

Date: 16/02/2019

Qty. | Description

1 CRN 10-1 A-FGJ-A-E-HQQE



Product No.: 96501056

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in high-grade 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 combined DIN-ANSI-JIS flanges.

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

Further product details

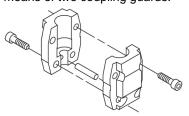
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An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

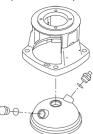
The colour code for the finished product is NCS 9000/RAL 9005.

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 and flange for motor mounting is made in one piece (cast iron). The pump head cover is a separate component (stainless steel). The pump head has a combined 1/2" priming plug and vent screw.



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.

Primary seal:

• Rotating seal ring material: silicon carbide (SiC)



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Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The shaft seal is screwed into the pump head.

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.

The pump has a stainless steel base mounted on a separate base plate. This base and base plate are kept in position by the tension of the staybolts which hold the pump together. The outlet side of the base has a combined drain plug and bypass valve. The pump is secured to the foundation by four bolts through the base plate. The flanges and base are cast in one piece and prepared for connection by means of DIN, ANSI or JIS.

Motor

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).

Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).

Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.

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 (I1/1).

Technical data

Controls:

Frequency converter: NONE

Liquid:

Pumped liquid: Water
Liquid temperature range: -20 .. 120 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 2873 rpm

Rated flow: 10 m³/h
Rated head: 7.1 m
Pump orientation: Vertical
Shaft seal arrangement: Single
Code for shaft seal: HQQE
Approvals on nameplate: CE, EAC,ACS

Materials:

Curve tolerance:

Base: Stainless steel

EN 1.4408 AISI 316

ISO9906:2012 3B



Date: 16/02/2019

Qty. | Description

Impeller: Stainless steel

EN 1.4401 AISI 316

Bearing: SIC

Installation:

Maximum ambient temperature: 40 °C Maximum operating pressure: 25 bar

Max pressure at stated temp: 25 bar / 120 °C

25 bar / -20 °C

Type of connection: DIN / ANSI / JIS

Size of inlet connection: DN 40

1 1/2 inch

Size of outlet connection: DN 40

1 1/2 inch

Pressure rating for pipe connection: PN 25 Flange rating inlet: 300 lb Flange size for motor: FT85

Electrical data:

Motor standard: IEC
Motor type: 71A
IE Efficiency class: IE3
Rated power - P2: 0.37 kW
Power (P2) required by pump: 0.37 kW
Mains frequency: 50 Hz

Rated voltage: 3 x 220-240D/380-415Y V

Rated current: 1.74/1.00 A Starting current: 490-530 % Cos phi - power factor: 0.80-0.70 Rated speed: 2850-2880 rpm Efficiency: IE3 73,8% Motor efficiency at full load: 73.8 % Motor efficiency at 3/4 load: 79.0 % Motor efficiency at 1/2 load: 75.5 %

Number of poles: 2

Enclosure class (IEC 34-5): 55 Dust/Jetting

Insulation class (IEC 85): F

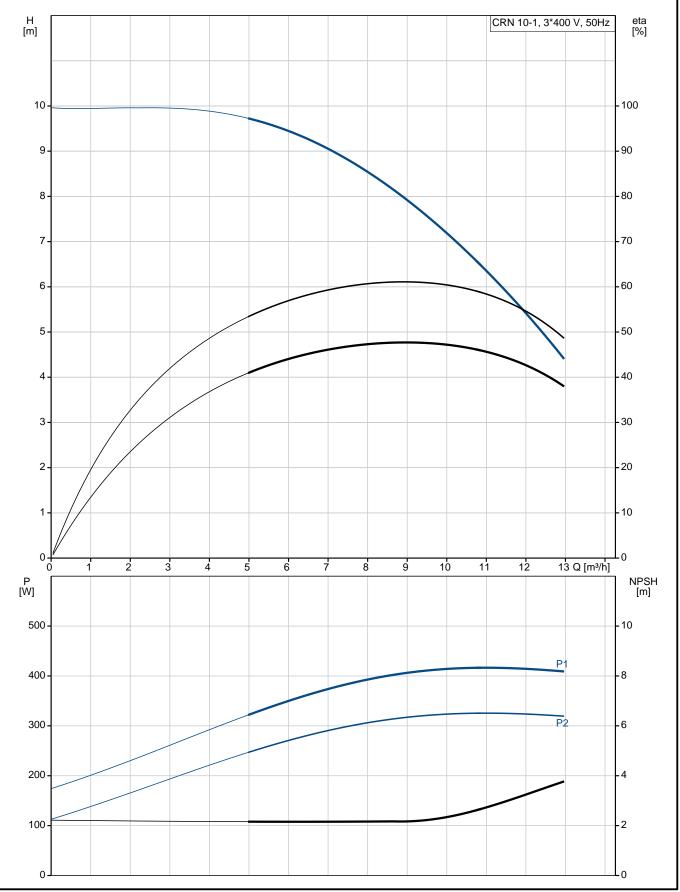
Others:

