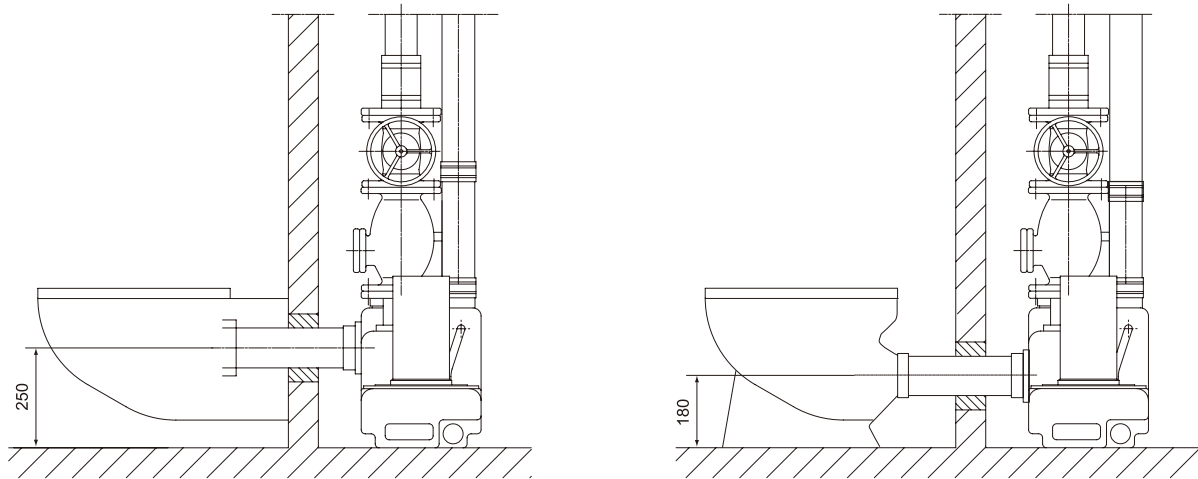
Stationary diaphragm hand pump connection
固定式手动隔膜泵连接



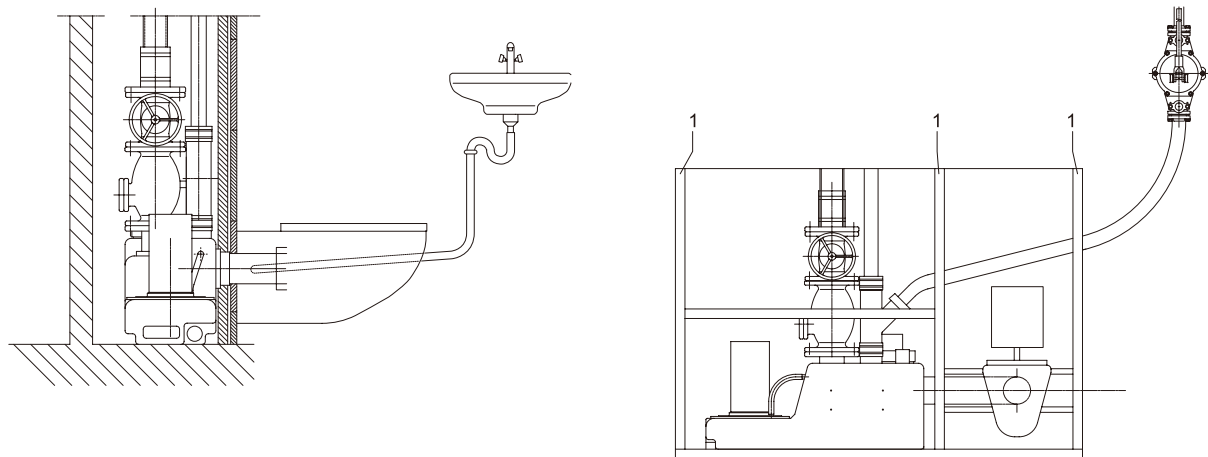
Installation examples Wilo-DrainLift S 安装示意

Installation examples 安装示意

Toilet direct connection 与座便器直联



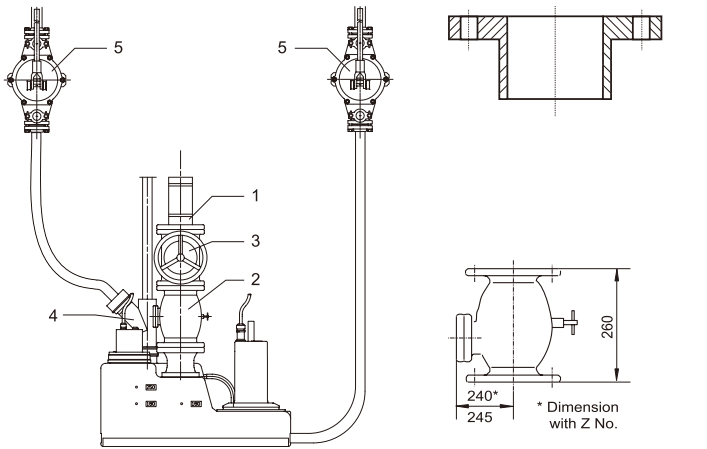
Front wall 墙面外安装



1 Front wall frame 墙外加隔挡

Mechanical accessories Wilo-DrainLift S 机械附件

Mechanical accessories 机械附件



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

单端法兰 (位号1)
DN80/100 (含在DrainLift S 系统1/7供货范围之内)

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

止回阀 (位号2)
第一个不收缩的通道, 连接件, 法兰DN10/16, 符合DIN2501, DN80

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

闸阀 (位号3)
铸铁GG25 (EN-GJL-250), 安装连接件, 法兰PN10/16, 符合DIN2501, DN80

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

排气管(位号4)
DN70, 塑料, 用于连接手动隔膜泵

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

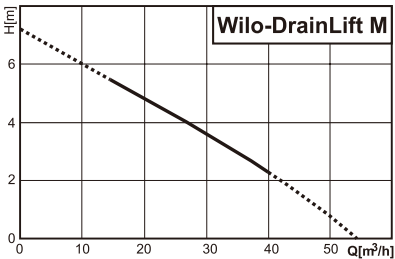
手动隔膜泵(位号5)
R 1½, 16 kg

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

连接件
8个用于连接法兰的螺丝、螺帽, 另带一平垫片, 法兰PN10/16, DIN2501, DN80

Series description Wilo-DrainLift M, L, XL 产品概述

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.

>Product advantages

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

> 污水提升系统:

> 应用:

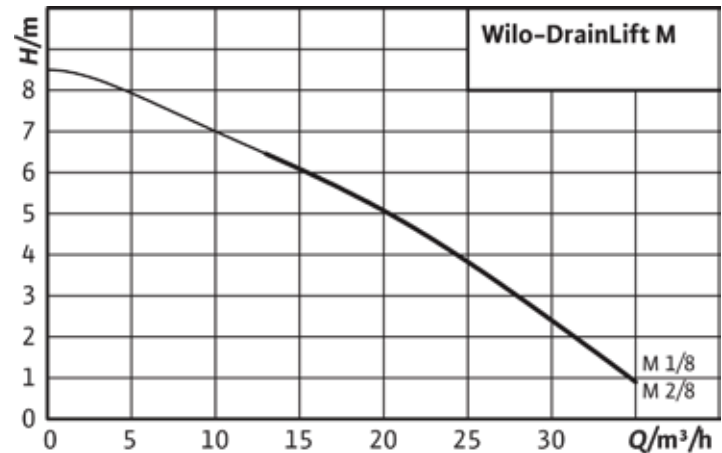
- 用于不能靠重力排放到市政管网的初级污水
- 用于单个家庭或小型楼宇的污水排放

