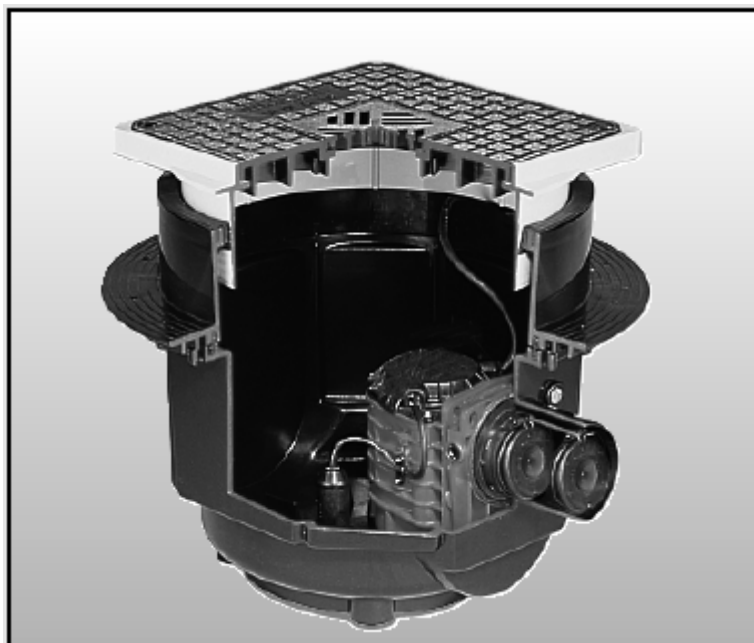


INSTALLATION AND OPERATING INSTRUCTIONS

KESSEL – Pumpfix S[®] Cellar drain

the fully-automatic cellar drain with odour trap,
backflow stop and drain pump



Art.no. 28451

Product advantages

- Telescopic upper section can be varied in height, rotated and tilted
- Cover can be matched to floor tile pattern
- Pressure-seal flange for moisture barrier
- Further inlets can be installed by drilling



Certification no. Z-53.3-310

The installation and service of this unit should be carried out by a licensed professional servicer

Company - Telephone No.

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(Subject to technical amendments)

Table of Contents

1. General information	1.1 Use	page 3
	1.2 Description	page 3
<hr/>		
2. Installation		
2.1 Installation		page 4
2.2 KESSEL – Pumpfix S for concrete slab installation (extra deep)		page 4
2.3 Installation in rising groundwater		page 6
2.4 Suggested installation		page 7
<hr/>		
3. Cleaning and maintenance		page 8
<hr/>		
4. Technical information		page 9
<hr/>		
5. Performance graph		page 10
<hr/>		
6. Technical data		page 11
<hr/>		
7. Troubleshooting assistance		page 12
<hr/>		
8. Spare parts		page 13
<hr/>		
9. Guarantee		page 14

1. General information

1.1 Uses

The KESSEL – *Pumpfix*[®]S cellar drain has a double backflow stop with emergency closure and pump. This ensures reliable drainage of points below the backflow level even if backflow is present. The pump only operates in the backflow mode, and discharges the wastewater to the drain by overcoming backwater pressure. When backflow is not present and discharge volume is low, the water is drained off by gravity, but if the volume of water increases, the pump activates to ensure positive discharge to the drain.

1.2 Description

The use of high-quality polymers which are highly durable and impact-resistant, together with corrosion-proof grades of steel makes the KESSEL - *Pumpfix*[®]S capable of withstanding the customary household acids and lyes as well as hot and cold water. Furthermore, the KESSEL - *Pumpfix*[®]S cellar drain is extremely easy to install.

The KESSEL - *Pumpfix*[®]S cellar drain consists of a housing with a telescopic upper section which can be continuously varied in height, rotated and tilted by up to 5 degrees. This enables the slotted grid or cover to be matched to the floor tile pattern.

The KESSEL - *Pumpfix*[®]S cellar drain is available as a combination set with various covers and upper sections, and with intermediate section article no. 83070 for deeper installation. This way, all the required installed depths can be provided.

A pressure-seal flange is available to enable a moisture barrier to be attached. The sides can be drilled through and inlet stub pipes installed to permit additional clear wastewater lines to be connected. This is a reliable means of disposing of water from showers, washing machines etc., and also of rainwater from low-lying areas or cellar stairways.

