

Qty. Description

1 CR 10-3 A-A-A-E-HQQE



Note! Product picture may differ from actual product

Product No.: [96500981](#)

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via oval flanges with internal Rp threads.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

Further product details

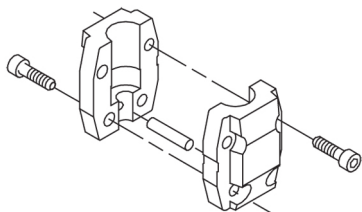
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An integral part of the process is a pretreatment. The entire process consists of these elements:

- 1) Alkaline-based cleaning.
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.
- 4) Curing to a dry film thickness 18-22 my m.

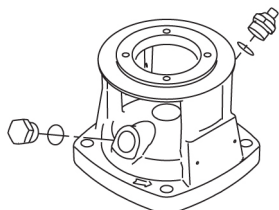
The colour code for the finished product is NCS 9000/RAL 9005.

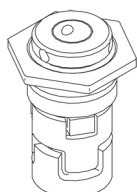
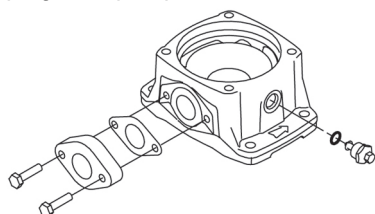
Pump

A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.



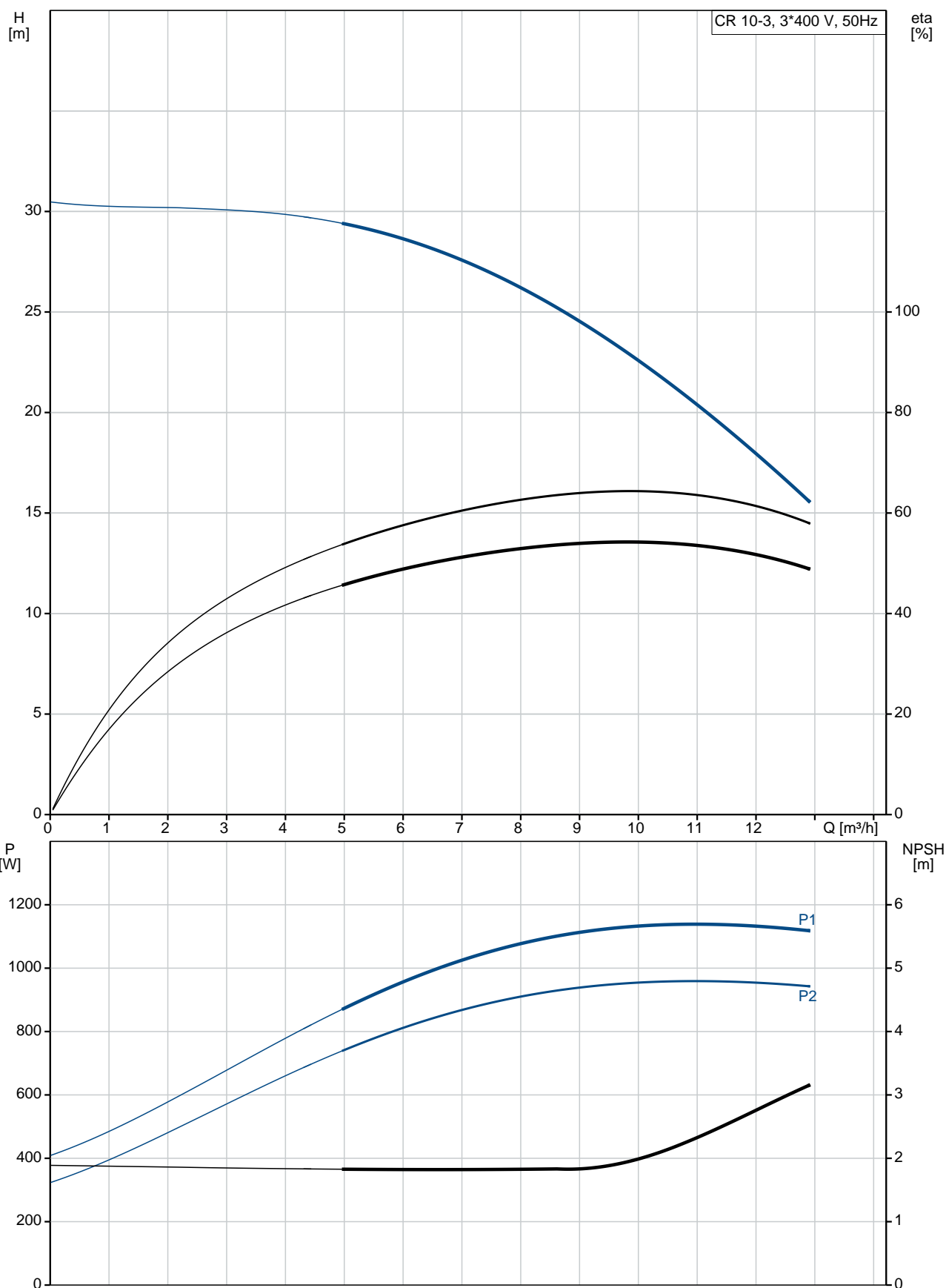
The pump head, pump head cover and flange for motor mounting is made in one piece. The pump head has a combined 1/2" priming plug and vent screw.



