

DWK and DPK

DWK 0.75 - 90 kW, 50/60 Hz, 1/3~
DPK 0.75 - 22 kW, 50/60 Hz, 1/3~

Service instructions



Original service instructions

CONTENTS

	Page
1. Symbols used in this document	2
2. Identification	2
2.1 Nameplate	2
2.2 Type key, DWK	3
2.3 Type key, DPK	3
3. Tightening torques	4
4. Service tools	5
4.1 Standard tools	5
4.2 Torque tools	5
5. Dismantling	6
5.1 General information	6
5.2 Oil change	6
5.3 Removing impeller and pump housing	7
5.4 Removing shaft seals	8
5.5 Removing bearings	8
5.6 Removing cable	9
5.7 Removing stator	9
6. Assembly	10
6.1 Fitting stator	10
6.2 Fitting cable	10
6.3 Fitting bearings	12
6.4 Fitting shaft seals	12
6.5 Fitting impeller and pump housing	13
7. Fault finding	14
8. Components and material specification	15
8.1 DWK.O.6.50.075, DWK.O.6.50.15 and DWK.O.6.50.22	16
8.2 DWK.O.6.80.15, DWK.O.6.80.22, DWK.O.10.80.37 and DWK.O.10.100.37	17
8.3 DWK.O.13.80.55, DWK.O.13.100.55, DWK.O.13.100.75, DWK.O.13.100.110, DWK.O.13.100.150 and DWK.O.13.150.150	18
8.4 DWK.E.10.100.220, DWK.E.10.150.220, DWK.E.10.150.300, DWK.E.10.200.300	19
8.5 DWK.E.10.150.370, DWK.E.10.150.450, DWK.E.10.200.370, DWK.E.10.200.450, DWK.E.10.150.550, DWK.E.10.200.550	20
8.6 DWK.E.10.200.750, DWK.E.10.200.900	21
8.7 DPK.10.50.075, DPK.10.50.15 and DPK.10.80.22	22
8.8 DPK.15.80.37, DPK.15.80.55, DPK.15.100.75, DPK.20.100.110 and DPK.20.100.150	23
8.9 DPK.20.150.190 and DPK.20.150.220	24
8.10 DPK.V.65.80.15.2 and DPK.V.65.80.22.2	25
8.11 DPK.V.80.80.37.2	26
8.12 DPK.V.80.80.55.2 and DPK.V.80.80.75.2	27
8.13 DPK.V.65.80.15.4 and DPK.V.65.80.22.4	28
8.14 DPK.V.80.80.37.4, DPK.V.80.80.55.4 and DPK.V.80.80.75.4	29

1. Symbols used in this document



Warning
If these safety instructions are not observed, it may result in personal injury.



Warning
The surface of the product may be so hot that it may cause burns or personal injury.

Caution

If these safety instructions are not observed, it may result in malfunction or damage to the equipment.

Note

Notes or instructions that make the job easier and ensure safe operation.

2. Identification

The nameplate is fitted to the top cover of the pump. Fix the extra nameplate supplied with the pump at the installation site or keep it in the cover of this booklet.

2.1 Nameplate

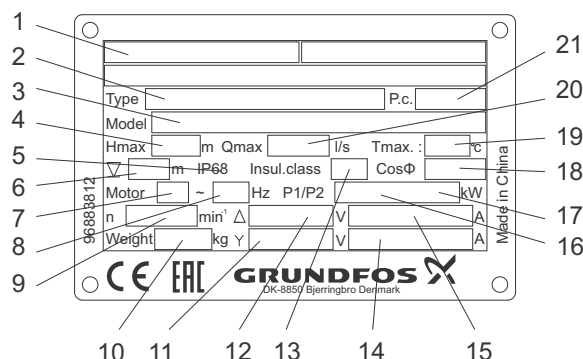


Fig. 1 Nameplate

Pos.	Description
1	Notified body
2	Type designation
3	Product number and serial number
4	Maximum head [m]
5	Enclosure class
6	Maximum installation depth [m]
7	Number of phases
8	Frequency [Hz]
9	Speed [min^{-1}]
10	Weight
11	Rated voltage [V] Star
12	Rated voltage [V] Delta
13	Insulation class
14	Rated current [A] Star
15	Rated current [A] Delta
16	Motor input power P1 [kW]
17	Motor output power P2 [kW]
18	Power factor
19	Maximum liquid temperature [$^{\circ}\text{C}$]
20	Maximum flow [l/s]
21	Production code (year/week)

2.2 Type key, DWK

Example	DWK	.O	.6	.50	075	-	.5	0D	R
DWK	Dewatering pump								
	Impeller								
O	Semi-open impeller								
E	Enclosed impeller								
	Strainer hole size								
6	Maximum solids size [mm]								
	Pump discharge								
50	Nominal diameter of pump discharge port [mm]								
	Code for output power, P2								
075	P2* = Code number from type designation / 10 [kW]								
	Equipment								
-	Standard								
S	With extra sensor (only for 0.75 to 3.7 kW)								
	Frequency								
5	50 Hz								
6	60 Hz								
	Voltage and starting method								
0D	380-415 V, DOL								
1D	380-415 V, Y/D								
0E	220-240 V, DOL								
1E	220-240 V, Y/D								
	Material								
[]	Standard								
R	Cast iron pump with high-chrome stainless steel impeller and stainless steel suction strainer								
Z	Custom built variant								

* Exception: Code 075 = 0.75 kW

2.3 Type key, DPK

Code	Example	DPK	.V	.65	.80	.22	.S	.4	.5	0D
DPK	Drainage pump									
	Impeller design									
[]	Semi open impeller									
V	Vortex impeller									
	Free passage									
65	Maximum solids size [mm]									
	Pump discharge									
80	Nominal diameter of pump discharge port [mm]									
	Code for output power, P2									
22	P2* = Code number from type designation / 10 [kW]									
	Equipment									
-	Standard									
S	Sensor(s)									
	Motor pole no.									
2	2-pole motor									
4	4-pole motor									
	Frequency									
5	50 Hz									
6	60 Hz									
	Voltage and starting method									
0D	380-415 V, DOL									
1D	380-415 V, Y/D									
0E	220-240 V, DOL									
1E	220-240 V, Y/D									

* Exception: Code 075 = 0.75 kW.

3. Tightening torques

Position numbers (refer to figures in sections 5. *Dismantling* and 6. *Assembly*).

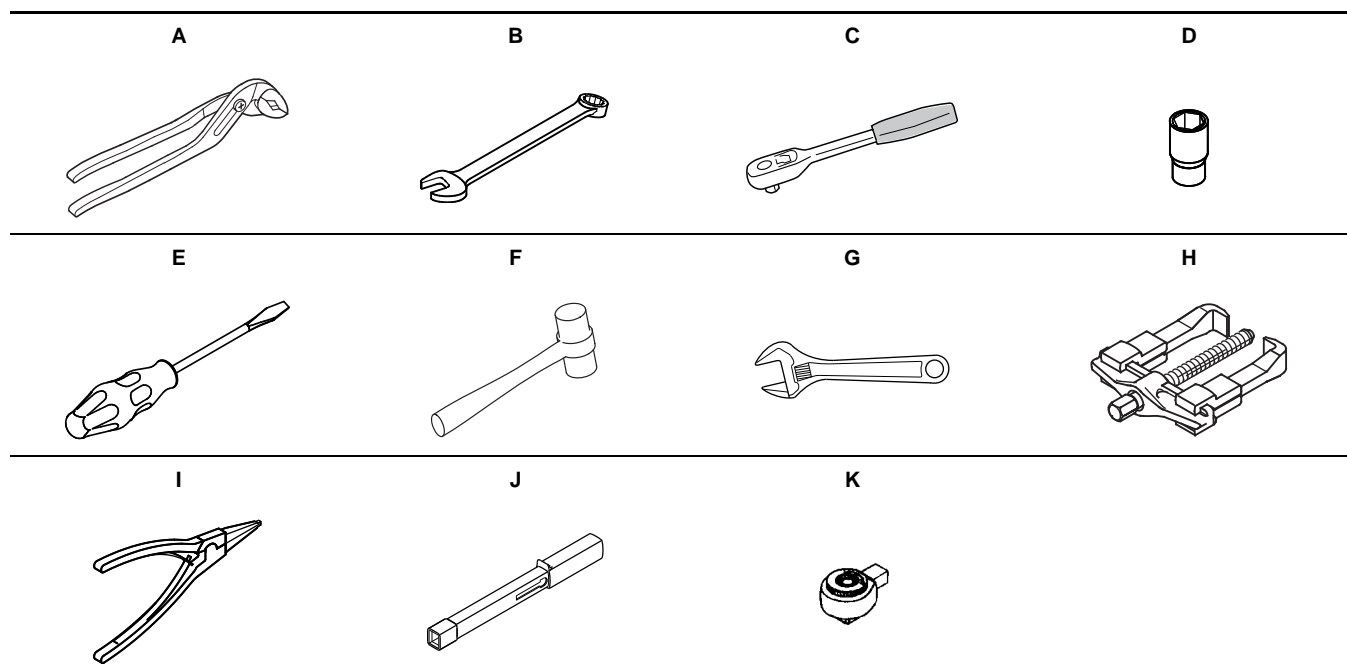
Pos.	Pump type	Designation	Dimension	Torque [Nm]	Lubricant
All	All	O-rings			Rocol
35	DPK	Screw		25 ± 2	
	DWK			30 ± 2	
60a	All	Screw		20 ± 2	
84b	DWK	Screw		30 ± 2	
88	DPK.V	Screw	M10	50 ± 5	
			M12	75 ± 5	
105b	All	Socket head screw		15 ± 2	
178	DPK.10.XX	Screw		20 ± 2	
	DPK.15-20.XX			25 ± 2	
	DPK.V.65.80.15.2			20 ± 2	
	DPK.V.65.80.22.2				
	DPK.V. others				
DWK.O.XX.XX.15-37	Screw		30 ± 2		
181a	DPK.10.XX	Screw		12 ± 2	
	DPK.15 -20.XX			25 ± 2	
	DPK.V.65.80.15.2			12 ± 2	
	DPK.V.65.80.22.2				
	DPK.V others				
DWK	Screw		25 ± 2		
182	All	Socket head screw		30 ± 2	
183	DPK.10.XX	Screw		30 ± 2	
	DPK.15 -20.XX			45 ± 5	
	DPK.V.65.80.15.2			30 ± 2	
	DPK.V.65.80.22.2				
	DPK.V others				
DWK	Screw		45 ± 5		
183b	DPK.20.150.XX	Screw		45 ± 5	
	DWK.E			30 ± 2	
184	DPK.10.XX	Screw		30 ± 2	
	DPK.15 -20.XX			45 ± 5	
	DPK.V.65.80.15.2			30 ± 2	
	DPK.V.65.80.22.2				
	DPK.V				
DWK	Screw		45 ± 5		
184b	DWK.E	Screw		15 ± 2	
186	DWK.E	Screw		30 ± 2	
188	DPK.10.XX	Nut		55 ± 5	
	DPK.15 -20.XX			70 ± 5	
	DPK.V			55 ± 5	
	DWK			70 ± 5	
188a	DPK.10.50.XX	Screw		25 ± 2	
	DPK.15.XX			45 ± 5	
	DPK.20.100.XX			30 ± 2	
	DPK.20.150.XX			25 ± 2	
	DPK.V.65.80.15.2			25 ± 2	
	DPK.V.65.80.22.2				
	DPK.V				
DWK	Screw		30 ± 2		
190b	DPK.20.150.XX	Screw		45 ± 5	
	DWK.O.13.XX.55-150			30 ± 2	
	DWK.E			45 ± 5	
193	All			15 ± 2	

THREAD-EZE, part number SV9997 (0.5 litre).

Gardolube L 6034, part number SV9995 (1 litre).

Rocol 22, part number RM2924 (1 kg).

4. Service tools



4.1 Standard tools

Pos.	Description	For pos.	Further information	Part number
A	Multigrip pliers		10 mm	SV0083
			13 mm	SV0055
B	Ring/open-end spanner		17 mm	SV0056
			19 mm	SV0063
			24 mm	SV0122
C	Ratchet handle		17 mm	SV0417
			19 mm	SV0419
D	Hexagon socket		24 mm	SV0424
			30 mm	
			36 mm	
E	Screwdriver			
F	Rubber mallet			
G	Adjustable wrench			SV0349
H	Puller for bearing			SV0335
I	Circlip pliers			SV2014

4.2 Torque tools

Pos.	Description	For pos.	Further information	Part number
J	Torque wrench		9 x 12 mm - 4-20 Nm	SV2092
			9 x 12 mm - 20-100 Nm	SV0269
K	Ratchet insert tool		9 x 12 mm - 1/2"	SV0295

5. Dismantling

5.1 General information

If the pump needs to be dismantled, either because it is choked or damaged, please follow the instructions in the following sections.

Position numbers of parts (digits) refer to drawings and parts lists; position numbers of tools (letters) refer to section 4. [Service tools](#).

Before dismantling the pump

- Disconnect the power supply to the motor.
- Remove the power cable in accordance with local regulations.
- Be aware of the centre of gravity of the pump in order to prevent it from overturning.
This is especially important in the case of high pumps.

Before assembly

- Clean and check all parts.
- Replace defective parts by new parts.
- Order the necessary service kits.
- Always replace gaskets and O-rings when the pump is overhauled.

During assembly

- Lubricate and tighten screws and nuts to correct torque. See section 3. [Tightening torques](#).

5.2 Oil change

After 3000 operating hours or once a year, change the oil in the oil chamber as described below.

If the shaft seal has been changed, the oil must be changed as well.



Warning

When loosening the screws of the oil chamber, note that pressure may have built up in the chamber. Do not remove the screws until the pressure has been fully relieved.

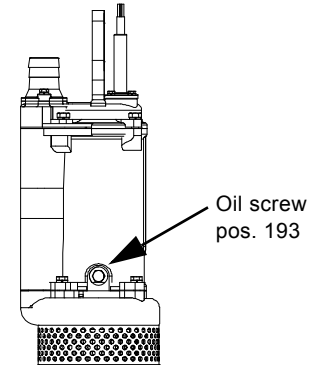


Fig. 2 Position of oil screw on DWK-O

1. Place pump on a plane surface with oil screw pointing downwards.
2. Place a container under the pump. The container must be able to hold the oil of the specific pump. The quantity of oil for the specific pump appears from the table below.