> 产品特点:

- 自由选择进水管线
- 重量轻
- 独立的主机报警装置
- 内置式止回阀
- 水箱容积大

Wilo-DrainLift M

4-pole, 50 Hz



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

根据标准EN12056-4.6.1
(压力管)流速保持在0.7至2.3m/s。

Series description Wilo-DrainLift M, L, XL 产品概述



Product Description 产品描述

Applications

Sewage lifting plant for drainage of residential and commercial buildings (e.g. pubs, stores etc.) Untreated sewage that cannot be fed to the public sewer system by gravity flow and sewage coming in form toilets below the backflow level must, according to the requirements of DIN EN 12056/DIN 1986-100, be fed to the public sewer system using an automatic lifting plant. Sewage containing petroleum oils or hazardous substances must be disposed of via an oil or petrol trap, those containing fats via a grease trap and those containing sand via a sand trap. For installations in which the feed to the lifting plant may never be interrupted during normal operation, the lifting plant must be equipped with a second conveyor (DrainLift M2/L2/XL2) with equivalent capacity, which switches on automatically when necessary (DIN EN 12050-1 A1).

Design

Fully assembled, fully submersible sewage lifting plant (submersion height: 2m, submersion duration: 7 days) with gas-tight and water-tight collection tank and buoyancy protection. Centrifugal pump with free-flow impeller.

DrainLift M1/L1

Single-pump plant with AC or three-phase motor for automatic operation. Switchgear with Schuko or CEE plug, volt-free contact, built-in alarm, built-in battery for mains-independent operation.

DrainLift M2/L2/XL2:

Double-pump system with three-phase motor for automatic operation (with automatic duty cycling, standby and peak load operation). Built-in double non-return valve requires only one pressure line connection. Switchgear with Schuko or CEE plug, volt-free contact, built-in alarm, built-in battery for main-independent operation.

Option

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

Scope of delivery

See Pump equipment/Function table.

Wilo-DrainLift M, L, XL

Sewage lifting Plant

污水提升装置

Type key 型号说明

Example: DrainLift L1/25(3~)

Sewage lifting plant for drainage of residential and commercial buildings

M1/L1 = Single-pump plants

M2/L2/XL2 = Double-pump plants

/25 Max. delivery head [m]

(1~) AC-1~230V, 50Hz

(3~) Three-phase current-3~400 V, 50 Hz

例如: Drain Lift LI / 25(3 ~)

污水提升装置用于提升民用和公共建筑的污水。

M1/L1=单泵装置

M2/L2/XL2=双泵装置

/25 最大扬程[m]

(1 ~) 交流电-1 ~ 230V, 50Hz

(3 ~) 三相电流-3 ~ 400V, 50Hz

用途

污水提升装置用于民用和商用建筑物排水(例如: 酒店, 商场等)。

卫生间的排水管标高低于公用的污水收集系统而无法利用重力排至公用的污水收集系统的场合。本装置是按照DIN EN 12056/DIN 986-100标准设计的, 采用自动的污水提升设备将卫生间污水排至公共的污水收集系统。对含油污水必须使用隔油设备进行处理, 对含砂污水必须使用除砂设备进行处理。对于正常运行时进水不许间断的情况, 污水提升装置必须用相同流量的双泵系统(DrainLift M2/L2/XL2), 此装置配有自动开启备用泵的开关(DIN EN 12050-1 A1)

设计

完全装配的潜水污水提升装置(浸没深度: 2m, 浸没时间: 7天)全部配有密闭的水箱和液位开关。离心泵带有无堵塞的叶轮。

DrainLift M1/L1

单泵装置带自动操作的交流三相电机。接电开关配有Schuko或者CEE插头, 电压自由触点, 内置报警器以及用于无电源操作的内置电池。

DrainLift M2/L2/XL2:

双泵系统配有可自动操作的三相交流电机(带自动工作负载循环, 备用及高峰负荷操作)。内置装在一条水管上的双止回阀。接电开关配有Schuko或者CEE插头, 电压自由触点, 内置报警器以及用于无电源操作的内置电池。

选项

DrainLift L1/L2 C型号, 配有带独立故障信号和可设置时间的控制箱。

供货范围

见设备功能表。

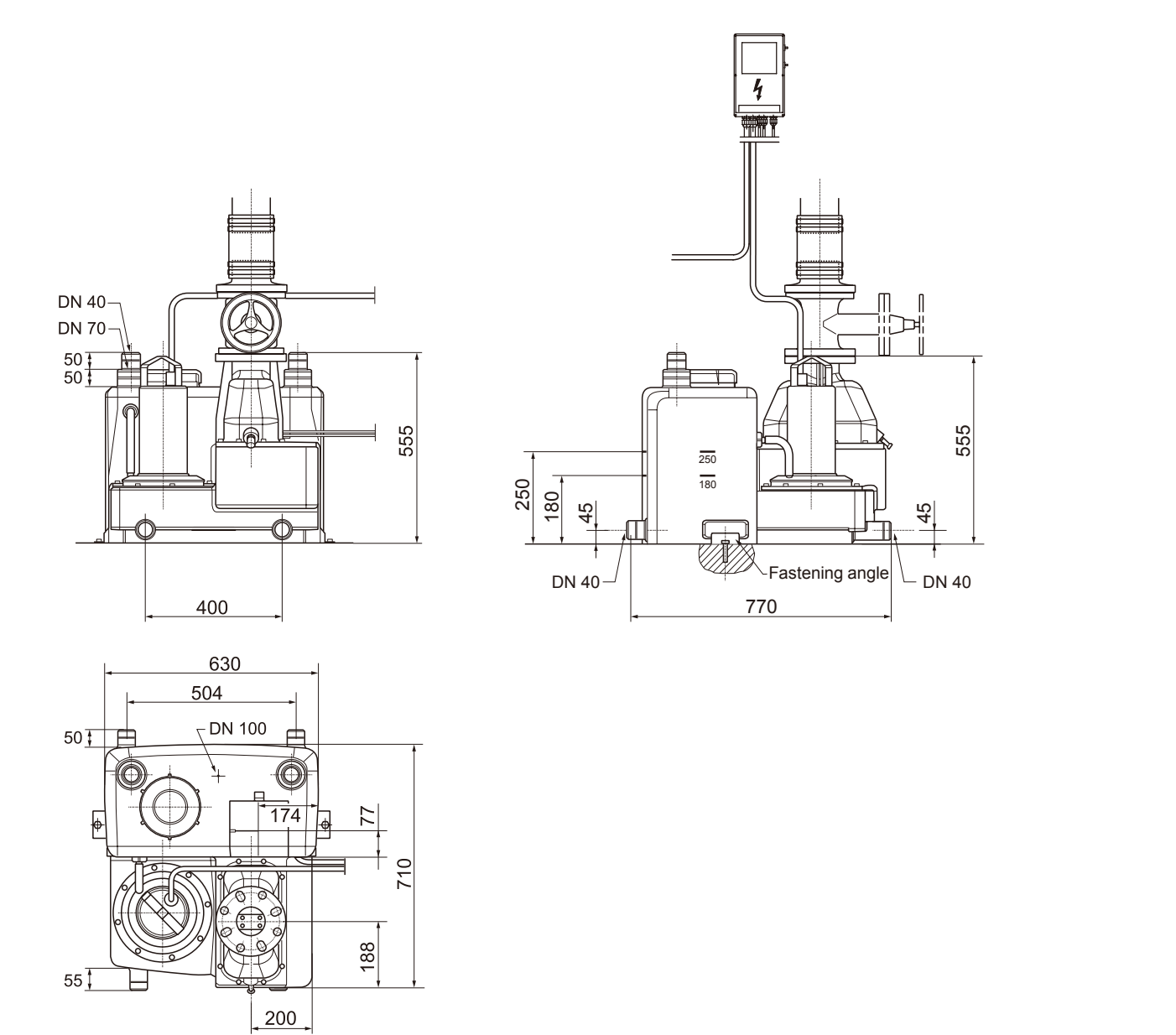
Technical Data W ilo-DrainLift M 技术参数			
		Wilo-DrainL ift	
		M1	M2
A ppr oved fluids 允许输送流体			
Domestic sewage not containing faeces 不含粪便的生活污水		•	•
Domestic sewage containing faeces 含粪便的生活污水		•	•
Washing machine soap and water mixture (without long-fibre constituents) 洗衣机肥皂水 (不含较长纤维)		•	•
Shower and bath water, unchlorinated 淋浴和浴池废水, 不含氯离子		•	•
Elect rical connec tion 电气连接			
Power consumption P _i at 1~230 V, 50 Hz [kW] 输出功率		1.6	1.6
Connected load P _i at 3~400 V, 50 Hz [kW] 功率		1.5	1.5
Nominal current at 1~230 V, 50 Hz [A] 额定电流		7.5	7.5
Nominal current at 3~400 V, 50 Hz [A] 额定电流		3.5	3.0
Mains frequency 频率		50	50
Pump speed [rpm] 转速		1450	1450
Cable length from plant to switchgear/plug [m] 从泵站到控制开关的电缆线长度		4	4
Permi tted field of appli cation 允许应用场合			
Operating mode (for each pump) 运行模式		S3 15%	S3 15%
Switching frequency max. [1/h] 最大开启频度 (次/小时)		30	60
Switch-on level (measured from the floor) [mm] 开启水位		170	180
Max. permitted pressure in the pressure pipe [bar] 出水管最大许用压力 (bar)		1.5	1.5
Fluid temperature, maximum [°C] 最大流体温度		40	40
Fluid temperature, short periods [°C] 最大流体温度 (短时)		60	60
Ambient temperature, maximum [°C] 最大环境温度		40	40
Connec tions 连接			
Ball passage [mm] 可通过球状物体		45	45
Delivery connection [mm] 出口连接		DN 65, DN80	DN 65, DN80
Intake connection [mm] 入口连接		DN 40, DN 100, DN150	DN 40, DN 100, DN150
Ventilation [mm] 排气管		DN 70	DN 70
Min. suction head (invert to the middle of the feed line)[mm] 最小吸上高度 (从进口中心线算起)		180	180
Motor 电机			
Insulation class 绝缘等级		H	H
Protection class (with out switch box) 防护等级		IP67	IP67
Dimensions/W eights 尺寸/重量			
Gross volume[l] 总容积		90	130
Swiching volume[l] 有效容积		30	40
weight[kg] 重量		45	72