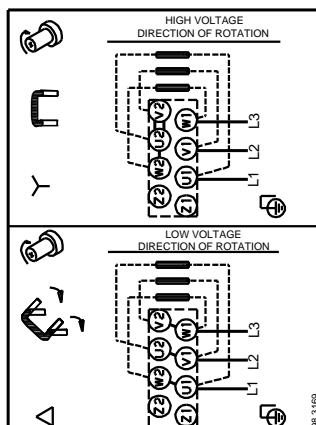
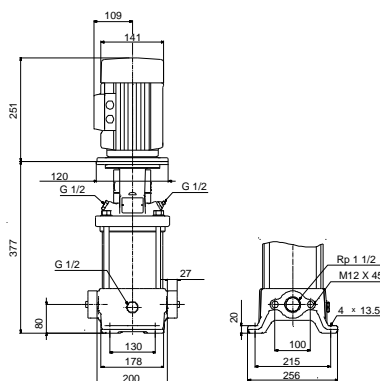
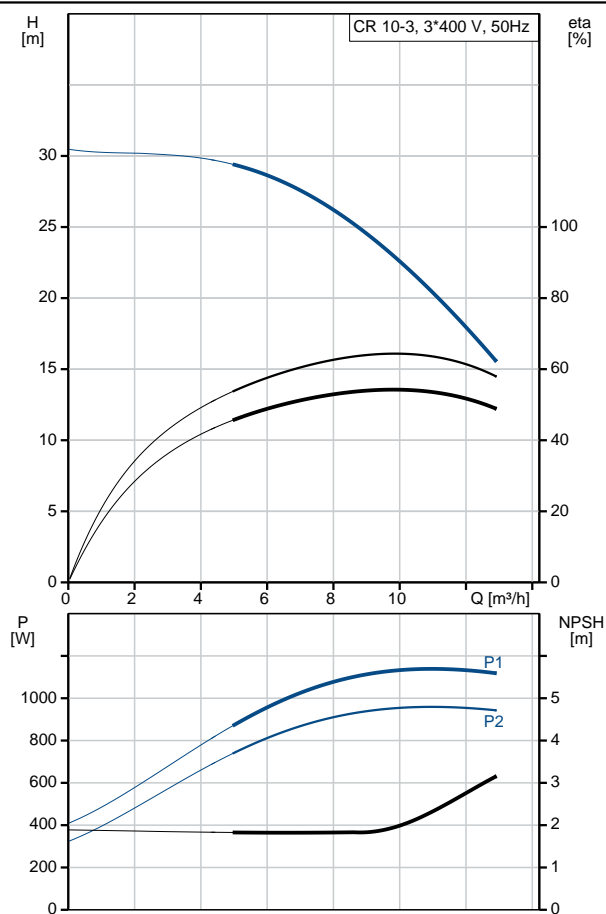
Qty.	Description
	<p>The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system. This seal type is assembled in a cartridge unit which makes replacement safe and easy. Due to the balancing, this seal type is suitable for high-pressure applications. The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> • Rotating seal ring material: silicon carbide (SiC) • Stationary seat material: silicon carbide (SiC) <p>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)</p> <p>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>  <p>The shaft seal is screwed into the pump head.</p> <p>The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.</p> <p>The base is made of cast iron. The oval flanges are bolted to the base. The outlet side of the base has a drain plug. The pump is secured to the foundation by four bolts through the base plate.</p>  <p>Motor</p> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with tapped-hole flange (FT).</p> <p>Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).</p> <p>Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p>The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I_N/1).</p> <p>Technical data</p> <p>Controls:</p> <p>Frequency converter: NONE</p> <p>Liquid:</p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: -20 .. 120 °C</p> <p>Liquid temperature during operation: 20 °C</p> <p>Density: 998.2 kg/m³</p> <p>Technical:</p> <p>Pump speed on which pump data are based: 2853 rpm</p>

Qty.	Description
	<p>Rated flow: 10 m³/h</p> <p>Rated head: 23.1 m</p> <p>Pump orientation: Vertical</p> <p>Shaft seal arrangement: Single</p> <p>Code for shaft seal: HQQE</p> <p>Approvals on nameplate: CE, EAC, ACS</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p>Materials:</p> <p>Base: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B</p> <p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Bearing: SIC</p> <p>Installation:</p> <p>Maximum ambient temperature: 60 °C</p> <p>Maximum operating pressure: 16 bar</p> <p>Max pressure at stated temp: 16 bar / 120 °C 16 bar / -20 °C</p> <p>Type of connection: Oval / Rp</p> <p>Size of inlet connection: 1 1/2 inch</p> <p>Size of outlet connection: 1 1/2 inch</p> <p>Pressure rating for pipe connection: PN 16</p> <p>Flange size for motor: FT100</p> <p>Electrical data:</p> <p>Motor standard: IEC</p> <p>Motor type: 80C</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 1.1 kW</p> <p>Power (P2) required by pump: 1.1 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 220-240D/380-415Y V</p> <p>Rated current: 4.35/2.50 A</p> <p>Starting current: 450-500 %</p> <p>Cos phi - power factor: 0.83-0.76</p> <p>Rated speed: 2840-2870 rpm</p> <p>Efficiency: IE3 82,7%</p> <p>Motor efficiency at full load: 82.7 %</p> <p>Motor efficiency at 3/4 load: 84.6 %</p> <p>Motor efficiency at 1/2 load: 85.4 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): 55 Dust/Jetting</p> <p>Insulation class (IEC 85): F</p> <p>Others:</p> <p>Minimum efficiency index, MEI $\hat{a}\%_{\hat{a}}$: 0.70</p> <p>Net weight: 37 kg</p> <p>Gross weight: 40 kg</p> <p>Shipping volume: 0.094 m³</p> <p>Danish VVS No.: 385903030</p> <p>Norwegian NRF no.: 9040458</p>

96500981 CR 10-3 A-A-A-E-HQQE 50 Hz



Description	Value
General information:	
Product name:	CR 10-3 A-A-A-E-HQQE
Product No:	96500981
EAN number:	5700396212975
Technical:	
Pump speed on which pump data are based:	2853 rpm
Rated flow:	10 m³/h
Rated head:	23.1 m
Head max:	30.3 m
Stages:	3
Impellers:	3
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC, ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Base:	Cast iron EN 1561 EN-GJL-200 ASTM A48-25B
Impeller:	Stainless steel EN 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Installation:	
Maximum ambient temperature:	60 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C 16 bar / -20 °C
Type of connection:	Oval / Rp
Size of inlet connection:	1 1/2 inch
Size of outlet connection:	1 1/2 inch
Pressure rating for pipe connection:	PN 16
Flange size for motor:	FT100
Connect code:	A
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor standard:	IEC
Motor type:	80C
IE Efficiency class:	IE3
Rated power - P2:	1.1 kW
Power (P2) required by pump:	1.1 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 220-240D/380-415Y V
Rated current:	4.35/2.50 A
Starting current:	450-500 %





Company name:

Created by:

