

18/02/2019

Qty. | Description

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#### CR 64-7-1 A-F-A-E-HQQE



Note! Product picture may differ from actual product

Product No.: 96123544

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 DIN 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.

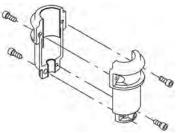
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.

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 long split coupling connects the pump and motor shaft. It is enclosed in the motor stool by means of two coupling guards. The long coupling makes it possible to replace the shaft seal without removing the motor from the pump.

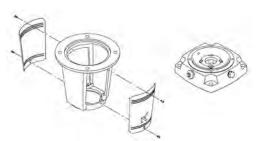


The motor stool connects the pump head and motor. The pump head has a combined 1/2" priming plug and vent screw.



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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.

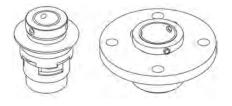
Primary seal:

- Rotating seal ring material: silicon carbide (SiC)
- 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 retained in the pump head by a cover and screws. It can be replaced without removing the motor.

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 base is made of cast iron. Both the inlet and the outlet side of the base have two pressure gauge tappings. The pump is secured to the foundation by four bolts through the base plate. The flanges are fastened to the base by means of locking rings.



### Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).

Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II). Electrical tolerances comply with IEC 60034.

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

The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.

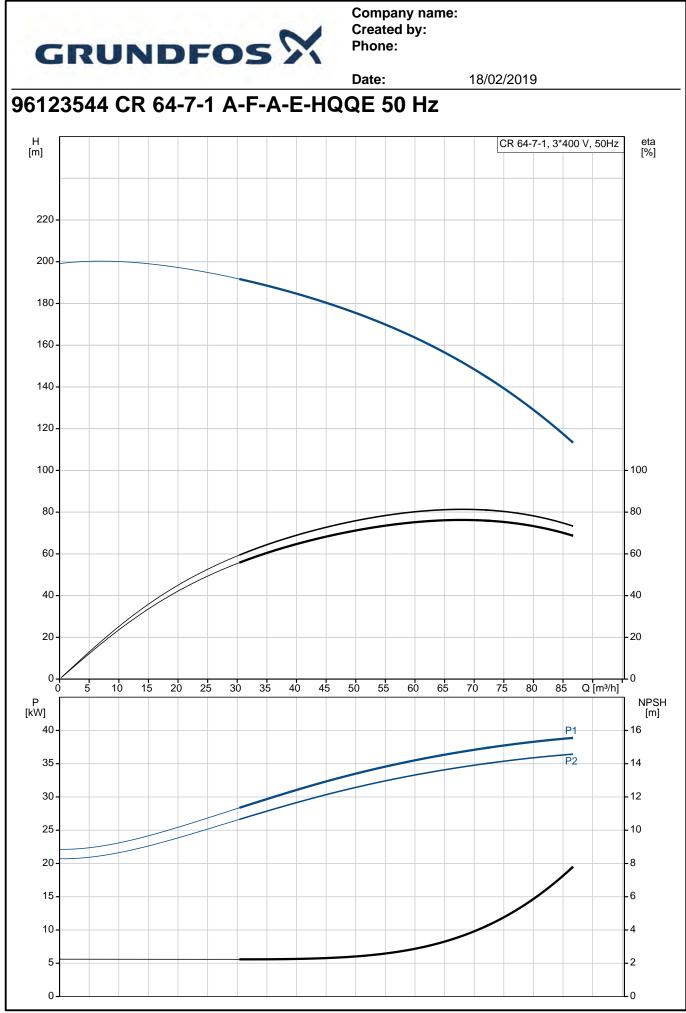
The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.



