

## CRI10-09 A-P-I-E-HQQE 3x400D 50 HZ Grundfos pump 96501254




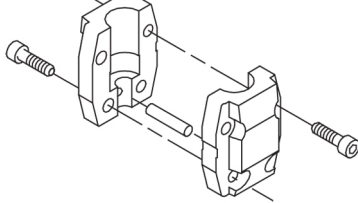
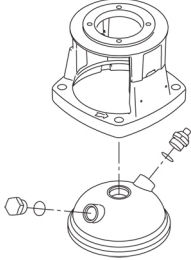
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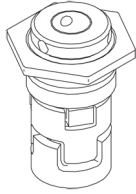
<https://www.lenntech.com/grundfos/CRI10/96501254/CRI-10-9-A-P-I-E-HQQE.html>

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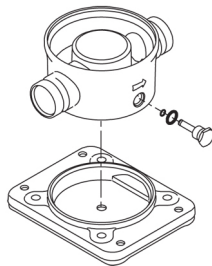
Position	Qty.	Description
	1	<p data-bbox="319 163 606 197"><b>CRI 10-9 A-P-A-E-HQQE</b></p>  <p data-bbox="319 481 598 515">Product No.: On request</p> <p data-bbox="319 548 1428 649">Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid 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 PJE (Victaulic®) couplings.</p> <p data-bbox="319 683 1053 716">The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p data-bbox="319 750 638 784"><b>Further product details</b></p> <p data-bbox="319 784 1444 884">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:</p> <ol data-bbox="319 896 813 1019" style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Zinc phosphating.</li> <li>3) Cathodic electro-deposition.</li> <li>4) Curing to a dry film thickness 18-22 my m.</li> </ol> <p data-bbox="319 1019 1029 1052">The colour code for the finished product is NCS 9000/RAL 9005.</p> <p data-bbox="319 1075 406 1108"><b>Pump</b></p> <p data-bbox="319 1108 1412 1164">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.</p>  <p data-bbox="319 1411 1444 1489">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.</p>  <p data-bbox="319 1792 1428 1892">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 data-bbox="319 1904 470 1937">Primary seal:</p> <ul data-bbox="359 1937 917 1993" style="list-style-type: none"> <li>• Rotating seal ring material: silicon carbide (SiC)</li> <li>• Stationary seat material: silicon carbide (SiC)</li> </ul> <p data-bbox="319 1993 1428 2049">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 data-bbox="319 2049 981 2083">Secondary seal material: EPDM (ethylene-propylene rubber)</p> <p data-bbox="319 2083 1220 2116">EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>



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. The 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 drain plug. The pump is secured to the foundation by four bolts through the base plate. The base is prepared for connection by means of PJE (Victualic®) couplings.