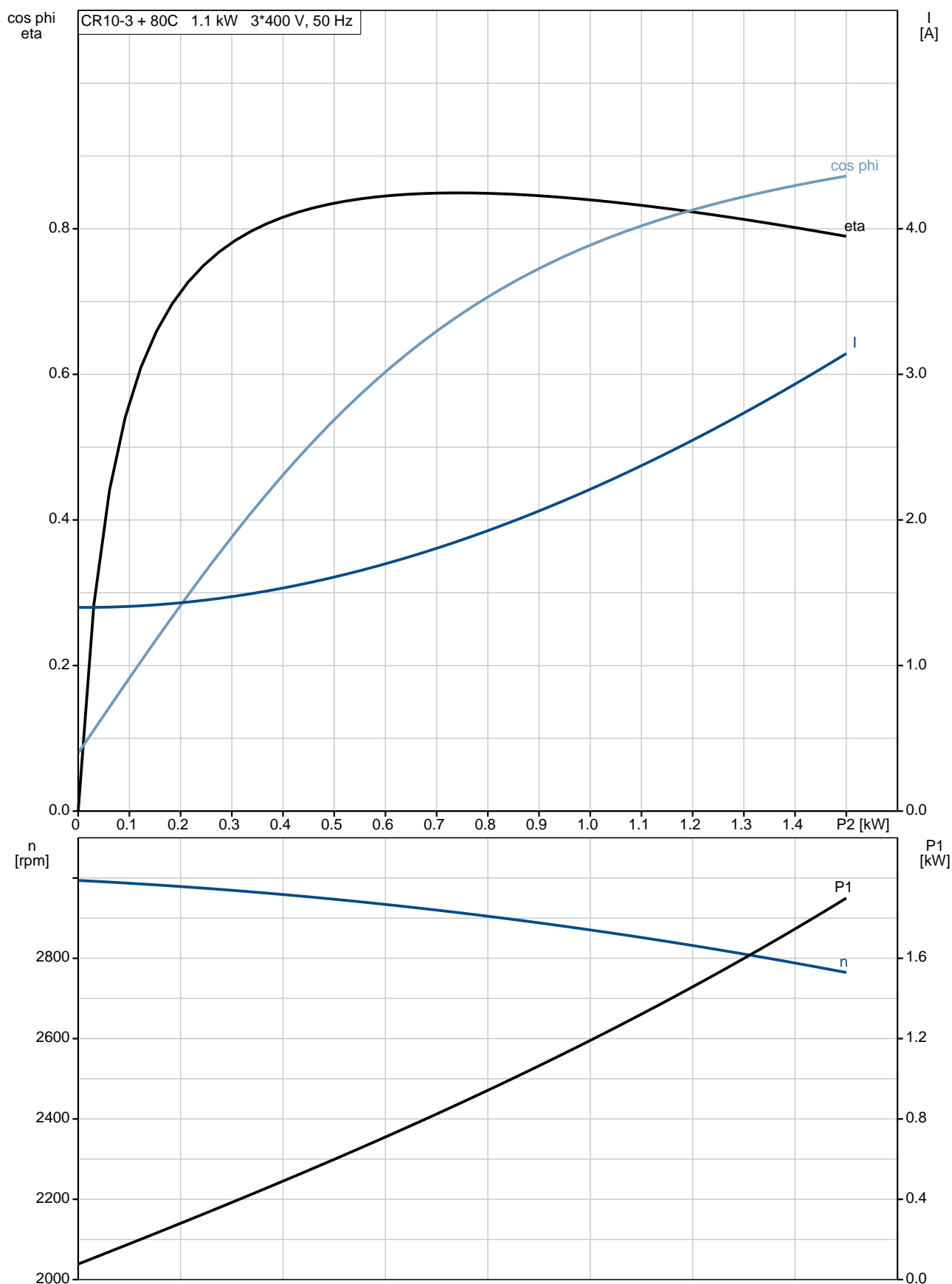
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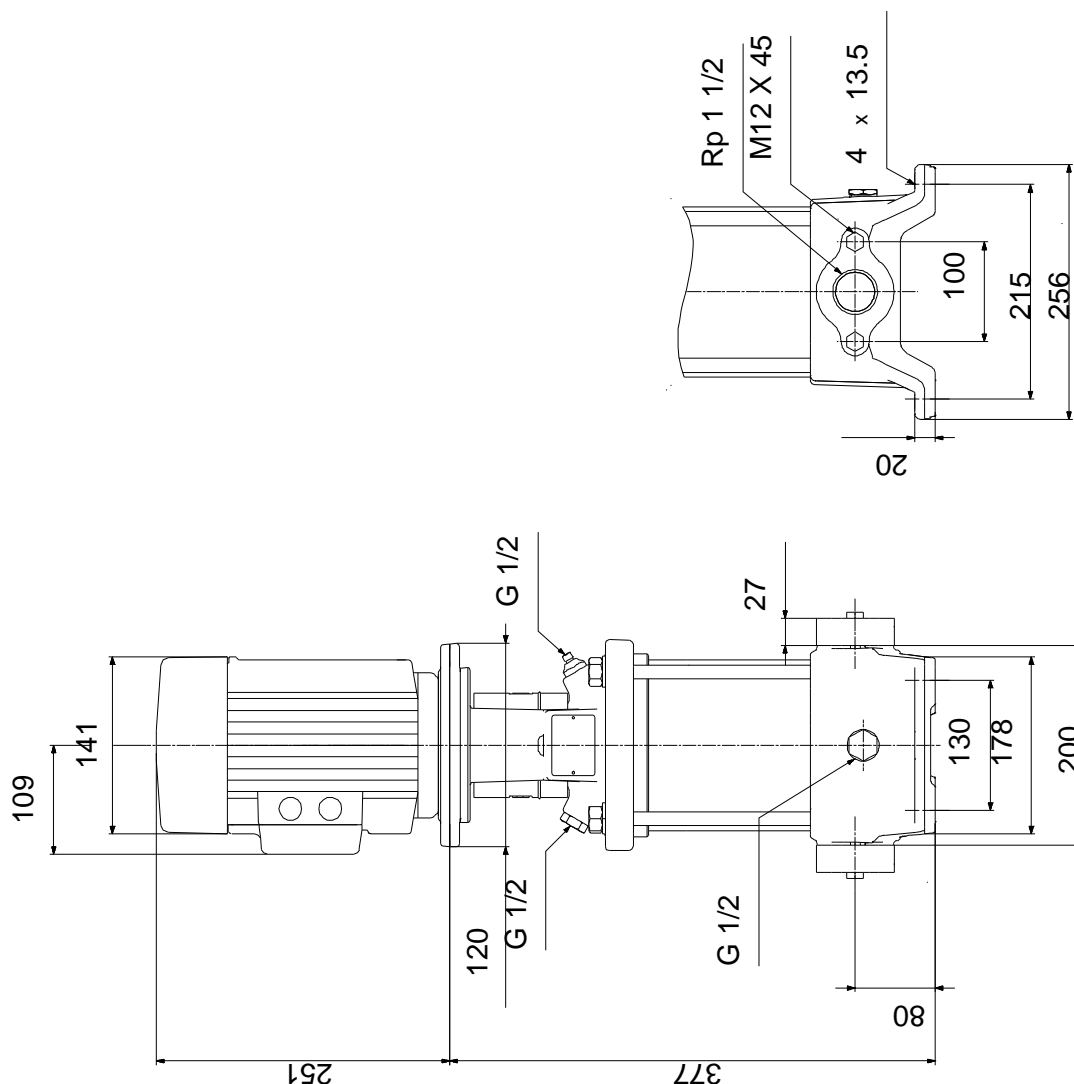
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Description	Value
Cos phi - power factor:	0.83-0.76
Rated speed:	2840-2870 rpm
Efficiency:	IE3 82,7%
Motor efficiency at full load:	82.7 %
Motor efficiency at 3/4 load:	84.6 %
Motor efficiency at 1/2 load:	85.4 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	NONE
Motor No:	85U05105
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI %:	0.70
Net weight:	37 kg
Gross weight:	40 kg
Shipping volume:	0.094 m ³
Danish VVS No.:	385903030
Norwegian NRF no.:	9040458

