Diesel pump
60 l/min and 100 l/min

230 V 1~AC

FMT Swiss AG

89 349 932 A802 GB

Contents

1. General information

1.1 Intended use

The diesel pump is to be used only for the delivery of diesel fuel.

Never use it to deliver explosive fluids like petrol, or other fluids with similar flashpoints!

The diesel pump must be connected to the appropriate electrical source.

Intended use includes compliance with the contents of the operating instructions which must be completely read before the pump is put into operation.

Any use beyond this (other materials, the use of force) or arbitrary modification (conversion, failure to use original accessories) may result in hazards, and is deemed to be outside the intended use.

The operator is responsible for damages resulting from use other than the intended use.

For any repairs to electrical components, the appropriate safety and test requirements are to be observed.

Only original replacement parts are to be used for any repairs, otherwise the warranty will be invalidated.

1.2 Construction and functional description

The diesel pump can be fitted with a variety of FMT accessories.

To prevent environmental damage the diesel pump is fitted with a siphon protection system. This means that if the discharge hose is damaged while the pump is stopped, siphon action will not empty the tank.

1.3 Area of aplication

The diesel pump is suitable for the delivery of diesel and heating oil only when they are not heated above their flash points.

The temperature of the delivery fluids must be between –10 °C and +40 °C. The temperature must not be above or below the limit values.

Because the motor and switch are not explosion-protected, the pump must **not**

- be operated in an explosion risk area.
- be used to deliver fuels of danger classification A I, A II and B.

1.4 Operational area requirements

Heating oil and diesel are water polluting substances. Therefore the country specific rules and regulations regarding the delivery and storage of such fluids must be obeyed.

According to § 19g WHG (Germany) the filling installation must be designed, fitted, mounted, maintained and operated in such a way that water pollution and/or any other environmental damage is prevented.

The operator of such an installation is, according to § 19i WHG (Germany) responsible for continuous monitoring to ensure compliance with the above stated requirements at the installation.

1.5 Technical data

Description		Diesel pump 60 l/min	Diesel pump 100 l/min
Fluid temperature	°C	-10 to +40	-10 to +40
Connection thread	G	1“ i	1“ i
Current consumption	A	2,8	5,7
Power	W	600 W	1000 W
Capacitor		450 V - 12,5 µF	450 V - 25 µF
Pressure relief setting	bar	1,8	2,2
Max. suction height	m	5	5
Nominal delivery rate under free discharge	l/min	60	100
Voltage	V	230	230
Frequency	Hz	50	50
Revolutions	min^{-1}	2800	1450
Protection class		IP 54	IP 54
Power cable	m	1,8	1,8
Weight	kg	6,85	12,50

Tab. 1-1: Technical data

2. General safety instructions

2.1 Information on safety at work

The diesel pump has been designed and manufactured according to the health and safety requirements of the relevant EC guidelines.

Nevertheless, there can still be risks if the product is not set up or operated as stipulated.

Therefore, before using the diesel pump, read these operation instructions and pass them on to other users.

When operating the diesel pump, the local safety and accident prevention rules and regulations always apply, as well as the safety advice in the operating instructions.

2.2 Explanation of the safety instructions which apply

The safety instructions used in these operating instructions are divided into various levels of hazard. Various levels of hazard are indicated in the instructions with the following keywords and pictograms:

Pictogram	Keyword	Consequences of failure to comply with the safety instructions
	Danger	Death or very serious injury
	Caution	Possible slight or not serious injury or material damage

In addition, a further instruction is used which gives general tips for handling the product.

Pictogram	Keyword	Meaning
	Note	Background knowledge or tips on the right way of using the product

2.3 Hazards when handling the Diesel pump

Danger!

Never work on a pump that is running!

- Mount or remove attachments and accessories only when the pump is switched off.
- For your own safety, disconnect the pump from the power supply.

Danger!

Do not pump contaminated fluids!

- Take special care to ensure that there is no contaminant in the fluid to be pumped.
- Install a strainer on the suction pipe.

Danger!

Damaged attachments and accessories can lead to personal injury and material damage!

- Suction and pressure pipes must not be kinked, twisted or stretched.
- Attachments and accessories must be checked for wear, splits or other damage at all times.
- Damaged attachments and accessories must be replaced immediately.
- With reference to the period of use, please note the details in ZH 1/A45.4.2 or DIN 20066 part 5.3.2.

