

CRE45-1 AN-F-A-E-HQQE 3x380-500 60 HZ

Grundfos pump 99072017



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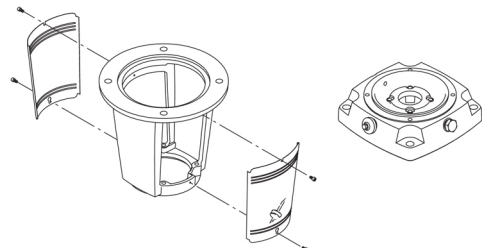
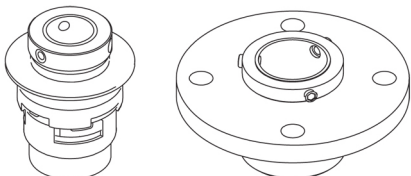
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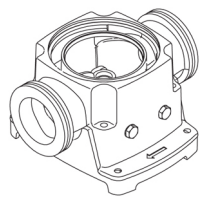
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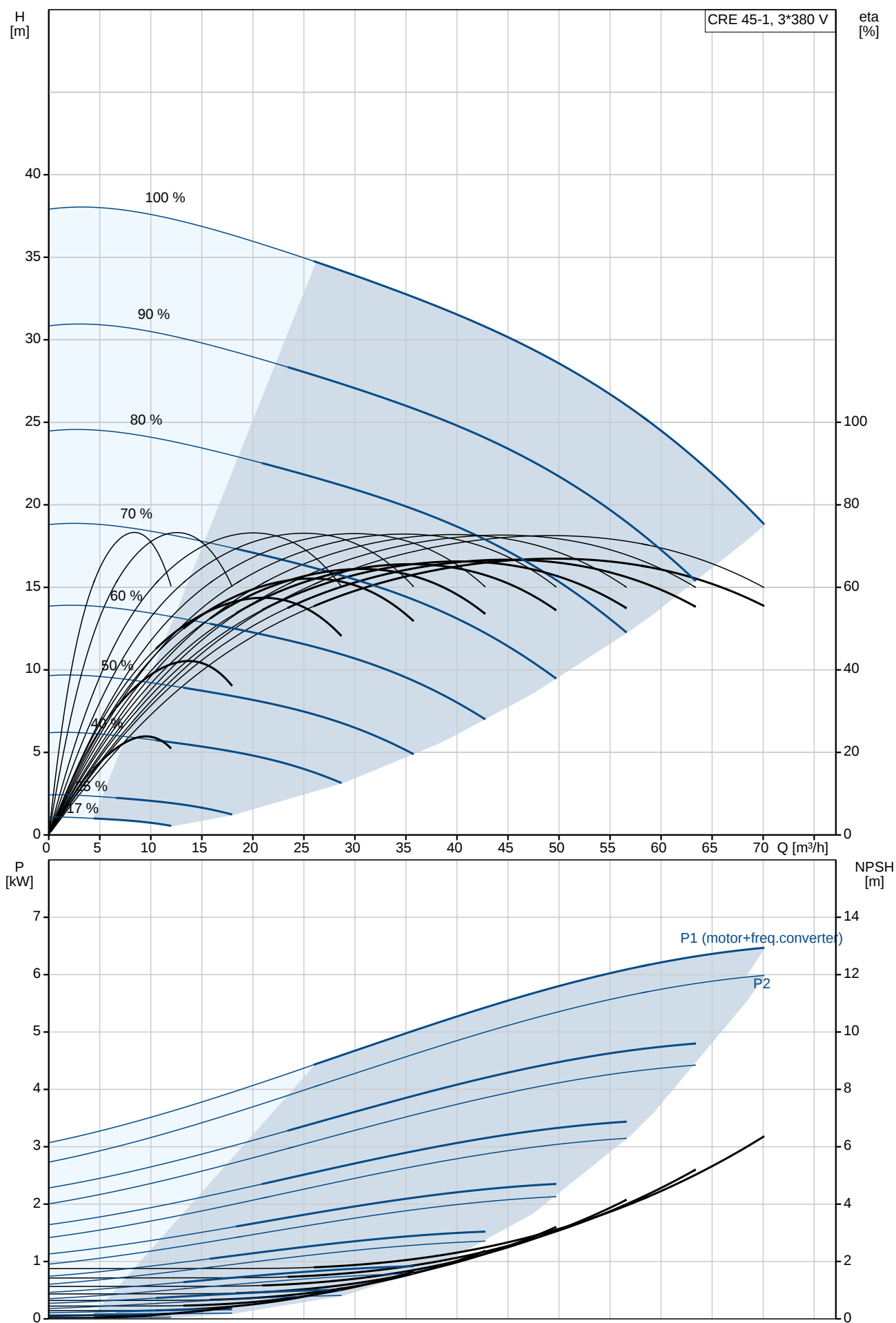
Position	Qty.	Description
	1	CRE 45-1 N-F-A-E-HQQE  Note! Product picture may differ from actual product Product No.: On request Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless 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:

Position	Qty.	Description
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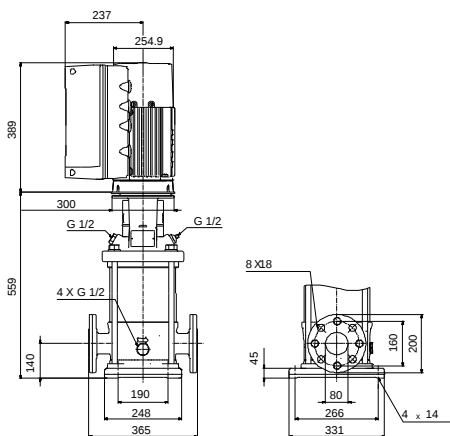
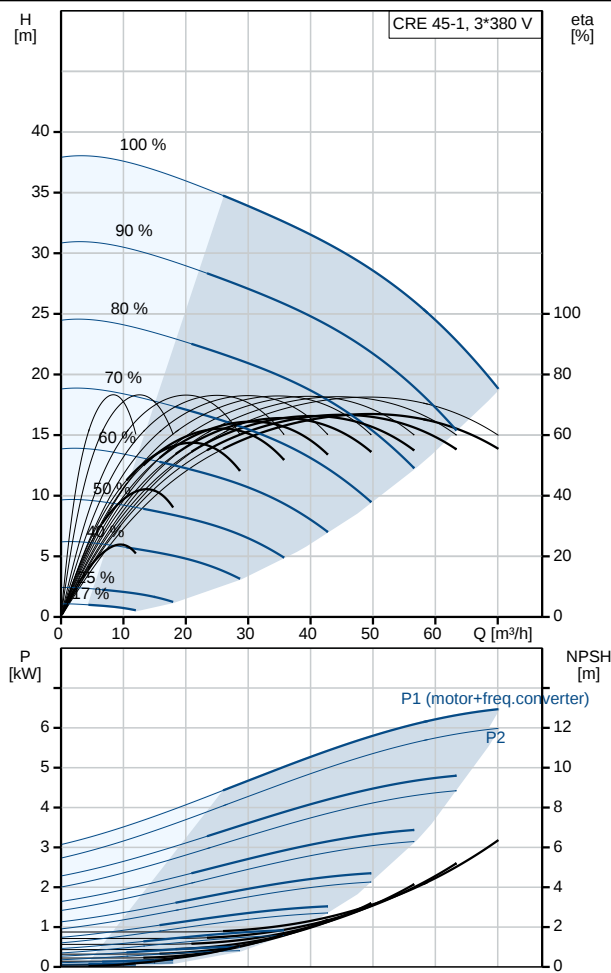
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		The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency. 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 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>54 m³/h</td></tr><tr><td>Rated head:</td><td>28.1 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 80</td></tr><tr><td>Size of outlet connection:</td><td>DN 80</td></tr><tr><td>Pressure rating for pipe connection:</td><td>PN 40</td></tr><tr><td>Flange size for motor:</td><td>FF265</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:	54 m³/h	Rated head:	28.1 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 80	Size of outlet connection:	DN 80	Pressure rating for pipe connection:	PN 40	Flange size for motor:	FF265
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Position	Qty.	Description
		Electrical data: Motor standard: IEC Motor type: 132SF IE Efficiency class: IE5 Rated power - P2: 7.5 kW Power (P2) required by pump: 7.5 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-500 V Rated current: 14.1-11.2 A Cos phi - power factor: 0.93-0.89 Rated speed: 360-4000 rpm Efficiency: 92.5% Motor efficiency at full load: 92.5 % Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Others: Minimum efficiency index, MEI $\geq$ 0.7 Net weight: 105 kg Gross weight: 138 kg Shipping volume: 0.495 m³ Danish VVS No.: 386007101