Note

Dispose of used oil in accordance with local regulations.

3. Remove oil screw (pos. 193 - M12 x 20) and let the oil drain into the container.
If 20 % of the liquid in the container is water, the shaft seal is defective and must be replaced. You can see this at once as water and oil will separate almost immediately.

Caution

If the same shaft seal is still used, the motor will be damaged within a short time.

4. Turn the pump so that the oil filling hole is pointing upwards.

5. Add the appropriate quantity of oil to the specific pump. See table below.

Pump type	No. of poles	Shaft power [kW]	Oil capacity [l]
DWK.O	2 pole	0.75	0.52
		1.5	
		2.2	
		3.7	2.15
		5.5	
		7.5	
		11	
DWK.E	2 pole	15	3.00
		22	
		30	
		37	6.10
		45	
		55	
		75	
DPK	2 pole	90	0.40
		0.75	
		1.5	
		2.2	0.92
		3.7	
		5.5	
		7.5	
DPK.V	2 pole	11	1.92
		15	
		19	
	4 pole	22	2.20
		1.5	
		2.2	
		3.7	
4 pole	4 pole	5.5	0.44
		7.5	
		1.5	0.88
		2.2	
		3.7	
4 pole	4 pole	5.5	1.84
		7.5	
		1.5	
2.2			
4 pole	4 pole	3.7	1.82
		5.5	
4 pole	4 pole	7.5	

- Clean the O-ring seats on the pump and on the oil screw (pos. 193).
- Lubricate and mount a new O-ring (pos. 194) on the oil screw. Lubricate and tighten the oil screw to correct torque. See section 3. [Tightening torques](#).

5.3 Removing impeller and pump housing

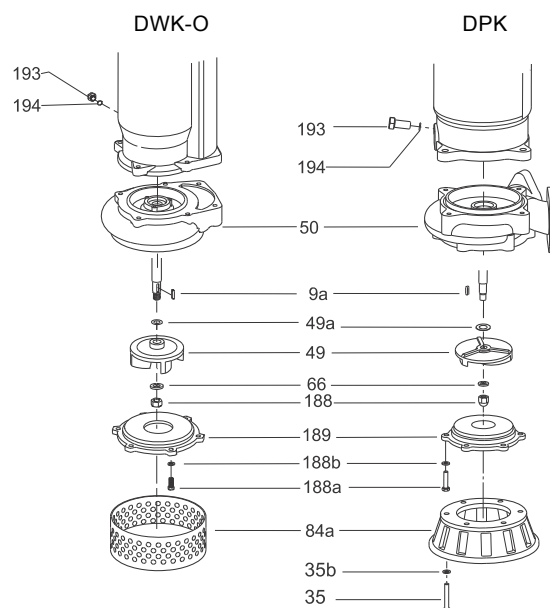


Fig. 3 Removing the impeller and pump housing

- Drain oil from oil chamber. See section 5.2 [Oil change](#).
- Remove suction strainer/ring stand (pos. 84a).
- Remove suction cover (pos. 189).
- Remove impeller (pos. 49).
- Remove key (pos. 9a) from shaft.
- Remove pump housing (pos. 50).

TM04 5530 3309

5.4 Removing shaft seals

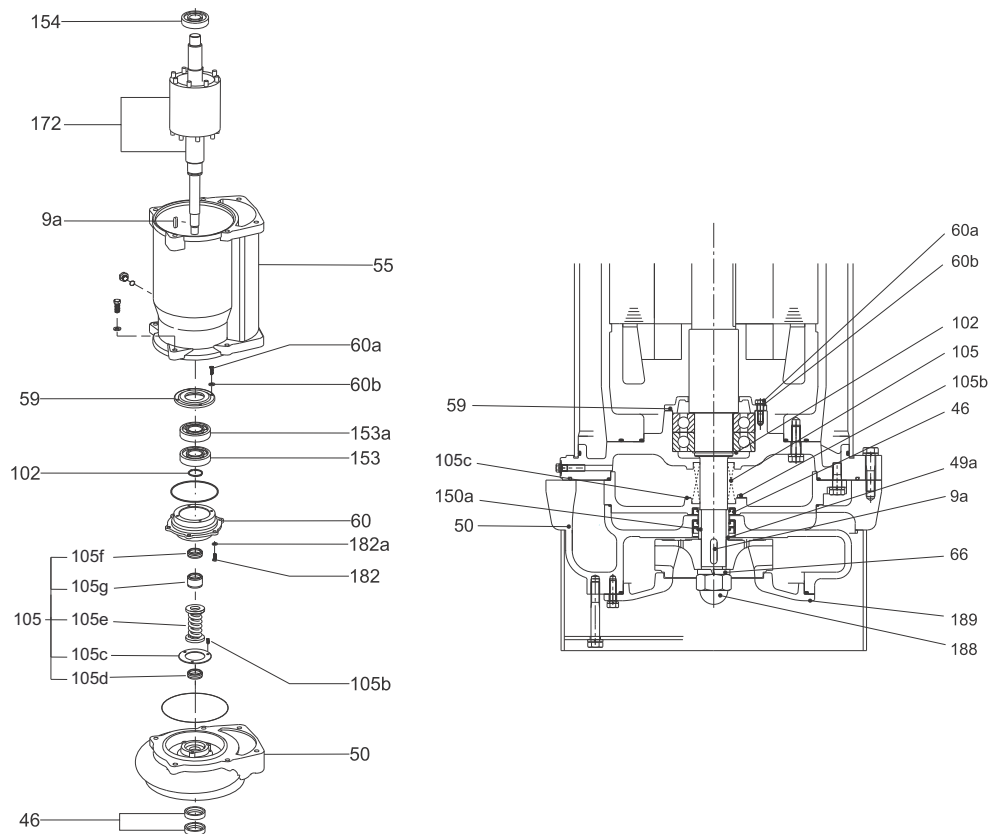


Fig. 4 Removing the shaft seal and bearings

1. Drain oil from oil chamber. See section [5.2 Oil change](#).
2. Remove impeller and pump housing. See section [5.3 Removing impeller and pump housing](#).
3. Remove stationary shaft seal part (pos. 105d) of shaft seal (pos. 105) from pump housing (pos. 50).
4. Remove lip seals (pos. 46) from pump housing/cover for oil chamber if fitted.
5. Remove rotating parts of shaft seal (pos. 105e and 105g) from shaft.
6. Remove lower bearing bracket (pos. 60) and rotor (pos. 172).
7. Remove cover for bearings (pos. 59).
8. Remove stationary shaft seal part (pos. 105f) from lower bearing bracket (pos. 60).

5.5 Removing bearings

1. Drain oil from oil chamber. See section [5.2 Oil change](#).
2. Remove impeller and pump housing. See section [5.3 Removing impeller and pump housing](#).
3. Remove lower bearing bracket (pos. 60) and rotor (pos. 172).
4. Remove cover for bearings (pos. 59) from lower bearing bracket.
5. Remove lower bearing (pos. 153 and pos. 153a, if mounted) from shaft using a puller for bearings (H).
6. Remove upper bearing (pos. 154) from shaft using a puller for bearings (H).

5.6 Removing cable

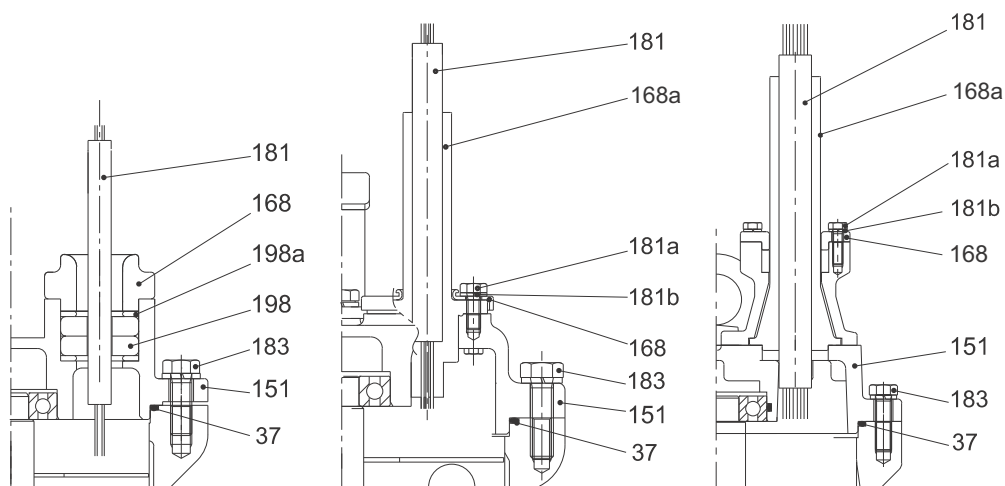


Fig. 5 Cable entries

1. Disconnect the power supply to the motor.
2. Remove top cover (pos. 151).
3. Disconnect power and signal conductors from top cover.
4. Remove cover for cable entry (pos. 168).
5. Remove cable (pos. 181).

5.7 Removing stator

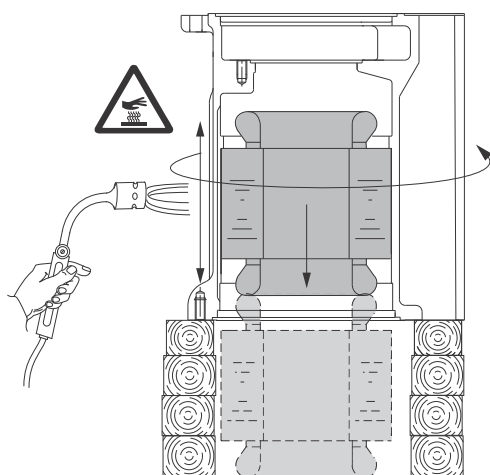


Fig. 6 Heating up stator housing in order to remove stator

1. Drain oil from oil chamber. See section [5.2 Oil change](#).
2. Remove impeller and pump housing. See section [5.3 Removing impeller and pump housing](#).
3. Remove lower bearing bracket (pos. 60) and rotor (pos. 172).
4. Remove cover for bearings (pos. 59) from lower bearing bracket.
5. Remove top cover (pos. 151).
6. Disconnect power and signal conductors from top cover.
7. Protect the free conductors from the heat of the stator.
8. Mark the position of stator conductors on stator housing for later refitting stator in the same position.
9. Block up stator housing in upside-down position as shown in fig. 6.
10. Slowly heat up stator housing evenly until stator drops out.



Warning

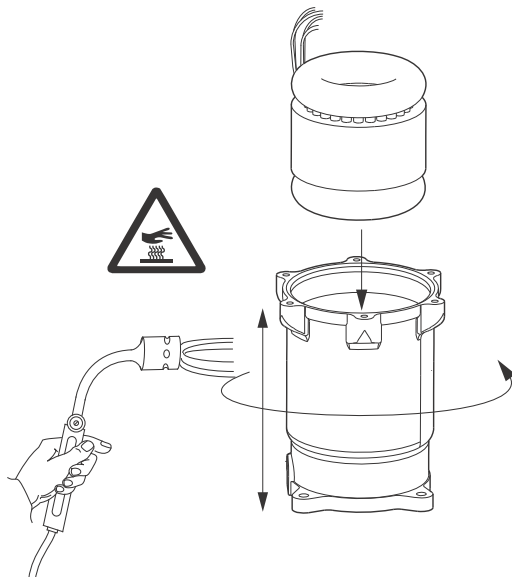
The surface of the stator housing is so hot that it will cause burns or personal injury if touched.

Caution

Make sure that the stator will not be damaged when dropping out of the stator housing.

6. Assembly

6.1 Fitting stator



TM04 5534 3309

Fig. 7 Heating up the stator housing prior to fitting the stator

1. Place stator housing in upright position.
2. Protect the free conductors from the heat of the stator.
3. Slowly heat up stator housing evenly to approx. 200 °C.



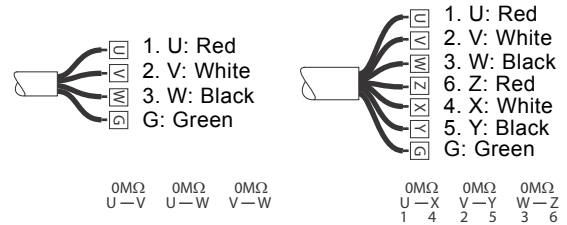
Warning

The surface of the stator housing is so hot that it will cause burns or personal injury if touched.

4. Make sure stator is placed in correct position according to section 5.7 *Removing stator*, point 8.
5. Lower stator into the preheated stator housing.
6. Make sure stator reaches the bottom recess in stator housing.
7. Let stator housing cool down by natural cooling.

6.2 Fitting cable

1. Fit cable in top cover (pos. 151).
2. Fit and lubricate O-ring (pos. 37) on top cover (pos. 151). See section 3. *Tightening torques*.
3. Connect power and signal conductors to top cover. See figs 8 to 10.
4. Check connection again. See fig. 8.
5. Fit top cover (pos. 151) on stator housing, tighten screws (pos. 183) according to torques in section 3. *Tightening torques*.
6. Fit cable entry (pos. 168), tighten screws (pos. 181a) according to torques in section 3. *Tightening torques*.



When checking pumps wired star-delta to DOL, see list below.