Minimum efficiency index, MEI ≥: 0.70
Net weight: 32 kg
Gross weight: 36 kg
Shipping volume: 0.08 m³



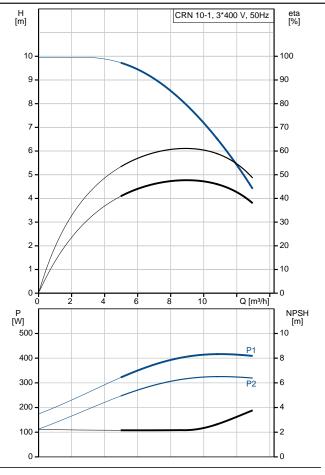
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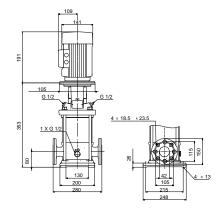
96501056 CRN 10-1 A-FGJ-A-E-HQQE 50 Hz

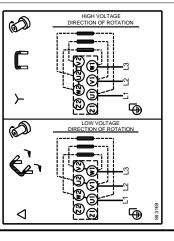




Description	Value
General information:	
Product name:	CRN 10-1 A-FGJ-A-E-HQQE
Product No:	96501056
EAN number:	5700396214474
Technical:	
Pump speed on which pump data are based:	2873 rpm
Rated flow:	10 m³/h
Rated head:	7.1 m
Head max:	9.9 m
Stages:	2
Impellers:	1
Number of reduced-diameter impellers:	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:	Stainless steel
	EN 1.4408
	AISI 316
Impeller:	Stainless steel
	EN 1.4401
Matarial and	AISI 316
Material code:	A F
Code for rubber:	_
Bearing: Installation:	SIC
Maximum ambient temperature:	40 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 120 °C
wax produce at stated temp.	25 bar / -20 °C
Type of connection:	DIN / ANSI / JIS
Size of inlet connection:	DN 40
<u> </u>	1 1/2 inch
Size of outlet connection:	DN 40
	1 1/2 inch
Pressure rating for pipe connection:	PN 25
Flange rating inlet:	300 lb
Flange size for motor:	FT85
Connect code:	FGJ
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:	71A
IE Efficiency class:	IE3
Rated power - P2:	0.37 kW
Power (P2) required by pump:	0.37 kW
Mains frequency:	50 Hz