Caution!

Spilled fuel can result in environmental damage!

Local and country rules and regulations relating to domestic water supplies and fuel storage must be obeyed.

3. Assembly

To attach the Diesel pump 4 bolts M6 (not included) are required.

When installing the pump, ensure that it is mounted on a stable surface. Select a secure location (protected from splash water, damage and theft).

First, remove the plastic plugs from the suction and discharge junctions.

Connect hoses to the suction and delivery connectors. Attach a strainer to the end of the suction hose.

Attach the nozzle valve to the delivery hose.

Connect the pump to the appropriate electrical source through the power connector.

The pump is now ready for operation.

Note

Ensure cleanliness during installation, and that all accessories/attachments are correctly connected to the pump housing.
Use suitable sealing and jointing material (e.g. Teflon tape).
In order to make mounting easier, grease the threads of the hoses and of the adapter.

3.1 Installing the siphon protection

Remove the bolt screwed in the upper part of the pump housing, together with the seal (see Fig. 3-1).

Screw into the same thread the threaded nozzle with the new seal (see Fig. 3-2).

Connect the hose to the threaded nozzle and feed it into the tank.

Note

Ensure when installing the siphon protection system that the end of the hose is not immersed in the fluid. If it is, the siphon protection system will not work!

Abb. 3-1: Siphon protection boring with blanking screw (as delivered)

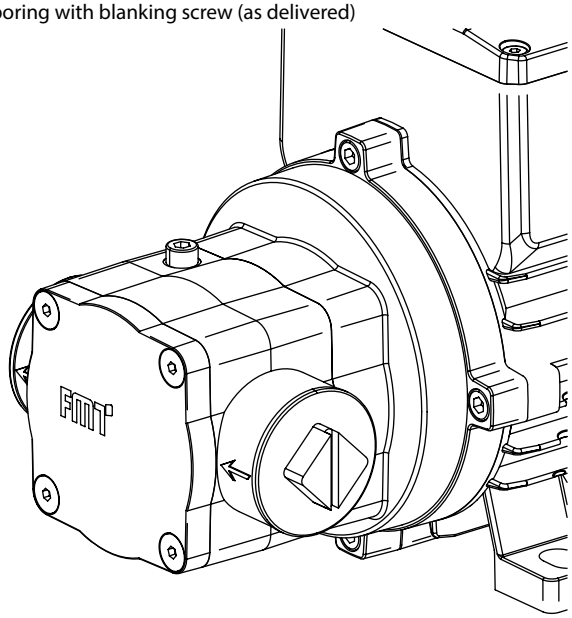
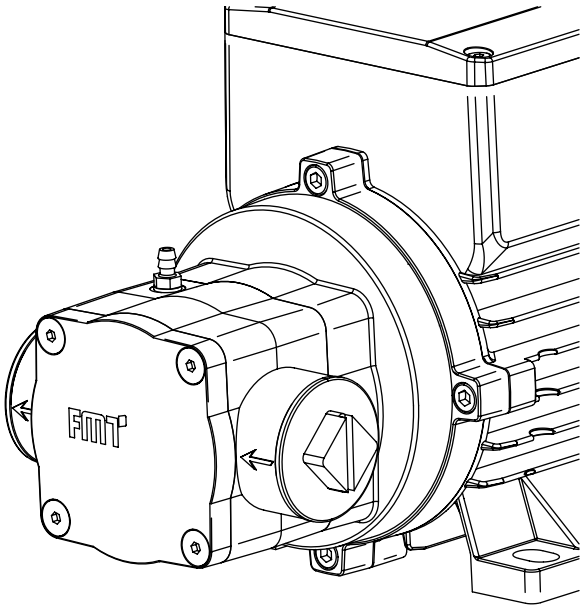


Abb. 3-2: Threaded nozzle for siphon protection screwed in place



4. Operation

Check the diesel pump and installed accessories for completeness and damage. Replace any damaged components immediately. Never use a pump if damaged.

Check the suction filter for damage each time the tank is filled/emptied and replace it if damaged. Never operate the pump without the suction filter, because the pump will not be protected against contamination by foreign bodies.

Suspend the suction hose in the tank to be emptied.

Note

To ensure that the tank can be completely emptied, the suction hose must reach to the bottom of the tank.

Before switching the pump on, ensure that the nozzle valve is closed.