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Iange size for motor:FF350Ilectrical data:Motor standard:IECMotor type:SIEMENSE Efficiency class:IE3Rated power - P2:37 kWPower (P2) required by pump:37 kWMains frequency:50 HzRated voltage:3 x 380-420D/660-725Y V			
Clectrical data:         Motor standard:       IEC         Motor type:       SIEMENS         E Efficiency class:       IE3         Rated power - P2:       37 kW         Power (P2) required by pump:       37 kW         Mains frequency:       50 Hz         Rated voltage:       3 x 380-420D/660-725Y V			
Notor standard:IECNotor type:SIEMENSE Efficiency class:IE3Lated power - P2:37 kWPower (P2) required by pump:37 kWNains frequency:50 HzLated voltage:3 x 380-420D/660-725Y V	Flange size for motor:	FF350	
Notor type:SIEMENSE Efficiency class:IE3Lated power - P2:37 kWLower (P2) required by pump:37 kWMains frequency:50 HzLated voltage:3 x 380-420D/660-725Y V	Electrical data:		
E Efficiency class:IE3Lated power - P2:37 kWLower (P2) required by pump:37 kWMains frequency:50 HzLated voltage:3 x 380-420D/660-725Y V	Motor standard:	IEC	
Rated power - P2:37 kWPower (P2) required by pump:37 kWPains frequency:50 HzRated voltage:3 x 380-420D/660-725Y V	Motor type:	SIEMENS	
Power (P2) required by pump:37 kWMains frequency:50 HzBated voltage:3 x 380-420D/660-725Y V	IE Efficiency class:	IE3	
Iains frequency:50 HzBated voltage:3 x 380-420D/660-725Y V	Rated power - P2:		
ated voltage: 3 x 380-420D/660-725Y V	Power (P2) required by pump:	37 kW	
•	Mains frequency:		
lated current: 68 0-63 0/39 0-36 0 Δ	Rated voltage:		
	Rated current:	68,0-63,0/39,0-36,0 A	
	Starting current:		
	Cos phi - power factor:		
	Rated speed:		
	Efficiency:		
	Motor efficiency at full load:		
	Motor efficiency at 3/4 load:		
	Motor efficiency at 1/2 load:		
	Motor efficiency at 1/2 load: Number of poles:		



0	GRUNDFO	DS X	Phone:		
			Date:	18/02/2019	
-	Description				
	Enclosure class (IEC 34-5): Insulation class (IEC 85):	55 Dust/Jetting F			
	Insulation class (IEC 85):	F			
	Others:				
	Minimum efficiency index, MEI a	à‰¥: 0.70			
	Net weight: Gross weight:	369 kg 413 kg			
	Shipping volume:	0.808 m <sup>3</sup>			
	Danish VVS No.:	385908071			
1					



