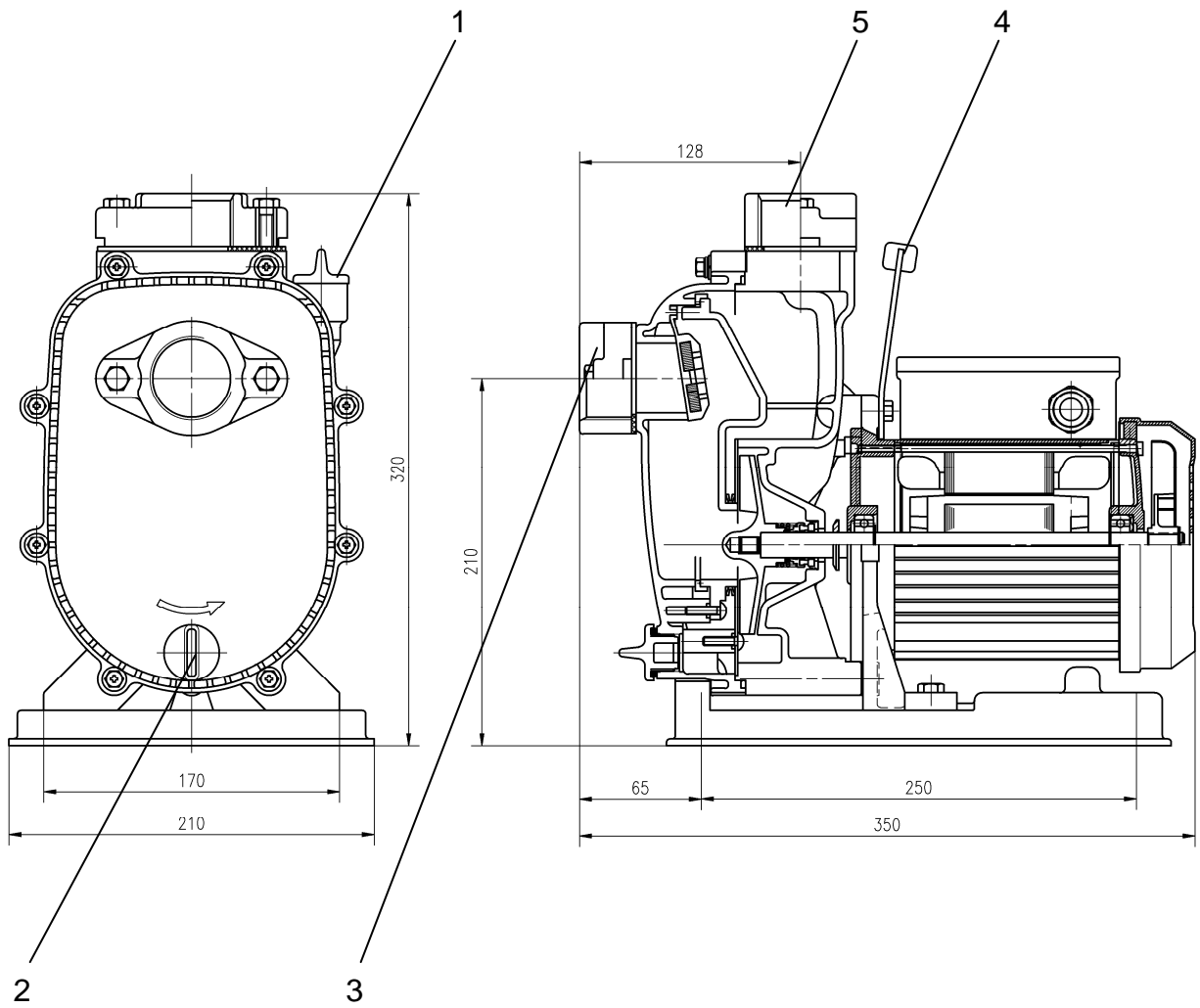




Wilo-Drain LP 40

- D** Einbau- und Betriebsanleitung
- GB** Installation and operating instructions
- F** Notice de montage et de mise en service

Fig. 1:



1 General Information

Assembly and installation should only be carried out by qualified personnel

1.1 Uses

The self priming pumps of the Wilo-Drain LP40 series are suitable for removing and lifting clean and dirty water/sewage. They are used for:

- domestic,
- horticulture,
- agricultural use,
- in industrial and process engineering.

