

Feed Pump

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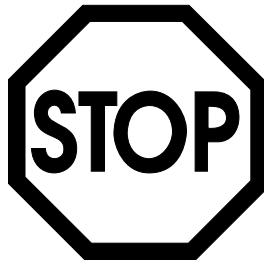
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Study instruction manuals and observe the warnings before installation, operation, service and maintenance.

Not following the instructions can result in serious accidents with fatal injuries.

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In order to make the information clear only foreseeable conditions have been considered. No warnings are given, therefore, for situations arising from unintended usage of the machine and its tools.

A summary of the safety information is found in the Safety chapter under divider 1.

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1 Function Description

1.1 Application

The feed pump is used to feed lube oil, gas oil, or marine diesel oil to the separator.

1.2 Design

The pump is of constant flow vane type. The pump unit consists of an electric motor and a pump.

1.3 Working Principle

The working part of the pump is a rotor with seven vanes which rotate inside an eccentric stator.

Individual cavities are formed between the vanes and the stator. When the cavities are filled with oil, the oil is transported to the separator inlet.

Priming

The pump will not work properly if the cavities are not completely filled.

If the pump is not completely filled, disconnect the flexible hose on the separator inlet and fill with oil.


Direction of Rotation

The direction of rotation is shown by an arrow on the electric motor.

2 Fault Finding

Fault	Probable cause	Remedy
Low capacity or low pressure	Suction valves shut off, or clogged strainer	Open the valves, or clean the strainer
Pump does not prime	Pump too dry Air leak on suction side of the pump	Fill the pump housing with oil Seal off the air leak
Drive motor tends to stop by tripping the overload relay	The counter pressure after the pump is too high The cut-off setting of the motor relay is too low	Check the valves between pump and separator Adjust the relay setting according to the motor power rating in Amps
Pump noisy when running	Suction valves shut off, or clogged strainer Air leak on suction side of the pump Heavy wear in the pump	Open the valves, or clean the strainer Seal off the air leak Dismantle the pump and replace the worn parts

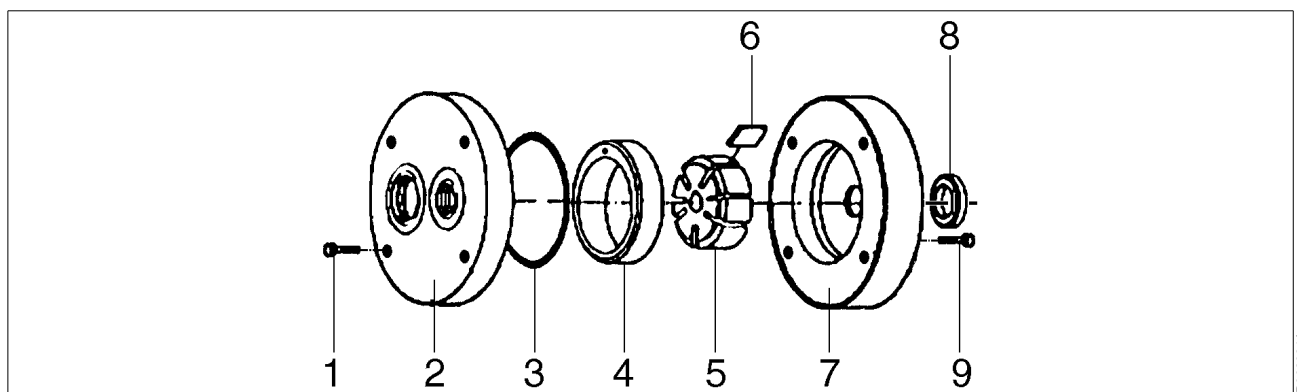
3 Maintenance

 **WARNING**
Entrapment hazard

Do not start maintenance work unless the power is switched off and the inlet and outlet are shut.