96500981 CR 10-3 A-A-A-E-HQQE 50 Hz

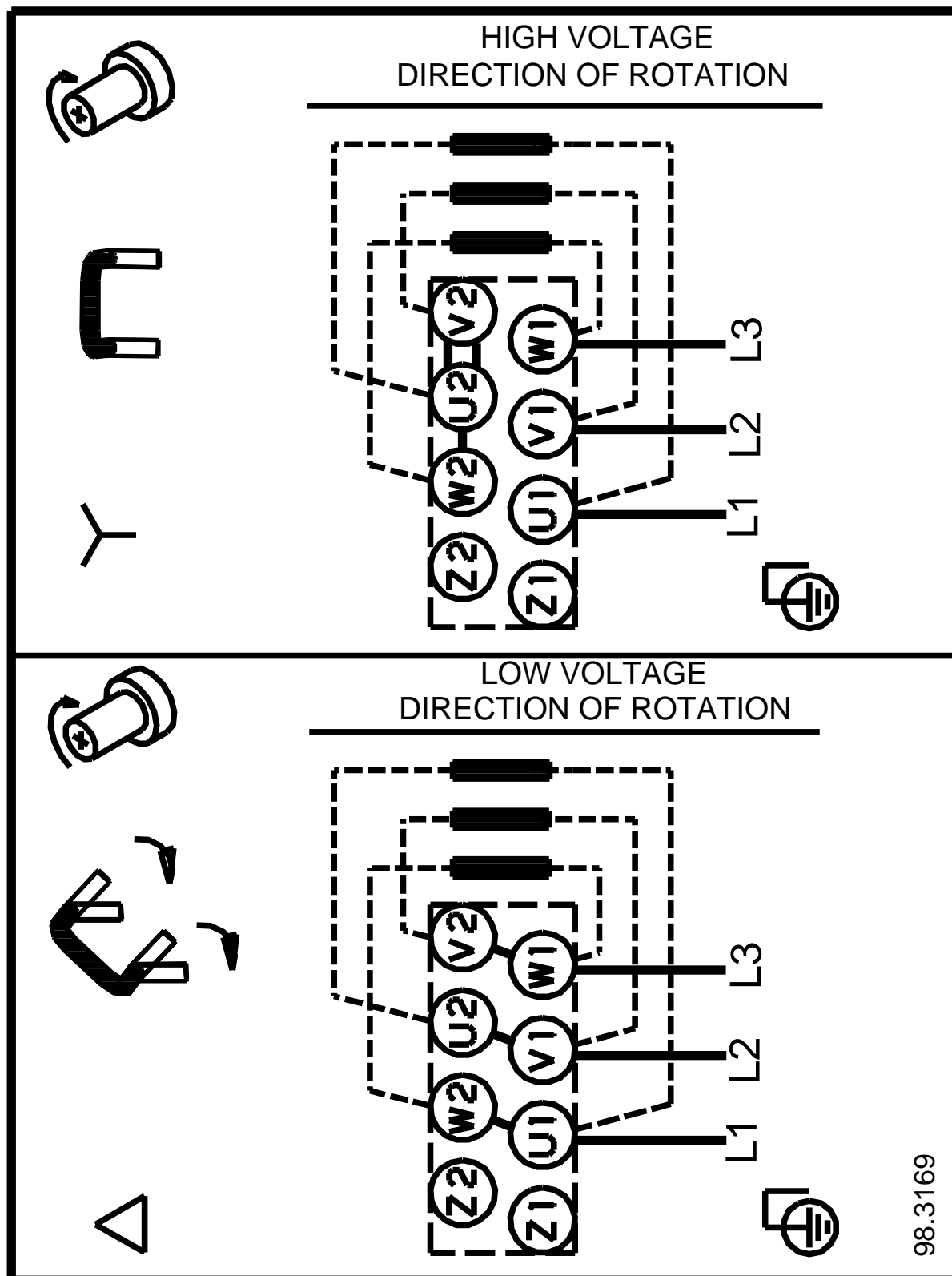


96500981 CR 10-3 A-A-A-E-HQQE 50 Hz



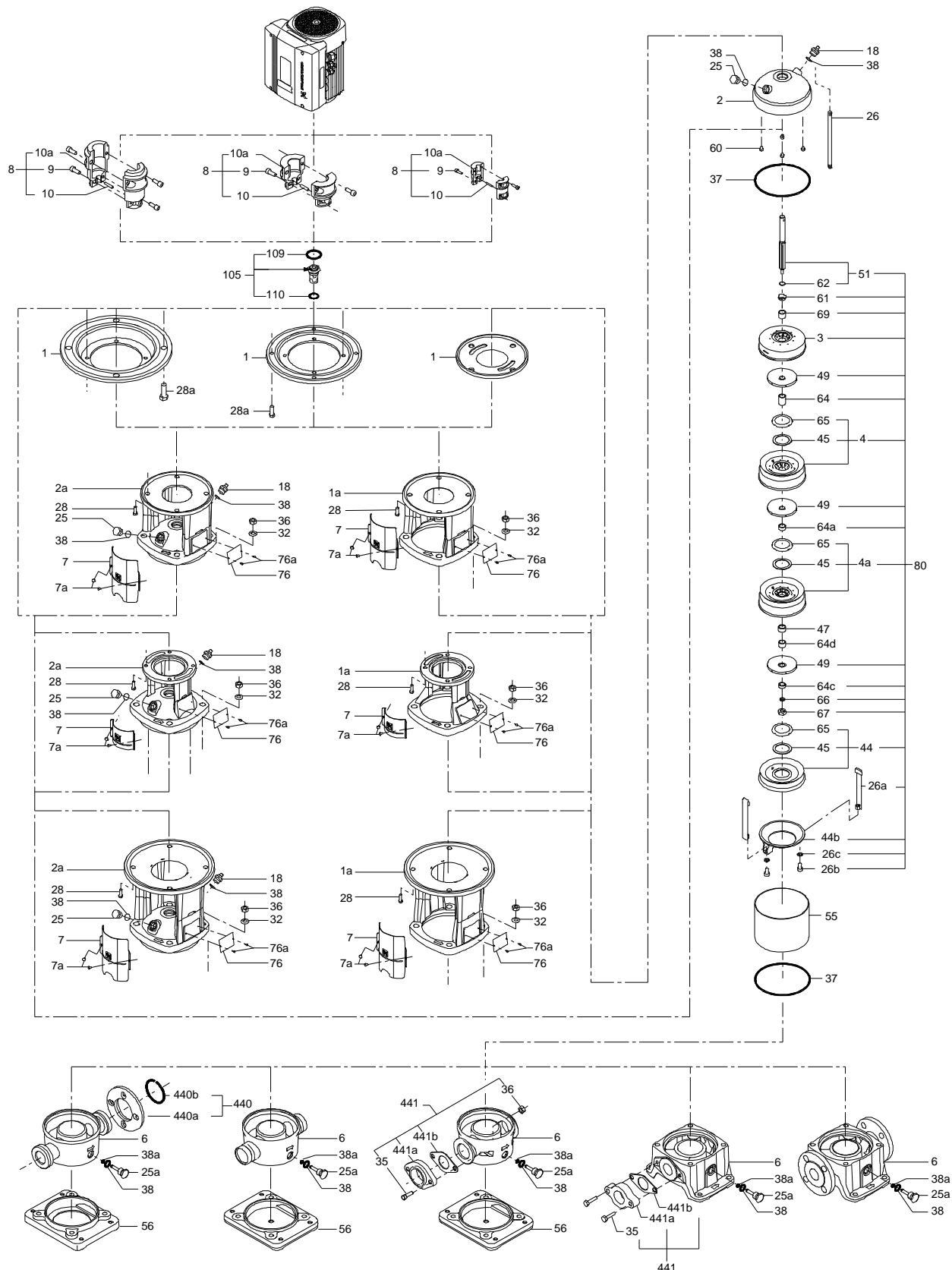
Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

96500981 CR 10-3 A-A-A-E-HQQE 50 Hz

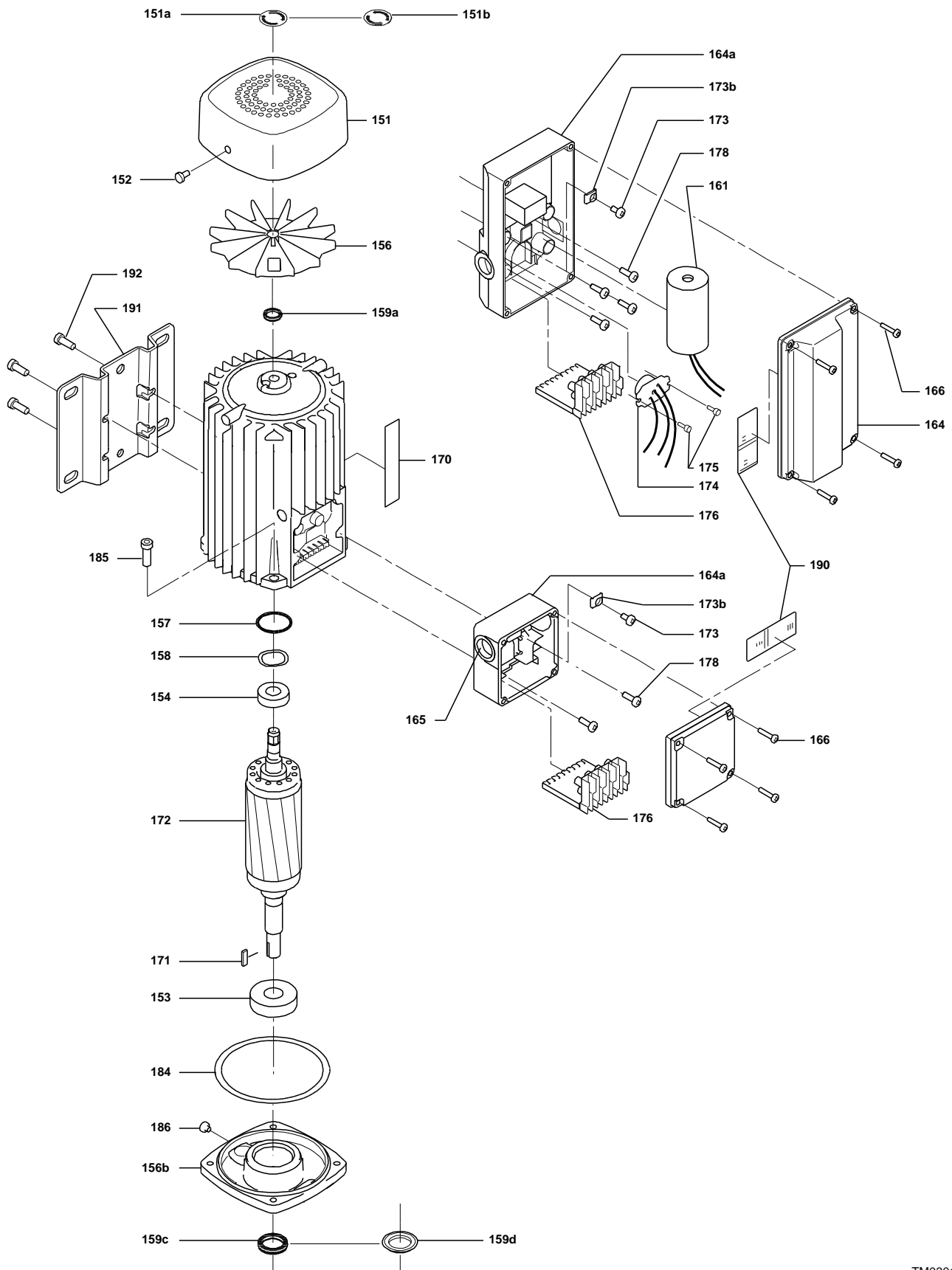


Note! All units are in [mm] unless others are stated.