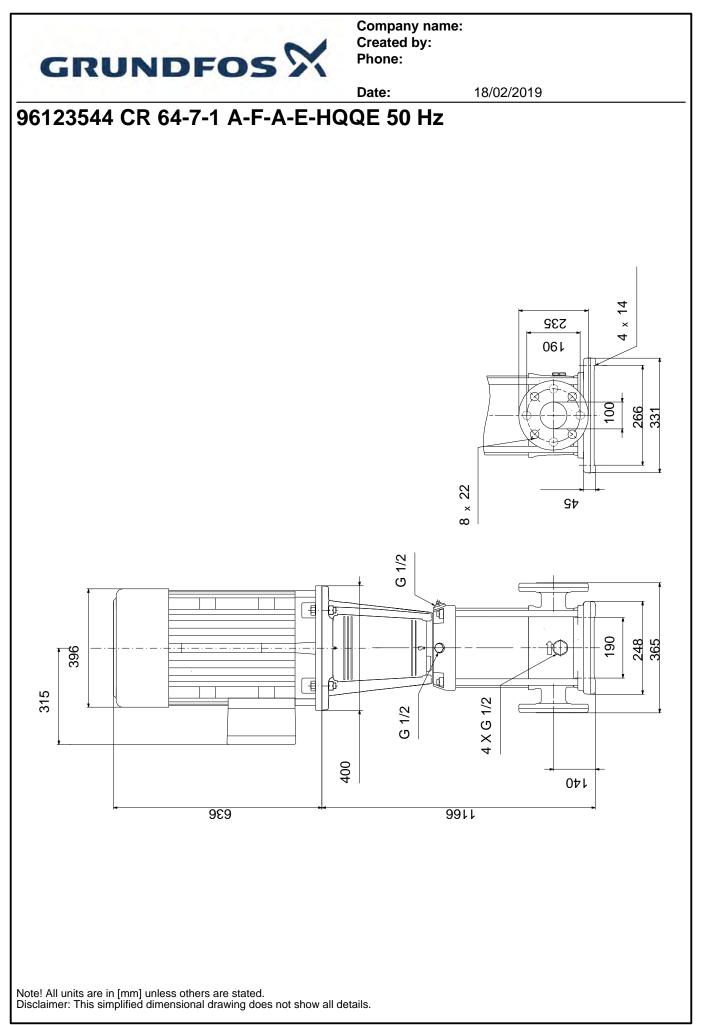


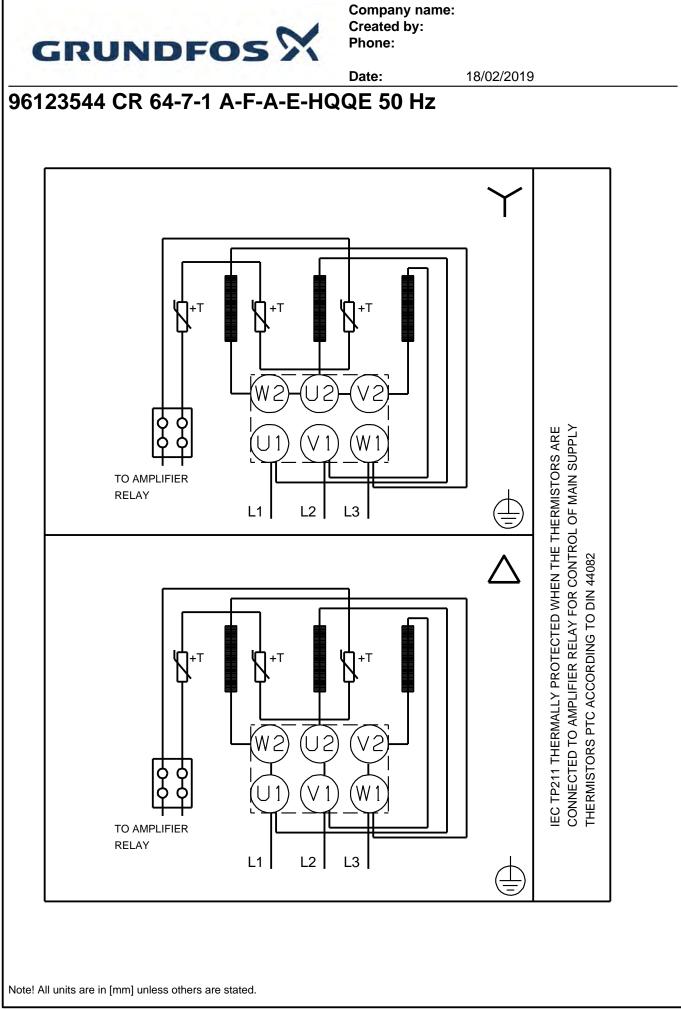
		Date:	18/02	2/2019		
Description	Value	H [m]		CR 64-7-	I, 3*400 V, 50Hz	eta [%]
General information:						
Product name:	CR 64-7-1 A-F-A-E-HQQE	220 -				
Product No:	96123544	200 -				
EAN number:	5700396697543	180 -				
Technical:				$\mathbf{N}$		
Pump speed on which pump data are based:	2957 rpm	160 <b>-</b> 140 <b>-</b>				
Rated flow:	64 m³/h					
Rated head:	154.7 m	120 -				
Head max:	196.9 m	100 -				- 100
Stages:	7					
Impellers:	7	80 -				- 80
Number of reduced-diameter impellers:	1	60 -				- 60
Low NPSH:	Ν	40 -				- 40
Pump orientation:	Vertical	40-				- 40
Shaft seal arrangement:	Single	20-				- 20
Code for shaft seal:	HQQE	0				Lo
Approvals on nameplate:	CE, EAC,ACS	0 10	20 30 40	50 60 7	0 Q [m³/h]	
Curve tolerance:	ISO9906:2012 3B	P [kW]			P1	NPSH [m]
Pump version:	A					
Model:	В	35 -			P2	- 14
Materials:		30 -				- 12
Base:	Cast iron	25 -				- 10
	EN 1563 EN-GJS-500-7	20 <b>-</b> 15 <b>-</b>			/	-8 -6
	ASTM A536 80-55-06	10 -				- 4
Impeller:	Stainless steel	5-				-2
	EN 1.4301	o				Lo
	AISI 304	۹				
Material code:	А	315				
Code for rubber:	E					
Bearing:	SIC					