## 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 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.

## Technical data

### Controls:

Frequency converter: NONE

### Liquid:

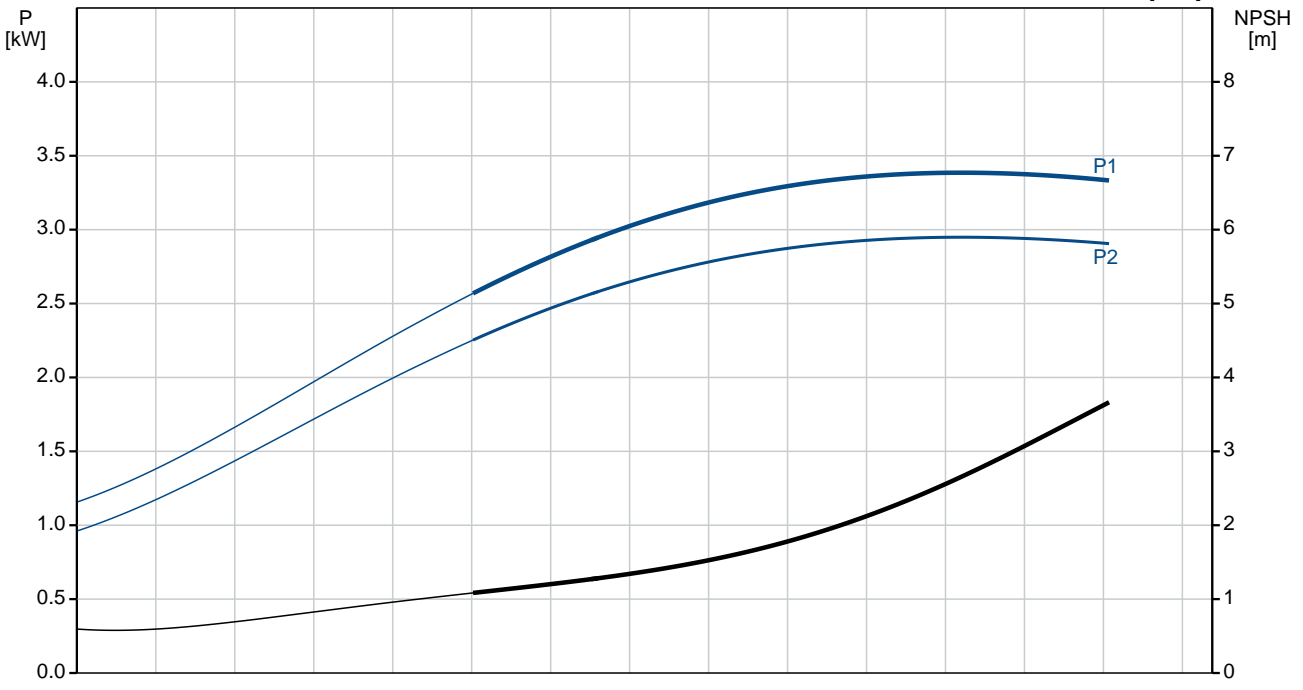
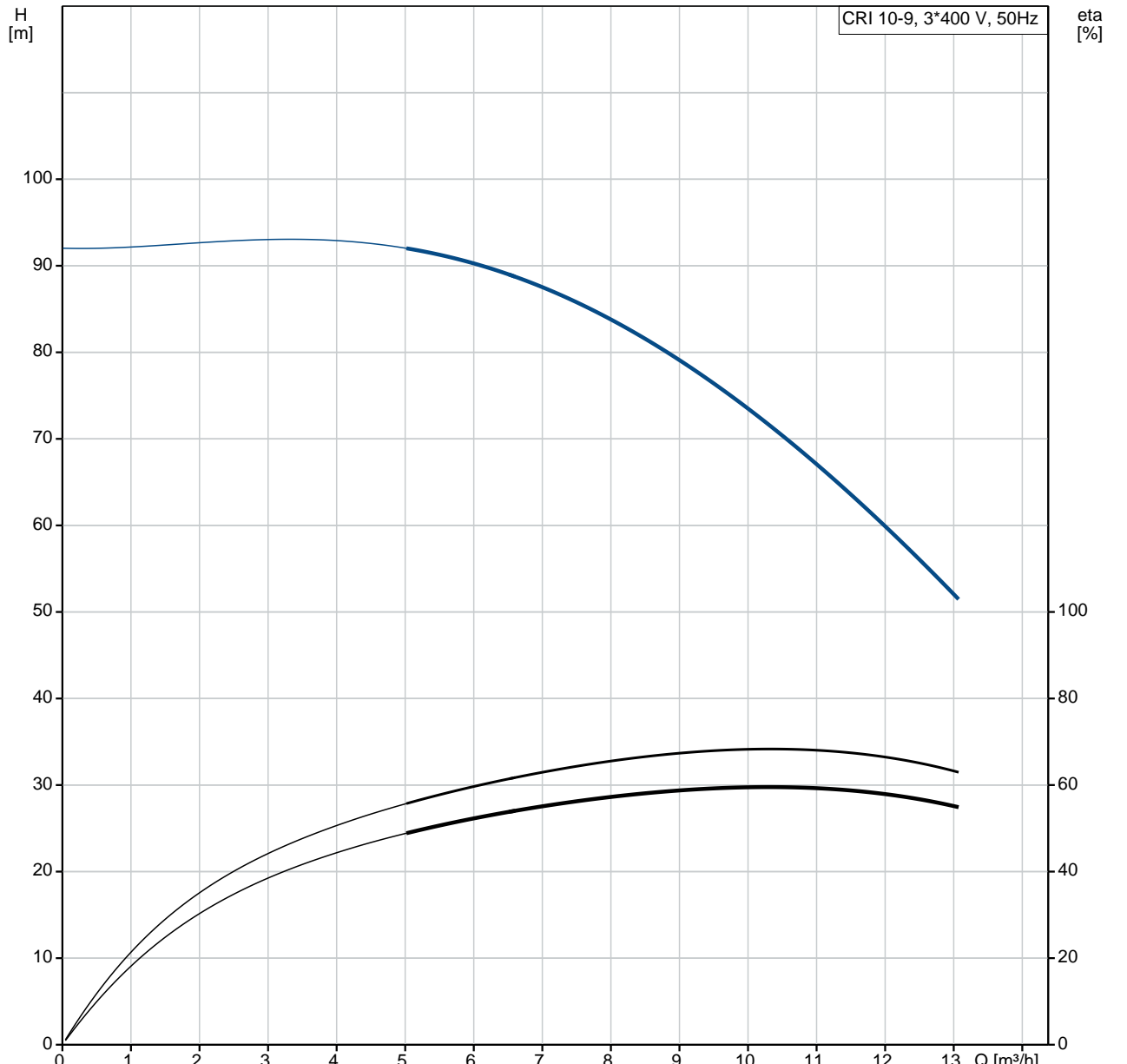
Pumped liquid: Water  
 Liquid temperature range: -20 .. 120 °C  
 Liquid temperature during operation: 20 °C  
 Density: 998.2 kg/m<sup>3</sup>