3.1 Dismantling and Assembly

Dismantling the pump

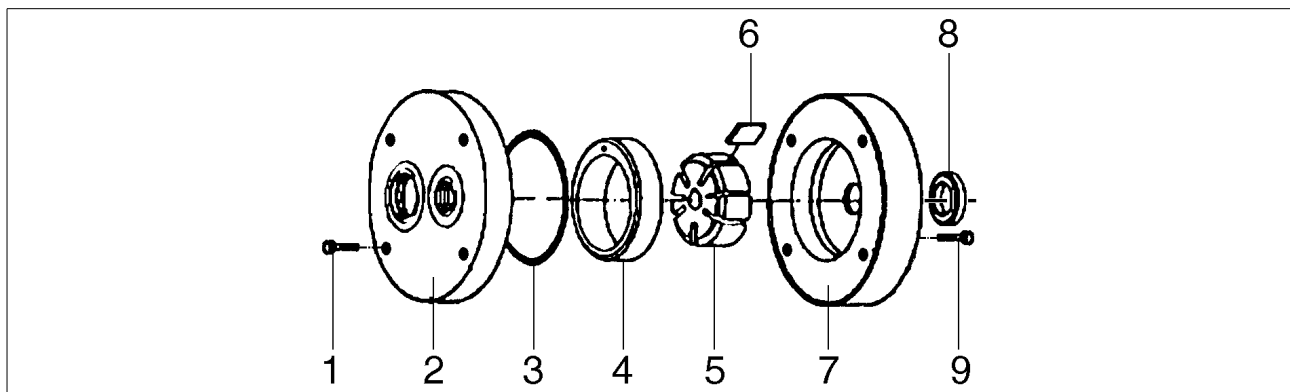


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|---|--------------------------|---|-----------------|
| 1 | Hexagon screw | 6 | Vane |
| 2 | Front flange/distributor | 7 | End flange |
| 3 | O-ring | 8 | Shaft seal ring |
| 4 | Stator | 9 | Hexagon screw |
| 5 | Rotor | | |

1. Disconnect the suction and pressure pipes from the front flange/distributor (2).

2. Loosen and remove the four hexagon screws (1), securing the pump to the electrical motor.
3. Remove the pump from the electrical motor shaft.
4. Loosen and remove the three hexagon screws (9) on the end flange (7) that secure the front flange/distributor (2) to the end flange.
5. Be careful when taking out the rotor, the vanes are not fixed. Remove the stator (4) and the rotor (5) with vanes (6).
6. Remove the shaft seal ring (8) on the end flange (7) and clean the recess.
7. Remove the O-ring (3) on the front flange/distributor and clean the groove.

Assembling the pump



- | | | | |
|---|--------------------------|---|-----------------|
| 1 | Hexagon screw | 6 | Vane |
| 2 | Front flange/distributor | 7 | End flange |
| 3 | O-ring | 8 | Shaft seal ring |
| 4 | Stator | 9 | Hexagon screw |
| 5 | Rotor | | |

1. Apply oil to the new shaft sealing lip and the outer rim of the shaft sealing.
2. Press in the new shaft sealing, flush with the end flange (7).

3. Fit the new O-ring (3) on the front flange/distributor (2).
4. Fit the stator (4) onto the gauge peg on the front flange/distributor (2).
5. Place the rotor (5) with vanes (6) inside the stator (4).
6. Fit the end flange (7) and secure the front flange/distributor (2) to the end flange with the three hexagon screws (9).
7. Mount the pump on the electric motor shaft.
8. Tighten the four hexagon screws (2), securing the pump to the electric motor.
9. Connect the suction and pressure pipes to the front flange/distributor (2).

