

CRE32-1-1 AN-F-A-E-HQQE 3x380-500 60 HZ

Grundfos pump 98390933



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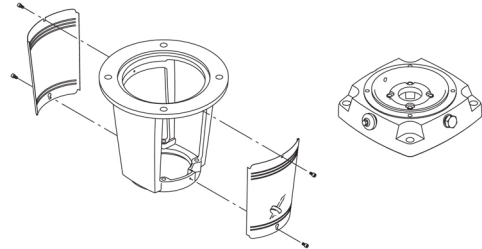
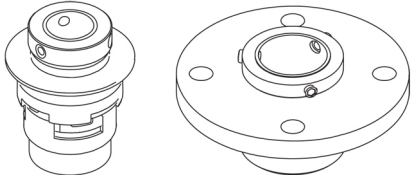
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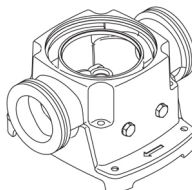
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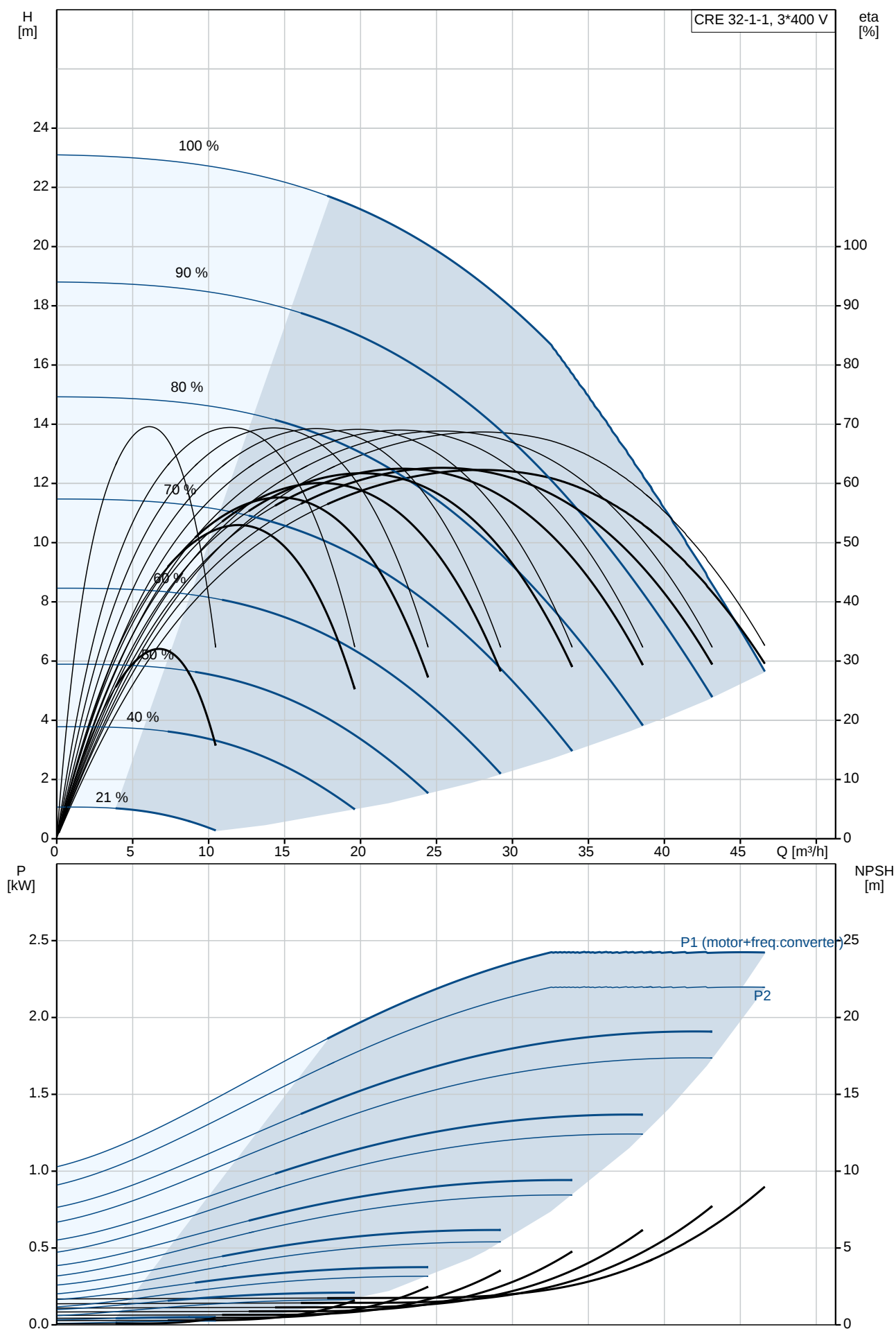
Position	Qty.	Description
	1	CRE 32-1-1 N-F-A-E-HQQE  Note! Product picture may differ from actual product Product No.: On request Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless 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, permanent-magnet, synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2. The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement. An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status: • "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights) • "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights) • "Alarm": Motor has stopped (flashing red indicator lights). Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption". The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required: • two dedicated digital inputs • three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V; the factory-fitted pressure sensor is connected to one of these inputs • 5 V voltage supply to potentiometer and sensor • one analog output, 0-10 V, 0(4)-20 mA • two configurable digital inputs or open-collector outputs • two Pt100/Pt1000 inputs • LiqTec, dry-running protection sensor input • Grundfos Digital Sensor input and output • 24 V voltage supply for sensors • two signal-relay outputs (potential-free contacts) • GENIbus connection • interface for Grundfos CIM fieldbus module. Further product details The pump is equipped with a pressure sensor registering pump outlet pressure and enabling controlled pump operation based on constant pressure. An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status: • "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights) • "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)