Support bearing:	Graflon	8 HII				
Installation:						
Maximum ambient temperature:	55 °C					
Maximum operating pressure:	30 bar	400	i i i i i i i i i i i i i i i i i i i			
Max pressure at stated temp:	30 bar / 120 °C					
	30 bar / -30 °C	G 1/2	<u>G 1/2</u>			
Type of connection:	DIN	¥				
Size of inlet connection:	DN 100	4 x G 1/2				
Size of outlet connection:	DN 100			235 19		
Pressure rating for pipe connection:	PN 40					
Flange size for motor:	FF350	248 365	26	6 <u>4 × 14</u>		
Connect code:	F					
Liquid:			Y			
Pumped liquid:	Water		'			
Liquid temperature range:	-30 120 °C		1 J			
Liquid temperature during operation:	20 °C	N <sup>**</sup> ■ N <sup>**</sup>				
Density:	998.2 kg/m <sup>3</sup>		<u>oo</u> d			
Electrical data:		1 TT V-		N SUPPLY		
Motor standard:	IEC	TO AMPLIFIER RELAY		OF MAIN		
Motor type:	SIEMENS		Δ	N THE TH CONTROL 4082		
IE Efficiency class:	IE3			AV FOR C		
Rated power - P2:	37 kW	<b>В</b> +т <b>В</b> +т	18+⊤	PROTEC FIER REL CORDING		
Power (P2) required by pump:	37 kW		<u> </u>	PTCAC		
Mains frequency:	50 Hz			P211 THE VECTED 1 MISTOR		
	3 x 380-420D/660-725Y			IEC TP211 CONNECT THERMIST		
Rated voltage:	V	RELAT L1	<sup>12</sup> 13			

