CRNE15-03 AN-P-G-E-HQQE 3x380-500 60 HZ

Grundfos pump 99071627



Thank you for your interest in our products. Please contact us for more information, or visit our website

https://www.lenntech.com/grundfos/CRNE15/99071627/CRNE-15-3-AN-P-G-E-HQQE.html

info@lenntech.com
tel. +31 152 610 900
fax. +31 152 616 289

Position	Qty.	Description
	1	**CRNE 15-3 N-P-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). 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 PJE (Victaulic®) couplings.

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

- "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".

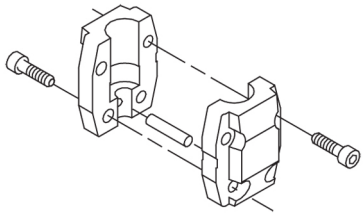
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An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

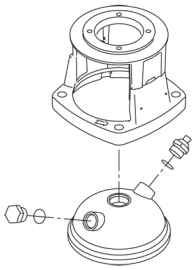
The colour code for the finished product is NCS 9000/RAL 9005.

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.

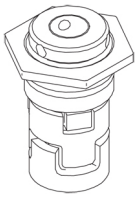
Primary seal:

- Rotating seal ring material: silicon carbide (SiC)
- 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.

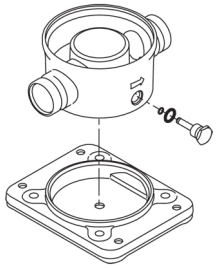


The shaft seal is screwed into the pump head.

Position	Qty.	Description

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 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:

Frequency converter:	Built-in
Pressure sensor:	Y

Liquid:

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

Technical:

Rated flow:	20.5 m³/h
Rated head:	47.9 m
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC,ACS
Curve tolerance:	ISO9906:2012 3B

Materials:

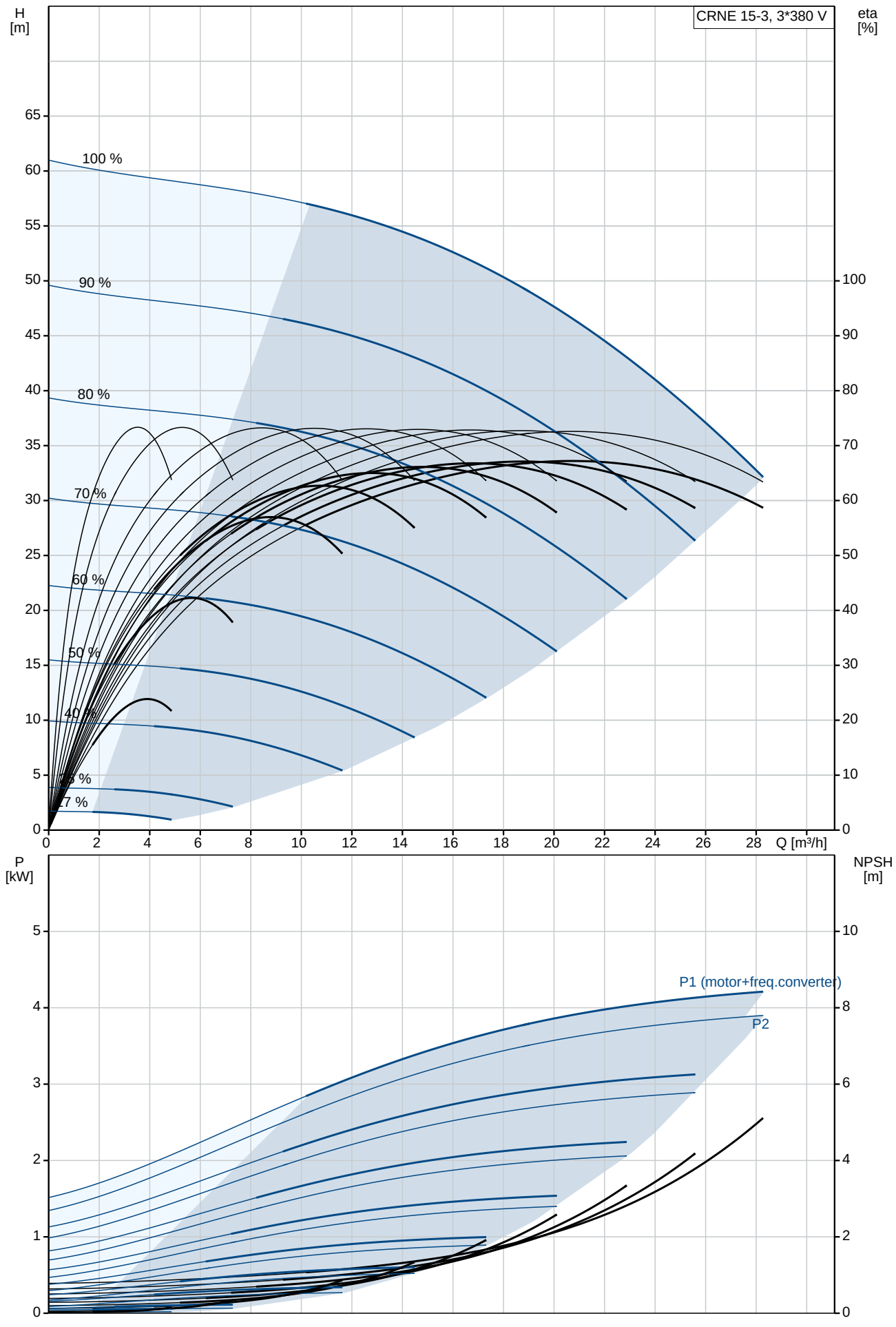
Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel EN 1.4401 AISI 316
Bearing:	SIC