WARNING: the KESSEL - *Pumpfix*[®]S must not be used as a siphon lift.

Do not use for faeces containing sewage!

2. Installation

Before installing the KESSEL - *Pumpfix*[®]S cellar drain, check all components for damage in transit.

2.1 Installation:

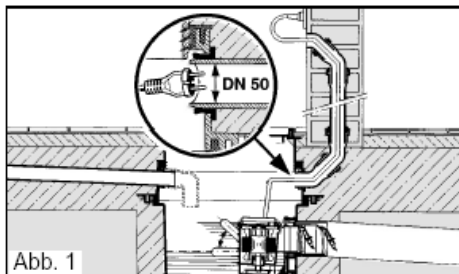


Fig. 1

Connecting the cable tube:

A cable duct in the form of an empty tube of 50 mm nom. dia. is to be laid on site (see Fig. 1). To connect this tube to the unit, insert the moulded seal in the cable entry point on the housing. The cable tube can then be pushed through (see Fig. 3). To simplify assembly, a 50 mm nom. dia. pipe elbow is also supplied.

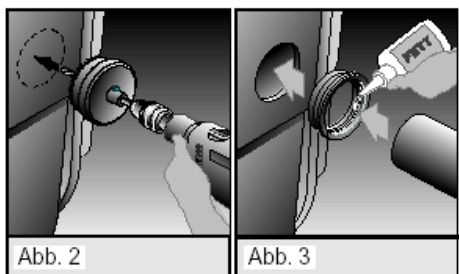


Fig. 2

Fig. 3

Connecting inlets from remote sources:

Determine the points at which inlets from showers, washbasin, washing machines or cellar drains are to be connected. Drill the necessary holes in the KESSEL - *Pumpfix*[®]S housing with a circular cutter of the correct diameter, then insert the moulded seal and the inlet pipe (see Fig. 2 and 3)

Make sure that no side inlets are connected near the float switch.

Float level could otherwise be affected by inlet flow. It is best to attach an elbow so that the flow is directed downward.

The side inlet must not be positioned below the switch – on level of the pump, because then there would be a risk of water backflowing into the inlet.

NOTE:

A vent line of 50 mm nom. dia. is needed if the water-proof cover plate is used.

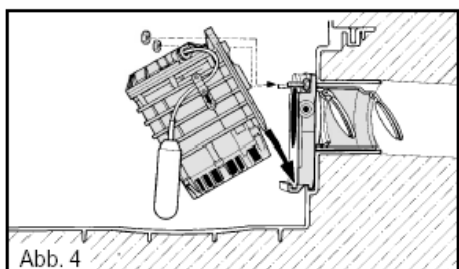


Fig. 4

Installing the pump:

Place the seal in the groove on the pump and press on the seal retaining ring (as shown in Fig. 9). Hold the pump at slight angle, insert it into the connecting flange and snait into position at the bottom. Push it on the threaded pins and secure it with the hex nuts. (see Fig. 4).

2. Installation

Installation:

Grease the moulded lip seal supplied and place it in the sealing groove in the top of the housing. Insert the upper section and position it at the required height (see Fig. 5). For deeper installation insert intermediate section, order no. 83070, between bottom part and telescopic upper part. This permits a 200 mm deeper installation.

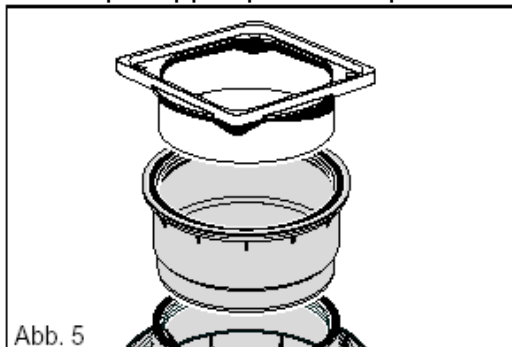


Fig. 5

WARNING:

When aligning the upper section, note the pattern of the floor tiles. After the final alignment, cutouts must be made in the upper section where the cable entry is located and wherever additional inlets are to be provided (see Fig. 6)

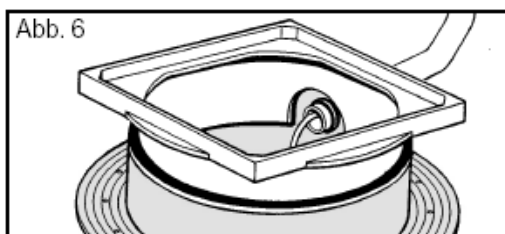


Fig. 6

Connect all pipes/empty tubes to the unit and set the housing in the concrete floor.