### Technical:

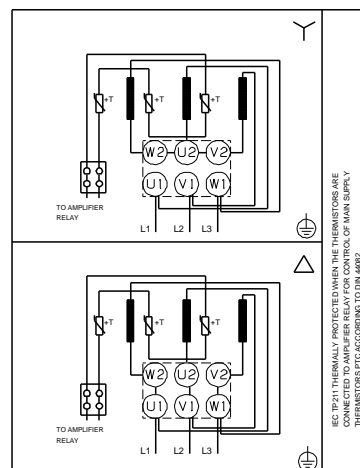
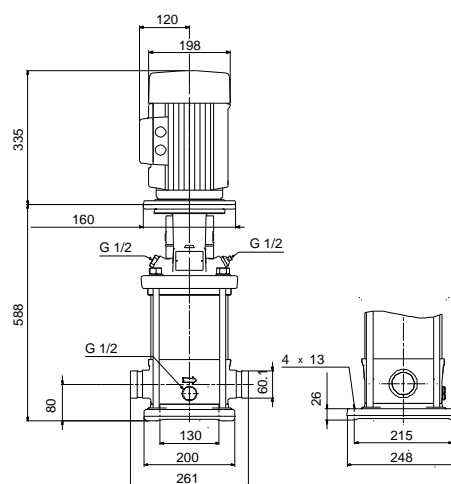
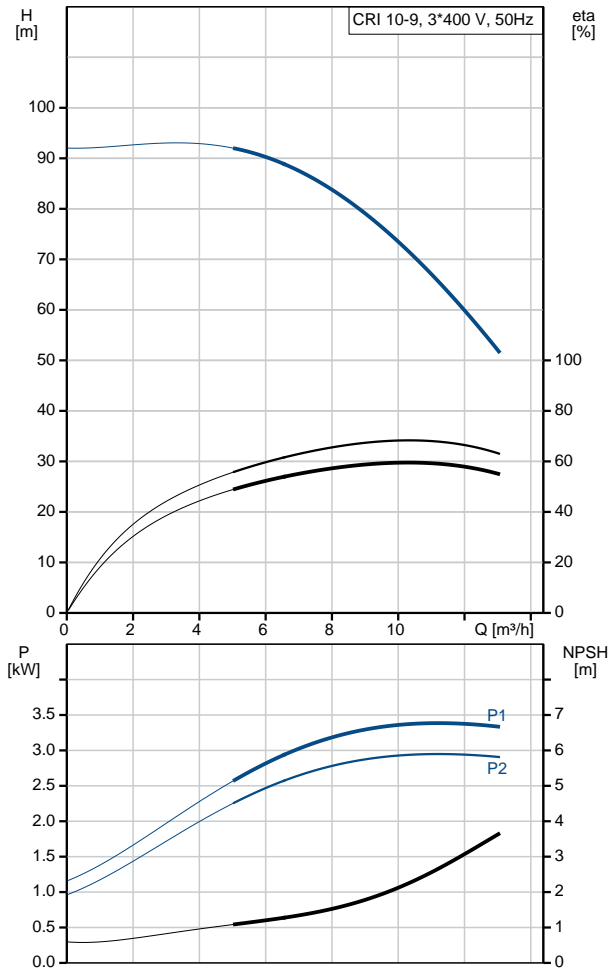
Rated flow: 10 m<sup>3</sup>/h  
 Rated head: 72.3 m  
 Pump orientation: Vertical  
 Shaft seal arrangement: Single  
 Code for shaft seal: HQQE  
 Approvals on nameplate: CE, EAC, ACS  
 Curve tolerance: ISO9906:2012 3B