Installation:

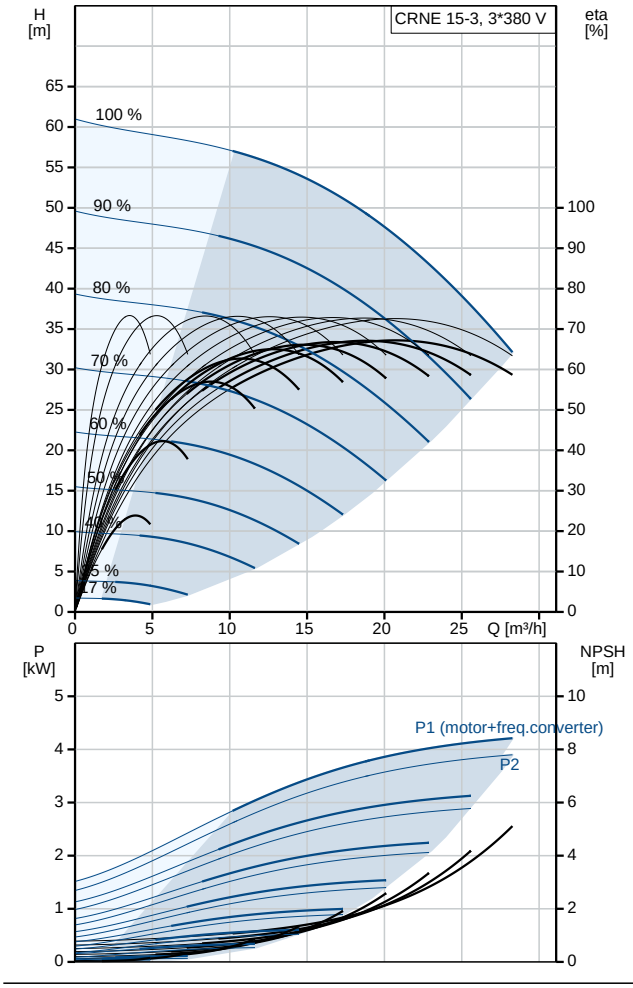
Maximum ambient temperature:	50 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 120 °C 25 bar / -20 °C
Type of connection:	PJE
Size of inlet connection:	DN 50