Position	Qty.	Description
		"Alarm": Motor has stopped (flashing red indicator lights). Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption". 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 motor stool connects the pump head and motor. 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) - 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.

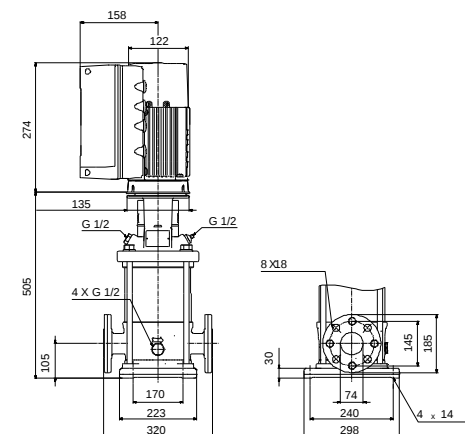
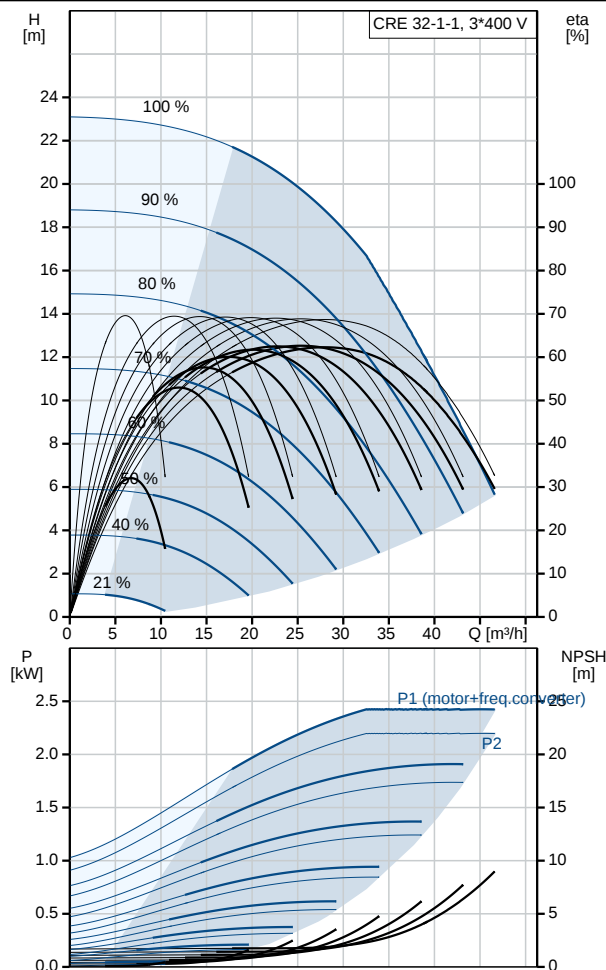
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		The base is made of cast iron. Both the inlet and the outlet side of the base have two pressure gauge tappings. The pump is secured to the foundation by four bolts through the base plate. The flanges are fastened to the base by means of locking rings.  Motor The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with 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 IE5 in accordance with IEC 60034-30-2. The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions. Technical data Controls: <table><tr><td>Frequency converter:</td><td>Built-in</td></tr><tr><td>Pressure sensor:</td><td>Y</td></tr></table> Liquid: <table><tr><td>Pumped liquid:</td><td>Water</td></tr><tr><td>Liquid temperature range:</td><td>-30 .. 120 °C</td></tr><tr><td>Liquid temperature during operation:</td><td>20 °C</td></tr><tr><td>Density:</td><td>998.2 kg/m³</td></tr></table> Technical: <table><tr><td>Rated flow:</td><td>36 m³/h</td></tr><tr><td>Rated head:</td><td>15.6 m</td></tr><tr><td>Pump orientation:</td><td>Vertical</td></tr><tr><td>Shaft seal arrangement:</td><td>Single</td></tr><tr><td>Code for shaft seal:</td><td>HQQE</td></tr><tr><td>Approvals on nameplate:</td><td>CE, EAC,ACS</td></tr><tr><td>Curve tolerance:</td><td>ISO9906:2012 3B</td></tr></table> Materials: <table><tr><td>Base:</td><td>Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06</td></tr><tr><td>Impeller:</td><td>Stainless steel EN 1.4301 AISI 304</td></tr><tr><td>Bearing:</td><td>SIC</td></tr><tr><td>Support bearing:</td><td>Graflon</td></tr></table> Installation: <table><tr><td>Maximum ambient temperature:</td><td>50 °C</td></tr><tr><td>Maximum operating pressure:</td><td>16 bar</td></tr><tr><td>Max pressure at stated temp:</td><td>16 bar / 120 °C 16 bar / -30 °C</td></tr><tr><td>Type of connection:</td><td>DIN</td></tr><tr><td>Size of inlet connection:</td><td>DN 65</td></tr><tr><td>Size of outlet connection:</td><td>DN 65</td></tr><tr><td>Pressure rating for pipe connection:</td><td>PN 40</td></tr><tr><td>Flange size for motor:</td><td>FT115</td></tr></table> Electrical data: <table><tr><td>Motor standard:</td><td>IEC</td></tr><tr><td>Motor type:</td><td>90LD</td></tr><tr><td>IE Efficiency class:</td><td>IE5</td></tr></table>	Frequency converter:	Built-in	Pressure sensor:	Y	Pumped liquid:	Water	Liquid temperature range:	-30 .. 120 °C	Liquid temperature during operation:	20 °C	Density:	998.2 kg/m³	Rated flow:	36 m³/h	Rated head:	15.6 m	Pump orientation:	Vertical	Shaft seal arrangement:	Single	Code for shaft seal:	HQQE	Approvals on nameplate:	CE, EAC,ACS	Curve tolerance:	ISO9906:2012 3B	Base:	Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06	Impeller:	Stainless steel EN 1.4301 AISI 304	Bearing:	SIC	Support bearing:	Graflon	Maximum ambient temperature:	50 °C	Maximum operating pressure:	16 bar	Max pressure at stated temp:	16 bar / 120 °C 16 bar / -30 °C	Type of connection:	DIN	Size of inlet connection:	DN 65	Size of outlet connection:	DN 65	Pressure rating for pipe connection:	PN 40	Flange size for motor:	FT115	Motor standard:	IEC	Motor type:	90LD	IE Efficiency class:	IE5
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Position	Qty.	Description
		Rated power - P2: 2.2 kW Power (P2) required by pump: 2.2 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-500 V Rated current: 4.15-3.40 A Cos phi - power factor: 0.93-0.87 Rated speed: 360-4000 rpm Efficiency: 90.1% Motor efficiency at full load: 90.1 % Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Others: Minimum efficiency index, MEI ≥: 0.7 Net weight: 62.5 kg Gross weight: 85.4 kg Shipping volume: 0.309 m³