- | | | | |
|------|--------|---|----------------|
| U, Z | (1, 6) | → | L ₁ |
| V, X | (2, 4) | → | L ₂ |
| W, Y | (3, 5) | → | L ₃ |

Fig. 8 Marking of conductors

TM04 5535 3309

Wiring diagrams

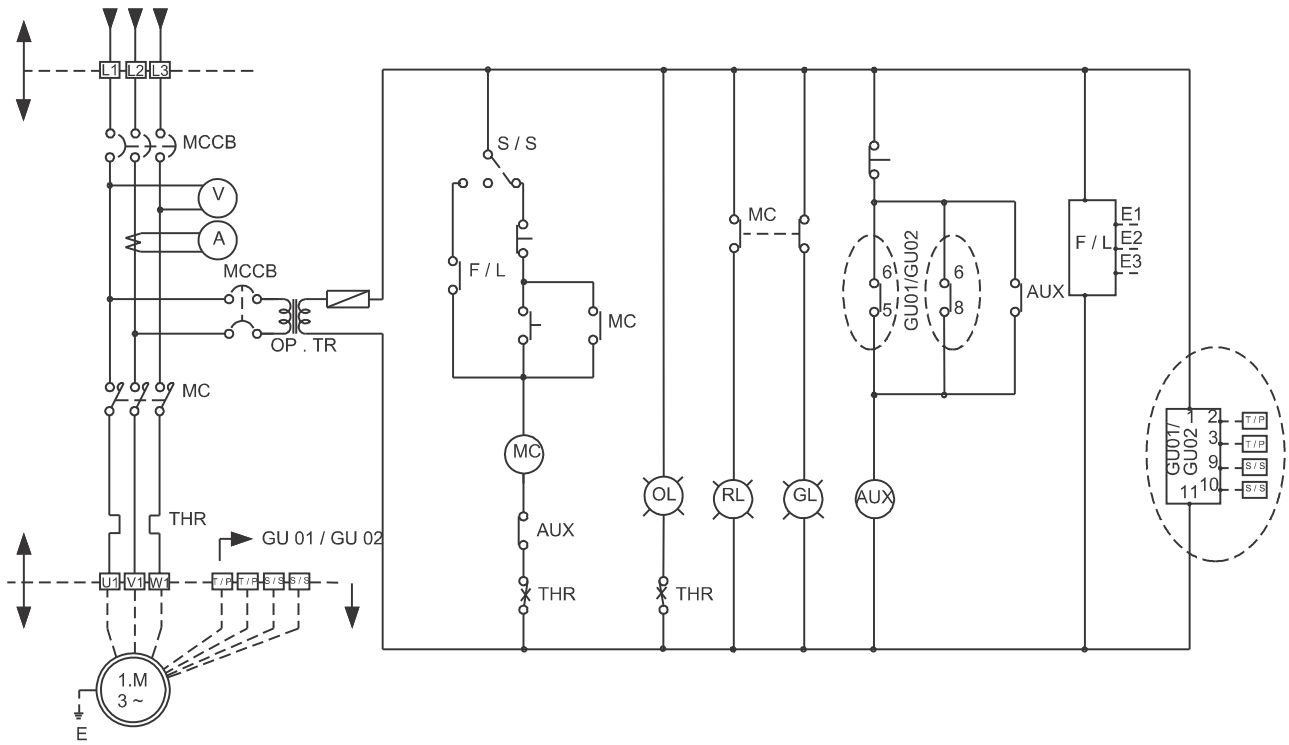


Fig. 9 Wiring diagram, DOL starting

TM04 4096 0709

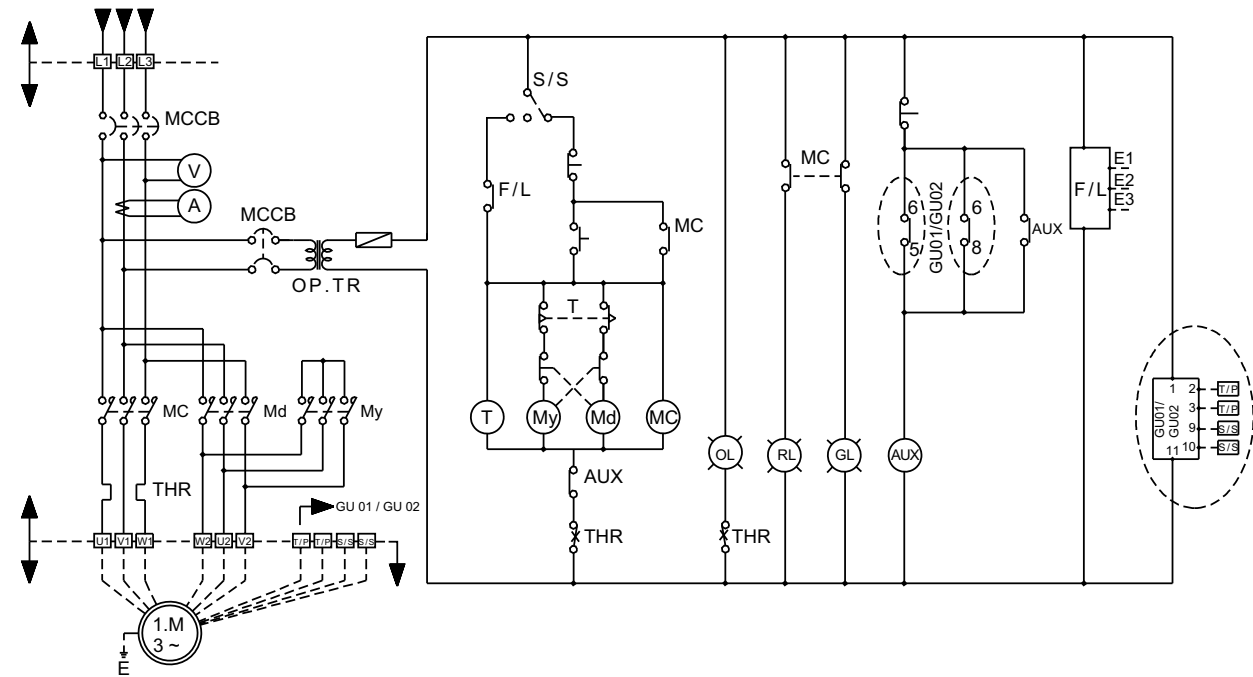


Fig. 10 Wiring diagram, star-delta starting

TM04 4097 0709

6.3 Fitting bearings

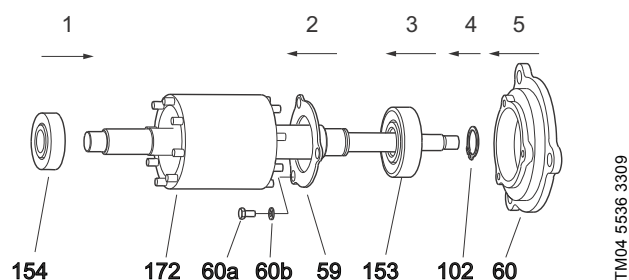


Fig. 11 Fitting bearings

1. Fit upper bearing (pos. 154) on shaft.

Caution Only press on the inner bearing ring.

2. Fit bearing cover (pos. 59) on shaft.
3. Fit lower bearing (pos. 153) on shaft. Some pump models have two lower bearings (pos. 153 and 153a).

Caution Only press on the inner bearing ring.

4. Fit stop ring (pos. 102) behind lower bearing/bearings.
5. Fit lower bearing bracket (pos. 60).

6.4 Fitting shaft seals

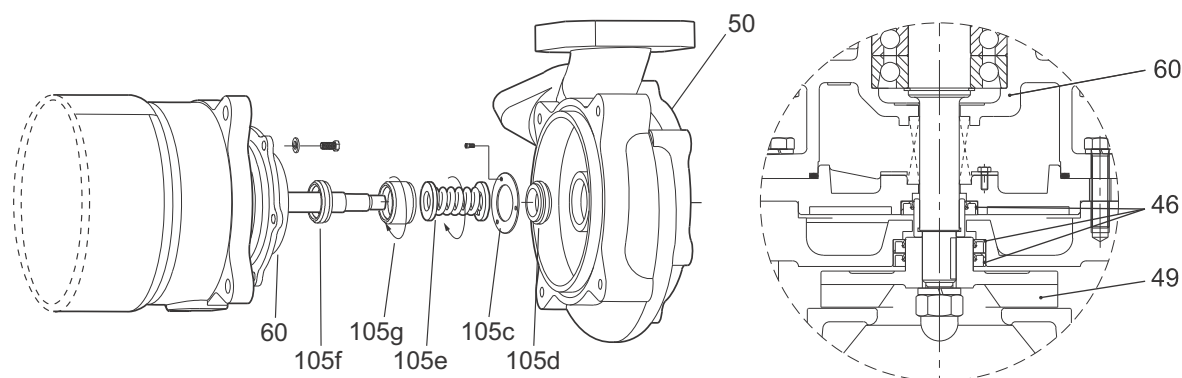


Fig. 12 Fitting the shaft seal

1. Fit stationary shaft seal part (pos. 105f) into lower bearing bracket (pos. 60).
2. Fit bearing bracket (pos. 60) on shaft and press it against the bearing till the bearing is pressed home in bearing bracket.
3. Mount rotor with shaft and bearing bracket in stator housing.
4. Fit stationary shaft seal part (pos. 105d) into pump housing (pos. 50).
5. For pumps with lip seals (pos. 46), fit lip seals into pump housing and cover for oil chamber.
6. Mount rotating shaft seal parts (pos. 105g and 105e) on shaft.
7. Mount pump housing on stator housing.

6.5 Fitting impeller and pump housing

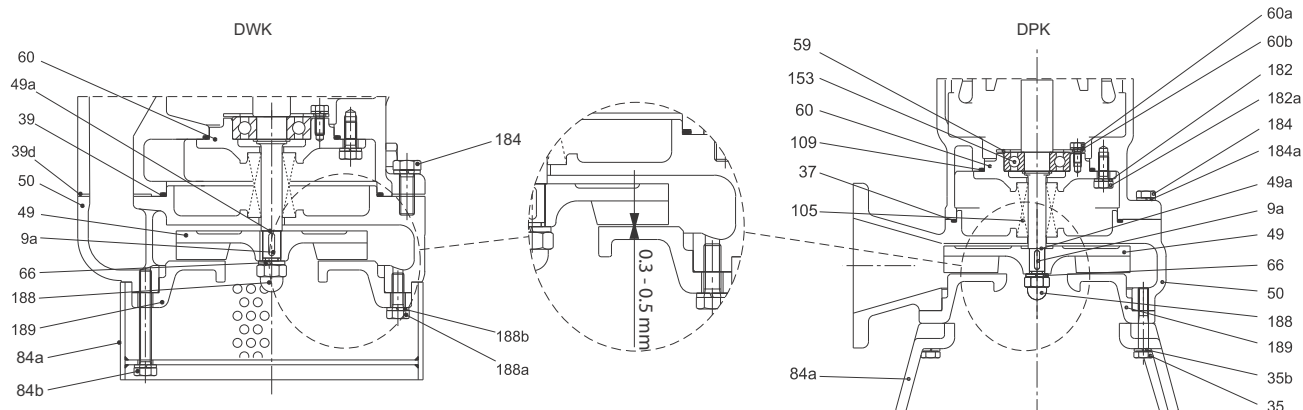


Fig. 13 Impeller and pump housing assembly and impeller clearance

1. Fit and lubricate O-ring (pos. 37 or 39) on pump housing (pos. 50).
2. Fit pump housing (pos. 50) and tighten screws (pos. 184) according to torques in table in section [3. Tightening torques](#).
3. Fit spacer rings (pos. 49a) to shaft.
4. Fit key (pos. 9a) in shaft.
5. Fit impeller (pos.49) on shaft and tighten nut (pos. 188) according to torques in table in section [3. Tightening torques](#).
6. Fit suction cover (pos.189) to pump housing and tighten screws (pos. 188a) according to torques in table in section [3. Tightening torques](#).
7. Check impeller clearance. See fig. 13. The impeller clearance must be between 0.3 and 0.5 mm. If the impeller clearance is outside this range, dismantle the impeller and add or remove spacer rings to obtain the right clearance. Then check the clearance again.
8. Fit suction strainer/ring stand (pos. 84a) and tighten screws (pos. 84b for DWK, pos. 35 for DPK) according to torques in table in section [3. Tightening torques](#).

TM04 5538 3309

7. Fault finding



Warning

Before starting work on the pump, make sure that the fuses have been removed or the mains switch has been switched to off. It must be ensured that the power supply cannot be accidentally switched on. All rotating parts must have stopped moving.

For pumps with sensor, start fault finding by checking the status on the GU01 or GU02 front panel. See installation and operating instructions for GU01 or GU02.

Note

Fault	Cause	Remedy
1. Motor does not start, fuses blow or motor protector trips out immediately. Caution: Do not try to start again.	a) Supply failure; short-circuit; earth-leakage fault in cable or motor winding.	Have the cable and motor checked and repaired by a qualified electrician.
	b) Fuses blow due to use of wrong type of fuse	Fit fuses of the correct type.
	c) Impeller blocked by impurities.	Clean the impeller.
	d) Air bell, float switch or electrode out of adjustment or defective.	Check the air bells, float switches or electrodes.
	e) Motor phase malfunction	Inspect motor and connections.
2. Pump operates, but motor protector trips out after a short while.	a) Low setting of thermal relay in motor protector.	Set the relay in accordance with the specifications on the pump nameplate.
	b) Increased current consumption due to large voltage drop.	Measure the voltage between two motor phases. Tolerance: - 10 %/+ 6 %.
	c) Impeller blocked by impurities.	Clean the impeller.
	d) Wrong direction of rotation.	Check the direction of rotation and possibly interchange any two phases in the power supply.
3. The thermal switch of the pump trips out after a short while.	a) Too high liquid temperature. Inadequate cooling.	Improve cooling or lower the liquid temperature.
	b) Too high viscosity of the pumped liquid.	Dilute the pumped liquid.
	c) Fault in the electrical connection. (Y-connection of pump to D-connection results in considerable undervoltage)	Check and correct the electrical connection.
4. Pump operates at below-standard performance and power consumption.	a) Impeller blocked by impurities.	Clean the impeller.
	b) Wrong direction of rotation.	Check the direction of rotation and possibly interchange any two phases in the power supply.
5. Pump operates, but gives no liquid.	a) Air in pump.	Vent the pump twice.
	b) Discharge valve closed or blocked.	Check the discharge valve and possibly open and/or clean.
	c) Non-return valve blocked.	Clean the non-return valve.
6. Pump clogged.	a) The liquid contains large particles.	Select a pump with a larger size of passage.
	b) A float layer has formed on the surface.	Install a mixer in the tank.