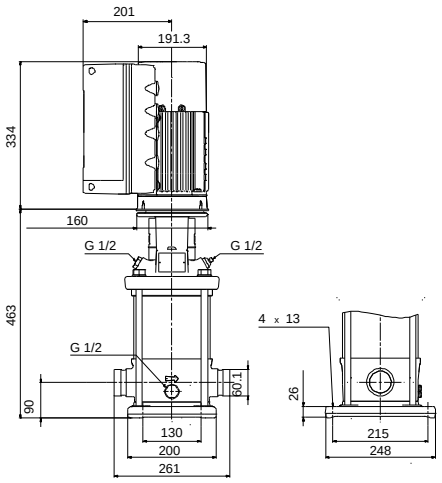
Position	Qty.	Description
		2 inch Size of outlet connection: DN 50 2 inch Pressure rating for pipe connection: PN 50 Flange size for motor: FT130 **Electrical data:** Motor standard: IEC Motor type: 112MC IE Efficiency class: IE5 Rated power - P2: 4 kW Power (P2) required by pump: 4 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-500 V Rated current: 7.60-6.20 A Cos phi - power factor: 0.92-0.87 Rated speed: 360-4000 rpm Efficiency: 92.2% Motor efficiency at full load: 92.2 % Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F **Others:** Minimum efficiency index, MEI ≥: 0.70 Net weight: 55 kg Gross weight: 77 kg Shipping volume: 0.234 m^3 Danish VVS No.: 386014103

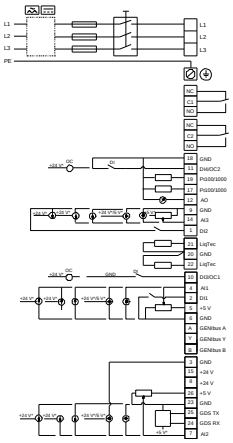
On request CRNE 15-3 N-P-A-E-HQQE 50 Hz



Description	Value
General information:	
Product name:	CRNE 15-3 N-P-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	20.5 m³/h
Rated head:	47.9 m
Stages:	3
Impellers:	3
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:	A
Materials:	
Base:	Stainless steel
	EN 1.4408
	AISI 316
Impeller:	Stainless steel
	EN 1.4401
	AISI 316
Material code:	A
Code for rubber:	E
Bearing:	SIC
Installation:	
Maximum ambient temperature:	50 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 120 °C
	25 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
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:	112MC
IE Efficiency class:	IE5
Rated power - P2:	4 kW
Power (P2) required by pump:	4 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	7.60-6.20 A
Cos phi - power factor:	0.92-0.87
Rated speed:	360-4000 rpm
Efficiency:	92.2%
Motor efficiency at full load:	92.2 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	98971050