• = available or authorised, 可用或确定， – = not available or not authorised 不可用或不确定

Dimensions Wilo-DrainLift M 尺寸

Dimension drawing 尺寸图

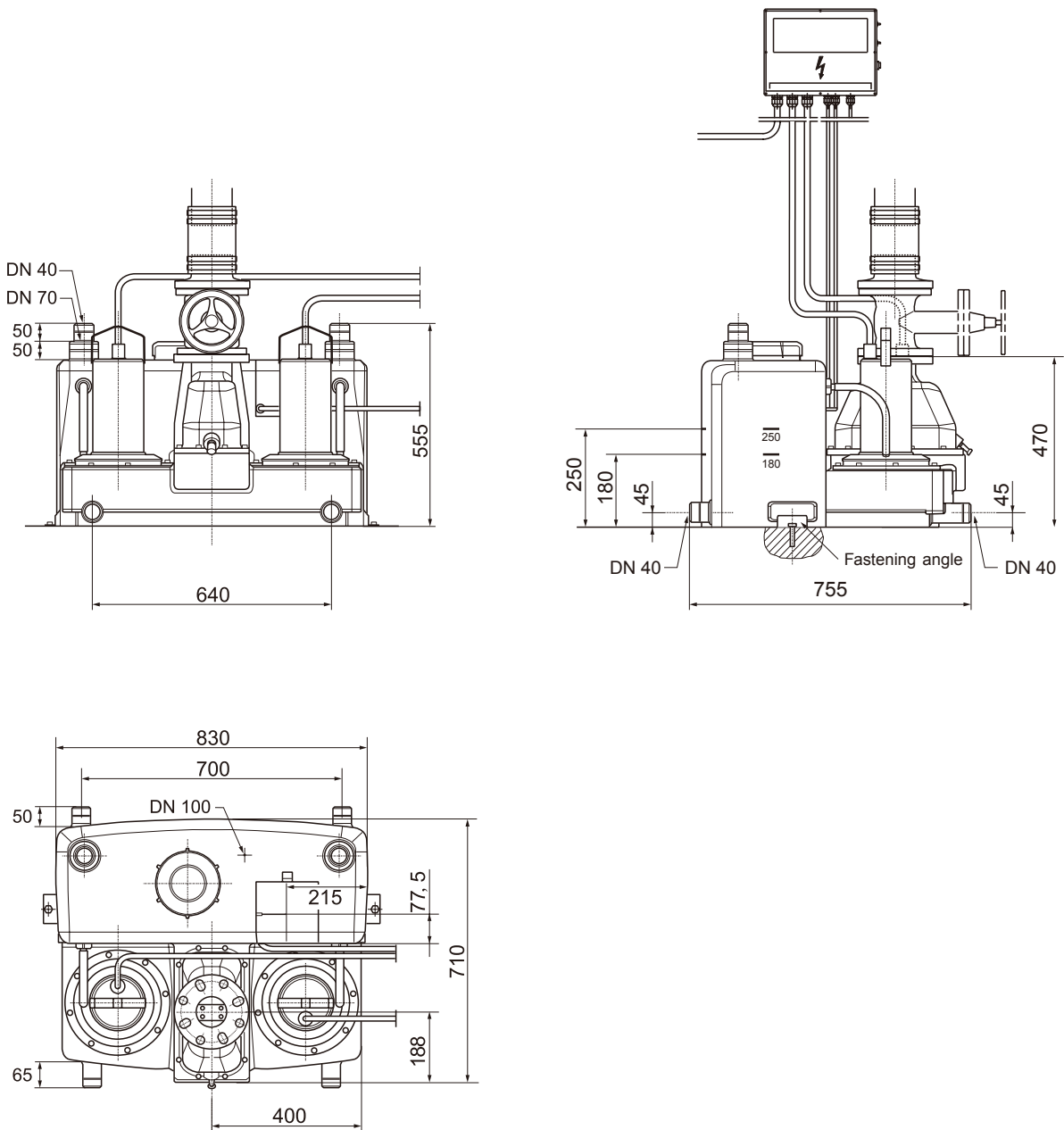
Wilo-DrainLift M1



Dimensions Wilo-DrainLift M 尺寸

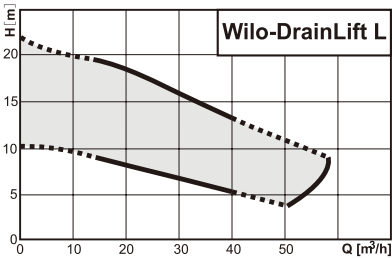
Dimension drawing 尺寸图

Wilo-DrainLift M2



Series description Wilo-Rexalift fit L 产品概述

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 single-family houses and small building complexes.