Use a suitable wire to pull the cable for the plug through the empty cable tube (if a tube of 50 mm nom. dia. or greater is used, it should be possible to pull the earthed plug through without difficulty).

Installing covers with alternative surfaces:

In the case of covers with alternative surfaces it is possible to lay tiles or natural stone slabs in the cover, so that it matches the surrounding flooring.

Products such as those available from PCI, Schomburg, Deitermann and other suppliers can be used to lay the tiles. To avoid laying and adhesion problems, we recommend the following procedure:

Laying tiles:

a) Apply a coat of primer, e.g. PCI 303, to the cover plate. Allow it to dry, then lay the tiles, for instance with PCI flexible mortar. This method is particularly suitable for thin tiles, since the filler can be applied to reach the desired height.

b) Lay the tiles with PCI Silcoferm S (self-adhesive silicon) or similar. This permits a thinner layer of adhesive when thicker tiles are being laid.

Laying natural stone slabs (marble, granite, agglomerate marble)

a) Apply a coat of primer to the cover plate, e.g. Primar PCI 303 and lay the slabs with PCI Carralit or similar.

b) Lay the natural stone slabs with PCI Caraferm (special silicone for natural stone) or similar. The application areas are similar to "Laying tiles".

2. Installation

2.2 KESSEL – Pumpfix S for concrete slab installation (extra deep)

Installation of the KESSEL – Pumpfix S should be carried out as described in Section 2.1. A cable entry hole (size DN 50) must be drilled (with hole saw) out of the intermediate section at the proper location. A DN 50 pipe inlet seal should be placed into the drilled out hole and the cable pipe should be laid as described.

With the set designed for installation depths from 750 – 875 mm, the top circular edge of the intermediate section is used as a seal. This edge should be greased before installation of the upper section.

Multiple inlets can be added to the chamber simply by drilling the required sized hole out of the intermediate section (using a hole saw). Important is that the addition of extra inlets does in no way effect the operation of the probes (water level control probes).

2.3 Installing in rising groundwater:

If the KESSEL - *Pumpfix*[®]S has to be installed in rising groundwater, it can be sealed without difficulty. A layer of the sealing material is clamped between the loose plastic flange (Order No. 83018) and the pressure-seal flange integral with the main body, and tightened in the position with the screws provided. Any sealing sheet used on the construction site is suitable. For installation in a watertight vat or tank, KESSEL can also supply a suitable natural rubber (NR/SBR) sealing sheet (800 mm dia., Order No. 83019), into which the screws holes have already been punched (see Fig. 7).

If for example a watertight concrete vat has to be drilled into in order to attach inlet pipes, cable ducts etc., these interruptions must also be rendered watertight.