Position	Qty.	Description
		<p><b>Materials:</b></p> <p>Base: Stainless steel EN 1.4408 AISI 316</p> <p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Bearing: SIC</p> <p><b>Installation:</b></p> <p>Maximum ambient temperature: 60 °C Maximum operating pressure: 16 bar Max pressure at stated temp: 16 bar / 120 °C 16 bar / -20 °C</p> <p>Type of connection: PJE Size of inlet connection: DN 50 2 inch</p> <p>Size of outlet connection: DN 50 2 inch</p> <p>Pressure rating for pipe connection: PN 50 Flange size for motor: FT130</p> <p><b>Electrical data:</b></p> <p>Motor standard: IEC Motor type: 100LC IE Efficiency class: IE3 Rated power - P2: 3 kW Power (P2) required by pump: 3 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D V Rated current: 6.3 A Starting current: 840-920 % Cos phi - power factor: 0.87-0.82 Rated speed: 2900-2920 rpm Efficiency: IE3 87,1% Motor efficiency at full load: 87.1 % Motor efficiency at 3/4 load: 88.0 % Motor efficiency at 1/2 load: 87.7 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F</p> <p><b>Others:</b></p> <p>Minimum efficiency index, MEI : 0.7 Net weight: 56 kg Gross weight: 60 kg Shipping volume: 0.13 m³</p>