On request CRE 45-1 N-F-A-E-HQQE 50 Hz

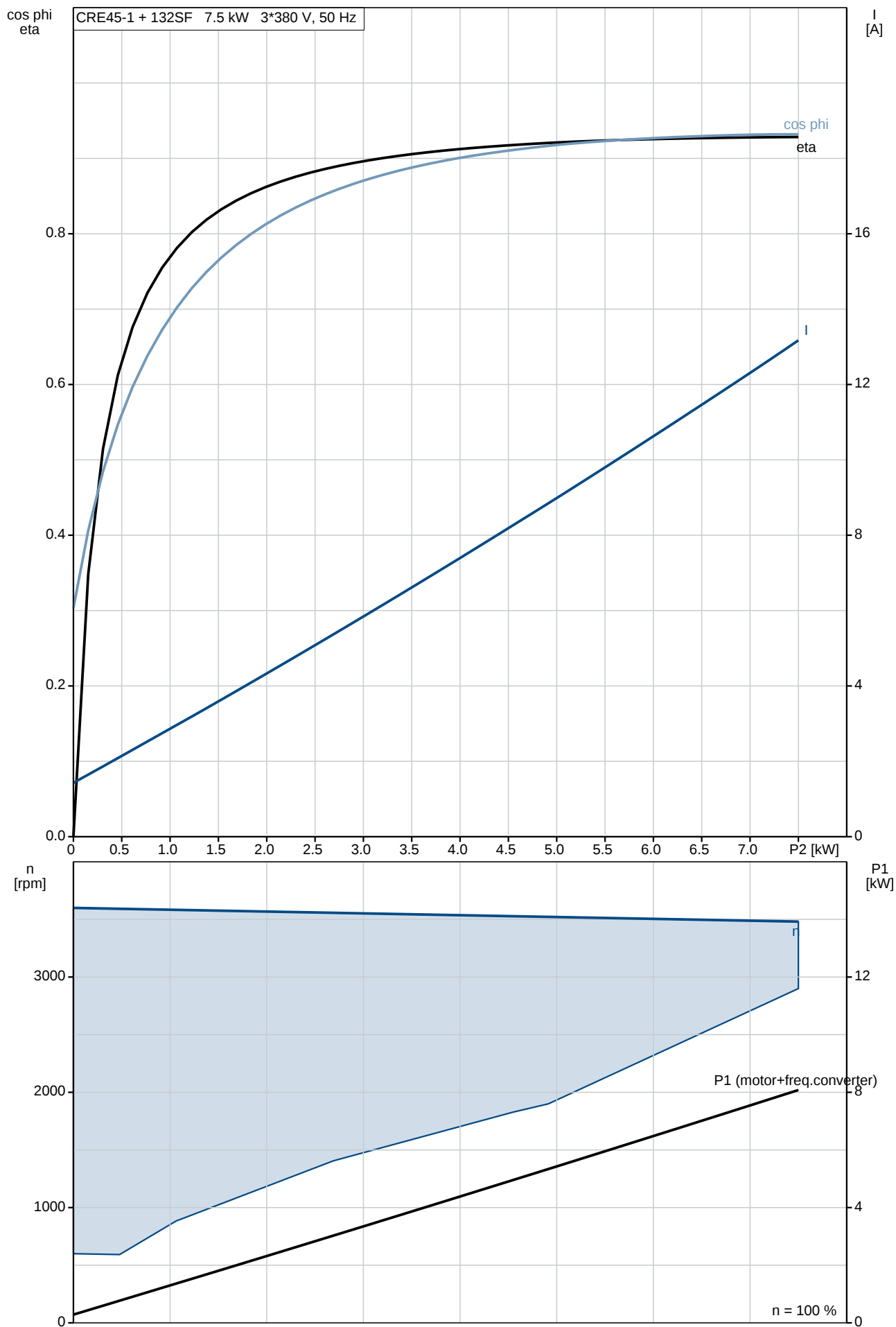


Description	Value
General information:	
Product name:	CRE 45-1 N-F-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	54 m ³ /h
Rated head:	28.1 m
Stages:	1
Impellers:	1
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC, ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	N
Model:	B
Materials:	
Base:	Cast iron
	EN 1563 EN-GJS-500-7
Impeller:	Stainless steel
	ASTM A536 80-55-06
	EN 1.4301
	AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Support bearing:	Graffon
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 80
Size of outlet connection:	DN 80
Pressure rating for pipe connection:	PN 40
Flange size for motor:	FF265
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-30 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m ³
Electrical data:	
Motor standard:	IEC
Motor type:	132SF
IE Efficiency class:	IE5
Rated power - P2:	7.5 kW
Power (P2) required by pump:	7.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	14.1-11.2 A
Cos phi - power factor:	0.93-0.89
Rated speed:	360-4000 rpm
Efficiency:	92.5%
Motor efficiency at full load:	92.5 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	98971052
Controls:	