4 Technical Data

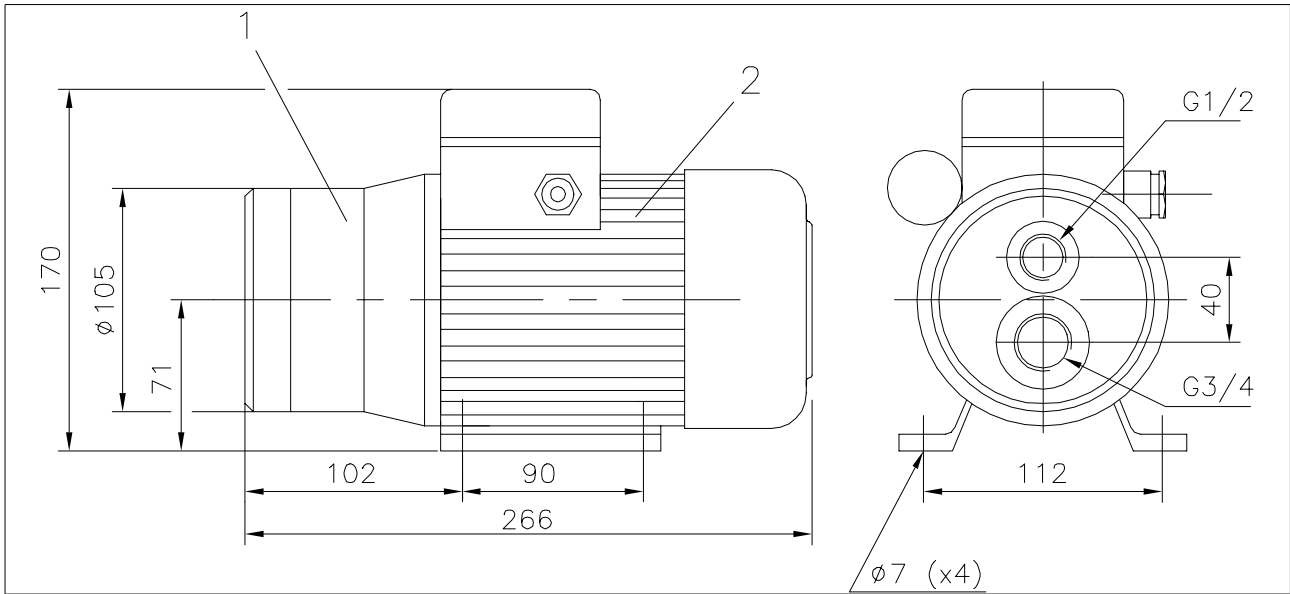
4.1 Specification

Media		Lube oil, Marine diesel oil (MDO), Gas oil
Maximum media temperature		80 °C
Pump type		Vane
Max. capacity	Lube oil	300 l/h at 50 Hz or 360 l/h at 60 Hz
	Diesel oil	630 l/h at 50 Hz or 760 l/h at 60 Hz
	Diesel oil	630 l/h, 24V DC
Mounting style		Horizontally
Weight incl. electric motor		9,5 kg, 230V AC 11 kg, 24V DC
Material		
	Pump housing	Cast iron
	Rotor with vanes	Steel
	Stator	Steel
Sealing		Shaft sealing
Motor		230V 1-phase AC or 24V DC, for marine applications
	Insulation	According to class F
	Enclosure	IP 54
	Speed	1350 rpm, 230V AC at 50 Hz 1620 rpm, 230V AC at 60 Hz 1400 rpm, 24V DC
	Power consumption	0,25 kW, 230V AC 0,2 kW, 24V DC