On request CRE 32-1-1 N-F-A-E-HQQE 50 Hz

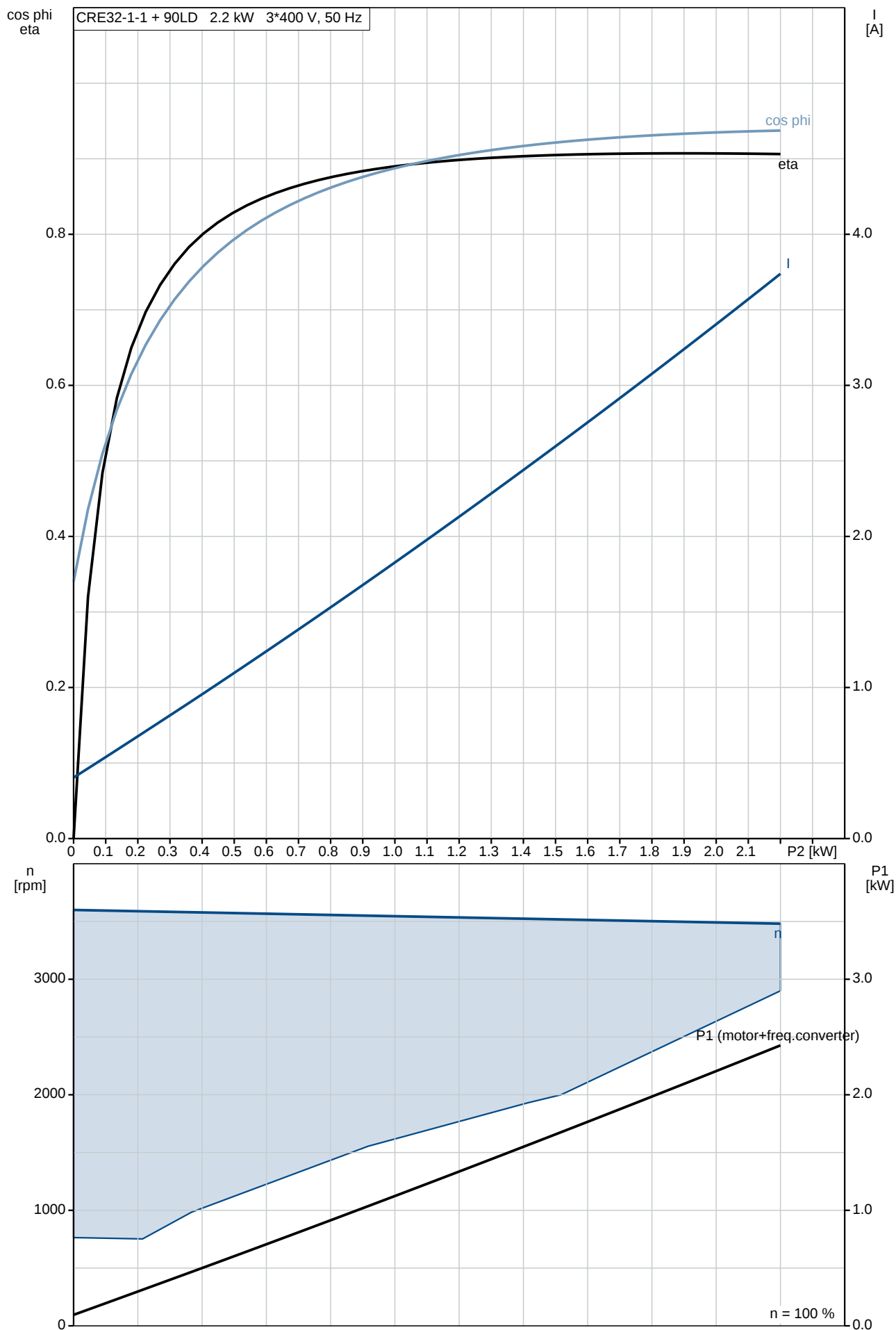


Description	Value
General information:	
Product name:	CRE 32-1-1 N-F-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	36 m³/h
Rated head:	15.6 m
Stages:	1
Impellers:	1
Number of reduced-diameter impellers:	1
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC, ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	N
Model:	B
Materials:	
Base:	Cast iron
	EN 1563 EN-GJS-500-7
	ASTM A536 80-55-06
Impeller:	Stainless steel
	EN 1.4301
	AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Support bearing:	Graflon
Installation:	
Maximum ambient temperature:	50 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
	16 bar / -30 °C
Type of connection:	DIN
Size of inlet connection:	DN 65
Size of outlet connection:	DN 65
Pressure rating for pipe connection:	PN 40
Flange size for motor:	FT115
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-30 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor standard:	IEC
Motor type:	90LD
IE Efficiency class:	IE5
Rated power - P2:	2.2 kW
Power (P2) required by pump:	2.2 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	4.15-3.40 A
Cos phi - power factor:	0.93-0.87
Rated speed:	360-4000 rpm
Efficiency:	90.1%
Motor efficiency at full load:	90.1 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	98190193
Controls:	