Operate the rocker switch to switch on the pump.

Caution!

Never operate the pump without delivery fluid for longer than 2 min. There is a danger of your diesel pump being damaged if operated dry.

Adjust the nozzle valve lever pressure according to the delivery rate required, or lock it in position (only applicable to automatic nozzle valve, not included in standard delivery).

Caution!

The Diesel pump does not automatically switch off, therefore do not leave the pump running unattended.

To finish a pumping session, release the nozzle valve control lever, never operate the pump with the nozzle valve closed for longer than 3 minutes.

Operate the rocker switch to switch off the pump.

Position the nozzle valve so that no diesel fuel can pollute the environment.

Caution!

Danger of product damage

The power source must be the correct voltage for the pump type

5. Maintenance

The Diesel pump is very easy to maintain and service.

Due to the operator responsibilities according to § 19i WHG (German rules), the following components must be regularly checked and replaced as necessary, to minimise the possibility of environmental or equipment damage, or personal injury:

- Pump housing
- Delivery hose
- Nozzle valve

6. Service

6.1 Replacing worn blades

Loosen the screws pos. 19.

Remove the complete bypass housing and gaskets, pos. 7 and pos. 16, from the motor.

Replace the worn blades pos. 6 by new genuine FMT spare parts. Observe the installation direction.

Put the bypass housing back in position and fasten it with the screws. Ensure the correct seat of the sealing rings.

Replacing the blades is only necessary in exceptional cases.

7. Troubleshooting

Fault	Cause	Solution
Delivered volume too low	Insufficient volume of supply; resistance in the suction line too high; suction line too long; too many bends and fittings; filter resistance too high; voltage too low; nozzle valve not completely open	Check the suction line and filter; check the voltage
Delivery pressure too low	Wrong direction of rotation; impurities	Clean the intake; check the direction of rotation (connection to voltage supply)
Pump makes too much noise	Vacuum in the suction line; entry of air in the suction line; misalignment of pump and motor; insufficient volume of supply	Check the suction line; check the correct assembly; ensure that volume of supply is sufficient
Leakage	Defective shaft seal; defective O-ring	Replace the gaskets
Difficulties with pump rotation	Impurities or sediments in the pump; pump was out of order for a long time	Clean the pump

Tab. 7-1: Troubleshooting

Please contact the customer service (refer to chapter 8 for the addresses), if the troubleshooting procedures described in chart 7-1 could not solve the problem.

8. Repairs/Service

The diesel pump was developed and produced according to the highest quality standards.

Should a problem develop, despite all quality controls, please contact our customer service:

FMT Swiss AG
Tel +49 9462 17-216
Fax +49 9462 1063
service@fmtag.ch

9. EC-Declaration of conformity

We hereby declare that the product described here, its concept and construction, including this particular model, complies with the EC requirements. Any change to the product, not approved by us, will invalidate the declaration.

Bezeichnung des Gerätes	**Diesel pump 60 l/min and 100 l/min 230 V 1~AC**
Product Type	Electric pump
Year of Manufacture	see nameplate
Applicable EC-Directives	EC-Low Voltage Directive (2006/95/EG) EC-Directive Electro-magnetic compatibility(2004/108/EG)
Applicable National Standards	DIN VDE 0843 T1

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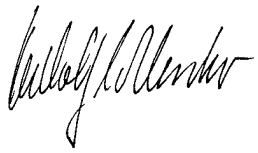


Dipl.-Ing. Rudolf Schlenker

10. Exploded view Diesel pump 60 l/min

Pos.	Quantity	Description	Item no.
1	1	Electric motor 230 V - 50 Hz 60 l/min	83 704
2	2	Guide bush - blue galvanised	83 775
3	1	Feather key DIN 6885 A	00 602
4	1	Raceway	82 471
5	1	Rotor 60 l chamfered slots	86 844
6	6	Blade	89 254
7	1	O-ring-FKM 70-62 x 1,5	82 673 878
8	2	Screw plug black PP 710 GPN	86 055
9	1	Nut DIN 985	03 496
10	1	Disc with bore hole for bypass	83 575
11	1	Compression spring - tapered 2x13,5x16	89 384
12	1	Bypass housing	83 763
13	1	Cap screw M 5x6	89 445
14	1	Valve tappet	83 574
15	1	Countersunk screw M 4x25	83 400
16	1	Cover gasket	83 769 878
17	2	Straight pin ISO 2338 - 3m 6x10-St	85 637
18	1	Bypass cover	83 762
19	4	Countersunk screw M5x60	86 979
20	1	Sealing ring	89 279
21	1	Waterproof switch	83 697