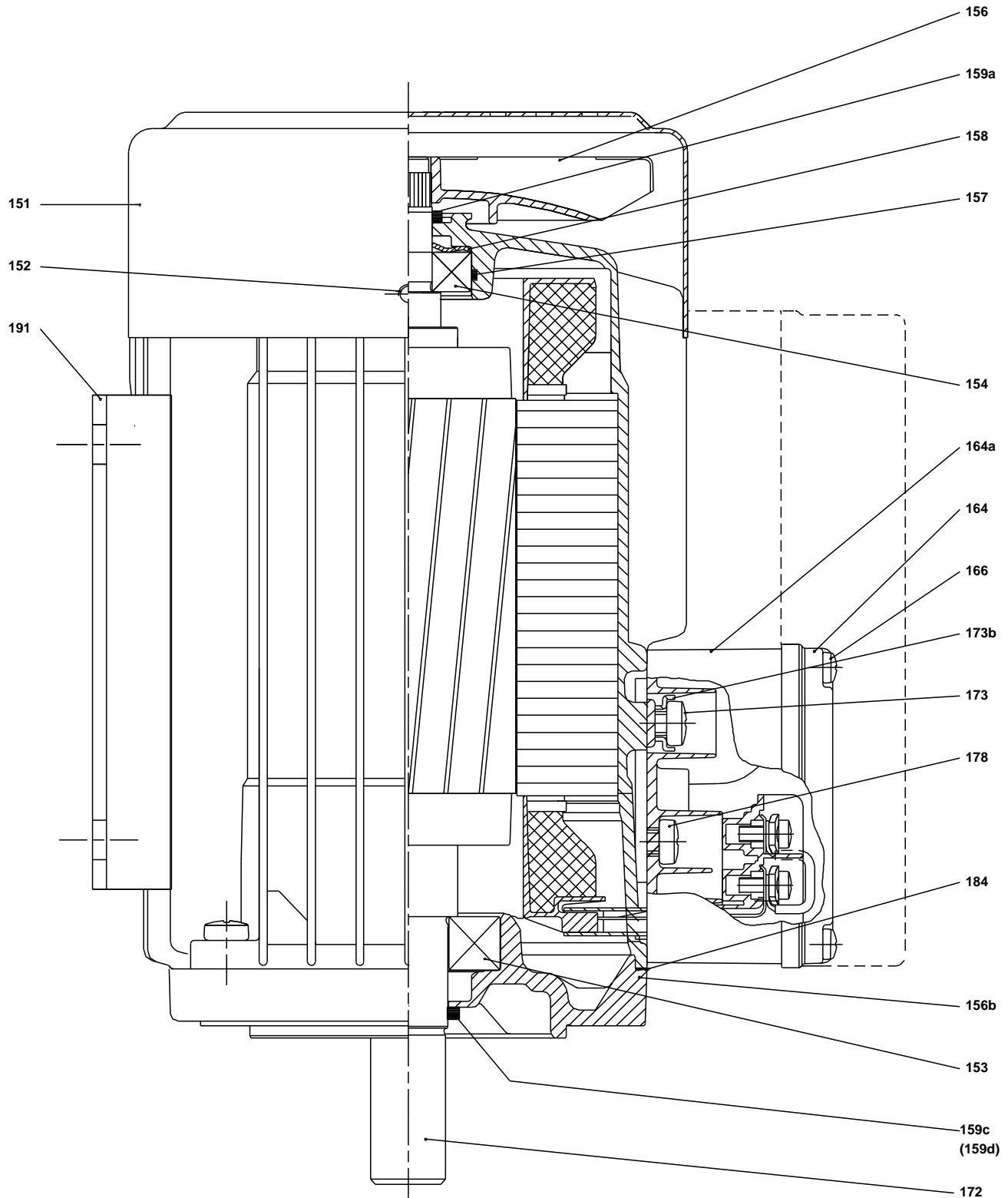
(tm069460 for MECR 10 standard)



(TM030163 0505)