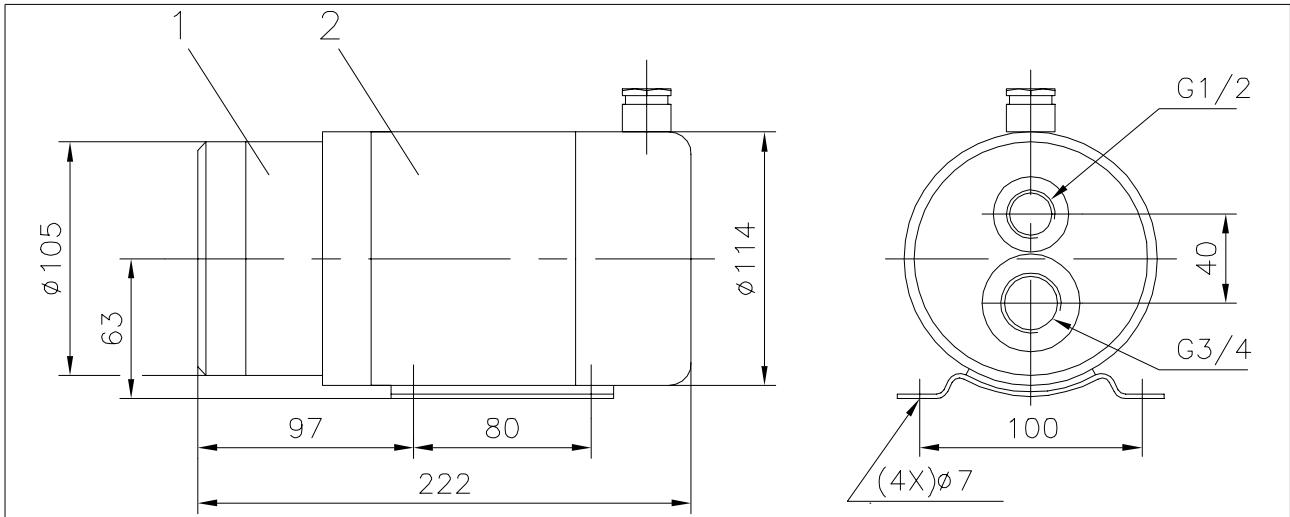
Article No.	Voltage	Frequency	Current	Flow l/h 50 Hz	Flow l/h 60 Hz
1764696-81	230V	50/60 Hz	2,2 A	300	360
1764696-80	230V	50/60 Hz	2,2 A	630	760

1764688-80	24V DC		12 A	630	
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4.2 Dimensions