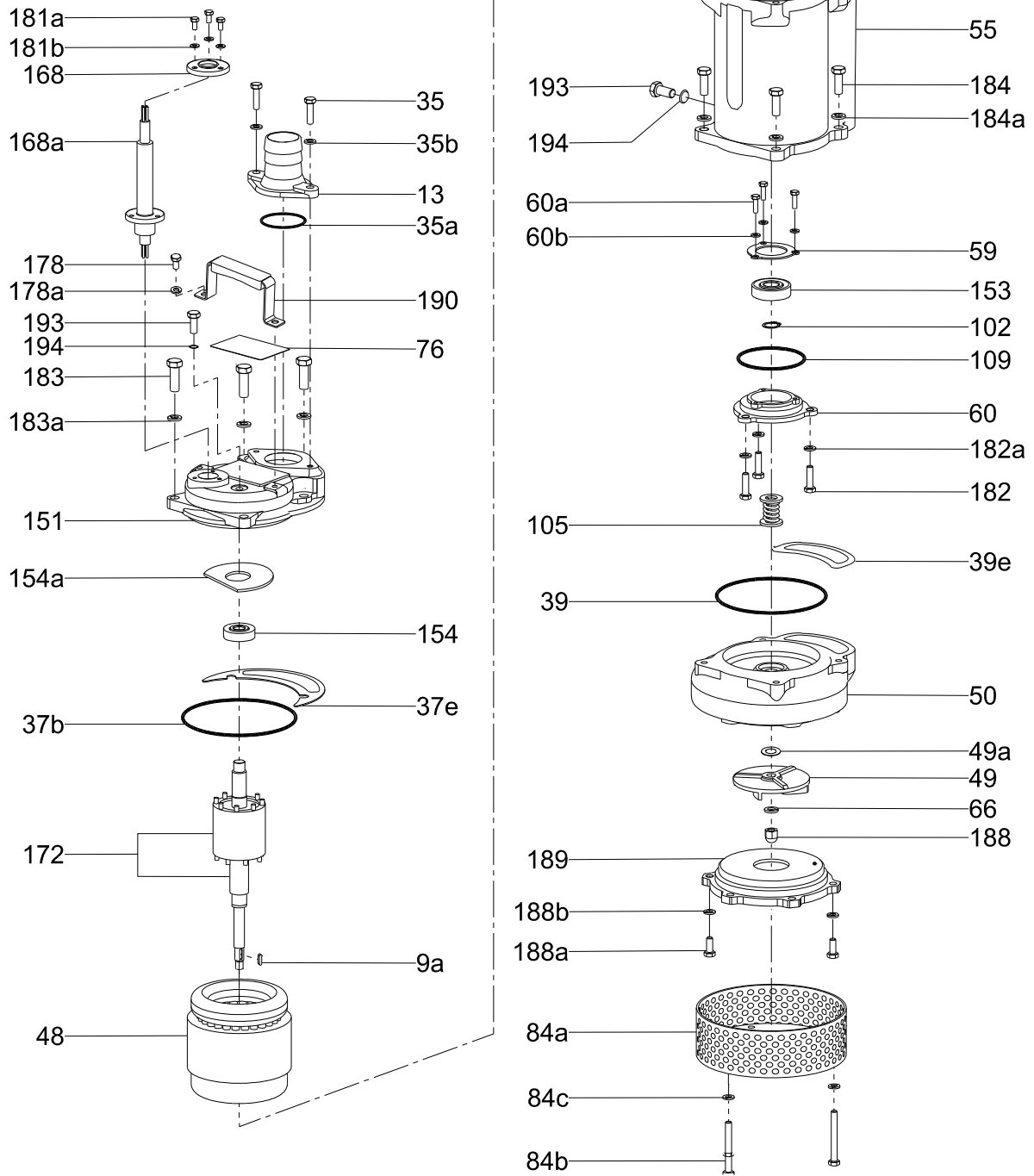
8. Components and material specification

The position numbers in the table below refer to the sectional drawings on the following pages.

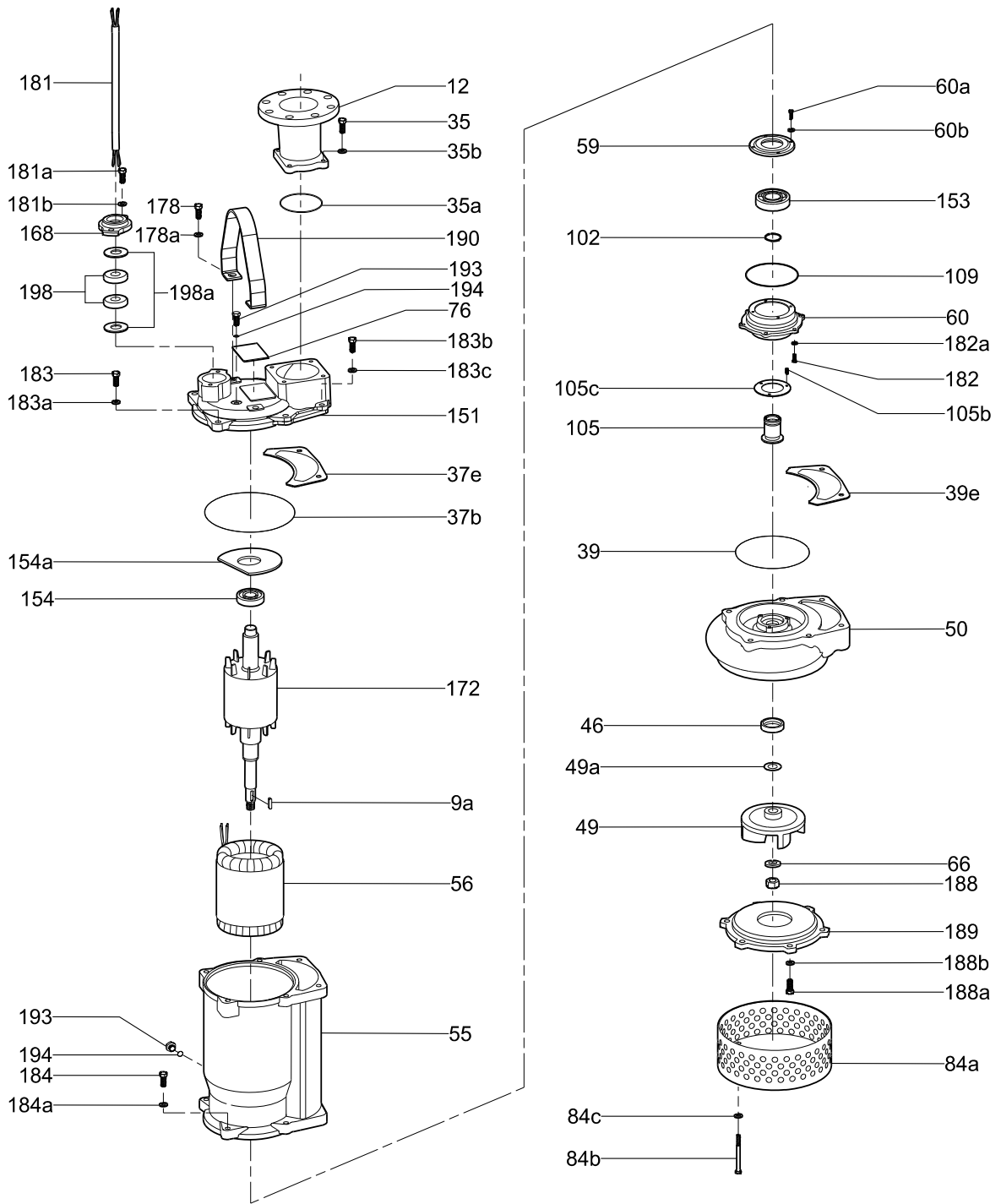
Pos.	Designation	Material		
		KS	ASTM	DIN
9a	Key	STS410	ANSI 410	17440
12	Flange	GC200	A48-CL30	GG20
13	Hose connection	GC200	A48-CL30	GG20
26a	O-ring	NBR	NBR	NBR
35	Hexagon head cap screw	STS304	A276-304	1.4301
35a	O-ring	NBR	NBR	NBR
35b	Spring washer	STS304	A276-304	1.4301
35c	Gasket	NBR	NBR	NBR
37	O-ring	NBR	NBR	NBR
37a	O-ring	NBR	NBR	NBR
37b	O-ring	NBR	NBR	NBR
37c	O-ring	NBR	NBR	NBR
37e	Gasket	NBR	NBR	NBR
39	O-ring	NBR	NBR	NBR
39a	O-ring	NBR	NBR	NBR
39b	O-ring	NBR	NBR	NBR
39c	O-ring	NBR	NBR	NBR
39e	Gasket	NBR	NBR	NBR
46	Lip seal	SCP1	SCP1	SCP1
48	Stator	-	-	-
49	Impeller	GCD450/ Hi-Cr	A536-77/ Hi-Cr	GGG40/ Hi-CrI
49a	Spacer ring	SS400	A283-Gr.D	-
50	Pump housing	GC200	A48-CL30	GG20
55	Motor housing	GC200	A48-CL30	GG20
55a	Outer casing (DWK.E)	SPP	A53-48	1629(1)- 61
	Motor bracket (DPK)	GC200	A28-CL30	GG20
59	Bearing cover	GC200	A48-CL30	GG20
60	Lower bearing bracket	GC200	A48-CL30	GG20
60a	Hexagon head cap screw	SM25C	A108-1025	-
60b	Spring washer	SM25C	A108-1025	-
61c	Upper bearing bracket	GC200	A48-CL30	GG20
66	Spring washer	STS304	A276-304	1.4301
76	Nameplate	STS304	A276-304	1.4301
84a	Inlet strainer/ring stand	SS400	A283-Gr.D	-
84b	Hexagon head cap screw	STS304	A276-304	1.4301
84c	Spring washer	STS304	A276-304	1.4301
88	Hexagon socket head cap screw	STS304	A276-304	1.4301
102	Stop ring	STS304	A276-304	1.4301
105	Mechanical shaft seal	-	-	-
105b	Hexagon head cap screw	SM25C	A108-1025	-
105c	Shaft seal retainer	STS304	A276-304	1.4301
107	O-ring	NBR	NBR	NBR
108	Sealing washer	STS304	A276-304	1.4301
108a	O-ring	NBR	NBR	NBR
109	O-ring	NBR	NBR	NBR
109a	O-ring	NBR	NBR	NBR
150a	Shaft sleeve	STS304	A276-304	1.4301
151	Motor bracket (DWK)	GC200	A48-CL30	GG20
	Head cover (DPK)	GC200	A48-CL30	GG20

Pos.	Designation	Material		
		KS	ASTM	DIN
153	Lower bearing	-	-	-
153a				
154	Upper bearing	-	-	-
154a	Cover	-	-	-
155	Shaft seal housing	GC200	A48-CL30	GG20
159	Rubber tube	NBR	NBR	NBR
159a	Clamping ring	GC200	A48-CL30	GG20
168	Clamping ring	GC200	A48-CL30	GG20
168a	Cable entry	GC200	A48-CL30	GG20
172	Rotor with shaft	STS410	ANSI 410	-
178	Hexagon head cap screw	STS304	A276-304	1.4301
178a	Spring washer	STS304	A276-304	1.4301
181	Power supply cable	PNCT	PNCT	PNCT
181a	Hexagon head cap screw	STS304	A276-304	1.4301
181b	Spring washer	STS304	A276-304	1.4301
182	Hexagon socket head cap screw	STS304	A276-304	1.4301
182a	Spring washer	STS304	A276-304	1.4301
183	Hexagon head cap screw	STS304	A276-304	1.4301
183a	Spring washer	STS304	A276-304	1.4301
183b	Hexagon head cap screw	STS304	A276-304	1.4301
183c	Spring washer	STS304	A276-304	1.4301
184	Hexagon head cap screw	STS304	A276-304	1.4301
184a	Spring washer	STS304	A276-304	1.4301
184b	Hexagon head cap screw	STS304	A276-304	1.4301
184c	Spring washer	STS304	A276-304	1.4301
185	O-ring	STS304	A276-304	1.4301
186	Hexagon head cap screw	STS304	A276-304	1.4301
186a	Spring washer	STS304	A276-304	1.4301
188	Hexagon nut	STS304	A276-304	1.4301
188a	Hexagon head cap screw	STS304	A276-304	1.4301
188b	Spring washer	STS304	A276-304	1.4301
189	Inlet cover (DWK)	GCD450	536-77	GGG40
	Inlet cover (DPK)	GC200	A28-CL30	GG20
190	Lifting handle	STS304	A276-304	1.4301
190d	Eyebolt	SM30C	A108-1030	-
193	Oil plug	STS304	A276-304	1.4301
194	O-ring	NBR	NBR	NBR
198	Cable gland	NBR	NBR	NBR
198a	Washer	STS304	A276-304	1.4301
522	Hexagon head cap screw	STS304	A276-304	1.4301
523	Spring washer	STS304	A276-304	1.4301

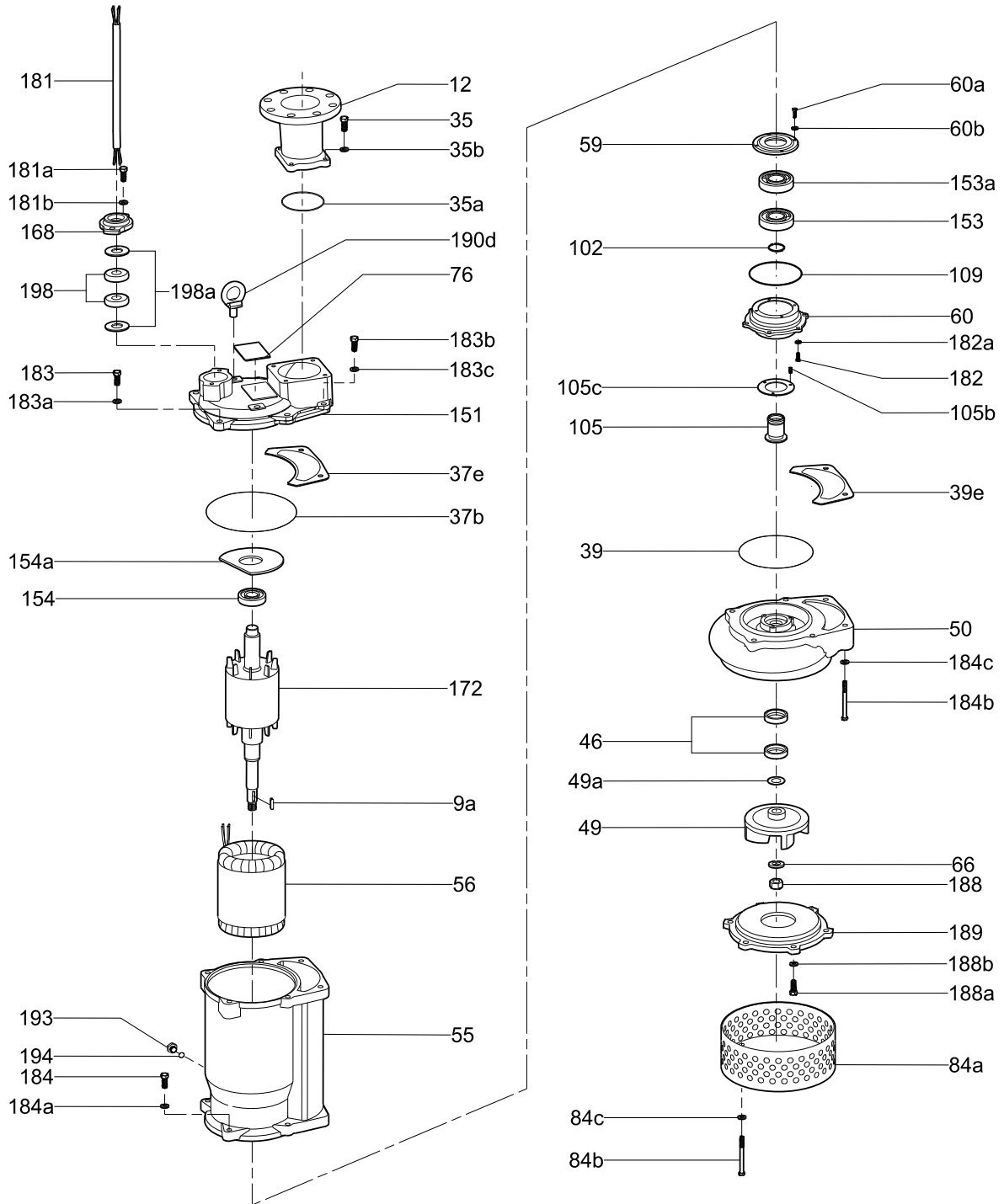
8.1 DWK.O.6.50.075, DWK.O.6.50.15 and DWK.O.6.50.22