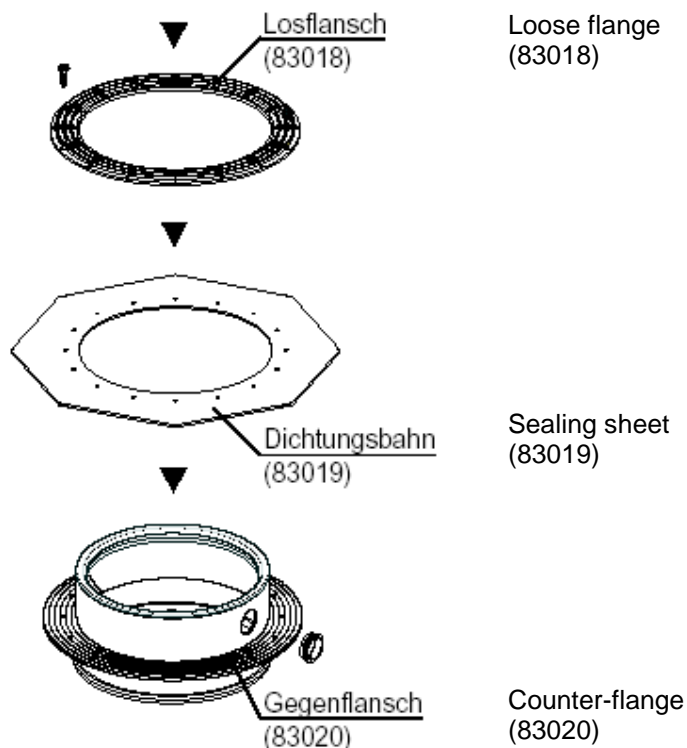


Fig. 7

2. Installation

2.4 Suggested installation: KESSEL - Pumpfix®S cellar drain

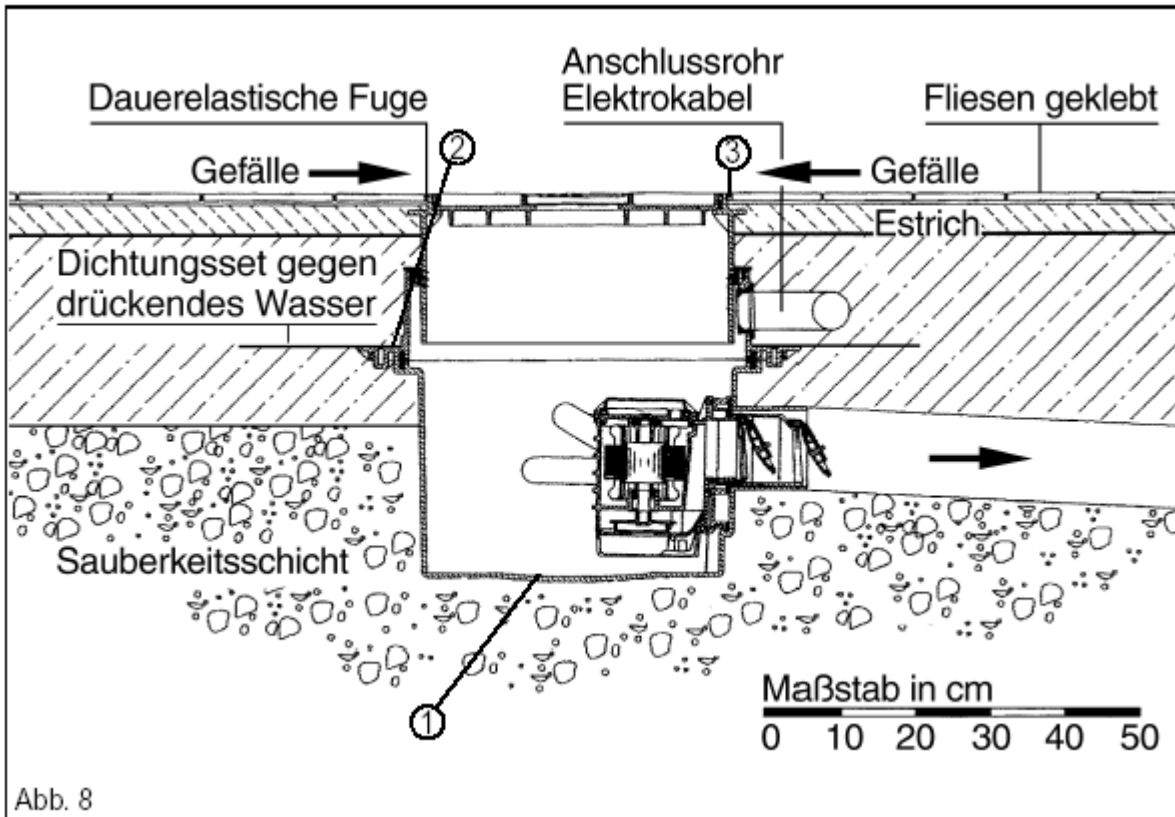


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Fig. 8

1. KESSEL Pumpfix®S
2. Pressed-seal flange with sealing sheet
3. Telescopic upper section

Dauerelastische Fuge	= flexible joint
Anschlussrohr Elektrokabel	= pipe for electrical cables
Fliesen geklebt	= floor tiles
Gefälle	= slope
Dichtungssset gegen drückendes Wasser	= groundwater protection seal
Estrich	= cast floor
Sauberkeitsschicht	= gravel base
Maßstab in cm	= dimension (cm)