- 1 Pump
- 2 Electric motor 230V AC



- 1 Pump
- 2 Electric motor 24V DC

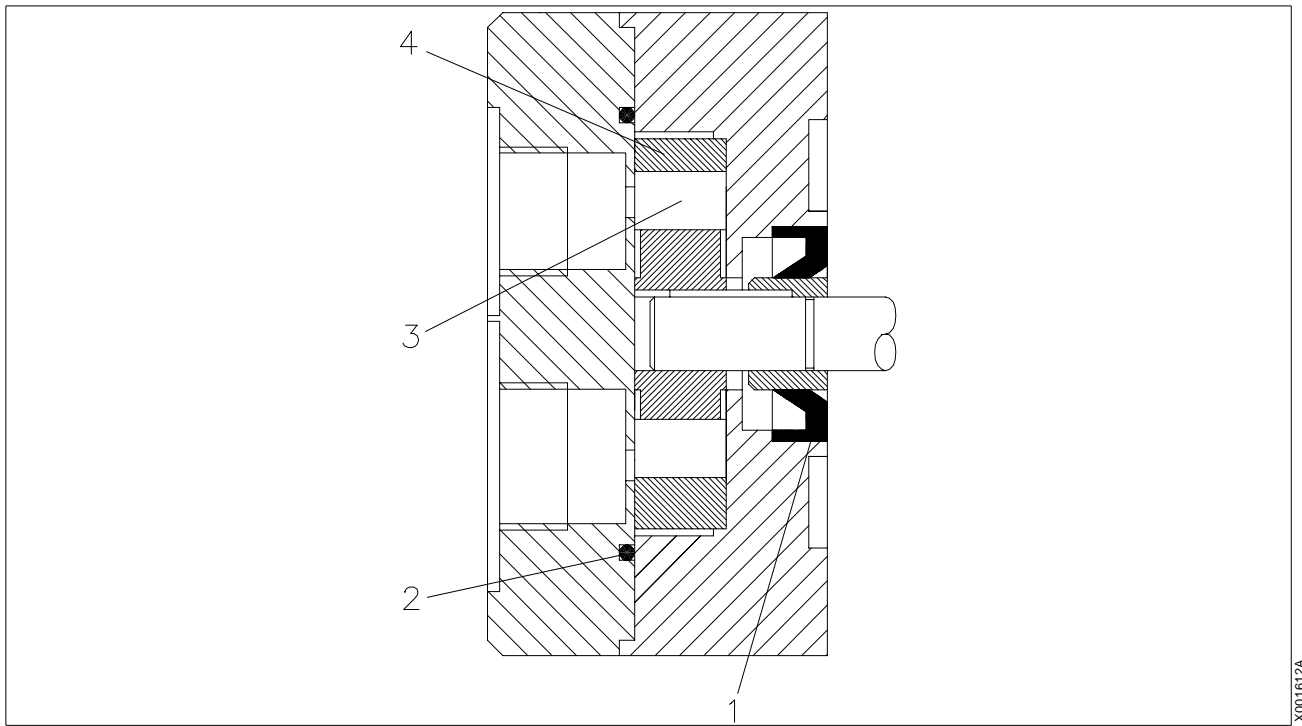
5 Installation

The feed pump must be installed to meet the following demands:

- The pump must be installed on a solid foundation and on a drip tray or in a cofferdam. It must be installed in horizontal position.
- The suction height must not cause a pressure exceeding 0.4 bar (40 kPa).

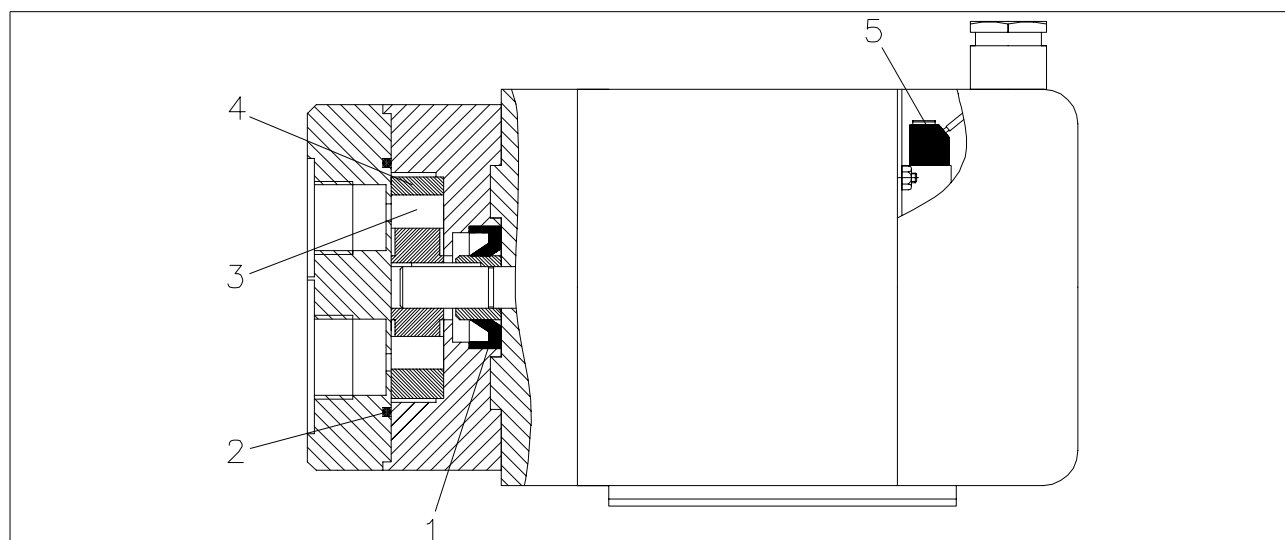
6 Spare Parts

Pump (230V AC)



X001612A

Item	Qty	Article No.	Description	Flow l/h 50 Hz	Flow l/h 60 Hz
1-3	1	1764693-01	Spare parts kit		
4	1	1764693-03	Displacement ring, inner diam. 49.6 mm	300	360
4	1	1764693-02	Displacement ring, inner diam. 51.0 mm	630	760

Pump complete (24V DC)

Item	Qty	Article No.	Description	Flow l/h
1-3	1	1764693-01	Spare parts kit	
4	1	1764693-02	Displacement ring, inner diam. 51.0 mm	630
5	1	1764710-01	Brush-set	