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		Date:	18/02/2019
Description	Value		
Rated current:	68,0-63,0/39,0-36,0 A	-	
Starting current:	670-670 %		
Cos phi - power factor:	0.88		
Rated speed:	2955 rpm		
fficiency:	IE3 93,7%		
otor efficiency at full load:	93.7-93.7 %		
lotor efficiency at 3/4 load:	93.9-93.9 %		
Notor efficiency at 1/2 load:	93.5-93.5 %		
lumber of poles:	2		
nclosure class (IEC 34-5):	55 Dust/Jetting		
sulation class (IEC 85):	F		
lotor protec:	PTC		
fotor No:	81U15334		
ontrols:			
requency converter:	NONE		
thers:			
linimum efficiency index, MEI ≥:	0.70		
let weight:	369 kg		
Bross weight:	413 kg		
hipping volume:	0.808 m <sup>3</sup>		
Danish VVS No.:	385908071		

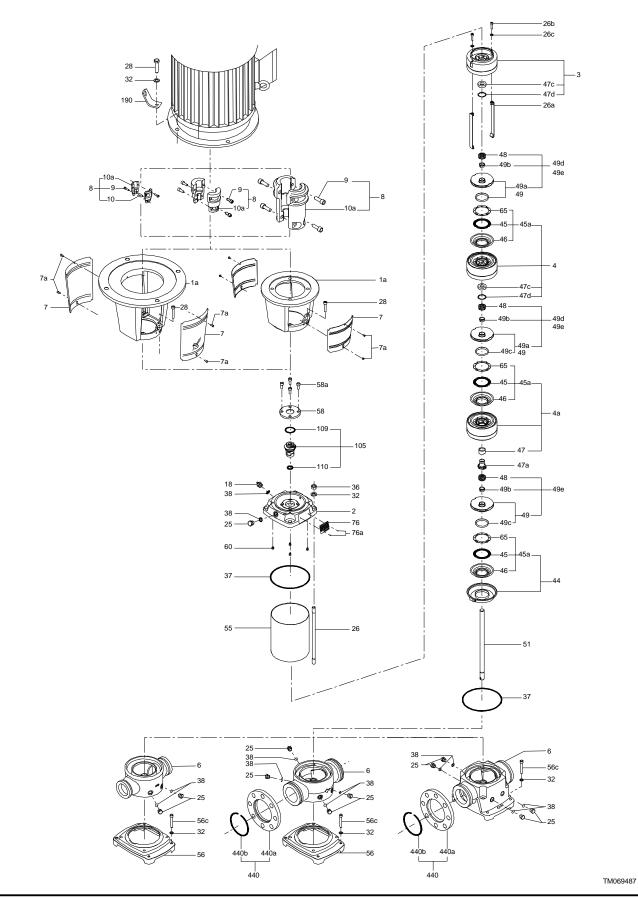






18/02/2019

## (tm069487 for LACR model B standard)

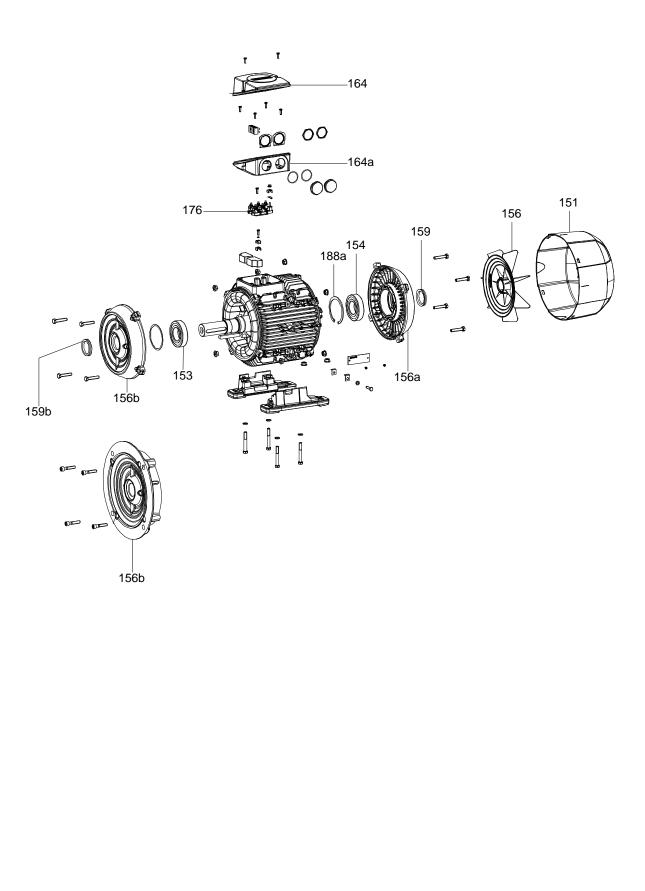


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18/02/2019







18/02/2019

# Spare parts CR 64-7-1, Product No. 96123544 Valid from 3.3.2014 (1410)

Pos	•	Annotation	Classification Data	Part no.	Qty.	
•	Base			96587673	1	pcs
6	Base				1	
80	Chamber stack			96416325	1	pcs
80	Chamber stack				1	
3	Upper chamber cpl.					
	Cone					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
47d	Lock ring					
47c	Bush					
4a	Intermediate chamber cpl.					
	Cone					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
45a	Neck ring cpl.					
45	Seal ring					
46	Neck ring					
65	Top f/neck ring					
47	Bearing					
4	Intermediate chamber cpl.					
	Cone					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
45a	Neck ring cpl.					
45	Seal ring					
46	Neck ring					
65	Top f/neck ring					
47d	Lock ring					
47c	Bush					
26c	Washer		Designation: D	IN 125A		
			Thickness: 1,6			
26b	Hex socket head cap screw					
26a	Strap cpl.					
44	Suction interconnector cpl.					
	Inlet part					
45	Seal ring					
46	Neck ring					
65	Top f/neck ring					
47a	Bearing cpl.					
чıd	Driver					
	Holder					
	Disc spring					
	Bearing ring					
40-						
- 49e	Impeller cpl.					