3. Cleaning and maintenance

WARNING: before any work is carried out in the pump, **DISCONNECT THE POWER SUPPLY PLUG!**

3.1 Removing the pump:

Take out the two hex screws. The pump can then be removed quickly. The check valve prevents any backwater from flowing back into housing after the pump has been removed. The emergency closure can be taken out after the threaded extension has been unscrewed (see Fig 9). This provides unobstructed access for cleaning the discharge line.

3.2 Installing the emergency closure:

Place the seal in the groove on the emergency closure (see Fig. 10) and locate it with the check valve retainer.

IMPORTANT: Connect the check valve to the valve lever.

Allow the emergency closure to engage in the insert flange at the bottom, and push it on to the threaded pin. Then screw it on with the threaded extensions. Check that the emergency closure operates correctly.

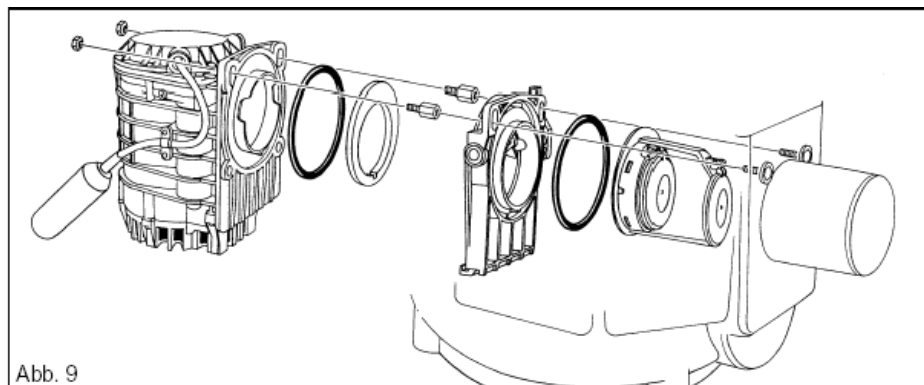


Fig. 9

3.3 Installing the pump:

(see Chapter 2.1) Reconnect the plug to the mains power socket. Fill the housing with water and check operation of the float switch. Insert the slotted grid or cover plate.

3.4 Cleaning:

Since the liquid medium may be contaminated with soap residues, hair or textile fibres from bath, showers washing machines etc., maintenance of the pump is recommended at least twice a year. Clean the outside of the pump and the inlet orifice or rinse through with clean water. If necessary, unscrew and remove the intake-side strainer, take off the intake cover and clean out the impeller cavity.

Clean the float switch as well to remove impurities and ensure that level sensing functions correctly.

Never open up the pump itself (only authorised specialists should do this), because careless handling could damage the pump seals and allow oil to reach the water or sewage.

4. Technical information

WARNING!

Immersed-motor pumps contain oil for lubrication and cooling purposes. If the pump is damaged, the oil could escape and contaminate the medium in which the pump is operating.

Before you run your KESSEL - *Pumpfix*[®]S immersed pump for the first time, have the following electrical protection measures checked by an expert: earth (ground) connection, neutralization, isolating transformer or fault-current protection circuit. These must comply with the local electricity supply company's regulations and be in good working order.

Recommendation:

Do not install the pump in the inspection shaft until the house or building has been handed over to the client.

Special requirements imposed by the Technical Building Institute in Berlin: The KESSEL - *Pumpfix*[®]S siphon unit may be used to discharge regular household wastewater to site drains according to German Industrial Standard 1986, but not sewage from WCs or urinals.

Units installed inside buildings must comply with the requirements of DIN 4109 – protection against noise in buildings.