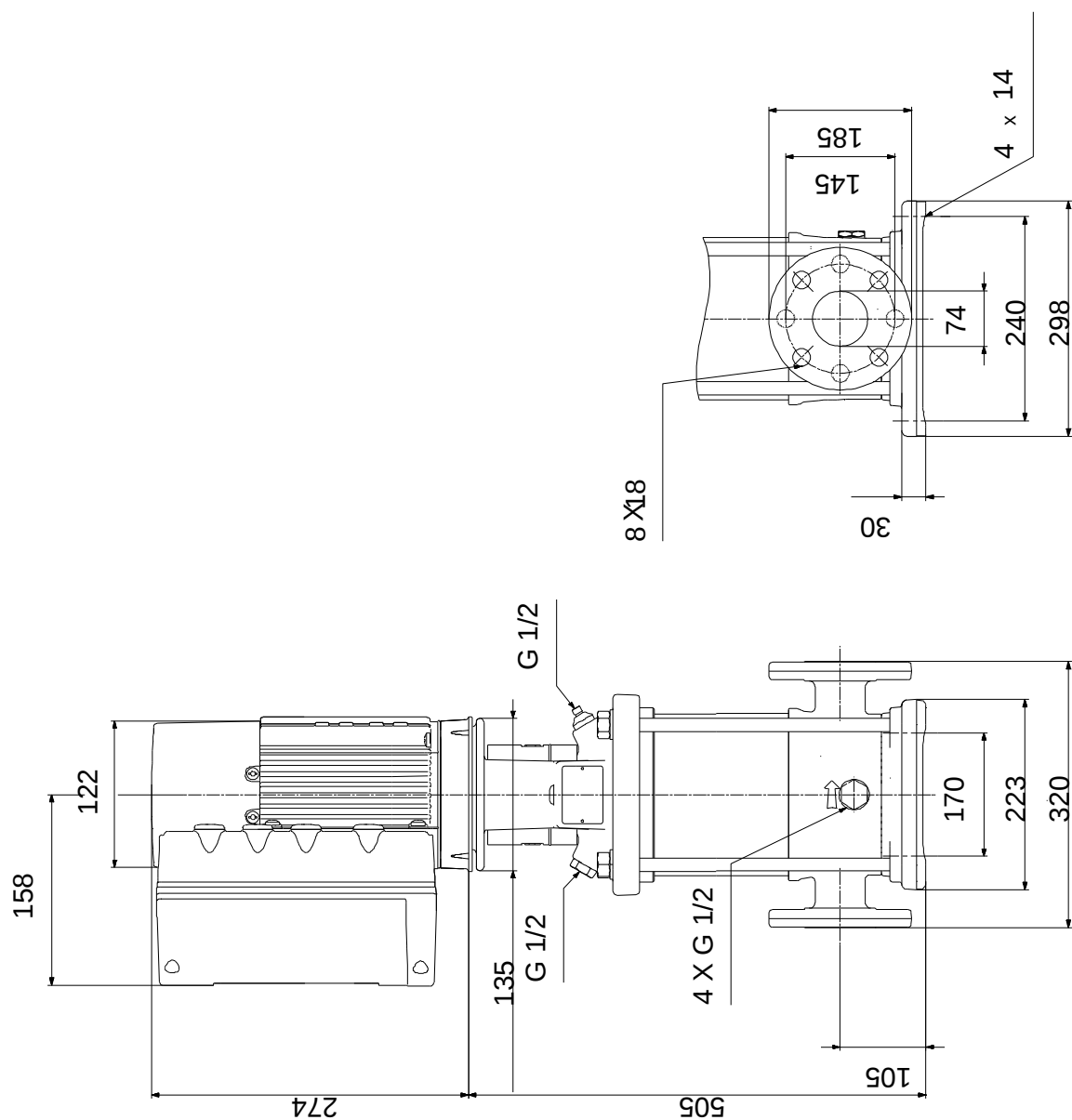


Description	Value
Control panel:	Standard
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	Y
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	62.5 kg
Gross weight:	85.4 kg
Shipping volume:	0.309 m ³