Tab. 10-1: Individual components and item numbers

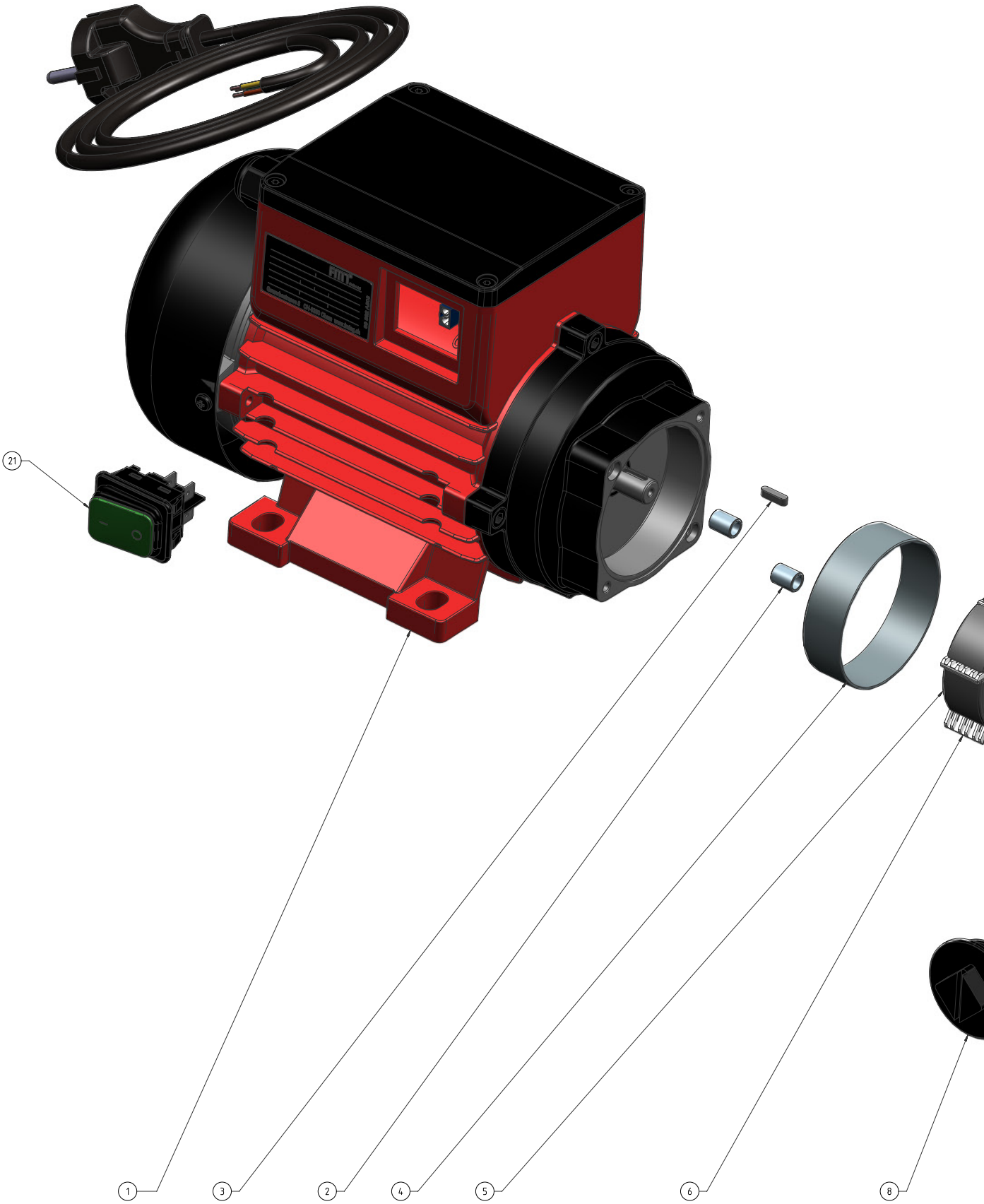
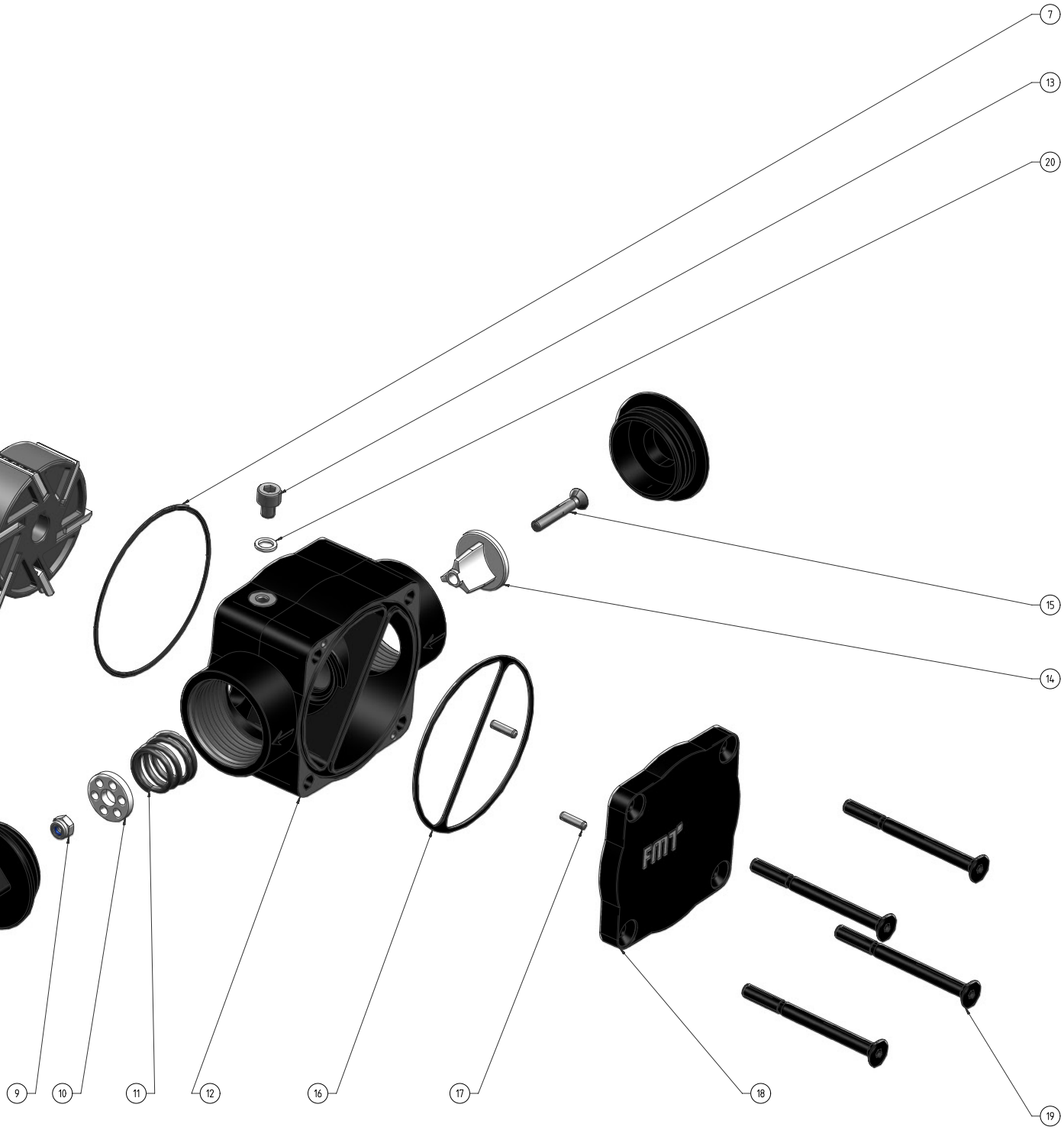