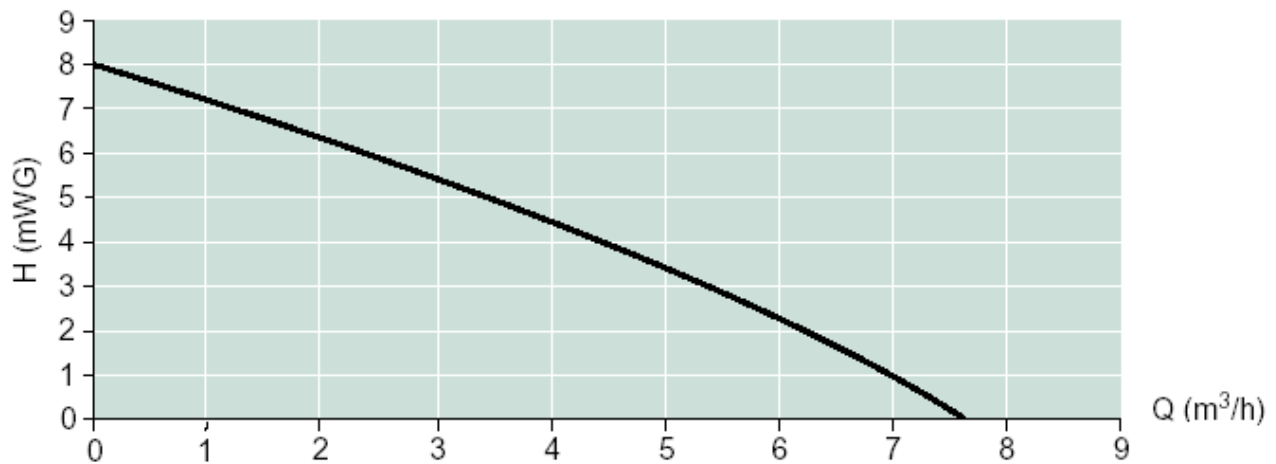
In accordance with the regulations for technical wastewater and sewage plant, the KESSEL - *Pumpfix*[®]S cellar drain must not be used with faeces or with flammable or explosive liquids. The on and off switching points of the flat switch can be adjusted by repositioning it at the two retaining screws.

5. Performance graph

Performance data:

Discharge volume	Q (m ³ /h)	0,0	1,3	2,5	3,6	4,6	5,5	6,3	7,1	7,7
Discharge head	H (mWS)	8,0	7,0	6,0	5,0	4,0	3,0	2,0	1,	0,0

Output graph:



Immersion depth 10 m

Continuous temperature for wastewater discharge 40°C; short-term temperature 95°C, AB operation 50 % duty cycle, 30 min.

6. Technical data

Power Rating*	Running speed	Power supply	Operating voltage	Nominal current	Length of cable	Plug connection	Motor-protection	Fuse
480 W	2800 rev / min	50 Hz AC	230 V	2.1 A	5 m	2-pin, earthed	built-in	6 Amp. time-lag

*) Effective power drawn from mains

Dimensions (pump):

Weight	Height	Max. diameter	Width	Depth
6.1 kg	215 mm	185 mm without float	160 mm without float	165 mm without check valve

Caution:

Use in swimming pools and garden ponds and their protection zones is permitted only if these have been constructed in accordance with VDE 0100 § 49 d electrical equipment regulations.

In case of doubt, consult your electrical installation specialist.