On request CRE 32-1-1 N-F-A-E-HQQE 50 Hz



On request CRE 32-1-1 N-F-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 CRE 32-1-1, Product No. On request
Valid from 25.12.2012 (1252)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
-	Motor				1	pcs
	Terminal				3	
	Pan head thread forming screw				4	
150	Stator housing				1	
150	Stator				1	
151	Fan cover				1	
152	Pan head thread forming screw				6	
152	Pan head thread forming screw				1	
152	Pan head thread forming screw				4	
152	Pan head thread forming screw				1	
153	Ball bearing				1	
154	Ball bearing		Designation: 6204.2Z.C3.SYN		1	
156	Fan				1	
156b	Flange				1	
156d	Gasket		Internal diameter: 114,80		1	
			Outer diameter: 121,20			
			Thickness: 0,25			
157	O-ring		Diameter: 47		1	
			Material type: NBR			
			Thickness: 3			
158	Waved washer				1	
159a	Seal ring				1	
159c	Seal ring				1	
166	Torx Screw				2	
172	Shaft w/rotor				1	
173a	Base				1	
185	Cross recess Pan head screw				4	
186	Drain plug				1	
187	Retaining ring				1	
188	Retaining ring				1	
203	Terminal plug				1	
251a	Control box				1	
251b	Control box				1	
251d	Pan head thread forming screw				4	
266	Connector plug 3-pole				1	
266	Connector plug 3-pole				1	
266	Connector plug 3-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 10-pole				1	
268	Pan head screw				1	
273	Funct. Module cpl.				1	
273b	Battery				1	
275a	Pin				1	
277	Isolation cover				1	
277a	Cross recess Pan head screw				1	
277a	Cross recess Pan head screw				1	
277a	Cross recess Pan head screw				4	
286	Spacer				1	
286	Spacer				1	
287	Cover				1	
288	Wire clamp				3	
288b	Washer				6	
289	Wire clamp				1	
290	Control panel, cpl.				1	
300	Plug cpl.				4	
301	Jumper				1	
	Bearing ring, stationary				1	pcs

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	Pressure transmitter				1	pcs
- 1a	Motor stool cpl.				1	pcs
1a	Motor stool				1	
7	Coupling guard				2	
7a	Socket button head screw				4	
- 8	Coupling cpl.		Dimension: 22/24		1	
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M10			
10a	Coupling				1	
28	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 50			
			Thread: M10			
28a	Hex head screw		Length (mm): 20		4	
			Thread: M8			
2	Pump head				1	pcs
- 3	Upper chamber cpl.				1	pcs
	Chamber				1	
45	Seal ring				1	
65	Top f/neck ring				1	
6	Base				1	pcs
- 18	Air vent screw				1	pcs
	Plug				1	
	Spindle				1	
23a	Plug				4	pcs
26	Staybolt		Length (mm): 216		4	pcs
			Thread: M16			
26.a	Strap cpl.				2	pcs
26b	Hex socket head cap screw				2	pcs
26c	Washer		Designation: DIN 125A		2	pcs
			Thickness: 1,6			
31	Hex socket head cap screw				1	pcs
32	Washer		Designation: DIN 125A		1	pcs
			Internal diameter: 6,4			
			Outer diameter: 12,0			
			Thickness: 1,6			
36	Hex nut		Thread: M16		4	pcs
37	O-ring				2	pcs
- 44	Suction interconnector cpl.				1	pcs
45	Seal ring				1	
46	Neck ring				1	
65	Top f/neck ring				1	
- 49d	Impeller cpl. reduced diameter				1	pcs
48	Nut				1	
- 49	Impeller				1	
	Impeller hub				1	
49c	Wear ring				1	
49b	Split cone				1	
- 51	Shaft cpl.		Diameter: 22		1	pcs
			Length (mm): 320			
	Washer				1	
	Bearing ring, rotating				1	
	Shaft				1	
66	Wedge lock washer				1	
67	Hex socket head cap screw		Designation: DIN 912		1	
			Length (mm): 16			
			Thread: M8			
55	Outer sleeve		Outer diameter: 197,0		1	pcs
			Length (mm): 95,5			
58	Cover				1	pcs
58a	Hex socket head cap screw		Designation: DIN 912		4	pcs
			Length (mm): 25			
			Thread: M10			
60	Spring				4	pcs

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
66a	Washer		Designation: DIN 125 A		4	pcs
			Internal diameter: 17			
			Outer diameter: 30			
			Thickness: 3			
100	O-ring		Diameter: 16,3		5	pcs
			Material type: EPDM			
			Thickness: 2,4			
- 105	Shaft seal		Material type: HQQE		1	pcs
	Adjusting fork				1	
109	O-ring				1	
110	O-ring		Diameter: 21,5		1	
			Material type: EPDM			
			Thickness: 4,25			
- 200	Flange cpl.				2	pcs
201	Flange		Diameter: DN 65		1	
			Pressure: PN 40			
203	Lock ring				1	

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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