Pos	Description	Annotation	Classification Data	Part no.	Otv	Unit
48	Nut	Annotation	chaosineation Data	i art no.	aly	. onit
49b	Split cone					
49	Impeller					
	Impeller hub					
49c	Wear ring					
49d	Impeller cpl. reduced diameter					
48	Nut					
49b	Split cone					
49a	Impeller, reduced diameter					
	Impeller hub					
49c	Wear ring					
51	Shaft					
	Kit, chambers			98497500	1	pcs
4a	Intermediate chamber cpl.					1
	Cone					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
45a	Neck ring cpl.					
45	Seal ring					
46	Neck ring					
65	Top f/neck ring					
47	Bearing					
47a	Bearing cpl.					1
	Driver					•
	Holder					
	Disc spring					
	Bearing ring					
	Kit, coupling			96416594	1	pcs
	Adjusting fork					1
8	Coupling cpl.		Dimension: 22/55			1
9	Hex socket head cap screw		Designation: D	IN 912		•
•			Length (mm): 25			
			Thread: M10			
10a	Coupling half					
iou	Kit, coupling guard			96505135	1	pcs
7a	Socket button head screw			0000100		4
7a 7	Coupling guard					+ 2
,	Kit, cover			98832448		2 pcs
58a	Hex socket head cap screw		Designation: DIN 9			4
500	Thex socket mead cap solew		Length (mm): 25	/12		т
			Thread: M10			
58	Cover					1
50	Kit, gaskets			96416599		pcs
	Adjusting fork			55410538		1
37	O-ring					2
38	O-ring O-ring		Diameter: 16,3			2
00			Material type: EPDM			<b>L</b>
			Thickness: 2,4			
38	O-ring		Diameter: 16,3			4
50			Material type: EPDM			7
60	Corina		Thickness: 2,4			1
60	Spring					4
109	O-ring		Diamater 01.0			1
110	O-ring		Diameter: 21,2			1
			Material type: EPDM			
			Thickness: 3,55			



os	Description	Annotation Classification Data Part no.	Qtv.	Unit
00	Kit, impeller		1	pcs
48	Nut		1	•
48	Nut		1	
49b	Split cone		1	
49	Impeller		1	
10	Impeller hub		•	
49c	Wear ring			
400	Kit, Impeller, reduced diamete	98634080	1	pcs
48	Nut	0000-000	' 1	•
48	Nut		י 1	
49b	Split cone		1	
49a	Impeller, reduced diameter		1	
430	Impeller hub			
49c	Wear ring			
490	Kit, plug	96505136	1	000
10		90303130		pcs
18	Air vent screw		1	
	Spindle			
25	Plug		4	
25	Plug		4	
25	Plug	Discussion 40.0	1	
38	O-ring	Diameter: 16,3	2	
		Material type: FKM		
~~		Thickness: 2,4		
38	O-ring	Diameter: 16,3	4	
		Material type: FKM		
		Thickness: 2,4		
38	O-ring	Diameter: 16,3	6	
		Material type: FKM		
		Thickness: 2,4		
38	O-ring	Diameter: 16,3	2	
		Material type: EPDM		
		Thickness: 2,4		
38	O-ring	Diameter: 16,3	4	
		Material type: EPDM		
		Thickness: 2,4		
	Kit, shaft seal HQQE	96525458	1	pcs
	Grinding device		1	
105	Shaft seal	Material type: HQQE	1	
	Adjusting fork	· · · · · · · · · · · · · · · · · · ·		
109	O-ring			
110	O-ring	Diameter: 21,5		
	-	Material type: EPDM		
		Thickness: 4,25		
	Kit, wear parts	98497495	1	pcs
45	Seal ring		. 8	•
47d	Lock ring		8	
47c	Bush		6	
49c	Wear ring		8	
65	Top f/neck ring		8	
50	Motor		1	pcs
156	Kit, fan	980622		
151	Kit, fan cover	980622		
156b	Kit, flange	980622		
	Kit, lubrication nipple	980625		
156a	Kit, ND-end shield cpl.	980625		
159b	Kit, seal ring	980625		
176	Kit, terminal board	980622		
164a	Kit, terminal box	980622	62 1	