# On request CRI 10-9 A-P-A-E-HQQE 50 Hz



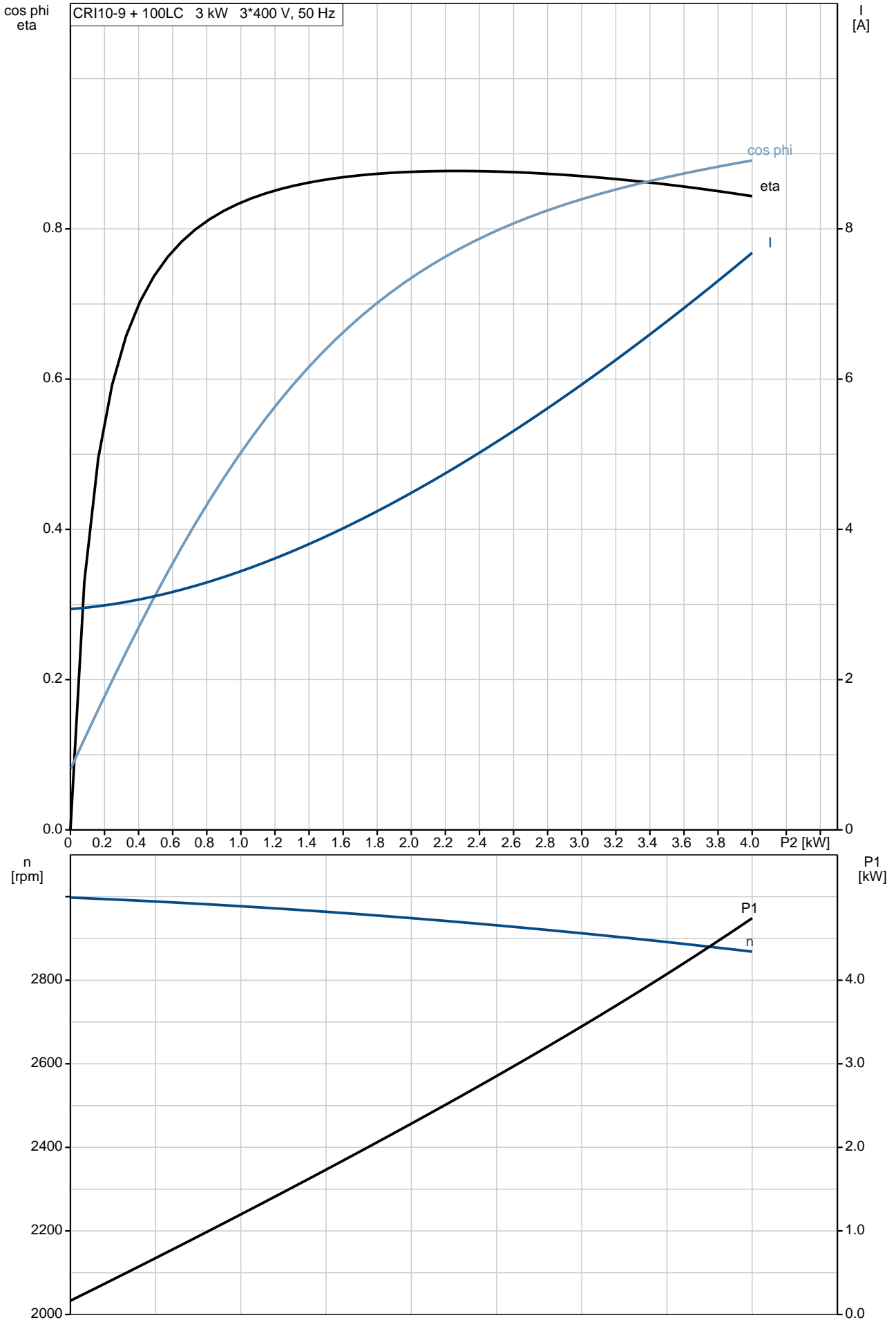
Description	Value
<b>General information:</b>	
Product name:	CRI 10-9 A-P-A-E-HQQE
Product No:	On request
EAN number:	On request
<b>Technical:</b>	
Rated flow:	10 m <sup>3</sup> /h
Rated head:	72.3 m
Stages:	9
Impellers:	9
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
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
<b>Materials:</b>	
Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel EN 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
<b>Installation:</b>	
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:	PJE
Size of inlet connection:	DN 50 2 inch
Size of outlet connection:	DN 50 2 inch
Pressure rating for pipe connection:	PN 50
Flange size for motor:	FT130
Connect code:	P
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor standard:	IEC
Motor type:	100LC
IE Efficiency class:	IE3
Rated power - P2:	3 kW
Power (P2) required by pump:	3 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D V
Rated current:	6.3 A
Starting current:	840-920 %
Cos phi - power factor:	0.87-0.82
Rated speed:	2900-2920 rpm
Efficiency:	IE3 87,1%
Motor efficiency at full load:	87.1 %
Motor efficiency at 3/4 load:	88.0 %
Motor efficiency at 1/2 load:	87.7 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting



Description	Value
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	85U15510
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Minimum efficiency index, MEI :	0.7
Net weight:	56 kg
Gross weight:	60 kg
Shipping volume:	0.13 m <sup>3</sup>

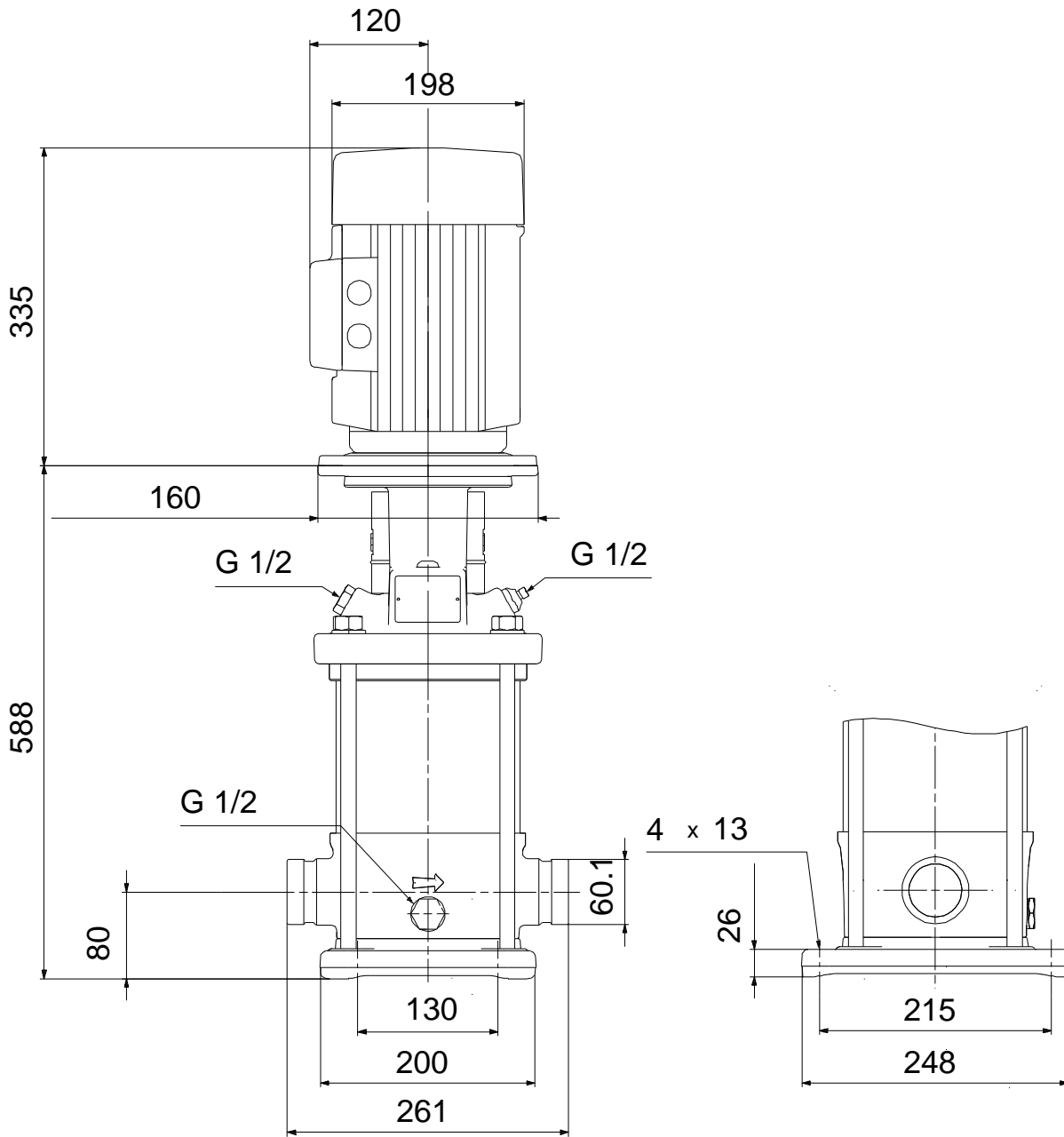
# On request CRI 10-9 A-P-A-E-HQQE 50 Hz