TM04 4575 4214

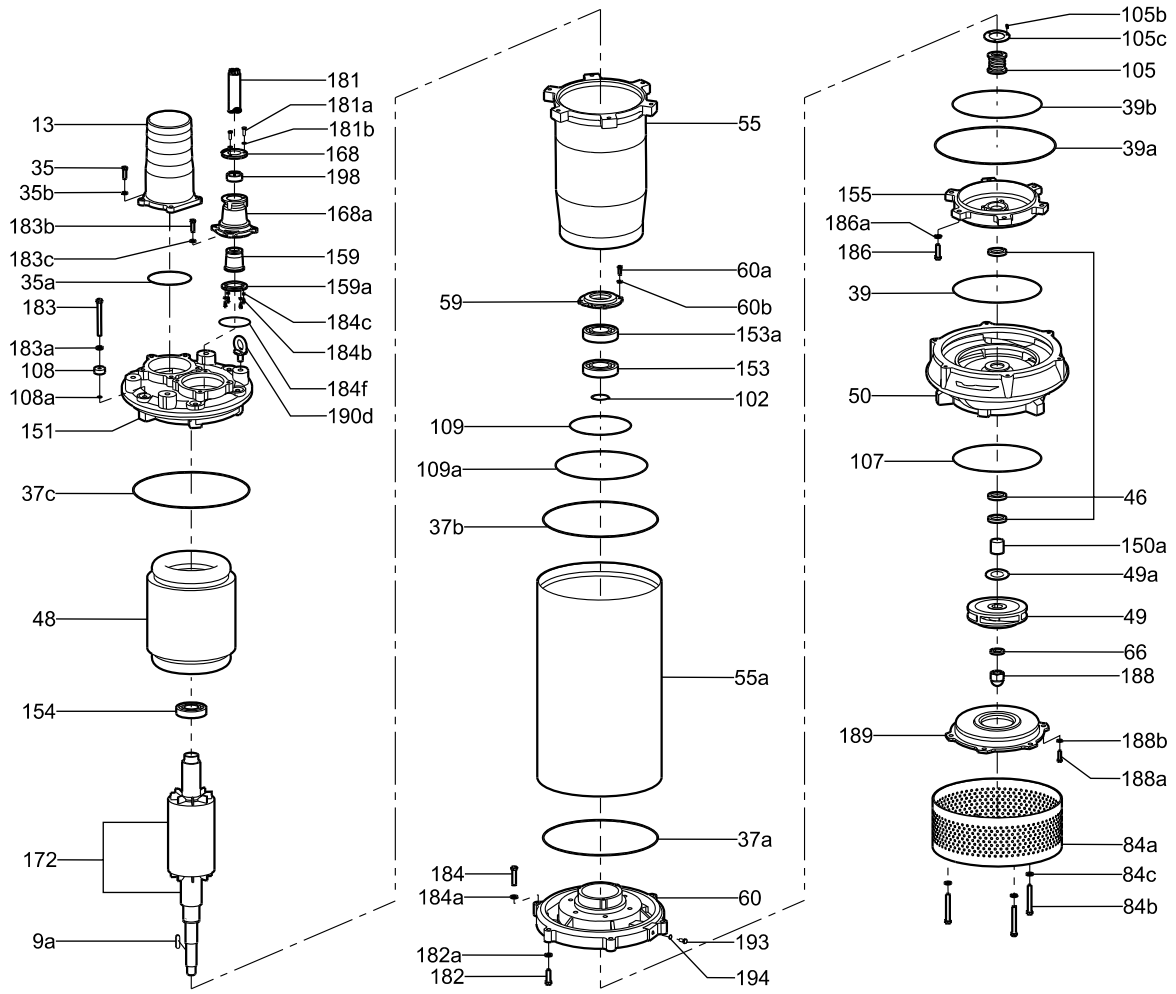


8.3 DWK.O.13.80.55, DWK.O.13.100.55, DWK.O.13.100.75, DWK.O.13.100.110, DWK.O.13.100.150 and DWK.O.13.150.150

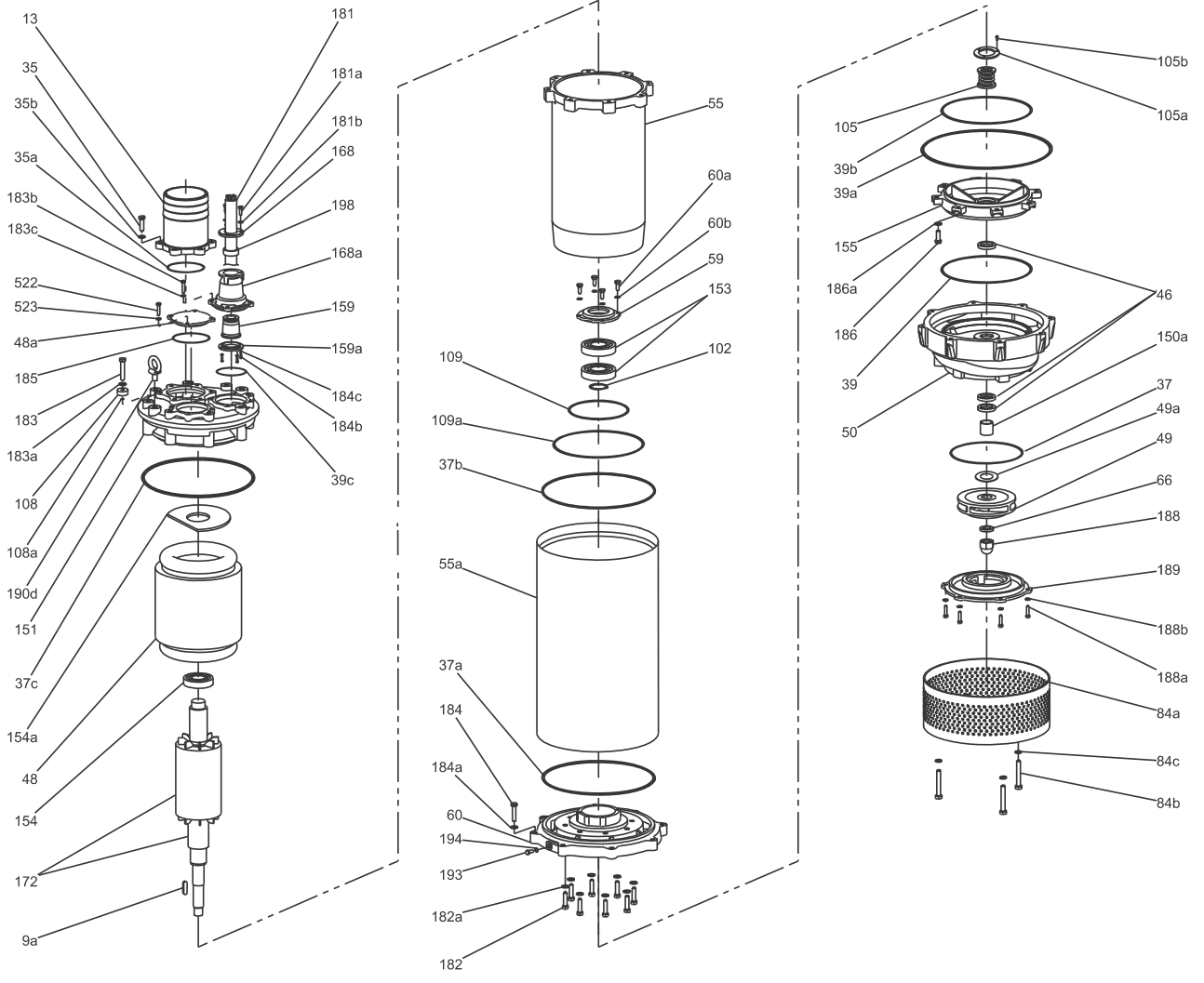


TM04 4577 4214

8.4 DWK.E.10.100.220, DWK.E.10.150.220,
DWK.E.10.150.300, DWK.E.10.200.300

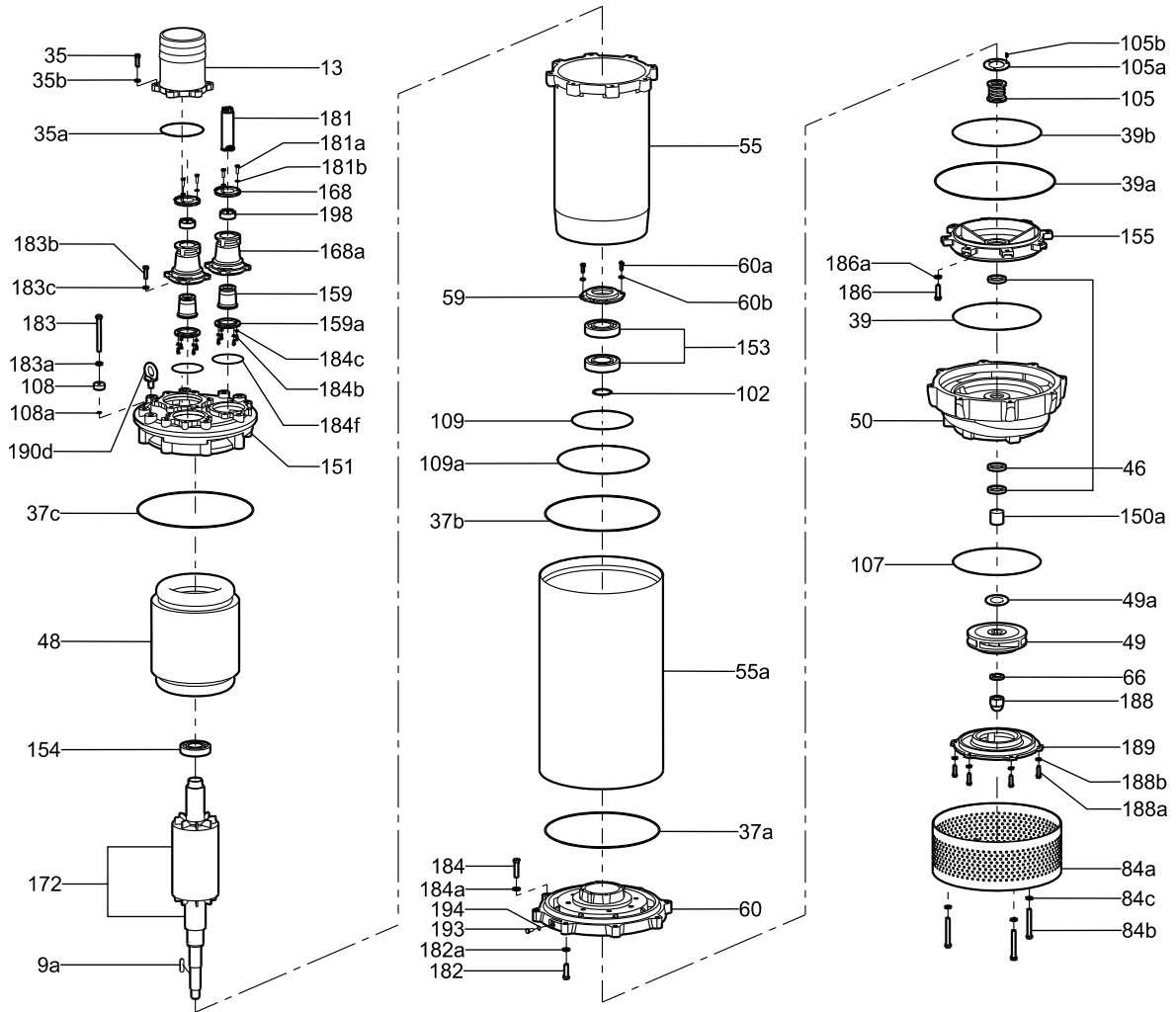