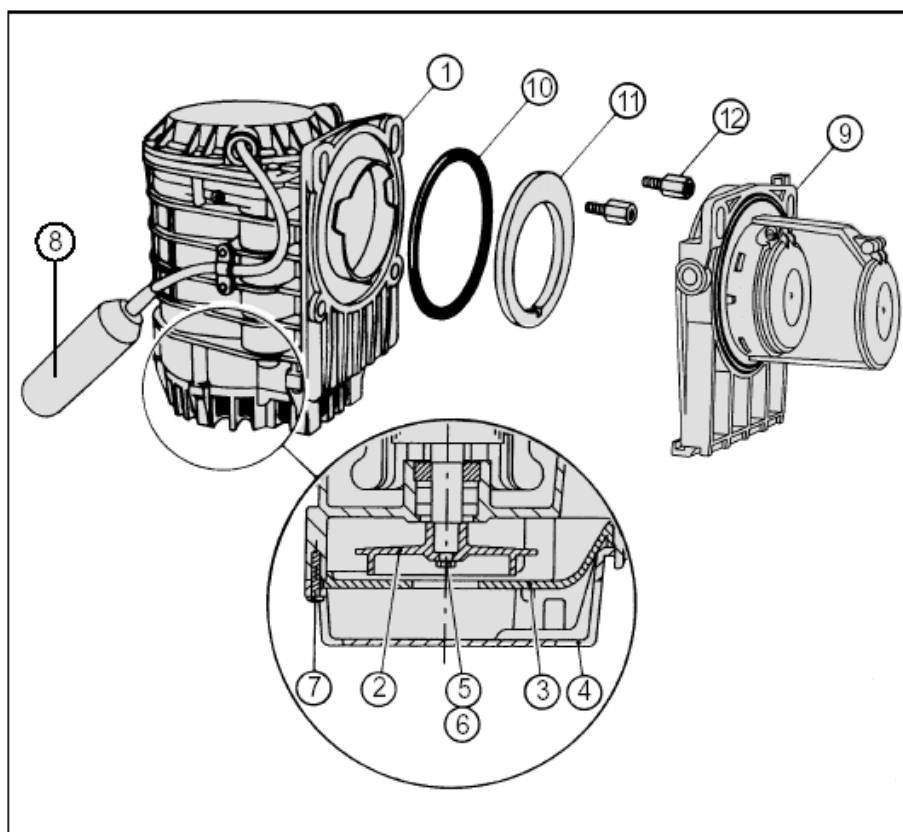
Note on ÖVE:

§ 2022.1 calls for pumps used in swimming pools and gardens to have a fixed electrical supply line from an isolating transformer. #The nominal secondary-side voltage must not be exceeded.

7. Troubleshooting assistance

Malfunction	Possible cause	Remedial action
Pump does not run	<ul style="list-style-type: none"> ➤ Mains power supply interrupted ➤ Fuse blown ➤ Power supply cable damaged ➤ Defective float switch ➤ Vent hole blocked 	<p>Check mains power supply</p> <p>Renew fuse</p> <p>Have repaired (only by KESSEL Service)</p> <p>Renew complete float switch (with cover) or have repaired by KESSEL Service</p> <p>Clean the vent hole</p>
Impeller is jammed	Impurities, solids and other coarse material have collected between the impeller and the intake flange	Clean the pump (see Chapter 3)
Reduced discharge rate	<ul style="list-style-type: none"> ➤ Intake strainer is blocked ➤ Worn intake flange ➤ Worn impeller 	<p>Clean the pump (see Chapter 3)</p> <p>Renew the intake flange</p> <p>Renew the impeller</p>

8. Spare parts



Item	Part name	Order No.	Quantity
1	500 W pump with float	28002 a	1
2	Impeller	28014	1
3	Intake cover	28015	1
4	Intake strainer	28016	1
5	Hex bolt M 6 x 12	28020	1
6	Slotted washer 6.4 pattern J	28021	1
7	Self-tapping screw M 4.2 x 22	28032	6
8	Float switch, complete	28012 a	1
9	Intermediate flange with double backflow protection	28004	1
10	O-ring, nom. dia. 100	28027	1
11	Seal retaining ring	28025	1
12	Threaded extension	28026	2

9. Guarantee

1. In the case that a KESSEL product is defective, KESSEL has the option of repairing or replacing the product. If the product remains defective after the second attempt to repair or replace the product or it is economically unfeasible to repair or replace the product, the customer has the right to cancel the order / contract or reduce payment accordingly. KESSEL must be notified immediately in writing of defects in a product. In the case that the defect is not visible or difficult to detect, KESSEL must be notified immediately in writing of the defect as soon as it is discovered. If the product is repaired or replaced, the newly repaired or replaced product shall receive a new warranty identical to that which the original (defective) product was granted. The term defective product refers only to the product or part needing repair or replacement and not necessarily to the entire product or unit. KESSEL products are warranted for a period of 24 months. This warranty period begins on the day the product is shipped from KESSEL to its customer. The warranty only applies to newly manufactured products. Additional information can be found in section 377 and 378 of the HGB.

2. Wear and tear on a product will not be considered a defect. Problems with products resulting from improper installation, handling or maintenance will also not be considered a defect.

01.01.2002

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