>Product advantages

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

> 污水提升系统:

> 应用:

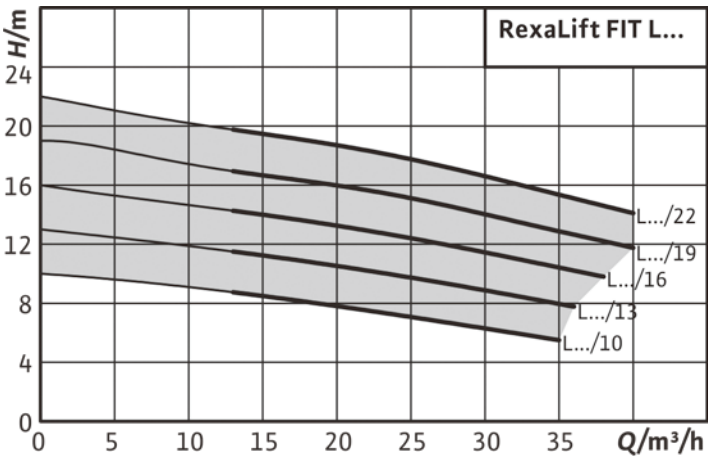
- 泵送原生污水，不能由重力自流进污管道的场合。
- 输送几个家庭和小型建筑（如咖啡馆等）

> 产品特点:

- 自由选择进口管线
- 重量轻
- 主机独立的报警装置
- 内置式止回阀
- 水箱容积大
- 使用范围可扩大

Rexalift fit I

2-pole, 50 Hz

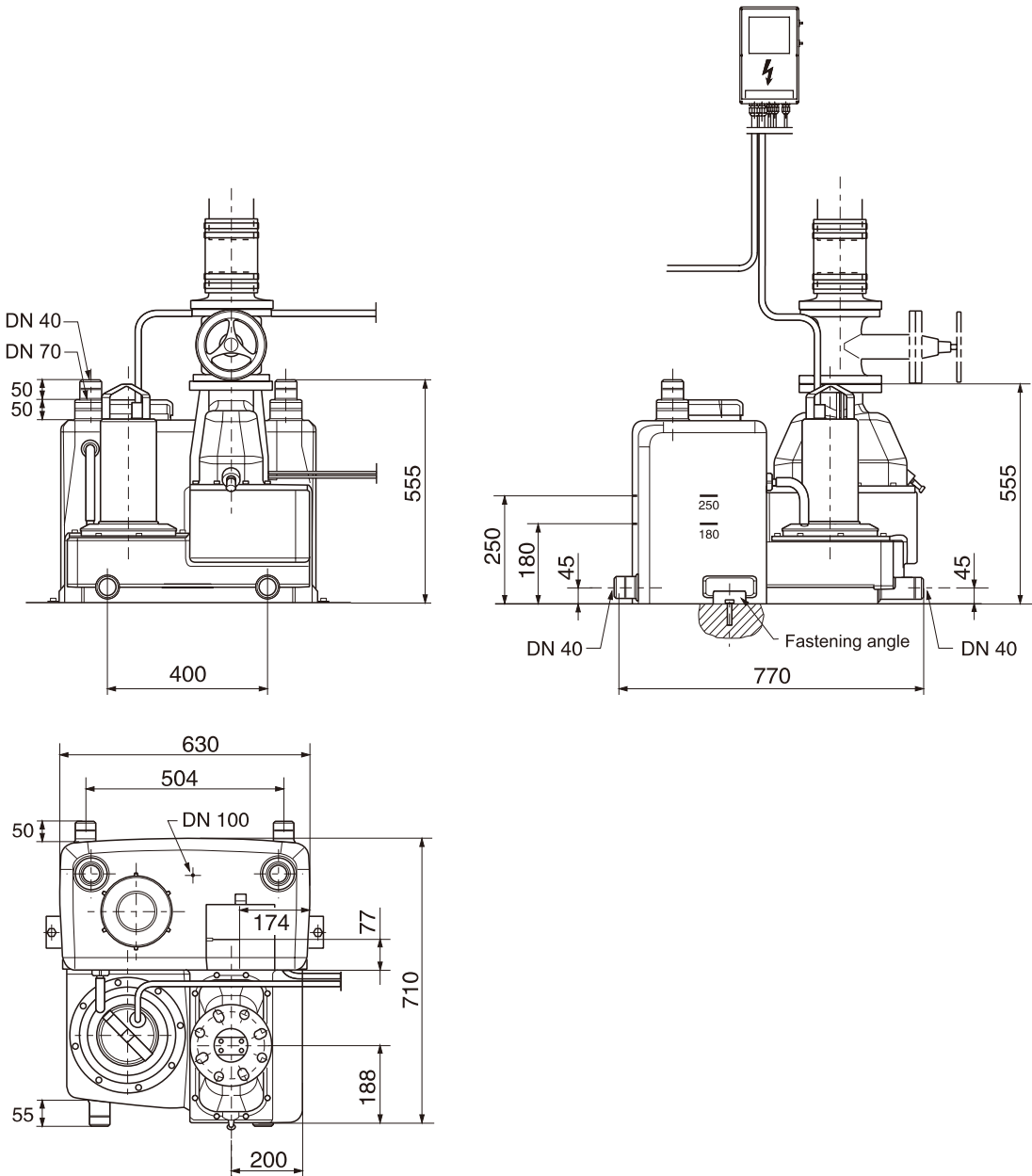


Technical Data Wilo-DrainLift L 技术参数			
		Wilo-DrainLift	
		L1/ 10/15/20/25	L2/ 10/15/20/25
Approved fluids 允许输送流体			
Domestic sewage not containing faeces 不含粪便的生活污水		•	•
Domestic sewage containing faeces 含粪便的生活污水		•	•
Washing machine soap and water mixture (without long-fibre constituents) 洗衣机肥皂水 (不含较长纤维)		•	•
Shower and bath water, unchlorinated 淋浴和浴池废水, 不含氯离子		•	•
Electrical connection 电气连接			
Power consumption P ₁ at 1~230 V, 50 Hz [kW] 输出功率		—	—
Connected load P ₁ at 3~400 V, 50 Hz [kW] 功率		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] 额定电流		—	—
Nominal current at 3~400 V, 50 Hz [A] 额定电流		5.95/6.9/8.8/8.9	5.95/6.9/8.8/8.9
Mains frequency 频率		50	50
Pump speed [rpm] 转速		2900	2900
Cable length from plant to switchgear/plug [m] 从泵站到控制开关的电缆线长度		4	4
Permitted field of application 允许应用场合			
Operating mode (for each pump) 运行模式		S3 15%	S3 15%
Switching frequency max. [1/h] 最大开启频度 (次/小时)		30	60
Switch-on level (measured from the floor) [mm] 开启水位		170	180
Max. permitted pressure in the pressure pipe [bar] 出水管最大许用压力 (bar)		2.5	2.5
Fluid temperature, maximum [°C] 最大流体温度		40	40
Fluid temperature, short periods [°C] 最大流体温度 (短时)		60	60
Ambient temperature, maximum [°C] 最大环境温度		40	40
Connections 连接			
Ball passage [mm] 可通过球状物体		45	45
Delivery connection [mm] 出口连接		DN 65, DN80	DN 65, DN80
Intake connection [mm] 入口连接		DN 40, DN100, DN150	DN 40, DN100, DN150
Ventilation [mm] 排气管		DN 70	DN 70
Min. suction head (invert to the middle of the feed line)[mm] 最小吸上高度 (从进口中心线算起)		180	180
Motor 电机			
Insulation class 绝缘等级		H	H
Protection class (with out switch box) 防护等级		IP67	IP67
Dimensions/Weights 尺寸/重量			
Gross volume[l] 总容积		90	130
Swiching volume[l] 有效容积		30	40
weight[kg] 重量		55	85