8.5 DWK.E.10.150.370, DWK.E.10.150.450, DWK.E.10.200.370,
 DWK.E.10.200.450, DWK.E.10.150.550, DWK.E.10.200.550



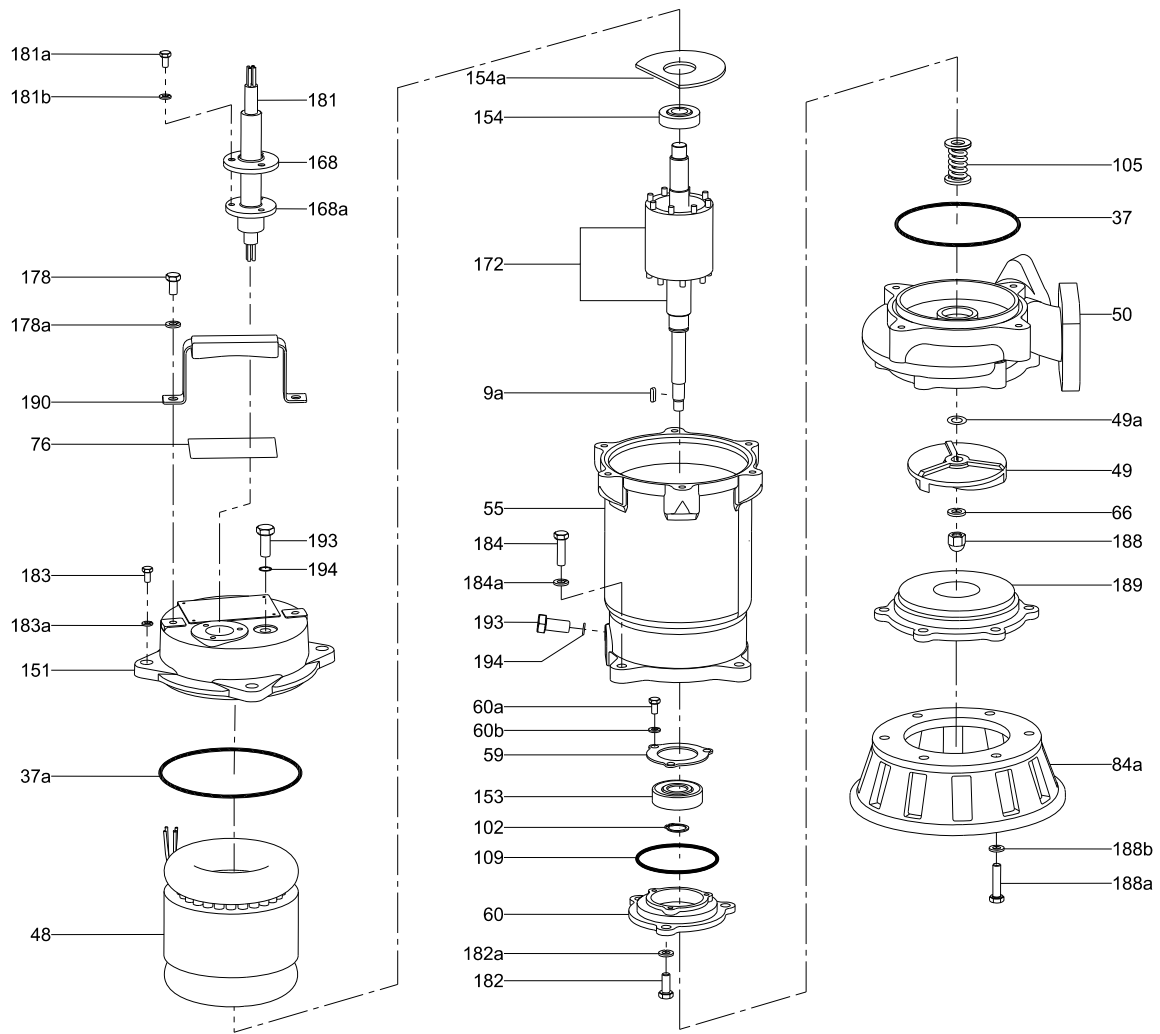
TM06 6933 2716

8.6 DWK.E.10.200.750, DWK.E.10.200.900

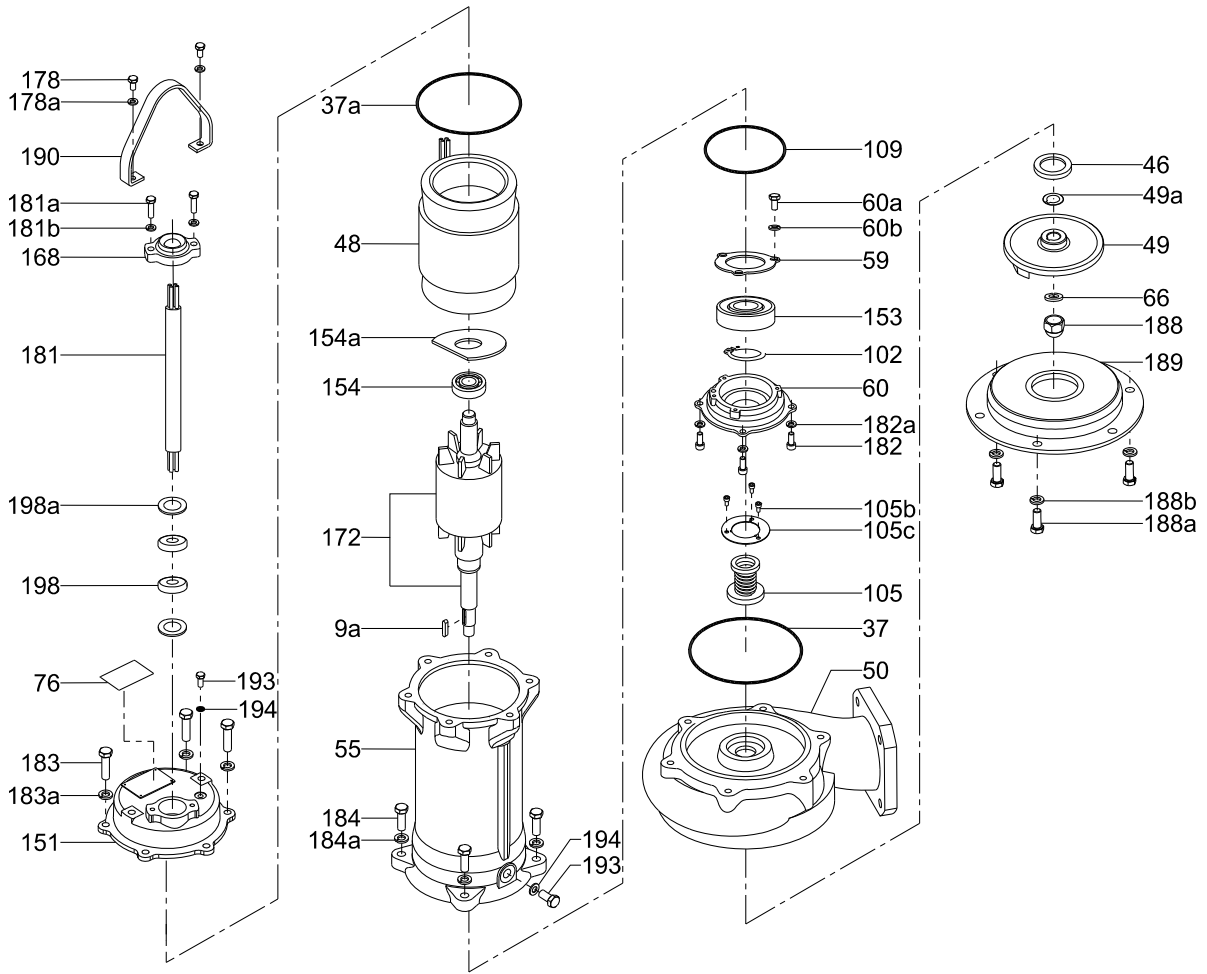


TM04 4707 1909

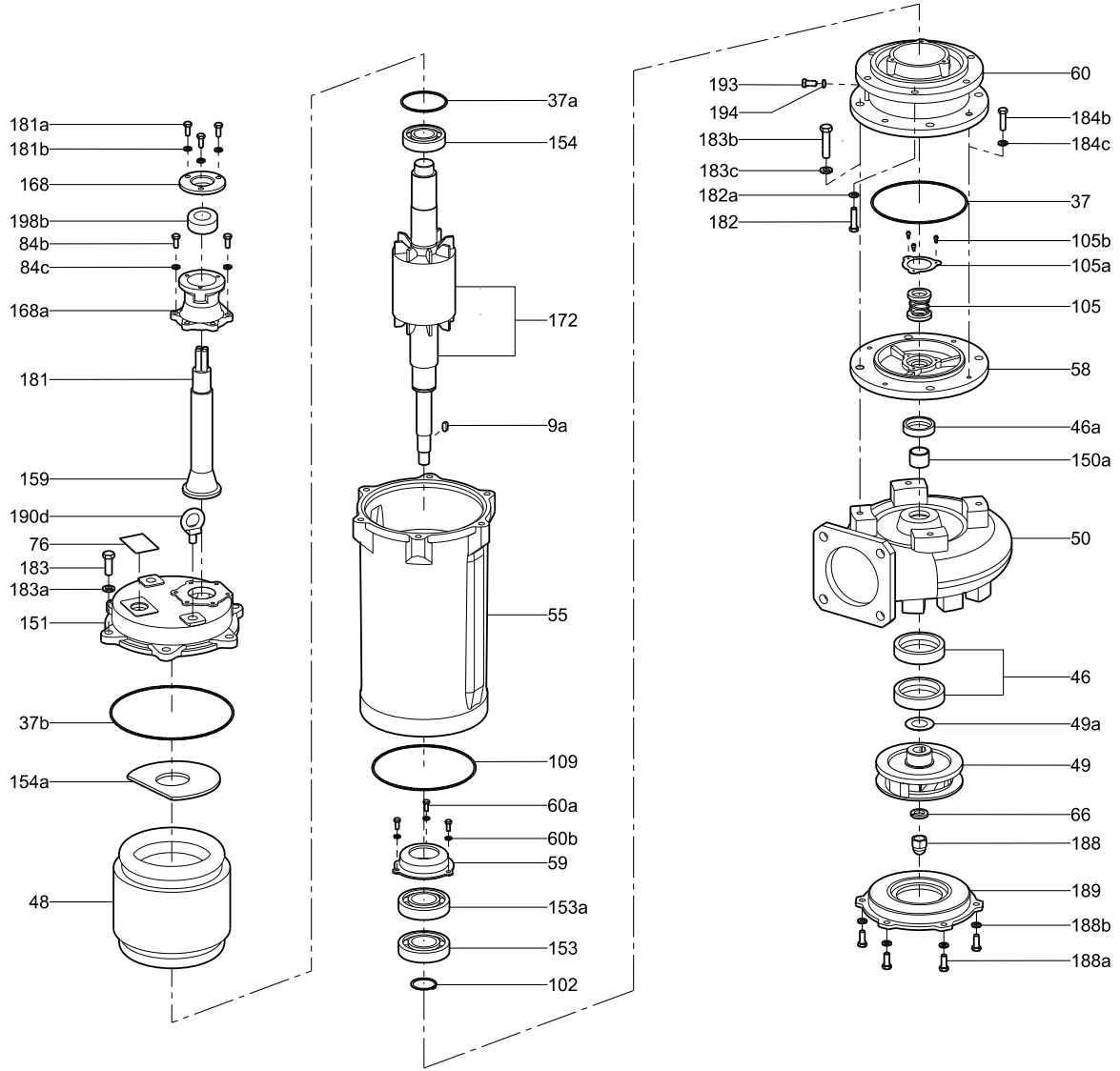
8.7 DPK.10.50.075, DPK.10.50.15 and DPK.10.80.22