The LP pumps are made from polypropylene plastics and bronze. They are resistant against corrosion and suitable for removing seawater. Further they are used for

- aquariums
- fish-farming

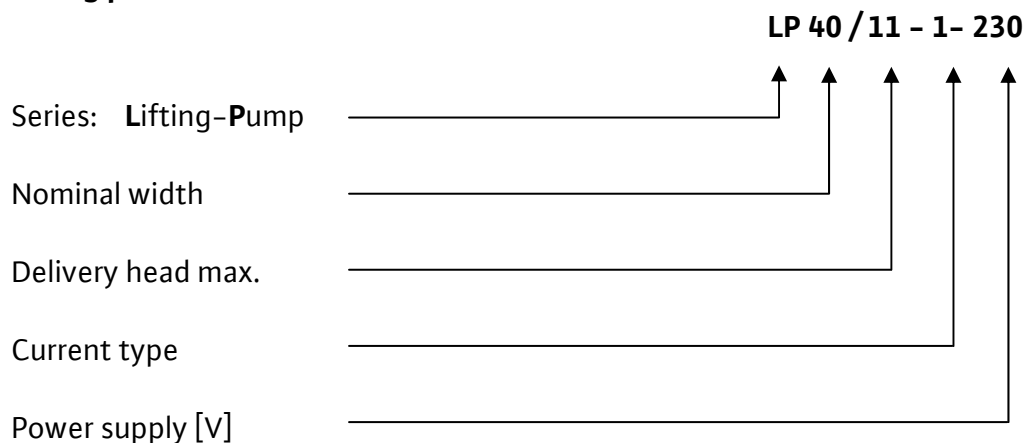


LP pumps may not be used to pump raw sewage containing Faeces.
Local regulations must be observed.

The pump must **not** be used for pumping **drinking water**.

1.2 Product data

1.2.1 Rating plate



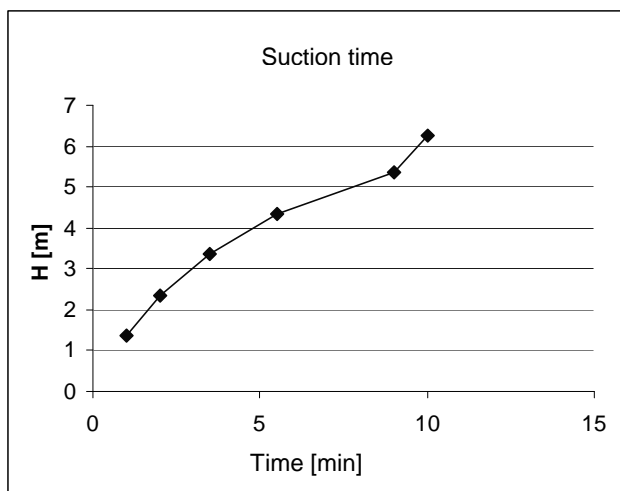
English

1.2.2 Connection and electrical data

| | |
|---------------------------------------|-------------------------|
| Power supply | 1 ~ 230 V, $\pm 10\%$ |
| Mains frequency | 50 Hz |
| System of protection | IP 44 |
| Isolation class | B |
| Operating mode | S1 continuous operation |
| Capacity max. | 9 μ F, 450V |
| Speed max. | max. 2900 1/min (50 Hz) |
| max. power input | see rating plate |
| Admission output P1 | 500W |
| Motor-output P2 | 400W |
| Conveying capacity | see rating plate |
| Delivery head max | see rating plate |
| Suction head | 6m |
| Nominal width delivery side | 40mm, 1½ " |
| Nominal width suction side | 40mm, 1½ " |
| Temperature range of the flow medium: | 0 up to +35°C |

1.2.3 suction time

The duration of the suction process of the LP40 pump depends on the suction depth. The diagram below shows the process duration in dependence on the depth. The mentioned time values are average values, depending from the conditions of use, they may deviate, for example by using a suction-hose.



| Depth [m] | Time [min] ca. |
|-----------|----------------|
| 1,0 | 1 |
| 2,0 | 2 |
| 3,0 | 4 |
| 4,0 | 6 |
| 5,0 | 9 |
| 6,0 | 10 |

2 Safety

These instructions contain important information which must be followed when installing and operating the pump. These operating instructions must therefore be read before assembly and commissioning by the installer and the responsible operator.

Both the general safety instructions in the “Safety precautions” section and those in subsequent sections indicated by danger symbols should be carefully observed.

2.1 Indication of instructions in the Operating Instructions

Safety precautions in these operating instructions which, if not followed, could cause personal injury are indicated by the symbol:



when warning of electrical voltage with



The following symbol is used to indicate that by ignoring the relevant safety instructions, damage could be caused to the pump/machinery and its functions:

ATTENTION!