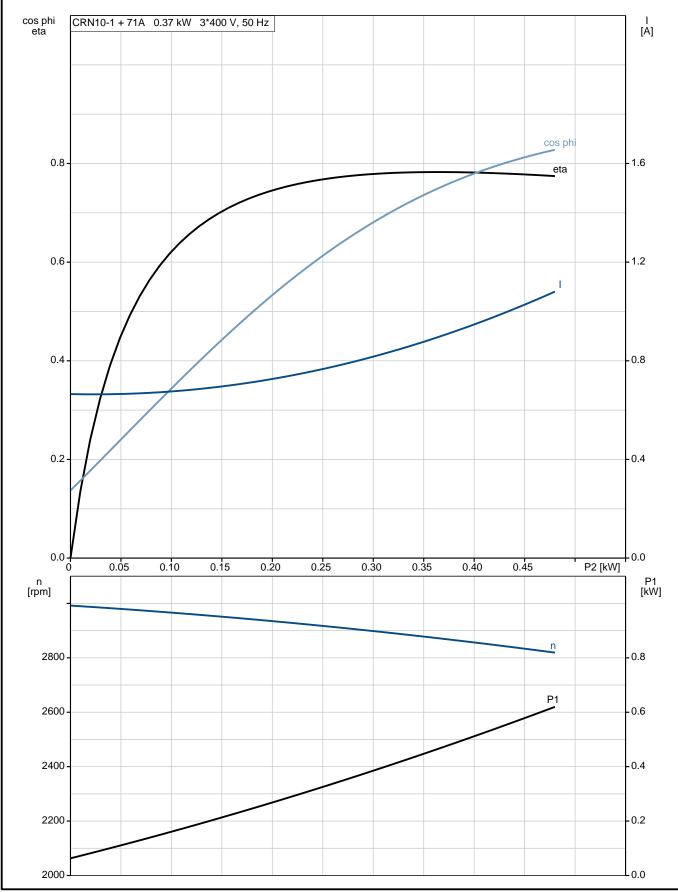


Description	Value
Rated voltage:	3 x 220-240D/380-415Y V
Rated current:	1.74/1.00 A
Starting current:	490-530 %
Cos phi - power factor:	0.80-0.70
Rated speed:	2850-2880 rpm
Efficiency:	IE3 73,8%
Motor efficiency at full load:	73.8 %
Motor efficiency at 3/4 load:	79.0 %
Motor efficiency at 1/2 load:	75.5 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	NONE
Motor No:	85805102
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	32 kg
Gross weight:	36 kg
Shipping volume:	0.08 m³



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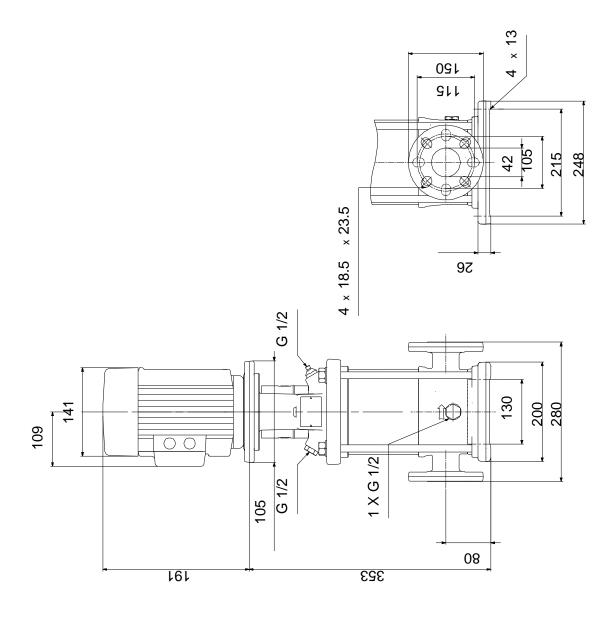
96501056 CRN 10-1 A-FGJ-A-E-HQQE 50 Hz





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96501056 CRN 10-1 A-FGJ-A-E-HQQE 50 Hz