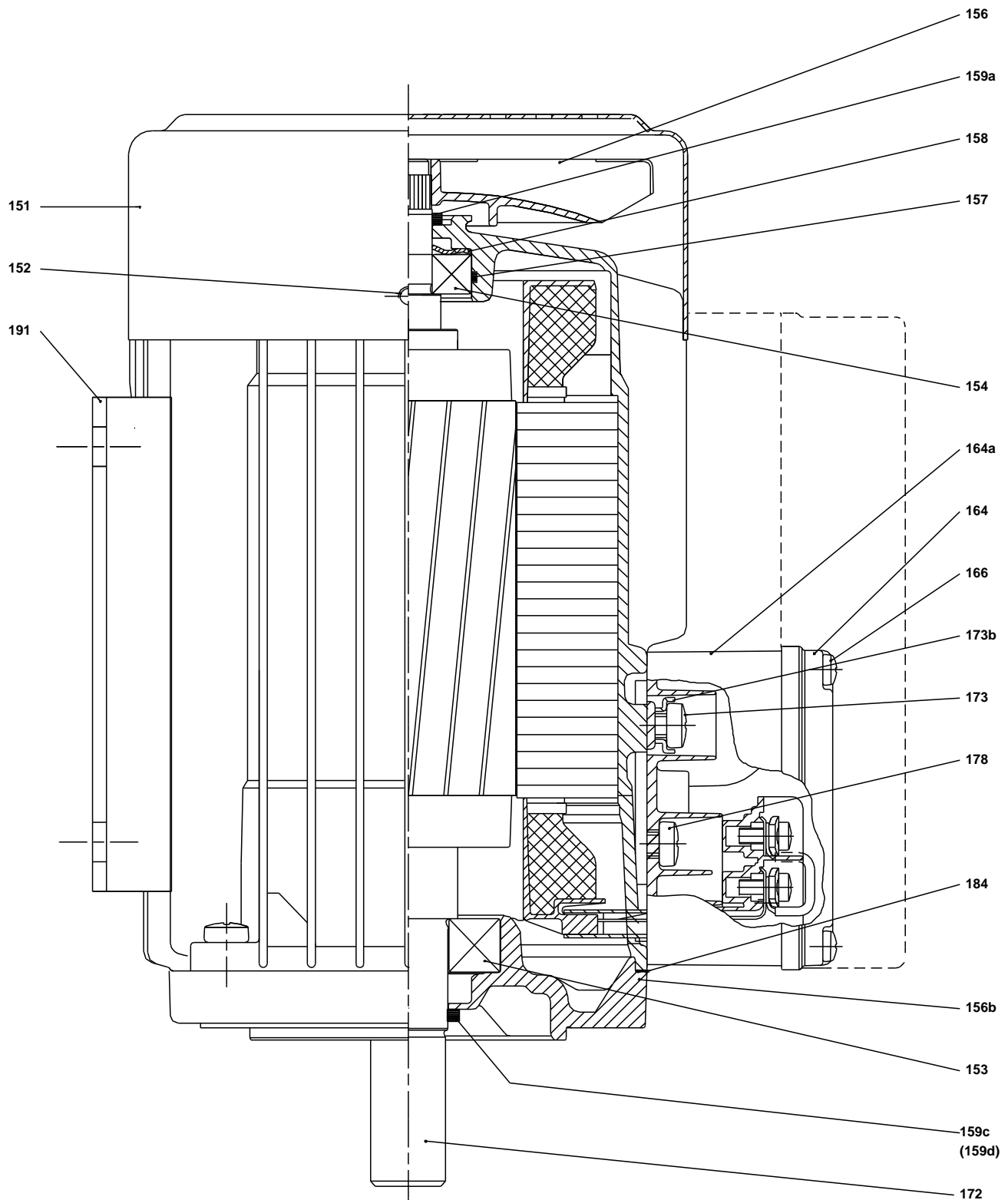
(TM029177)



TM029177)

TM030163

(TM029177)



TM029177)

Spare parts CR 10-3, Product No. 96500981
Valid from 1.1.2011 (1152)

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
-	Kit, chamber stack			96508405	1	pcs
- 80	Chamber stack		Bearing type: SIC		1	
- 3	Top intermediate chamber					
	Spare, turbulence optimizer KP					
	Guide vane					
- 4a	Intermediate chamber cpl.					
	Guide cup					
	Bearing plate					
	Guide vane					
3	Intermediate chamber					
45	Neck ring cpl.					
47	Bearing bush					
65	Retainer					
- 4	Intermediate chamber cpl.					
	Guide cup					
	Guide vane					
3	Intermediate chamber					
45	Neck ring cpl.					
65	Retainer					
26a	Strap cpl.					
26.c	Washer		Designation: DIN 125A			
			Thickness: 1,6			
26.b	Hex head screw					
44b	Inlet part					
- 44a	Inlet part cpl.					
	Guide cup					
	Inlet part					
45	Neck ring cpl.					
65	Retainer					
47	Bearing ring					
49	Impeller cpl.					
- 51	Shaft, spline, cpl.					
	Bar					
62	Stop ring					
64c	Spacing pipe		Length (mm): 12.7			
64a	Spacing bush		Length (mm): 9.00			
64.d	Spacer					
64	Spacing pipe		Length (mm): 29.05			
66	Wedge lock washer					
67	Lock nut		Thread: M8			
69	Spacing bush		Length (mm): 18.00			
-	Kit, coupling			96511317	1	pcs
	Adjusting fork				1	
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 20			
			Thread: M6			
10a	Coupling half				2	
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
-	Kit, coupling guard			96509611	1	pcs
7.a	Combi Slot Torx screw				4	
7	Coupling guard				2	
-	Kit, gaskets			96509609	1	pcs

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
	Gasket				2	
24	O-ring				2	
37	O-ring				2	
38a	O-ring		Diameter: 5,3		1	
			Material type: EPDM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		1	
			Material type: EPDM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		2	
			Material type: EPDM			
			Thickness: 2,4			
60	Spring				4	
415	Gasket				2	
441b	Gasket		Internal diameter: 49		2	
			Outer diameter: 92			
			Thickness: 2			
-	Kit, plug			96511311	1	pcs
- 18	Air vent screw				1	
	Spindle					
	Plug					
25a	Drain plug				1	
25	Plug				1	
38a	O-ring		Diameter: 5,3		1	
			Material type: FKM			
			Thickness: 2,4			
38a	O-ring		Diameter: 5,3		1	
			Material type: EPDM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		1	
			Material type: FKM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		2	
			Material type: FKM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		1	
			Material type: EPDM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		2	
			Material type: EPDM			
			Thickness: 2,4			
-	Kit, shaft seal HQQE			96511844	1	pcs
	Emery cloth				1	
	Grinding device				1	
105	Shaft seal		Material type: HQQE		1	
-	Kit, wear parts			96511889	1	pcs
- 4a	Intermediate chamber cpl.				1	
	Sand Lifter					
	Guide cup					
	Bearing plate					
	Guide vane					
3	Intermediate chamber					
45	Neck ring cpl.					
47	Bearing bush					
65	Retainer					
26.c	Washer		Designation: DIN 125A		2	
			Thickness: 1,6			
26.b	Hex head screw				2	
45	Neck ring cpl.				7	