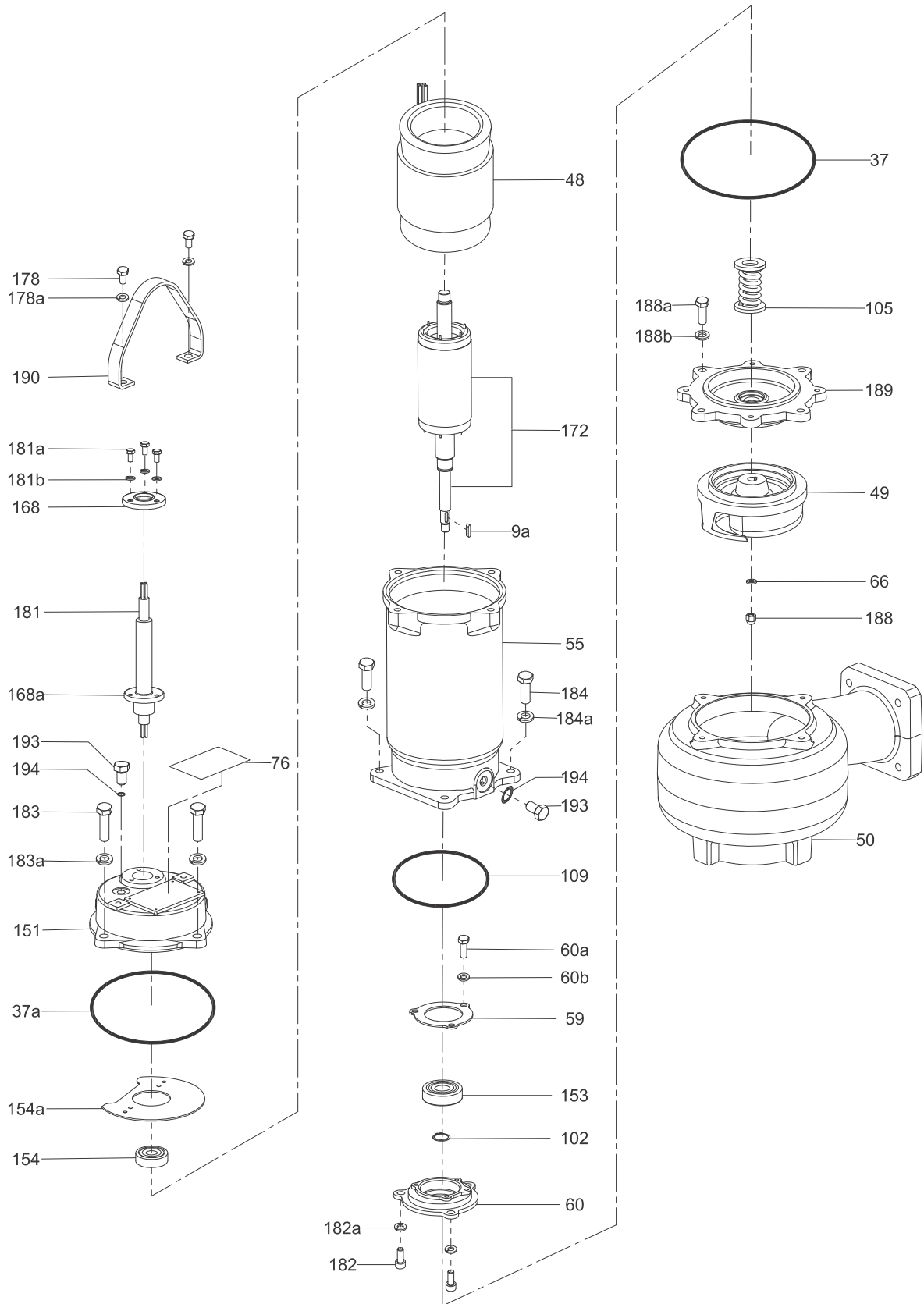
TM04 4365 4214



8.9 DPK.20.150.190 and DPK.20.150.220

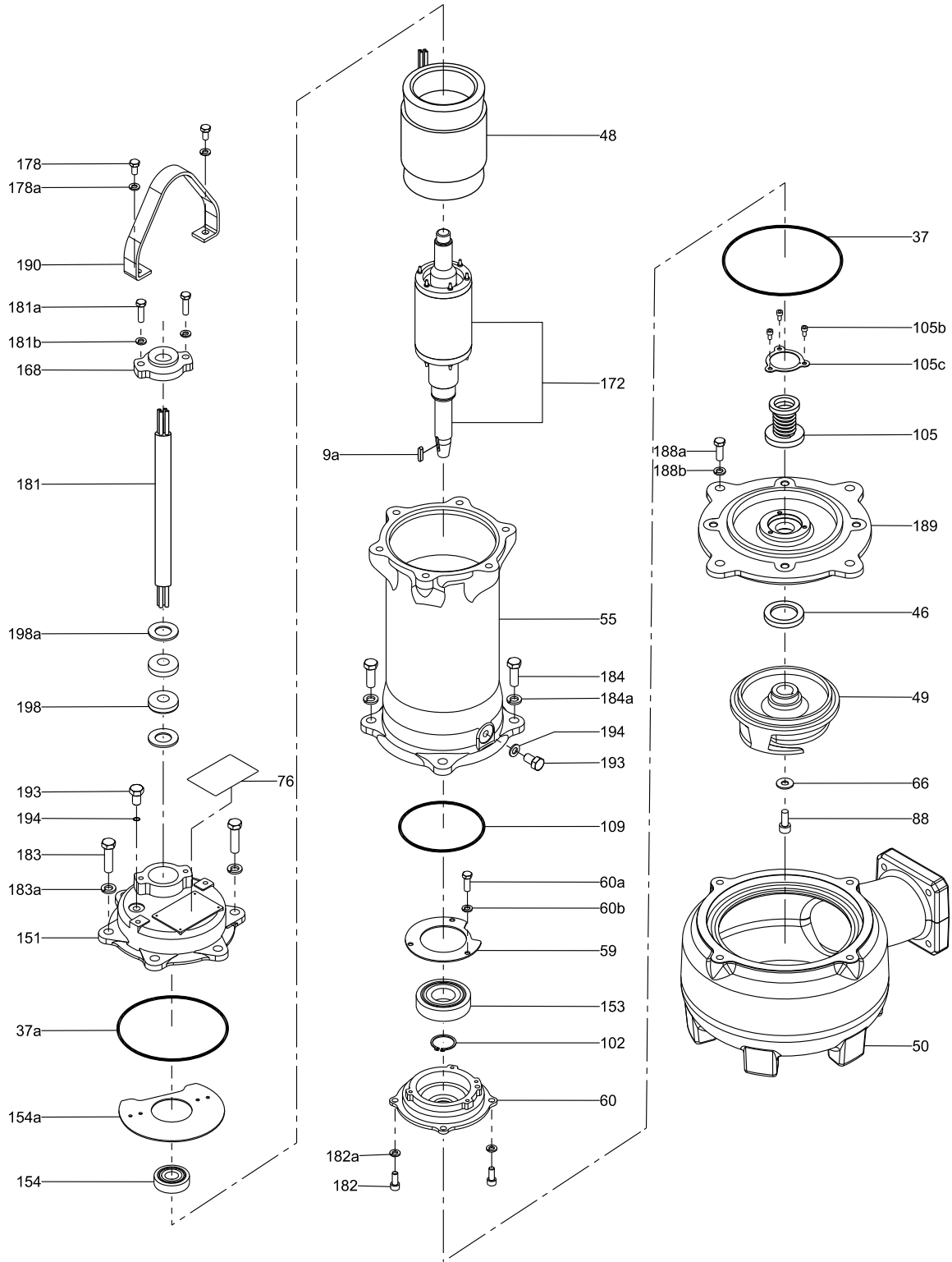


TN04 4706 1909

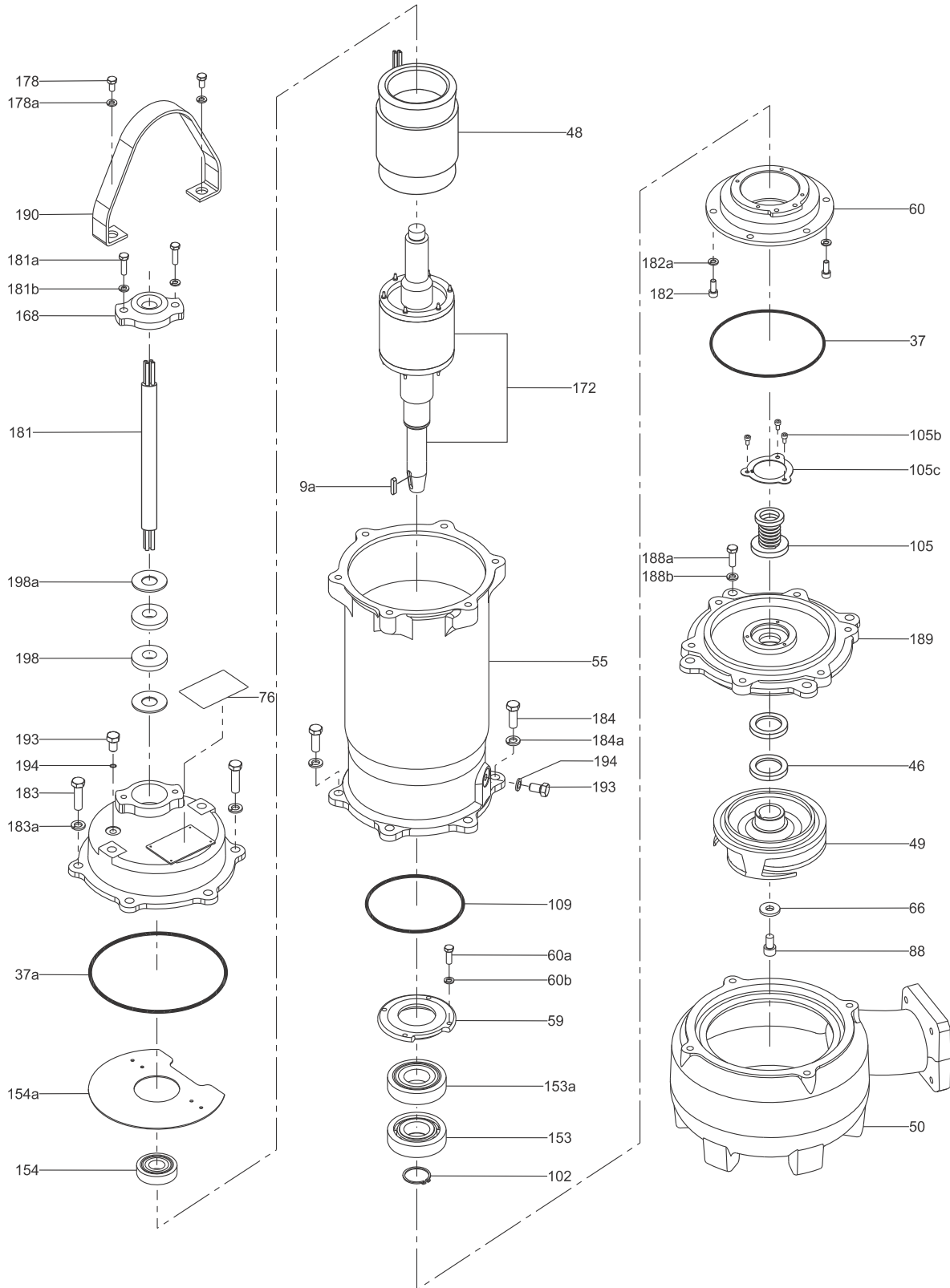


TM06 5610 5215

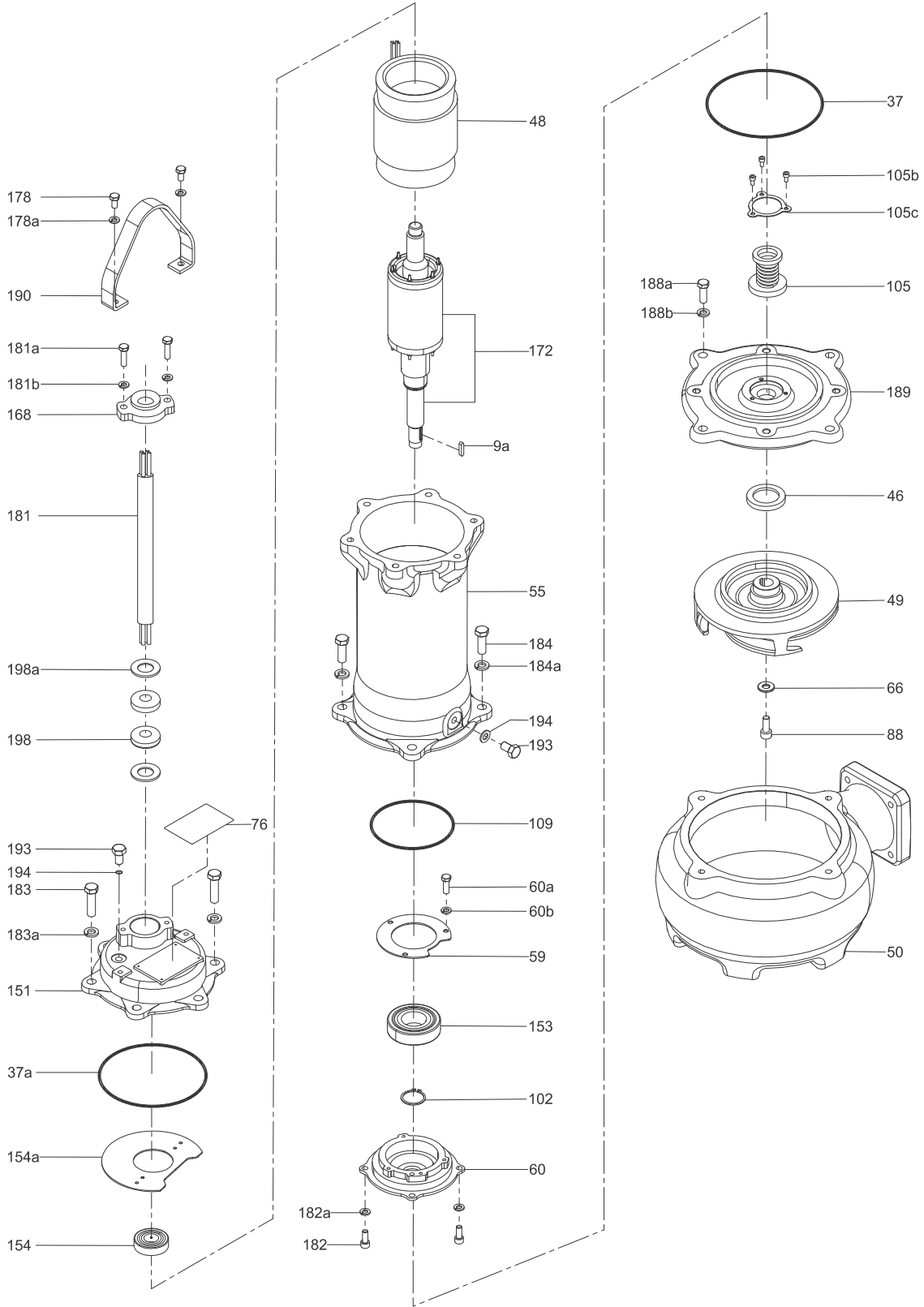
8.11 DPK.V.80.80.37.2



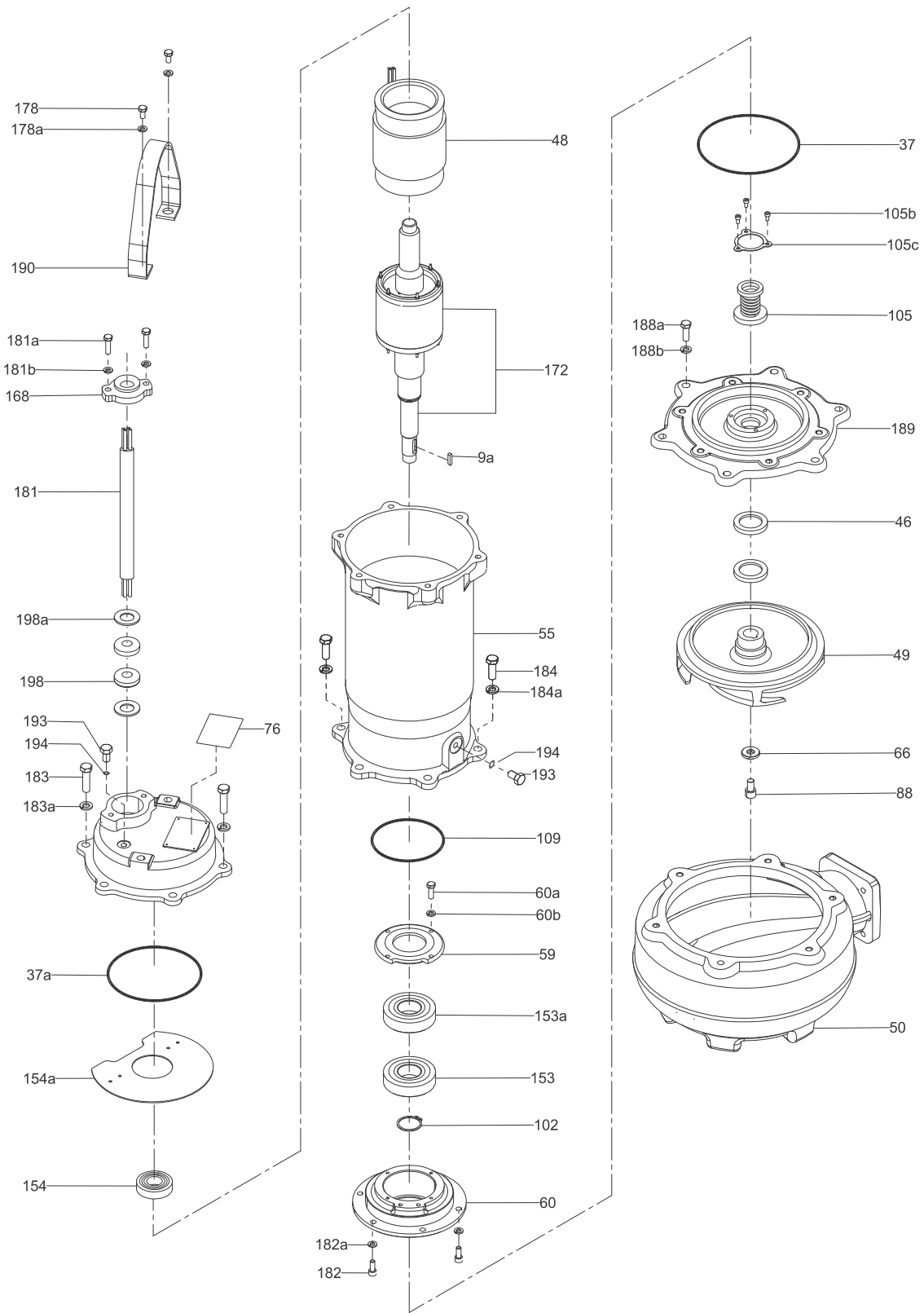
TM06 54/28 49/15



8.13 DPK.V.65.80.15.4 and DPK.V.65.80.22.4



TM06 5608 5215



Subject to alterations.