CRI10-9 + 100LC 3 kW 3\*400 V, 50 Hz



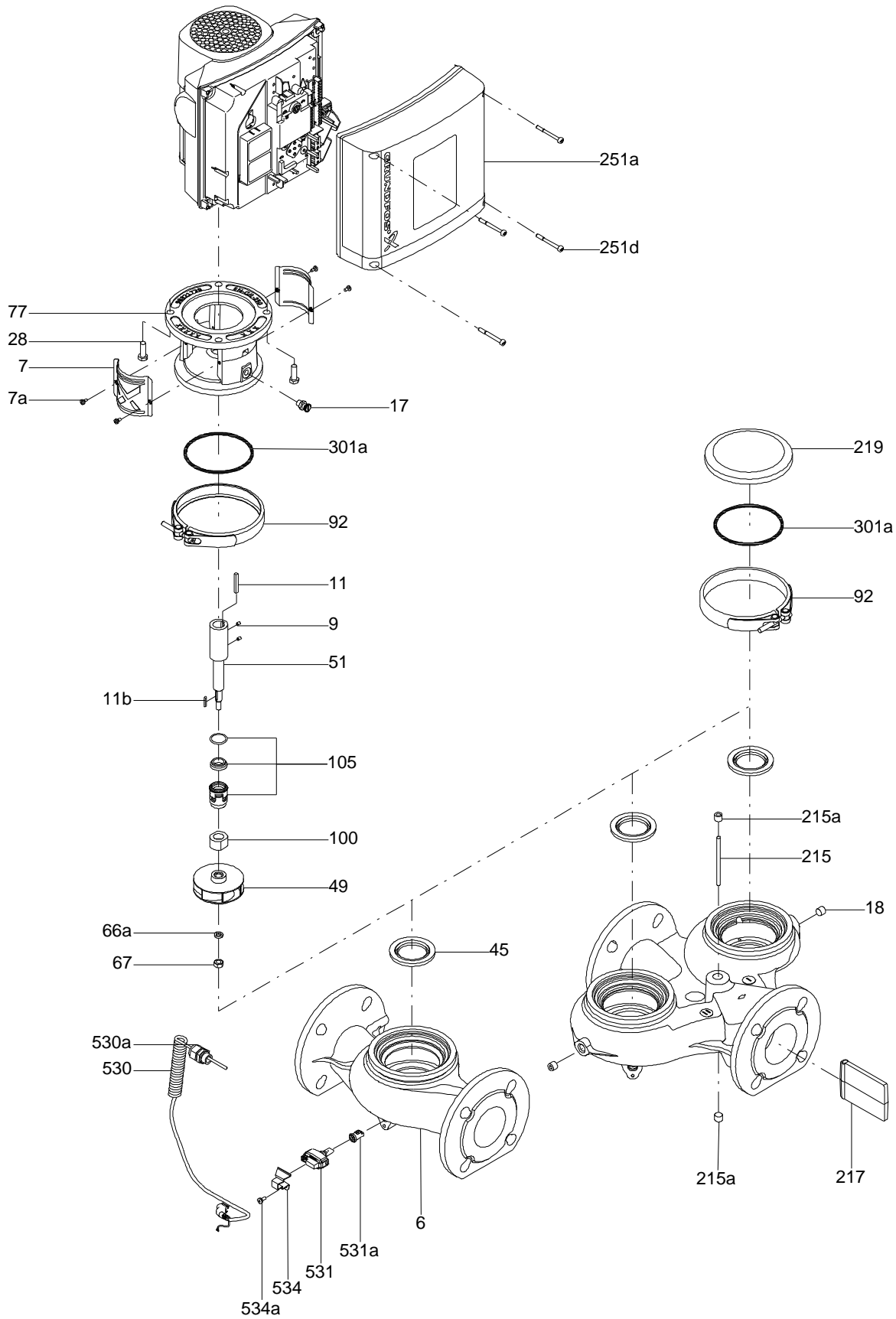


**On request CRI 10-9 A-P-A-E-HQQE 50 Hz**



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

Exploded view



Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view ( TM057026 for MGE model H/I )



**Parts list CRI 10-9, Product No. On request**  
**Valid from 1.1.2011 (1152)**

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+	Motor				1	pcs
-	Base cpl.				1	pcs
6	Base				1	
25	Drain plug				1	
56	Base plate				1	
-	Rubber module				1	pcs
20	Spring				4	
37	O-ring				2	
38	O-ring		Diameter: 16,3		1	
			Material type: EPDM			
			Thickness: 2,4			
38a	O-ring		Diameter: 5,3		1	
			Material type: EPDM			
			Thickness: 2,4			
100	O-ring		Diameter: 16,3		2	
			Material type: EPDM			
			Thickness: 2,4			
- 2	Pump head cpl.				1	pcs
2	Pump head				1	
7	Coupling guard				2	
7.a	Combi Slot Torx screw				4	
- 18	Air vent screw				1	
	Plug				1	
	Spindle				1	
23	Plug				1	
37.a	O-ring				1	
76	Nameplate				1	
76a	Rivet				1	
77	Pump cover				1	
- 8	Coupling cpl.				1	pcs
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M8			
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
10a	Coupling half				2	
26	Staybolt				4	pcs
36	Hex nut		Thread: M16		4	pcs
55	Outer sleeve				1	pcs
66a	Washer		Designation: DIN 125 A		4	pcs
			Internal diameter: 17			
			Outer diameter: 30			
			Thickness: 3			