• = available or authorised 可用或确定， – = not available or not authorised 不可用或不确定。

Dimensions Wilo-DrainLift M 尺寸

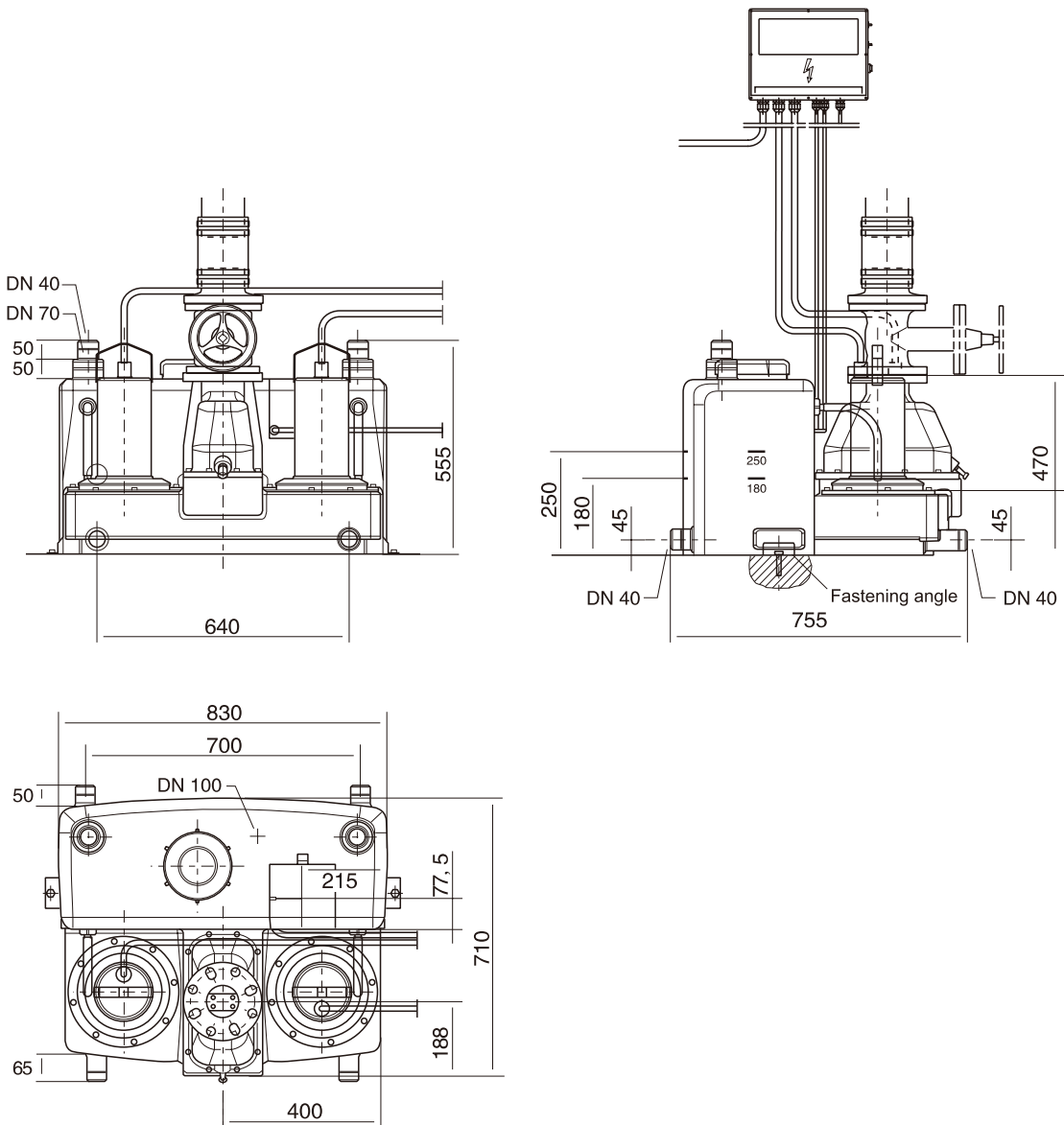
Dimension drawing 尺寸图
Wilo-DrainLift M2



Dimensions Wilo-DrainLift M 尺寸

Dimension drawing 尺寸图

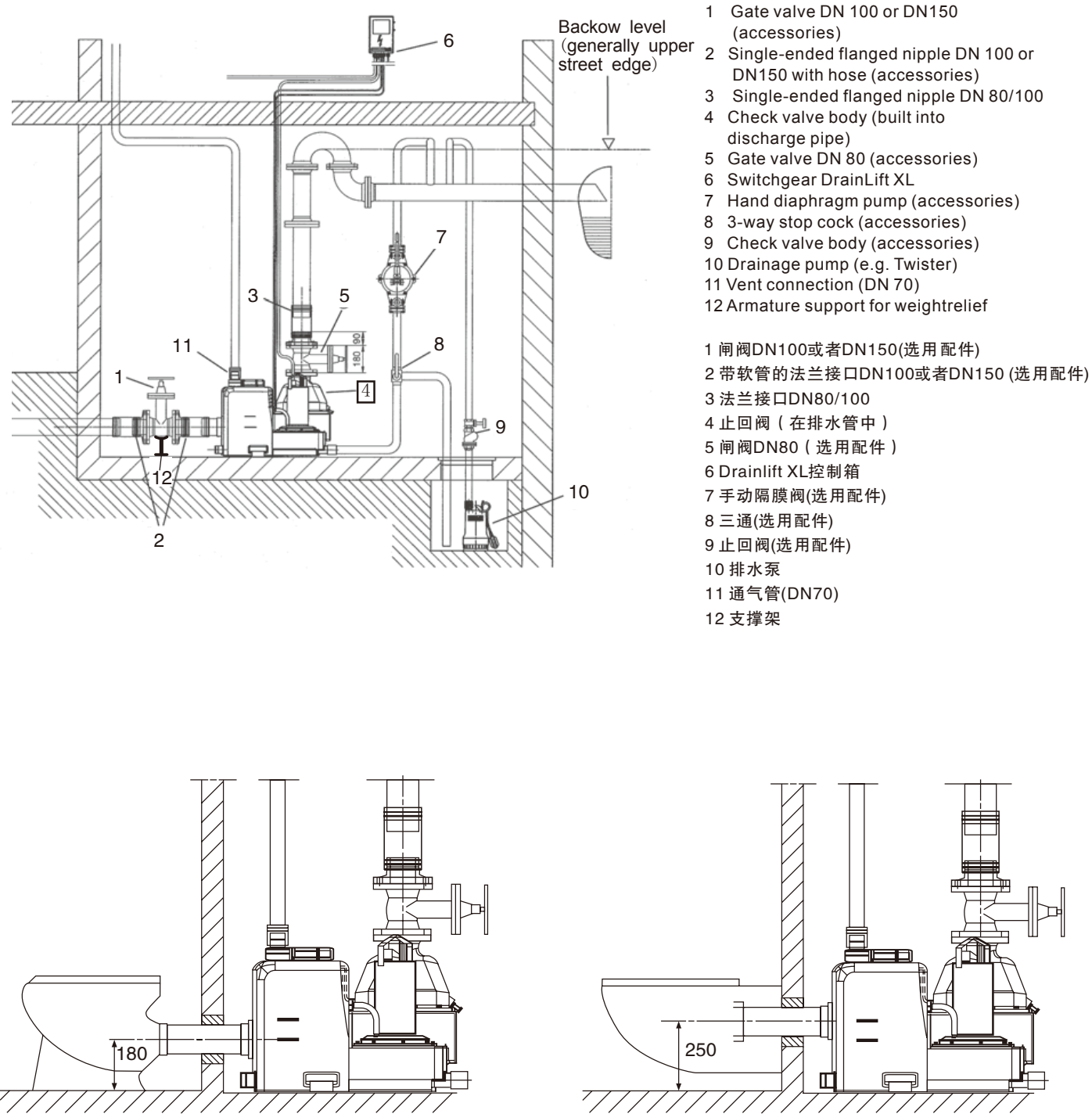
DrainLift L2



Installation examples Wilo-Drain Lift L 安装示意

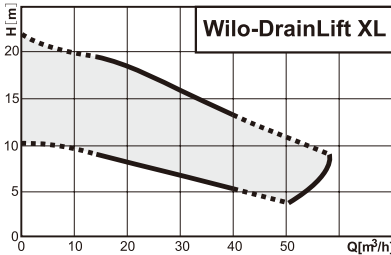
Typical Installation Schemes 典型安装设计

Installation example 安装示意



Series description Wilo-DrainLift XL 产品概述

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.).

>Product advantages

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

> 污水提升系统:

> 应用领域:

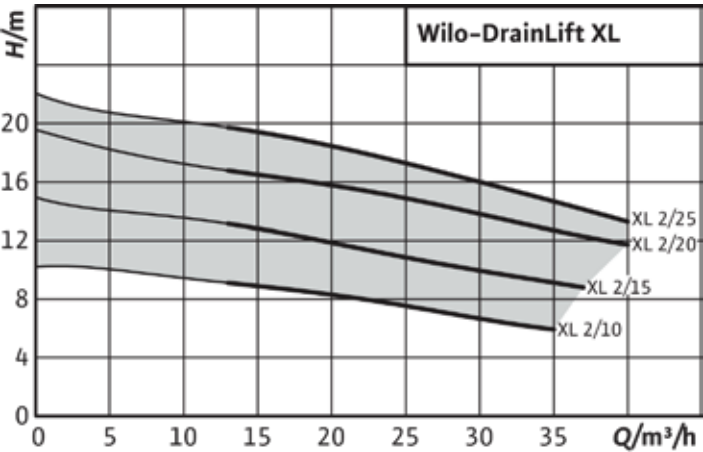
- 泵送不能由重力自流进排污管线的原生污水
- 输送大型建筑内的污水（如餐馆、商场等）

> 产品特点:

- 水箱容积大
- 主机独立的报警装置
- 只有一个出水口（内置Y型管）
- 内置式止回阀
- 适用于连续运行的场合

Wilo-DrainLift XL

2-pole, 50 Hz



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

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

根据标准EN12056-4.6.1
(压力管)流速保持在0.7至2.3m/s。

Technical Data Wilo-DrainLift XL

技术数据

		Wilo-DrainLift XL10/15/20/25
Approved fluids 应用介质		
Domestic sewage not containing faeces	不含粪便的生活污水	•
Domestic sewage containing faeces	含粪便的生活污水	•
Washing machine soap and water mixture (without long-fibre constituents) 肥皂水 (不含长纤维)		•
Shower and bath water, unchlorinated	淋浴和浴池废水,不含氯离子	•