Argentina

Bombas GRUNDFOS de Argentina S.A.
Ruta Panamericana km. 37.500 Centro
Industrial Garin
1619 Garin Pcia. de B.A.
Phone: +54-3327 414 444
Telefax: +54-3327 45 3190

Australia

GRUNDFOS Pumps Pty. Ltd.
P.O. Box 2040
Regency Park
South Australia 5942
Phone: +61-8-8461-4611
Telefax: +61-8-8340 0155

Austria

GRUNDFOS Pumpen Vertrieb Ges.m.b.H.
Grundfosstraße 2
A-5082 Grödig/Salzburg
Tel.: +43-6246-883-0
Telefax: +43-6246-883-30

Belgium

N.V. GRUNDFOS Bellux S.A.
Boomssesteenweg 81-83
B-2630 Aartselaar
Tél.: +32-3-870 7300
Télécopie: +32-3-870 7301

Belarus

Представительство ГРУНДФОС в
Минске
220125, Минск
ул. Шафраньянская, 11, оф. 56, 5Ц
«Порт»
Тел.: +7 (375 17) 286 39 72/73
Факс: +7 (375 17) 286 39 71
E-mail: minsk@grundfos.com

Bosnia and Herzegovina

GRUNDFOS Sarajevo
Zmaja od Bosne 7-7A,
BH-71000 Sarajevo
Phone: +387 33 592 480
Telefax: +387 33 590 465
www.ba.grundfos.com
e-mail: grundfos@bih.net.ba

Brazil

BOMBAS GRUNDFOS DO BRASIL
Av. Humberto de Alencar Castelo Branco,
630
CEP 09850 - 300
São Bernardo do Campo - SP
Phone: +55-11 4393 5533
Telefax: +55-11 4343 5015

Bulgaria

Grundfos Bulgaria EOOD
Slatina District
Iztochna Tangenta street no. 100
BG - 1592 Sofia
Tel. +359 2 49 22 200
Fax. +359 2 49 22 201
email: bulgaria@grundfos.bg

Canada

GRUNDFOS Canada Inc.
2941 Brighton Road
Oakville, Ontario
L6H 6C9
Phone: +1-905 829 9533
Telefax: +1-905 829 9512

China

GRUNDFOS Pumps (Shanghai) Co. Ltd.
10F The Hub, No. 33 Suhong Road
Minhang District
Shanghai 201106
PRC
Phone: +86 21 612 252 22
Telefax: +86 21 612 253 33

Croatia

GRUNDFOS CROATIA d.o.o.
Buzinski prilaz 38, Buzin
HR-10010 Zagreb
Phone: +385 1 6595 400
Telefax: +385 1 6595 499
www.hr.grundfos.com

Czech Republic

GRUNDFOS s.r.o.
Čajkovského 21
779 00 Olomouc
Phone: +420-585-716 111
Telefax: +420-585-716 299

Denmark

GRUNDFOS DK A/S
Martin Bachs Vej 3
DK-8850 Bjerringbro
Tlf.: +45-87 50 50 50
Telefax: +45-87 50 51 51
E-mail: info_GDK@grundfos.com
www.grundfos.com/DK

Estonia

GRUNDFOS Pumps Eesti OÜ
Peterburi tee 92G
11415 Tallinn
Tel: + 372 606 1690
Fax: + 372 606 1691

Finland

OY GRUNDFOS Pumput AB
Trukkikuja 1
FI-01360 Vantaa
Phone: +358-(0) 207 889 500

France

Pompes GRUNDFOS Distribution S.A.
Parc d'Activités de Chesnes
57, rue de Malacombe
F-38290 St. Quentin Fallavier (Lyon)
Tél.: +33-4 74 82 15 15
Télécopie: +33-4 74 94 10 51

Germany

GRUNDFOS GMBH
Schlüterstr. 33
40699 Erkrath
Tel.: +49-(0) 211 929 69-0
Telefax: +49-(0) 211 929 69-3799
e-mail: infoservice@grundfos.de
Service in Deutschland:
e-mail: kundendienst@grundfos.de

Greece

GRUNDFOS Hellas A.E.B.E.
20th km. Athinon-Markopoulou Av.
P.O. Box 71
GR-19002 Peania
Phone: +0030-210-66 83 400
Telefax: +0030-210-66 46 273

Hong Kong

GRUNDFOS Pumps (Hong Kong) Ltd.
Unit 1, Ground floor
Siu Wai Industrial Centre
29-33 Wing Hong Street &
68 King Lam Street, Cheung Sha Wan
Kowloon
Phone: +852-27861706 / 27861741
Telefax: +852-27858664

Hungary

GRUNDFOS Hungária Kft.
Park u. 8
H-2045 Törökbálint,
Phone: +36-23 511 110
Telefax: +36-23 511 111

India

GRUNDFOS Pumps India Private Limited
118 Old Mahabalipuram Road
Thoraiakkam
Chennai 600 096
Phone: +91-44 2496 6800

Indonesia

PT. GRUNDFOS POMPA
Graha Intirub Lt. 2 & 3
Jln. Cililitan Besar No.454. Makasar,
Jakarta Timur
ID-Jakarta 13650
Phone: +62 21-469-51900
Telefax: +62 21-460 6910 / 460 6901

Ireland

GRUNDFOS (Ireland) Ltd.
Unit A, Merrywell Business Park
Ballymount Road Lower
Dublin 12
Phone: +353-1-4089 800
Telefax: +353-1-4089 830

Italy

GRUNDFOS Pompe Italia S.r.l.
Via Gran Sasso 4
I-20060 Truccazzano (Milano)
Tel.: +39-02-95838112
Telefax: +39-02-95309290 / 95838461

Japan

GRUNDFOS Pumps K.K.
1-2-3, Shin-Miyakoda, Kita-ku,
Hamamatsu
431-2103 Japan
Phone: +81 53 428 4760
Telefax: +81 53 428 5005

Korea

GRUNDFOS Pumps Korea Ltd.
6th Floor, Aju Building 679-5
Yeoksam-dong, Kangnam-ku, 135-916
Seoul, Korea
Phone: +82-2-5317 600
Telefax: +82-2-5633 725

Latvia

SIA GRUNDFOS Pumps Latvia
Deglava biznesa centrs
Augusta Deglava ielā 60, LV-1035, Rīga,
Tālr.: + 371 714 9640, 7 149 641
Fakss: + 371 914 9646

Lithuania

GRUNDFOS Pumps UAB
Smolensko g. 6
LT-03201 Vilnius
Tel: + 370 52 395 430
Fax: + 370 52 395 431

Malaysia

GRUNDFOS Pumps Sdn. Bhd.
7 Jalan Peguam U1/25
Glenmarie Industrial Park
40150 Shah Alam
Selangor
Phone: +60-3-5569 2922
Telefax: +60-3-5569 2866

Mexico

Bombas GRUNDFOS de México S.A. de
C.V.
Boulevard TLC No. 15
Parque Industrial Stiva Aeropuerto
Apodaca, N.L. 66600
Phone: +52-81-8144 4000
Telefax: +52-81-8144 4010

Netherlands

GRUNDFOS Netherlands
Weluwezoom 35
1326 AE Almere
Postbus 22015
1302 CA ALMERE
Tel.: +31-88-478 6336
Telefax: +31-88-478 6332
E-mail: info_gnl@grundfos.com

New Zealand

GRUNDFOS Pumps NZ Ltd.
17 Beatrice Tinsley Crescent
North Harbour Industrial Estate
Albany, Auckland
Phone: +64-9-415 3240
Telefax: +64-9-415 3250

Norway

GRUNDFOS Pumper A/S
Strømsveien 344
Postboks 235, Leirdal
N-1011 Oslo
Tlf.: +47-22 90 47 00
Telefax: +47-22 32 21 50

Poland

GRUNDFOS Pompy Sp. z o.o.
ul. Klonowa 23
Baranowo k. Poznania
PL-62-081 Przeźmierowo
Tel: (+48-61) 650 13 00
Fax: (+48-61) 650 13 50

Portugal

Bombas GRUNDFOS Portugal, S.A.
Rua Calvet de Magalhães, 241
Apartado 1079
P-2770-153 Paço de Arcos
Tel.: +351-21-440 76 00
Telefax: +351-21-440 76 90

Romania

GRUNDFOS Pompe România SRL
Bd. Biruintei, nr 103
Pantelimon county Ilfov
Phone: +40 21 200 4100
Telefax: +40 21 200 4101
E-mail: romania@grundfos.ro

Russia

ООО Грудфос Россия
109544, г. Москва, ул. Школьная, 39-41,
стр. 1
Тел. (+7) 495 564-88-00 (495) 737-30-00
Факс (+7) 495 564 88 11
E-mail grundfos.moscow@grundfos.com

Serbia

Grundfos Srbija d.o.o.
Omladinskih brigada 90b
11070 Novi Beograd
Phone: +381 11 2258 740
Telefax: +381 11 2281 769
www.rs.grundfos.com

Singapore

GRUNDFOS (Singapore) Pte. Ltd.
25 Jalan Tukang
Singapore 619264
Phone: +65-6681 9688
Telefax: +65-6681 9689

Slovakia

GRUNDFOS s.r.o.
Prievozská 4D
821 09 BRATISLAVA
Phona: +421 2 5020 1426
sk.grundfos.com

Slovenia

GRUNDFOS LJUBLJANA, d.o.o.
Leskoškova 9e, 1122 Ljubljana
Phone: +386 (0) 1 568 06 10
Telefax: +386 (0)1 568 06 19
E-mail: tehnika-si@grundfos.com

South Africa

GRUNDFOS (PTY) LTD
Corner Mountjoy and George Allen Roads
Wilbart Ext. 2
Bedfordview 2008
Phone: (+27) 11 579 4800
Fax: (+27) 11 455 6066
E-mail: lsmart@grundfos.com

Spain

Bombas GRUNDFOS España S.A.
Camino de la Fuenteccilla, s/n
E-28110 Algete (Madrid)
Tel.: +34-91-848 8800
Telefax: +34-91-628 0465

Sweden

GRUNDFOS AB
Box 333 (Lunnagårdsgatan 6)
431 24 Mölndal
Tel.: +46 31 332 23 000
Telefax: +46 31 331 94 80

Switzerland

GRUNDFOS Pumpen AG
Bruggacherstrasse 10
CH-8117 Fällanden/ZH
Tel.: +41-44-806 8111
Telefax: +41-44-806 8115

Taiwan

GRUNDFOS Pumps (Taiwan) Ltd.
7 Floor, 219 Min-Chuan Road
Taichung, Taiwan, R.O.C.
Phone: +886-4-2305 0868
Telefax: +886-4-2305 0878

Thailand

GRUNDFOS (Thailand) Ltd.
92 Chaloom Phrakiat Rama 9 Road,
Dokmai, Pravej, Bangkok 10250
Phone: +66-2-725 8999
Telefax: +66-2-725 8998

Turkey

GRUNDFOS POMPA San. ve Tic. Ltd. Sti.
Gezbe Organize Sanayi Bölgesi
Ihsan dede Caddesi,
2. yol 200. Sokak No. 204
41490 Gezbe/ Kocaeli
Phone: +90 - 262-679 7979
Telefax: +90 - 262-679 7905
E-mail: satis@grundfos.com

Ukraine

Бізнес Центр Європа
Столичне шосе, 103
м. Київ, 03131, Україна
Телефон: (+38 044) 237 04 00
Факс.: (+38 044) 237 04 01
E-mail: ukraine@grundfos.com

United Arab Emirates

GRUNDFOS Gulf Distribution
P.O. Box 16768
Jebel Ali Free Zone
Dubai
Phone: +971 4 8815 166
Telefax: +971 4 8815 136

United Kingdom

GRUNDFOS Pumps Ltd.
Grovebury Road
Leighton Buzzard/Beds. LU7 4TL
Phone: +44-1525-850000
Telefax: +44-1525-850011

U.S.A.

GRUNDFOS Pumps Corporation
17100 West 118th Terrace
Olathe, Kansas 66061
Phone: +1-913-227-3400
Telefax: +1-913-227-3500

Uzbekistan

Grundfos Tashkent, Uzbekistan The Repre-
sentative Office of Grundfos Kazakhstan in
Uzbekistan
38a, Oybek street, Tashkent
Телефон: (+998) 71 150 3290 / 71 150
3291
Факс: (+998) 71 150 3292

Addresses Revised 25.08.2016

97551833 0816

ECM: 1191017