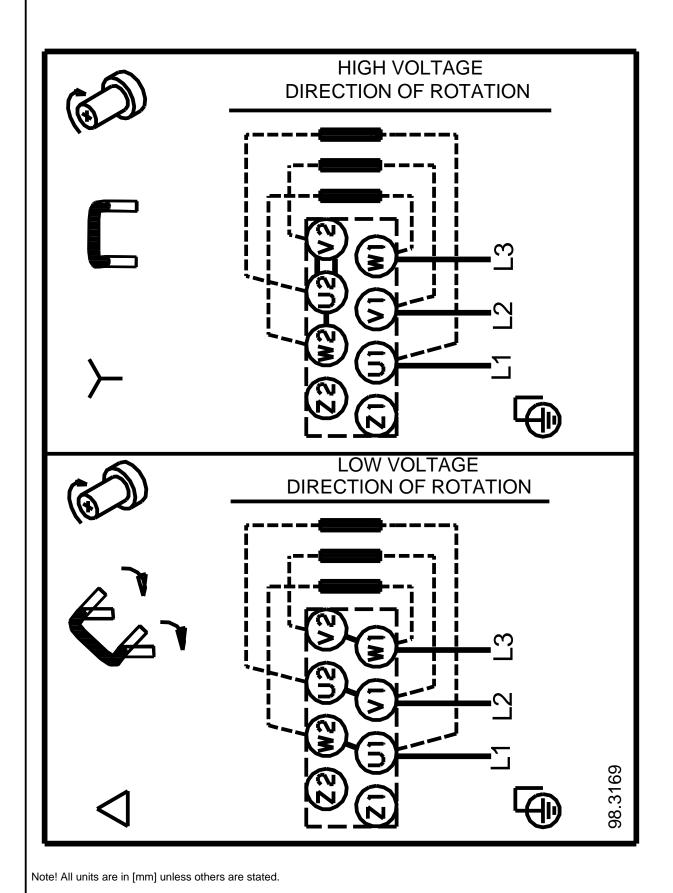
Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



Date:

16/02/2019

96501056 CRN 10-1 A-FGJ-A-E-HQQE 50 Hz

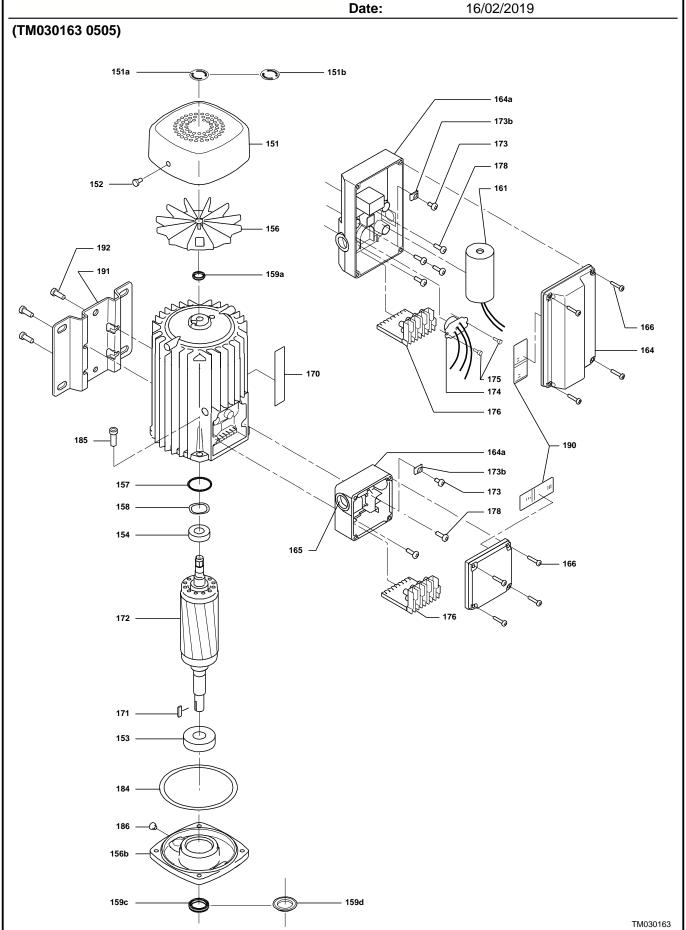




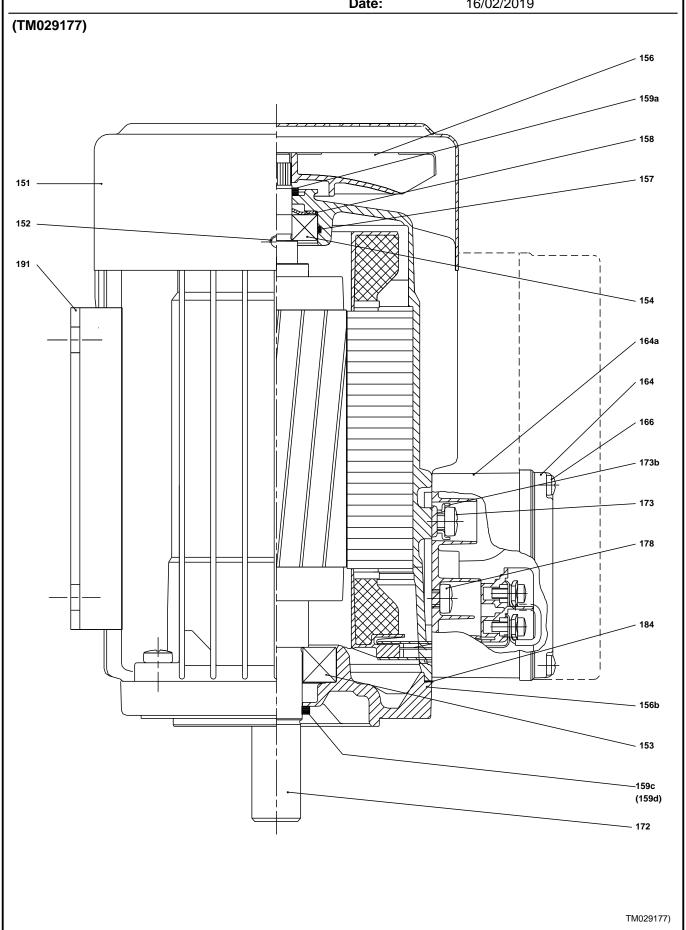
Date: 16/02/2019 (tm069460 for MECR 10 standard) 62 -28a --65 45 25 26c 26b



Date:









Date: 16/02/2019

Spare parts CRN 10-1, Product No. 96501056 Valid from 1.1.2004 (0401)

Pos	Description	Annotation	Classification Data	Part no.		. Unit
	Kit, chamber stack			96491720	1	pcs
80	Chamber stack					1
4a	Intermediate chamber cpl.					
	Sand Lifter					
	Guide cup					
	Bearing plate					
	Guide vane					
3	Intermediate chamber					
45	Neck ring cpl.					
47	Bearing bush					
65	Retainer					
4	Chamber cpl.					
3	Chamber					
26a	Strap cpl.					
26.c	Washer		Designation: DIN 125A			
			Thickness: 1,6			
26.b	Hex head screw					
44b	Inlet part					
44a	Inlet part cpl.					
	Inlet part					
45	Neck ring cpl.					
65	Retainer					
47	Bearing ring					
49	Impeller cpl.					
51	Shaft, spline, cpl.					
62	Retaining ring					
64d	Spacing bush					
64a	Spacer					
64a	Spacing bush		Length (mm): 9.00			
64.d	Spacing bush		Length (mm): 12.7			
66	Wedge lock washer		Lengur (mm). 12.7			
67	Lock nut		Thread: M8			
07	Kit, coupling		Tilleau. Wo	96511315	1	200
				90311313		pcs
0	Adjusting fork		Designation, DIN 042			1
9	Hex socket head cap screw		Designation: DIN 912			4
			Length (mm): 20			
40	0 " 1 "		Thread: M6			•
10a	Coupling half		Diaments 5			2
10	Shaft pin		Diameter: 5			1
	160		Length (mm): 26		_	
	Kit, coupling guard			96509611		pcs
7.a	Combi Slot Torx screw					4
7	Coupling guard					2
	Kit, gaskets			96509609	1	pcs
	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			



Pos	Description	Annotation Classification Data	Part no.	Qty	<u>. U</u>
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		96511312	1	р
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
	- 3	Material type: EPDM			
		Thickness: 2,4			
38	O-ring	Diameter: 16,3			1
55	○ 11119	Material type: FKM			•
		Thickness: 2,4			
38	Oring	Diameter: 16,3			2
30	O-ring	· · · · · · · · · · · · · · · · · · ·			2
		Material type: FKM			
00		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	р
	Emery cloth				1
	Grinding device				1
105	Shaft seal	Material type: HQQE			1
	Kit, wear parts		96511889	1	р
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
20.0	***************************************	Thickness: 1,6			_
26.b	Hex head screw	11110111033. 1,0			2
26.b 45					7
	Neck ring cpl.				
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
		Tll. 140			4
67	Lock nut	Thread: M8			1