Electrical connection 电源		
Power consumption P _i at 1~230 V, 50 Hz [kW]	功率P _i	—
Connected load P _i at 3~400 V, 50 Hz [kW]	功率P _i	2.95/3.8/4.9/5.3
Nominal current at 1~230 V, 50 Hz [A]	额定电流	—
Nominal current at 3~400 V, 50 Hz [A]	额定电流	5.95/6.9/8.5/8.9
Mains frequency	频率	50
Pump speed [rpm]	转速	2900
Cable length from plant to switchgear/plug [m]	电缆长度	4
Permitted field of application 允许使用范围		
Operating mode (for each pump) 操作模式		S1 S3 60%
Switching frequency max. [1/h]	出水管最大允许压力	60
Switch-on level (measured from the floor) [mm]	开启水位	650
Max. permitted pressure in the pressure pipe [bar]	出水管最大允许压力	2.5
Fluid temperature, maximum [°C]	介质最高温度	40
Fluid temperature, short periods [°C]	介质瞬时温度	60
Ambient temperature, maximum [°C]	环境最大温度	40
Connections 连接		
Ball passage [mm]	可通过球状物体	45
Delivery connection [mm]	出口连接	DN 65 DN 80
Intake connection [mm]	入口连接	DN 100 DN 150
Ventilation [mm]	排气	DN 70
Min. suction head (invert to the middle of the feed line) [mm]	入口最小高度(入口上缘到最低点)	700
Motor 电机		
Insulation Class	绝缘等级	H
Protection class (without switch box)	防护等级(不包括无控制箱)	IP 67
Dimensions/weights 尺寸/重量		
Gross volume [l]	总容积[l]	440
Switching volume [l]	有效容积[l]	220
Weight [kg]	重量[kg]	135

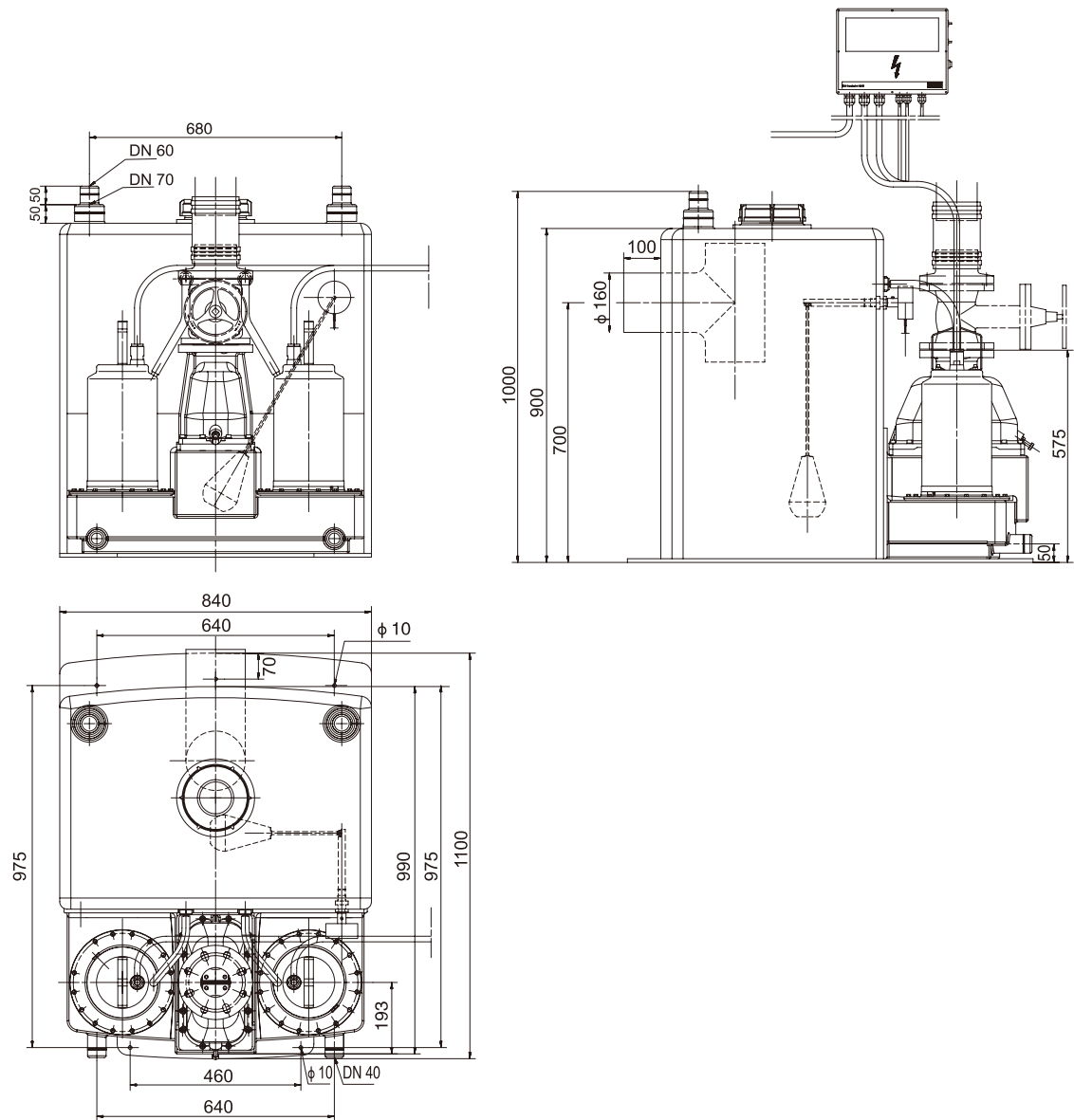
Wilo Catalogue C3 - Dirt and Sewage Lifting Units, Pumps Stations