- 80	Chamber stack		Bearing type: SIC		1	pcs
- 4	Intermediate chamber cpl.				1	
	Guide vane				10	
3	Top intermediate chamber				1	
- 4	Intermediate chamber cpl.				6	
	Guide vane				10	
	Guide cup				1	
3a	Intermediate chamber				1	
45	Neck ring cpl.				1	
65	Retainer				1	
- 4a	Intermediate chamber cpl.				2	
	Guide vane				10	
	Bearing plate				1	
	Bearing bush				1	
	Guide cup				1	
3a	Intermediate chamber				1	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
45	Neck ring cpl.				1	
65	Retainer				1	
26.b	Hex head screw				2	
26.c	Washer		Designation: DIN 125A		2	
			Thickness: 1,6			
26a	Strap cpl.				2	
36	Lock nut		Thread: M8		1	
- 44a	Inlet part cpl.				1	
	Inlet part				1	
	Guide cup				1	
45	Neck ring cpl.				1	
65	Retainer				1	
44b	Inlet part				1	
47a	Bearing ring				2	
49	Impeller cpl.				9	
- 51	Shaft, spline, cpl.				1	
	Bar				0	
62	Stop ring				1	
64	Spacing bush		Length (mm): 9.00		2	
64.d	Spacer				2	
64c	Spacing pipe		Length (mm): 12.7		1	
66	Wedge lock washer				1	
69	Spacing pipe		Length (mm): 29.05		6	
69	Spacing bush		Length (mm): 18.00		1	
105	Shaft seal		Material type: HQQE		1	pcs

*Disclaimer: The information about the Grundfos pump in this document may be outdated.*

*Data may be subject to alterations without further notice.*

*Please contact us to verify the data above is still accurate/up-to-date.*

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