2.2 Personnel qualifications

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

2.3 Danger in the event of non-observance of the safety instructions

Non-observance of the safety instructions can result in risk of injury to persons and damage to pump/installation. Non-observance of the safety instructions can result in the loss of any claims for damages.

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

- Failure of important functions of the pump/installation,
- Failure of specified maintenance and repair procedures,
- Risks to persons through electrical, mechanical and bacteriological effects,
- Property damage.

2.4 Safety instructions for the operator

The existing directives for accident prevention must be adhered to. Danger from electrical current must be eliminated. Local directives or general directives [e.g. IEC, VDE etc.] and local power supply companies must be adhered to.

Risks through mechanical or bacteriological effects must be prevented. Local conditions and guidelines relating to sewage technology must be adhered to.

2.5 Safety instructions for inspection and installation work

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

Work to the pump/installation must only be carried out when at a standstill.

2.6 Unauthorised modification and manufacture of spare parts

Modifications to the pump/installation are only permissible after consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer ensure safety. The use of other parts can nullify the liability from the results of their usage.

English

2.7 Improper use

The operational safety of the supplied pump/unit is only guaranteed for conventional use in accordance with section 1 of the installation and operating instructions. The limit values must on no account fall under or exceed those specified in the catalogue/data sheet.

3 Transport and interim storage

ATTENTION!

- The pump may only be transported/suspended on the handle provided for transport. Never by the cable. The pump must be protected against physical damage
- The pump mustn't get into contact with flammable parts (clothes..) while using.
- If the Pump is not used for longer time it should be disconnected from the electrical supplyment.

4 Product and accessory description

4.1 Pump description (Fig. 1)

| | | | |
|--------|--------------------------|--------|----------------|
| Pos. 1 | Filling- / bleeding plug | Pos. 4 | Handle |
| Pos. 2 | Drain plug | Pos. 5 | Discharge port |
| Pos. 3 | Suction port | | |

The Self priming Pump Wilo LP is driven by a dry-running motor which is fixed by screws with the pump housing. Motor and pump have a continuous shaft made of stainless steel. The impellers material is bronze. The pump housing is made of polypropylene plastics. The flow medium enters from a horizontal suction opening and exits by the vertical pressure connection. Both connections are equipped with 1 ½ " plastic flanges.

4.2 Products delivered

- Installation and operating instructions
- Plastic flanges 1 ½". Suction and pressure.

4.3 Accessories

- Accessories must be ordered separately
- Suction side: Use special hoses for suction use

5 Assembly / Installation

The LP40 pumps are intended for the following types of installation

- transportable dry installation
- stationary dry installation

5.1 Assembly

- The pump must be installed in a frost-free place.
- The shaft must be free from coarse solids (e.g. building rubble) prior to installation and commissioning.
- See catalogue for installation dimensions
- The pressure-pipe must show the pump's nominal width (R 1½, possibility for expansion).
- The suction flange and pipe must be absolutely tight. Otherwise no suction mode.

5.2 Electrical connection



Electrical connection should be made by a qualified electrician. Current national regulations must be observed (e.g. VDE regulations in Germany).

- Check that the mains current and voltage comply with the data on the rating plate
- Mains fuse: 16 A, time-lag
- Pump/installation must be earthed in compliance with regulations
- In accordance with EN 60335, submersible driven-motor pumps with less than 10 m of connecting cable are **only** permitted **for use within buildings**, in other words not for operation in open air.

6 Operation

- To reach a optimum suction-process, it is necessary to fill the pump housing with water using the hopper cap

ATTENTION!

The mechanical seal must not run dry!

- Dry running reduces the life of motor and mechanical seal.
- Fill in some water !

7 Maintenance



In order to avoid infection maintenance work should only be carried out using protective gloves.



For all maintenance and repair work the pump is to be switched off-circuit and protected against unauthorised re-starting.

In principle, damage to the connecting cable should only be repaired by a qualified electrician.

8 Problems, causes and solutions

| Problem | Causes | Solutions |
|-------------------|--|---|
| Pump does not run | no voltage | Check wires and fuses and/or switch automatic circuit-breakers back on in distribution substation |
| | Rotor blocked | Clean casing and impeller |
| | Cable break | Check cable resistance. If necessary, replace cable. Only use original Wilo special cable! |
| Pump has no power | The pump sucks in air due to an overly strong check the function/adjustments of the drop in the liquid level | Check the liquid level |
| | Pump working against insulating air cushion | Fill the pump housing with water. |
| | Pressure-pipe blocked | Check and clean line |
| No suction | Hose (suction side leaky) | Repair or change suction hose. |

If no solution can be found, please contact your plumbing and heating specialist or your nearest Wilo customer services or representative.

Subject to technical alterations!

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March 2009



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