Subject to change without prior notice.
威乐公司不断改进和创新产品，若技术参数发生改变，以变更后数据为准，保留技术更改的权利。

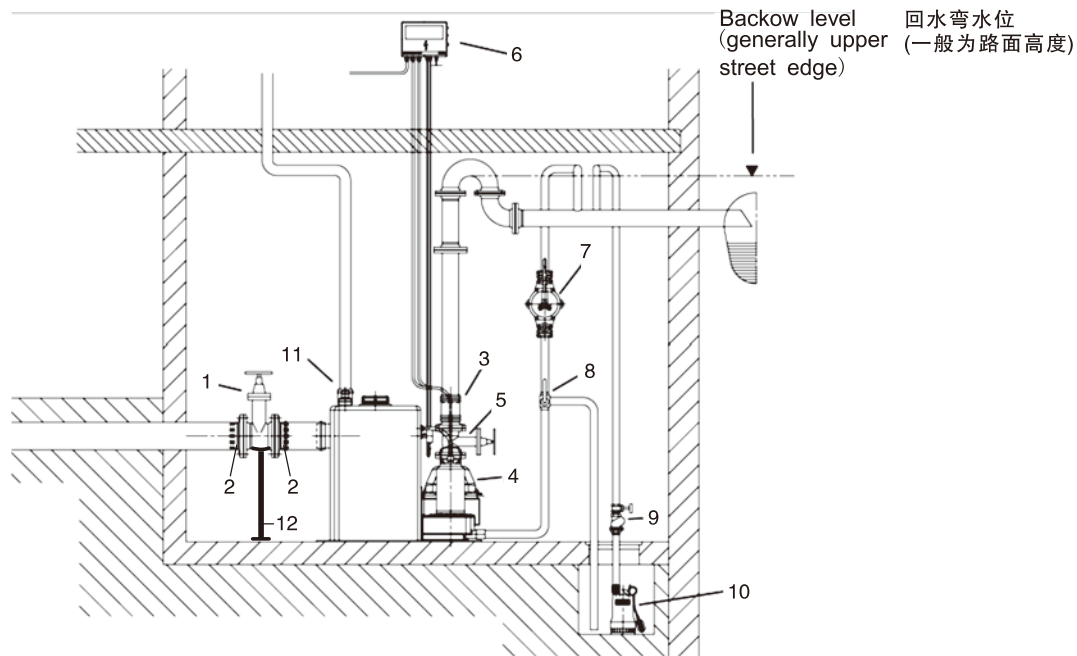
Dimensions Wilo-DrainLift XL 尺寸

Dimension drawing 尺寸图

Wilo-DrainLift XL10/15/20/25



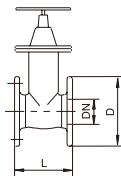
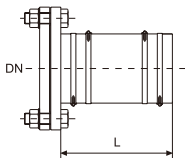
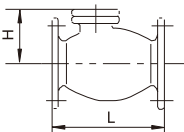
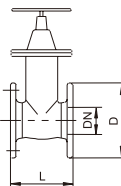
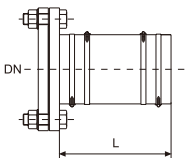
Pump curve Wilo-DrainLift XL 安装示例



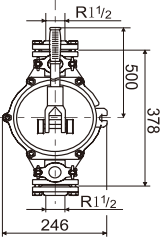
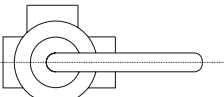
- 1 Gate valve DN 100 or DN150 (accessories)
- 2 Single-ended flanged nipple DN 100 or DN150 with hose (accessories)
- 3 Single-ended flanged nipple DN 80/100
- 4 Check valve body (built into discharge pipe)
- 5 Gate valve DN 80 (accessories)
- 6 Switchgear DrainLift XL
- 7 Hand diaphragm pump (accessories)
- 8 3-way stop cock (accessories)
- 9 Check valve body (accessories)
- 10 Drainage pump (e.g. Twister)
- 11 Vent connection (DN 70)
- 12 Armature support for weight relief

- 1 闸阀DN100或者DN150(选用配件)
- 2 带软管的法兰接口DN100或者DN150选用配件)
- 3 法兰接口DN80/100
- 4 止回阀 (在排水管中)
- 5 闸阀DN80 (选用配件)
- 6 Drainlift XL 控制箱
- 7 手动隔膜泵 (选用配件)
- 8 三通 (选用配件)
- 9 止回阀 (选用配件)
- 10 排水泵 (如 Twister)
- 11 通气管 (Dn70)
- 12 支撑架

Mechanical accessories Wilo-DrainLift S, M, L, XL 机械附件

				Wilo-DrainLift XL10/15/20/25			
Inlet connection:入口管连接				Drainlift s	Drainlift m	Drainlift L	Drainlift XL
	Gate valve* (Item 1) 闸阀(位号1)			DN 100	DN 100 or DN 150	DN 100 or DN 150	DN 100 or DN 150
	DN	L[mm]	D [mm]				
	100	190	325				
	150	210	425				
	Single-ended flanged nipple with hose and hose clips*(item 2) (位号2) 带软管和软管夹的一端为法兰的连接管			2x DN 100	2x DN 100 or 2x DN 150	2x DN 100 or 2x DN 150	2x DN 100 or 2x DN 150
	DN	L[mm]					
	100	190					
	150	210					
Discharge side connection:排水管连接							
	Check valve body*(item4) 止回阀(位号4)			DN 80	built-in	built-in	built-in
	DN	H[mm]	D [mm]				
	80	245	260				
	Gate valve* (Item 5) 闸阀 (位号5)			DN 80	DN 80	DN 80	DN 80
	DN	H[mm]	D [mm]				
	80	180	295				
	Single-ended flanged nipple with hose and hose clips *(Item3) (位号3) 带软管和软管夹的一端为法兰的连接管			S 1/5 DN 80 S 1/7 DN 80/100 built-in	80/100 built-in	80/100 built-in	80/100 built-in
	DN	L[mm]					
	80	180					
	100	190					