Abb. 10-1: Exploded view Diesel pump 60 l/min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11. Exploded view Diesel pump 100 l/min

Pos.	Quantity	Description	Item no.
1	1	Electric motor 230 V - 50 Hz 100 l/min	83 706
2	2	Guide bush - blue galvanised	83 775
3	1	Feather key DIN 6885 A	00 604
4	1	Raceway	82 524
5	1	Rotor 100 l chamfered slots	86 845
6	6	Blade	89 304
7	1	O-ring 72 x1,5	82 661 878
8	2	Screw plug black PP 710 GPN	86 055
9	1	Nut DIN 985	03 496
10	1	Disc with bore hole for bypass	83 575 777
11	1	Compression spring - tapered 2x14,5x16	00 242
12	1	Bypass housing	84 428
13	1	Cap screw M 5x6	89 445
14	1	Valve tappet	83 772 777
15	1	Countersunk screw M 4x25	83 400
16	1	Cover gasket	84 432 878
17	2	Straight pin ISO 2338 - 3m6x10-St	85 637
18	1	Bypass cover	84 430
19	4	Countersunk screw M 5x70	86 235
20	1	Sealing ring	89 279
21	1	Waterproof switch	83 697
22	1	Shaft bearing	83 997
23	1	Ball bearing D6xD19x6	83 979