_	Pos	Description	Annotation	Classification Data	Part no.	Qty.	Unit
	1a	Motor stool				1	pcs
	2	Pump head			96547433		pcs
•	3	Upper chamber cpl.			98634144		pcs
	47c	Bulk, Bush (10 pcs)			993211	94	1
+	4	Bulk, Intermediate chamber cpl. (3 pcs)			99481471	4	pcs
+	4a	Bulk, Intermediate chamber cpl. (5 pcs)			99262958	2	pcs
-	4	Bulk, Intermediate chamber cpl. (10 pcs)			99481484	4	pcs
-	45a	Bulk, Neck ring cpl. (10 pcs)			965474	141	1
	45	Bulk, Seal ring (10 pcs)			965	53603	30
	65	Bulk, Top f/neck ring (10 pcs)			96	53601	14
	6	Base			96587690	1	pcs
	7a	Bulk, Socket button head screw (10 pcs)			96549696	4	pcs
	7	Bulk, Coupling guard (10 pcs)			96603279	2	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
	26c	Bulk, Washer (4 pcs)		Designation: DIN 125A	99262704		pcs
		· · · · · · · · · · · · · · · · · · ·		Thickness: 1,6			
	26c	Washer		Designation: DIN 125A	96586880	2	pcs
				Thickness: 1,6		_	
	26b	Bulk, Hex socket head cap screw (10 pcs)			98931380	2	pcs
	26a	Strap cpl.			98983895		pcs
	26	Staybolt		Length (mm): 745	98976739		pcs
	20	Oldyboli		Thread: M16	30370733	7	pcs
	28	Bulk, Hex socket head cap screw (10 pcs)		Designation: DIN 912	96536147	1	nce
	20	Buik, Hex socket head cap sciew (10 pcs)		Length (mm): 50	90550147	4	pcs
				Thread: M10			
	28	Bully Hay hand arrow (20 pag)			07506040	4	n 00
	20	Bulk, Hex head screw (20 pcs)		Length (mm): 60	97506949	4	pcs
	20	Dully Machan (100 non)		Thread: M16	00000054	4	
	32	Bulk, Washer (100 pcs)		Designation: DIN 125 A	98923051	4	pcs
				Internal diameter: 17			
				Outer diameter: 30			
	00			Thickness: 3	00000400		
	36	Bulk, Hex nut (20 pcs)		Thread: M16	96620480		pcs
	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			
-	44	Suction interconnector cpl.			98634152		pcs
	45	Bulk, Seal ring (10 pcs)			965360		
	65	Bulk, Top f/neck ring (10 pcs)			965360		1
+	47a	Bulk, Bearing cpl. (5 pcs)			99270649	2	pcs
+	47a	Bulk, Bearing cpl. (10 pcs)			96535951	2	pcs
	48	Bulk, Nut (3 pcs)			99262680	1	pcs
	48	Bulk, Nut (10 pcs)			99262683	1	pcs
	48	Bulk, Nut (10 pcs)			96536016	1	pcs
-	49e	Bulk, Impeller cpl. (5 pcs)			96536036	6	pcs
	48	Bulk, Nut (3 pcs)			992626		•
	48	Bulk, Nut (10 pcs)			992626		
	48	Bulk, Nut (10 pcs)			965360		
	49b	Bulk, Split cone (10 pcs)			965360		
+	490 49e	Impeller cpl.			98394371		
۲	49e 49b	Bulk, Split cone (10 pcs)			96536010		pcs
	49b 49a						pcs
-	49a 49c	Bulk, Impeller, reduced diameter (5 pcs)			99500075		pcs
	49C	Bulk, Wear ring (10 pcs)			965358	379	1

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_			D	ate:	18/02/2019		
	Pos	Description	Annotation	Classification Data	a Part no.	Qty.	Unit
				Length (mm): 601			
	58	Cover			98893158	1	pcs
	60	Bulk, Spring (20 pcs)			96536032	4	pcs
-	105	Bulk, Shaft seal (12 pcs)		Material type: HQQ	E 96984086	1	pcs
		Adjusting fork			965878	896 1	
	109	Bulk, O-ring (10 pcs)			965475	586 1	
+	105	Bulk, Shaft seal (12 pcs)		Material type: HQQ	E 96984070	1	pcs
	440b	Bulk, Lock ring (4 pcs)			96547435	1	pcs