Other connections/accessories


	Diaphragm hand pump1 1/2 (Item 7) 手动隔膜泵 (位号 7)	•	•	•	•
	3-way spigot (Item 8) 三通 (位号 8)	—	—	—	—






* Required for installation in accordance with norms/recommendations in force. 可按标准或推荐有效
• = available or authorised 可用或确定, — = not available or not authorised 不可用或不确定。

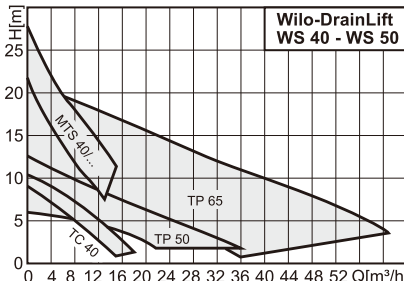


Series description Wilo-DrainLift WS 产品概述

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 EN12050
-Outside the building as pumps station in accordance with EN752

>Product advantages

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

> 污水提升系统:

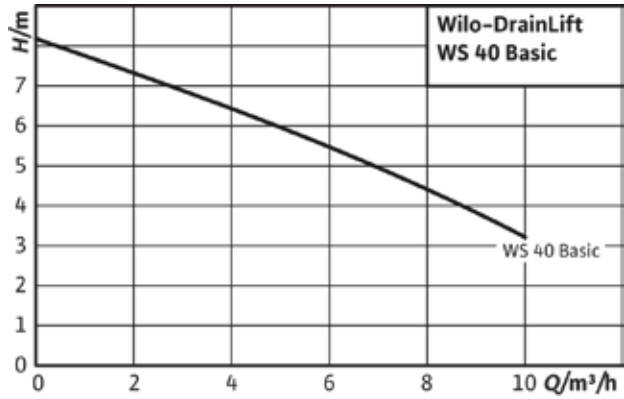
> 应用:

泵站系统用于污水和废水的增压排放
—室内符合EN12050污水提升系统
—室外符合泵站EN752的要求

> 产品特点:

- 可自由选择进水口管线
- 可沿轴延伸方向灵活安装
- 当选用TP50, TP65, MTS40/...泵时,用露出水面的联轴器很容易安装和维护
- Wilo-Drain MTS 40带切碎刀的污水提升装置也一样

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



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

单独的曲线，参见所选泵型的曲线。

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

根据标准EN12056-4.6.1
(压力管)出口流速保持在0.7至2.3m/s。

Series description Wilo-DrainLift WS 40 Basic 产品概述



Wilo-DrainLift WS 40 Basic
Synthetic pumps station

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

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

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

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

Wilo- Drainlift WS40Basic
综合泵站系统基础

- 型号说明**
例：**WS40E/STS 40/8 DM-BV**
- WS** 综合泵站
 - 40** 泵站出口直径
 - E** 单泵系统
 - STS 40/8** 所选泵型号
 - DM** 3 相电机
 - BV** 止回球阀/没有止回球阀但有一体式单向阀

应用
Wilo– Drainlift WS40基本型，是按照EN12050–2标准设计的，用于从低于建筑物排放点提升不含粪便的污水，自动排放的系统。
本系统可以安装在建筑物内或建筑物外， 像一个塑料筒一样安在地面上。特别适用于季节性排放污水的场合（ 如野营，周末渡假屋等等 ）， 或者冻土层不深的地区。

内置的水泵
STS40
适用于严重污染的水，可通过40mm的球形物体。

- Censtruction结构**
- 直径 DN100的用于维修服务的管路
 - 排气连接直径DN70
 - 排气管最大承压4bar
 - 泵站系统用可循环利用的塑料PE
 - 具有可靠的内部支撑骨架，压力增高时安全
 - 按现场要求，随意连接进水口

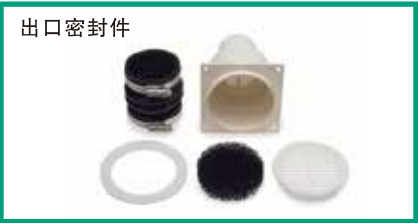
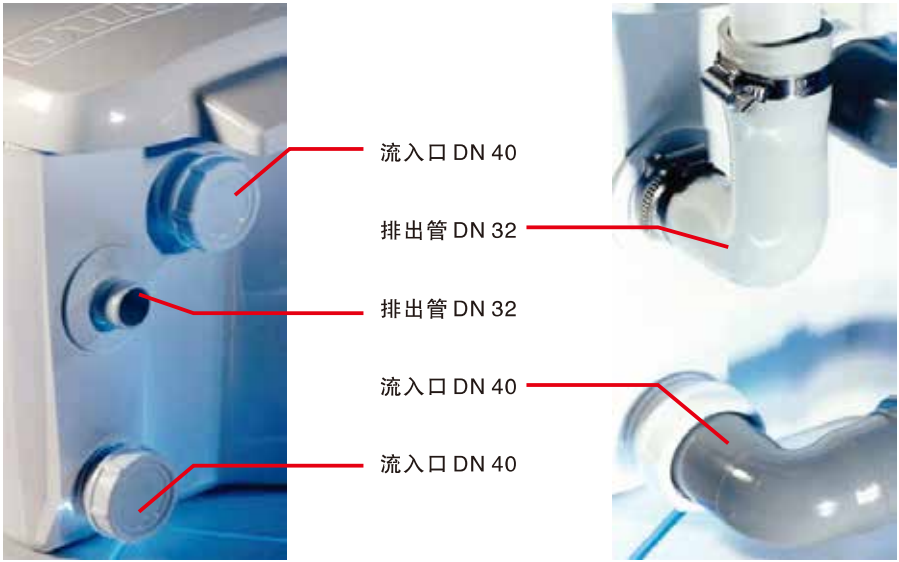
Series description Wilo-DrainLift WS 40 Basic 产品概述

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

- 供货范围**
- 水箱（ 适用于单泵或两台泵系统 ）
 - 内置的管路连接
 - 单向活门， 替代止回球阀
 - 泵
 - 水位开关
 - 控制开关（ 适用于2台泵3相电系统 ）
 - 带密封的顶盖
 - 锯开口的锯子Φ124mm， 入口密封DN100（连接管路Φ110mm）
 - 为手动隔膜泵连接用的1个PVC Φ50mm的管和线扎
 - 和地板固定用的固定件
 - 《 操作维护说明书 》



Wilo – DrainLift KH 32 安装说明



Wilo – DrainLift S 典型安装实例

传统的安装位置



墙壁内安装



Wilo-Drain TP 40 S 切碎刀结构



Wilo-DrainLift M/L



Wilo-DrainLift L/M Installation Guide 安装说明



隔振条
Dampening strip attachment



入口连接
Inlet pipe connection



Wilo-DrainLift L/M Installation Guide 安装说明



清理毛刺
Deburring inlet hole



密封圈安装
Lip seal Installation



进口以及关闭阀门的连接
Inlet connection complete with
isolating valve



排气管连接
Vent connection (Dn70)



排气 Konfix
连接件 Vent Konfix connection



给手动隔膜泵开接口
Open up suction connection to
diaphragm hand pump



固定相应的管件和软管
Fix pipe or hose respectively



排出管路的安装分解图
Discharge pipe arrangement



安装防止浮动的固定钢件
Provide anti buoyancy anchoring



安装完毕的
Wilo-DrainLift M/L completely
installed

Wilo – DrainLift XXL 典型安装实例



Wilo – DrainLift WS 典型安装实例



“威乐的产品节能
降耗，技术领先，
服务更出色！”