Tab. 11-1: Individual components and item numbers

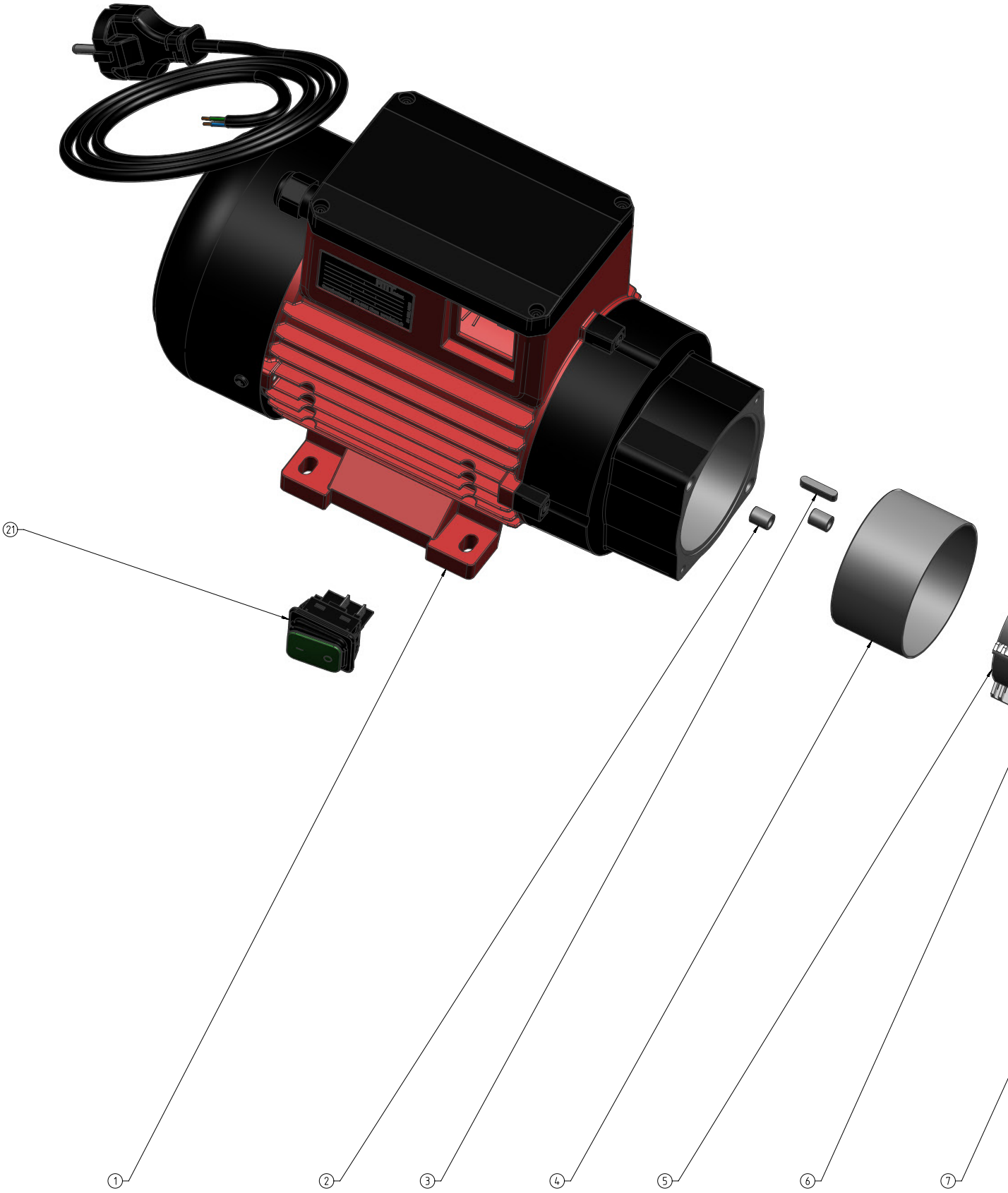
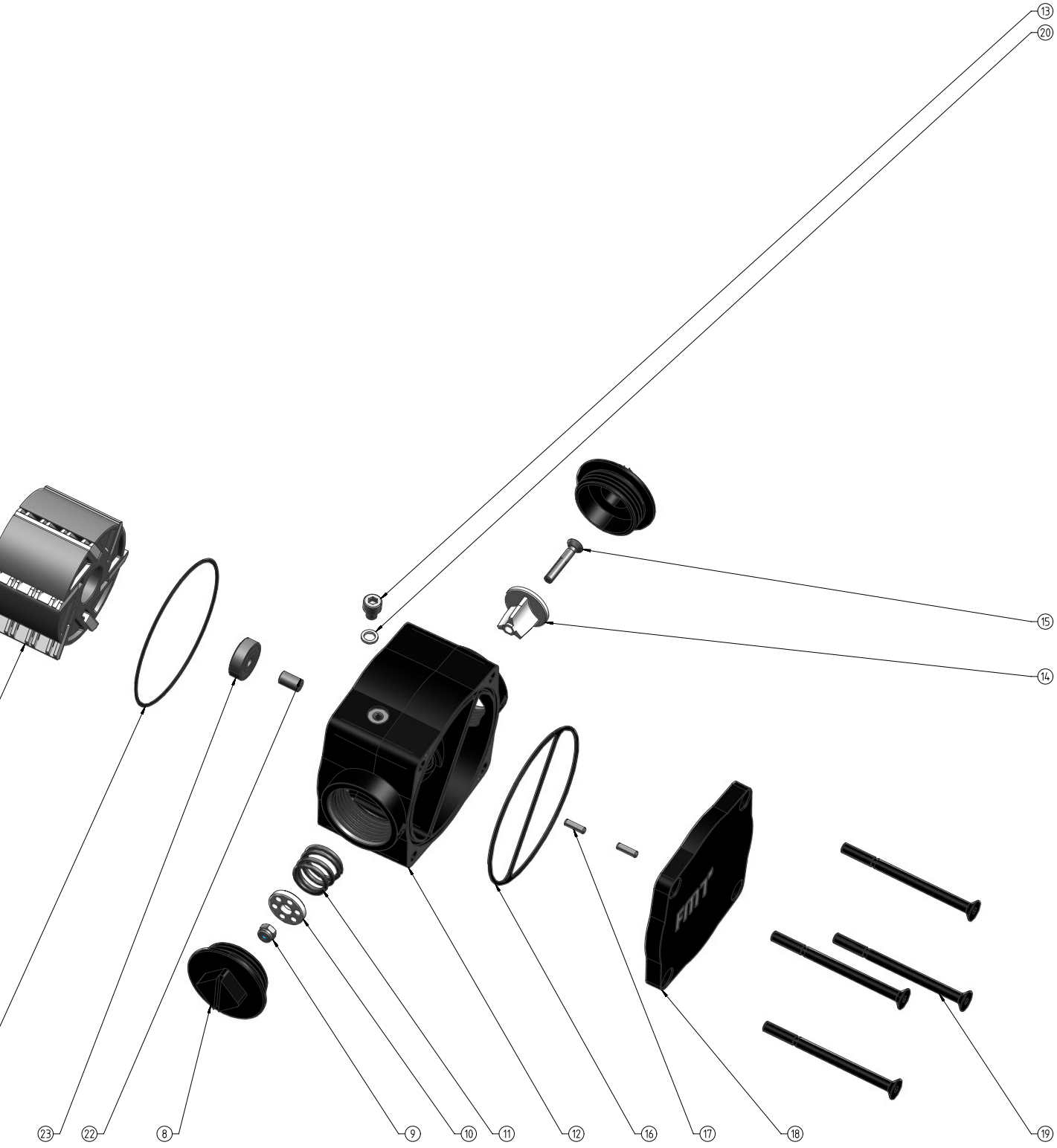


Abb. 11-1: Exploded view Diesel pump 100 l/min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