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
47	Bearing ring				1	
62	Retaining ring				1	
64c	Spacing pipe		Length (mm): 12.7		1	
64a	Spacing bush		Length (mm): 9.00		1	
64.d	Spacer				1	
65	Retainer				7	
66	Wedge lock washer				1	
67	Lock nut		Thread: M8		1	
-	Motor			91333027	1	pcs
-	Kit, Ball bearing			96279730	1	
111	Ball bearing		Designation: 6204.2Z.C3.SYN			
111	Ball bearing					
157	O-ring		Diameter: 32			
			Material type: NBR			
			Thickness: 2			
158	Waved washer					
-	Kit, fan			96279721	1	
156	Fan					
159a	Seal ring					
-	Kit, fan cover			96279720	1	
151	Fan cover					
152	Pan head thread forming screw					
-	Kit, flange			96279854	1	
156b	Flange					
159c	Seal ring					
184	Gasket		Internal diameter: 114,80			
			Outer diameter: 121,20			
			Thickness: 0,25			
185	Pan head screw					
186	Drain plug					
-	Kit, shaft seal			96279722	1	
159c	Seal ring					
159a	Seal ring					
-	Kit, terminal box			96279724	1	
152	Pan head thread forming screw					
164a	Terminal box w/gasket					
164	Terminal box cover w/gasket					
173a	Washer		Designation: SQUARE			
			Internal diameter: 5,5			
			Outer diameter: 10X10			
			Thickness: 1,5			
173a	Base					
173	Pan head thread forming screw		Designation: COMBI TORX T25			
173	Pan head screw		Designation: DIN 7985			
175	Pan head screw		Designation: DIN 7985			
176	Terminal cpl.					
-	Motor			85901513	1	pcs
-	Kit, Ball bearing			96279730	1	
111	Ball bearing		Designation: 6204.2Z.C3.SYN			
111	Ball bearing					
157	O-ring		Diameter: 32			
			Material type: NBR			
			Thickness: 2			
158	Waved washer					
-	Kit, fan			96279721	1	
156	Fan					
159a	Seal ring					
-	Kit, fan cover			96279720	1	

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
151	Fan cover					
152	Pan head thread forming screw					
-	Kit, flange			96279854	1	
156b	Flange					
159c	Seal ring					
184	Gasket		Internal diameter: 114,80 Outer diameter: 121,20 Thickness: 0,25			
185	Pan head screw					
186	Drain plug					
-	Kit, shaft seal			96279722	1	
159c	Seal ring					
159a	Seal ring					
-	Kit, terminal box			96279724	1	
152	Pan head thread forming screw					
164a	Terminal box w/gasket					
164	Terminal box cover w/gasket					
173a	Washer		Designation: SQUARE Internal diameter: 5,5 Outer diameter: 10X10 Thickness: 1,5			
173a	Base					
173	Pan head thread forming screw		Designation: COMBI TORX T25			
173	Pan head screw		Designation: DIN 7985			
175	Pan head screw		Designation: DIN 7985			
176	Terminal cpl.					
2a	Pump head			98952899	1	pcs
+ 3	Bulk, Top intermediate chamber (3 pcs)			96538970	1	pcs
+ 3	Top intermediate chamber			98415149	1	pcs
+ 4a	Bulk, Intermediate chamber cpl. (10 pcs)			96538850	1	pcs
+ 4a	Intermediate chamber cpl.			98371073	1	pcs
- 4	Intermediate chamber cpl.			98371071	1	pcs
3	Intermediate chamber			98415145	1	
65	Bulk, Retainer (20 pcs)			98354675	1	
6	Base			98818812	1	pcs
7.a	Bulk, Combi Slot Torx screw (1000 pcs)			96886324	4	pcs
10	Bulk, Shaft pin (10 pcs)		Diameter: 5 Length (mm): 26	96536473	1	pcs
+ 18	Bulk, Air vent screw (5 pcs)			96547461	1	pcs
+ 18	Air vent screw			95061351	1	pcs
25	Bulk, Plug (10 pcs)			96536013	1	pcs
25a	Bulk, Drain plug (10 pcs)			96535881	1	pcs
26a	Strap cpl.			98980041	2	pcs
26.c	Bulk, Washer (4 pcs)		Designation: DIN 125A Thickness: 1,6	99262704	2	pcs
26.c	Washer		Designation: DIN 125A Thickness: 1,6	96586880	2	pcs
26	Bulk, Staybolt (4 pcs)		Length (mm): 163 Thread: M16	98680984	4	pcs
26	Staybolt		Length (mm): 163 Thread: M16	98680982	4	pcs
28	Bulk, Hex head screw (20 pcs)		Length (mm): 45 MM Thread: M12	96620474	4	pcs
32	Bulk, Washer (100 pcs)		Designation: DIN 125 A Internal diameter: 17 Outer diameter: 30 Thickness: 3	98923051	4	pcs
36	Bulk, Hex nut (20 pcs)		Thread: M16	96620480	4	pcs

Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
37	Bulk, O-ring (20 pcs)			96538857	2	pcs
38a	Bulk, O-ring (10 pcs)		Diameter: 5,3	99198791	1	pcs
			Material type: EPDM			
			Thickness: 2,4			
38	Bulk, O-ring (10 pcs)		Diameter: 16,3	99198815	2	pcs
			Material type: EPDM			
			Thickness: 2,4			
38	Bulk, O-ring (50 pcs)		Diameter: 16,3	99412727	2	pcs
			Material type: EPDM			
			Thickness: 2,4			
44b	Inlet part			98814595	1	pcs
+ 44a	Inlet part cpl.			97973678	1	pcs
47	Bulk, Bearing ring (10 pcs)			96538795	1	pcs
49	Bulk, Impeller cpl. (10 pcs)			96538796	3	pcs
49	Impeller cpl.			98394441	3	pcs
+ 51	Shaft, spline, cpl.			98368605	1	pcs
55	Outer sleeve			98812619	1	pcs
60	Bulk, Spring (20 pcs)			96538963	4	pcs
64c	Bulk, Spacing pipe (5 pcs)		Length (mm): 12.7	97980241	1	pcs
64a	Bulk, Spacing bush (20 pcs)		Length (mm): 9.00	96538950	1	pcs
64.d	Bulk, Spacer (20 pcs)			97516851	1	pcs
64	Bulk, Spacing pipe (20 pcs)		Length (mm): 29.05	96535101	1	pcs
66	Bulk, Wedge lock washer (10 pcs)			96536157	1	pcs
67	Bulk, Lock nut (10 pcs)		Thread: M8	98277008	1	pcs
69	Bulk, Spacing bush (20 pcs)		Length (mm): 18.00	96538948	1	pcs
76a	Bulk, Rivet (100 pcs)			96620489	2	pcs
105	Bulk, Shaft seal (11 pcs)		Material type: HQQE	96538914	1	pcs
415	Bulk, Gasket (10 pcs)			96536048	2	pcs
415	Gasket			99364495	2	pcs
440a	Flange		Thread: RP 1 1/2	99037027	2	pcs