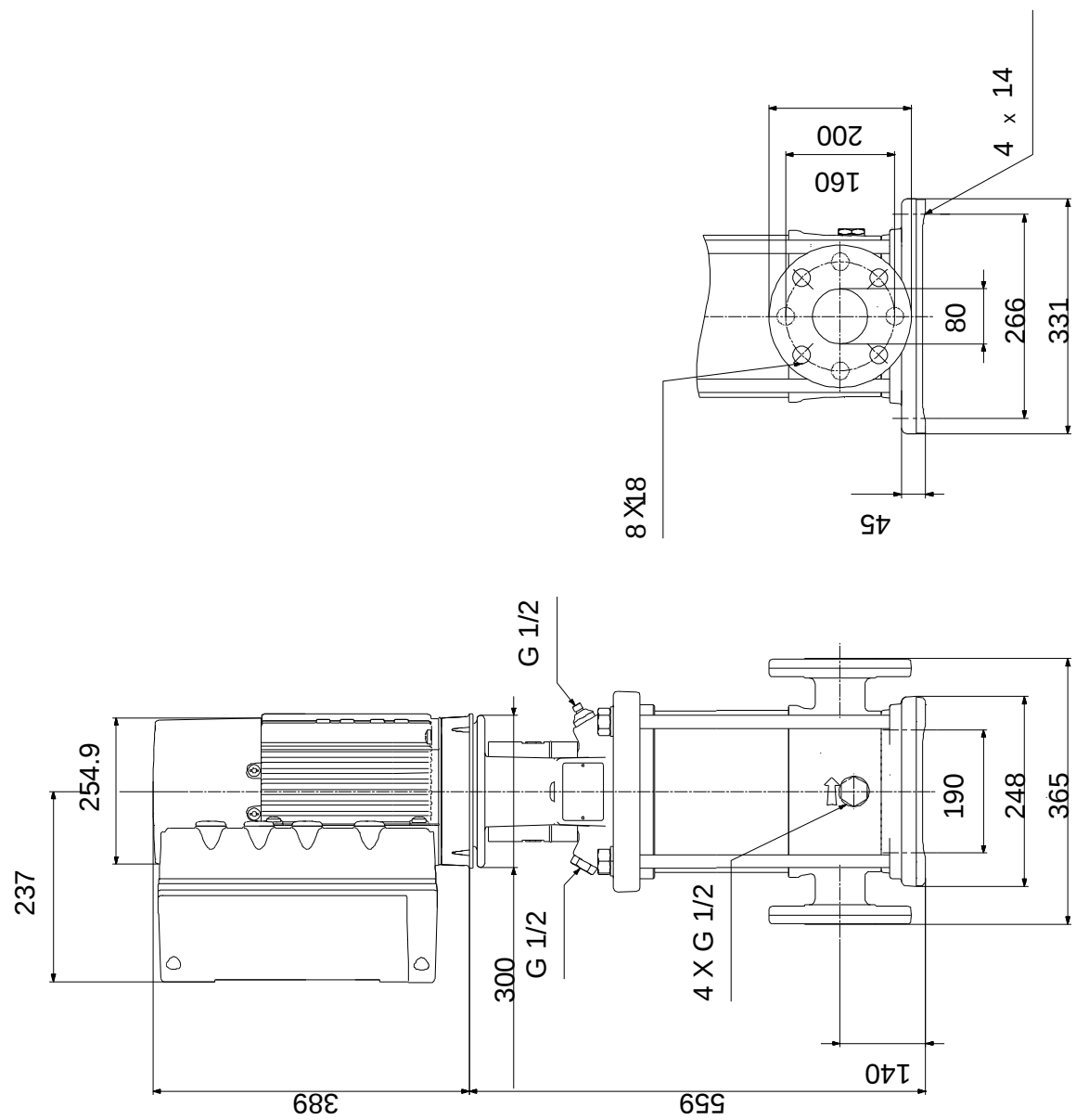


Description	Value
Control panel:	Standard
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	Y
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	105 kg
Gross weight:	138 kg
Shipping volume:	0.495 m ³
Danish VVS No.:	386007101

On request CRE 45-1 N-F-A-E-HQQE 50 Hz



On request CRE 45-1 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)



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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