Pos		Annotation	Classification Data	<u>-</u>	/. Un
	Kit, Ball bearing			96279730	1
111	Ball bearing		Designation: 6204.2	Z.C3.SYN	
111	Ball bearing				
157	O-ring		Diameter: 32		
			Material type: NBR		
			Thickness: 2		
158	Waved washer		THIORITOGO. Z		
130	Kit, fan			96279721	4
450	<u> </u>			90279721	ı
156	Fan				
159a	<u> </u>				
	Kit, fan cover			96279720	1
151	Fan cover				
152	Pan head thread forming screw				
	Kit, flange			96279727	1
156b	Flange				
159c					
184	Gasket		Internal diameter: 1	14 80	
			Outer diameter: 121,20	,	
			Thickness: 0,25		
185	Pan hood corous		THICKITESS. U,ZJ		
	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: SQUA	RE	
	· · · · · · · · · · · · · · · · · · ·		Internal diameter: 5,5		
			Outer diameter: 10X10		
470	D		Thickness: 1,5		
173a					
173	Pan head thread forming screw		Designation: COMB		
173	Pan head screw		Designation: DIN 79		
175	Pan head screw		Designation: DIN 79	985	
176	Terminal cpl.				
2	Pump cover			98481138 1	рс
4a	Intermediate chamber cpl.			98371088 1	рс
3	Intermediate chamber				1
4	Chamber cpl.			98371075 1	pc
6	Base			98892305 1	рс
7.a	Bulk, Combi Slot Torx screw (1000 pcs)		Diameter 5	96886324 4	рс
10	Bulk, Shaft pin (10 pcs)		Diameter: 5	96536473 1	рс
			Length (mm): 26		
18	Bulk, Air vent screw (5 pcs)			96547461 1	рс
18	Air vent screw			95061351 1	рс
25	Bulk, Plug (10 pcs)			96536013 1	рс
26a	Strap cpl.			98984427 2	рс
26.c	Bulk, Washer (4 pcs)		Designation: DIN 125A	99262704 2	рс
	, (. p /		Thickness: 1,6	· -	۳,
26.c	Washer		Designation: DIN 125A	96586880 2	no
20.0	vvasilei			20300000 Z	рс
00	0, 1, 1,		Thickness: 1,6	00005407	
26	Staybolt			98925107 4	рс
37.a	Bulk, O-ring (20 pcs)			96538857 1	рс
38a	Bulk, O-ring (10 pcs)		Diameter: 5,3	99198791 1	рс
			Material type: EPDM		
			Thickness: 2,4		



	Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
	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			98814593	1	pcs
+	44a	Inlet part cpl.			98890953	1	pcs
	47	Bulk, Bearing ring (10 pcs)			96538795	1	pcs
	49	Impeller cpl.			98459841	1	pcs
-	51	Shaft, spline, cpl.			98368625	1	pcs
	62	Retaining ring			965880	22 1	
	55	Outer sleeve			98812631	1	pcs
	56	Base plate			98824711	1	pcs
	60	Bulk, Spring (20 pcs)			96538963	4	pcs
	64d	Bulk, Spacing bush (20 pcs)			96538961	1	pcs
	64d	Bulk, Spacing bush (20 pcs)			96535114	1	pcs
	64a	Bulk, Spacer (20 pcs)			97516851	1	pcs
	64a	Bulk, Spacing bush (20 pcs)		Length (mm): 9.00	96538950	1	pcs
	64.d	Bulk, Spacing pipe (5 pcs)		Length (mm): 12.7	97980241	1	pcs
	66	Bulk, Wedge lock washer (10 pcs)			96536157	1	pcs
	67	Bulk, Lock nut (10 pcs)		Thread: M8	98277008	1	pcs
	76a	Bulk, Rivet (100 pcs)			96620489	1	pcs
	105	Bulk, Shaft seal (11 pcs)		Material type: HQQE	96538914	1	pcs
	203	Helical compression spring			96547671	2	pcs