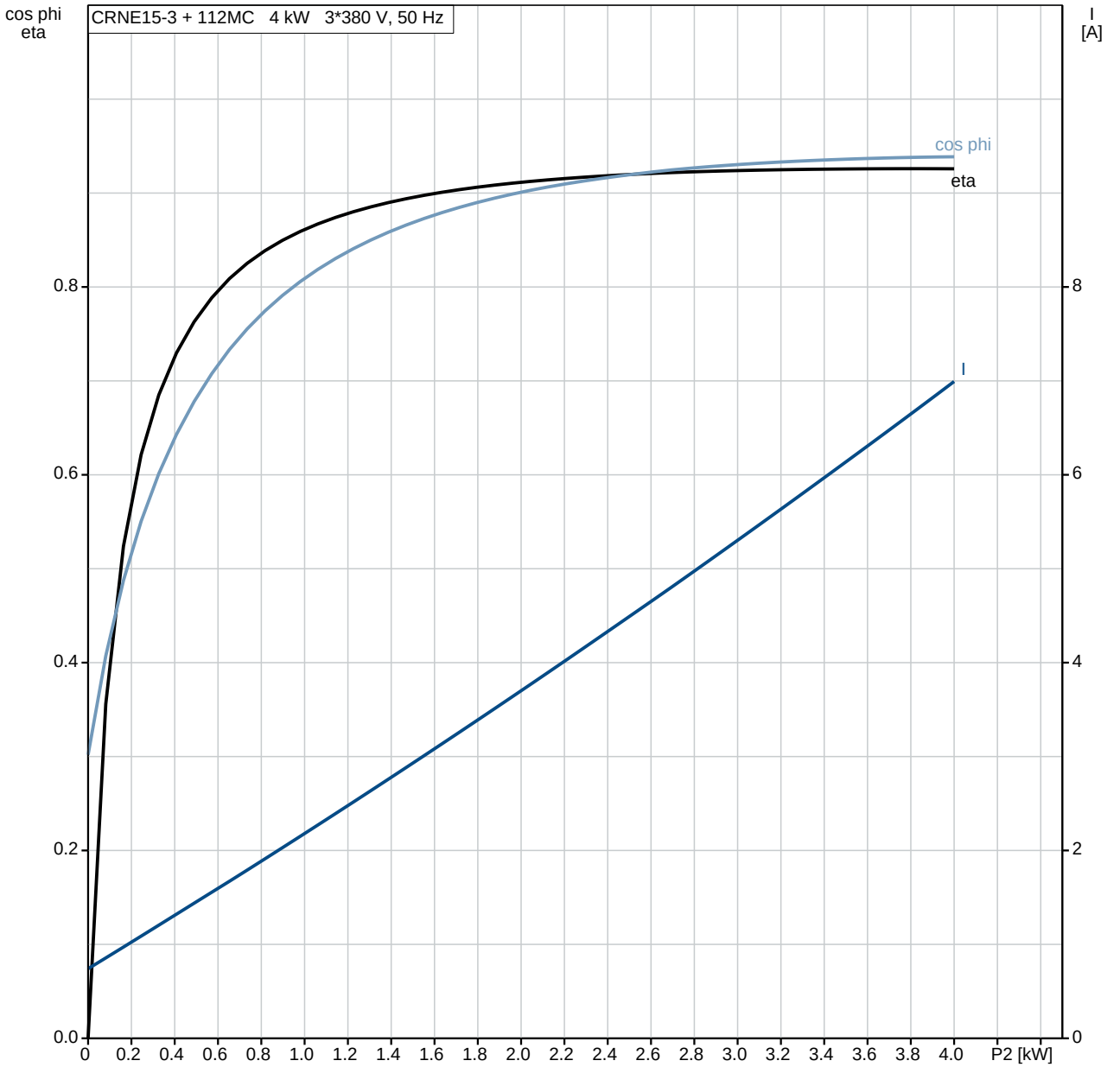


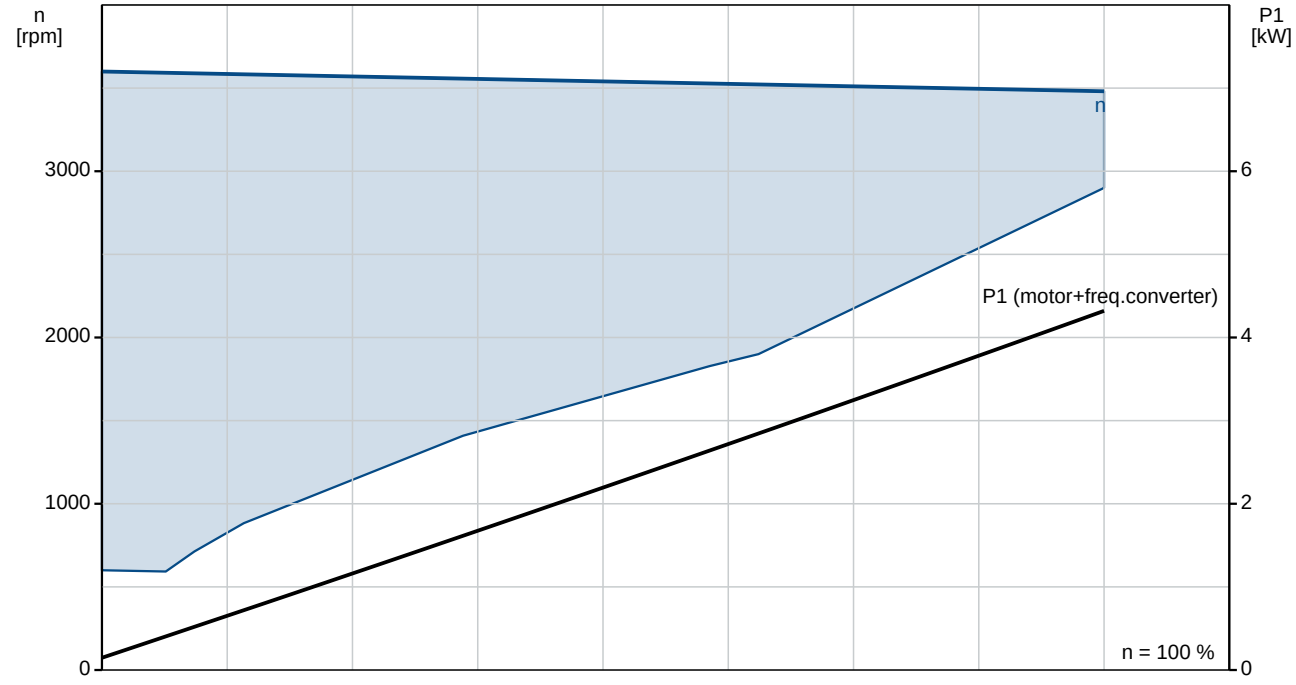




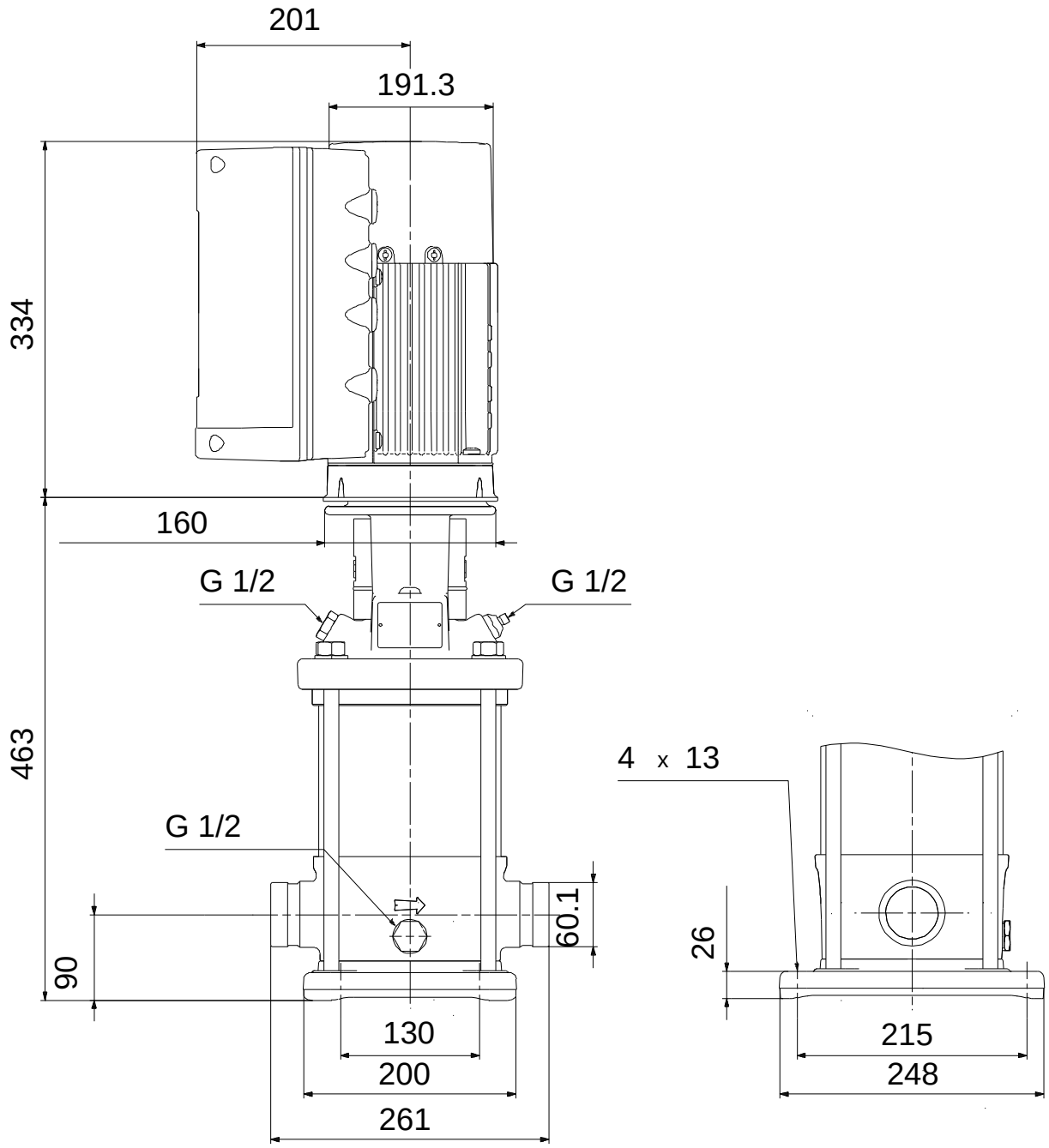
Description	Value
Controls:	
Control panel:	Standard
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	Y
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	55 kg
Gross weight:	77 kg
Shipping volume:	0.234 m³
Danish VVS No.:	386014103

On request CRNE 15-3 N-P-A-E-HQQE 50 Hz



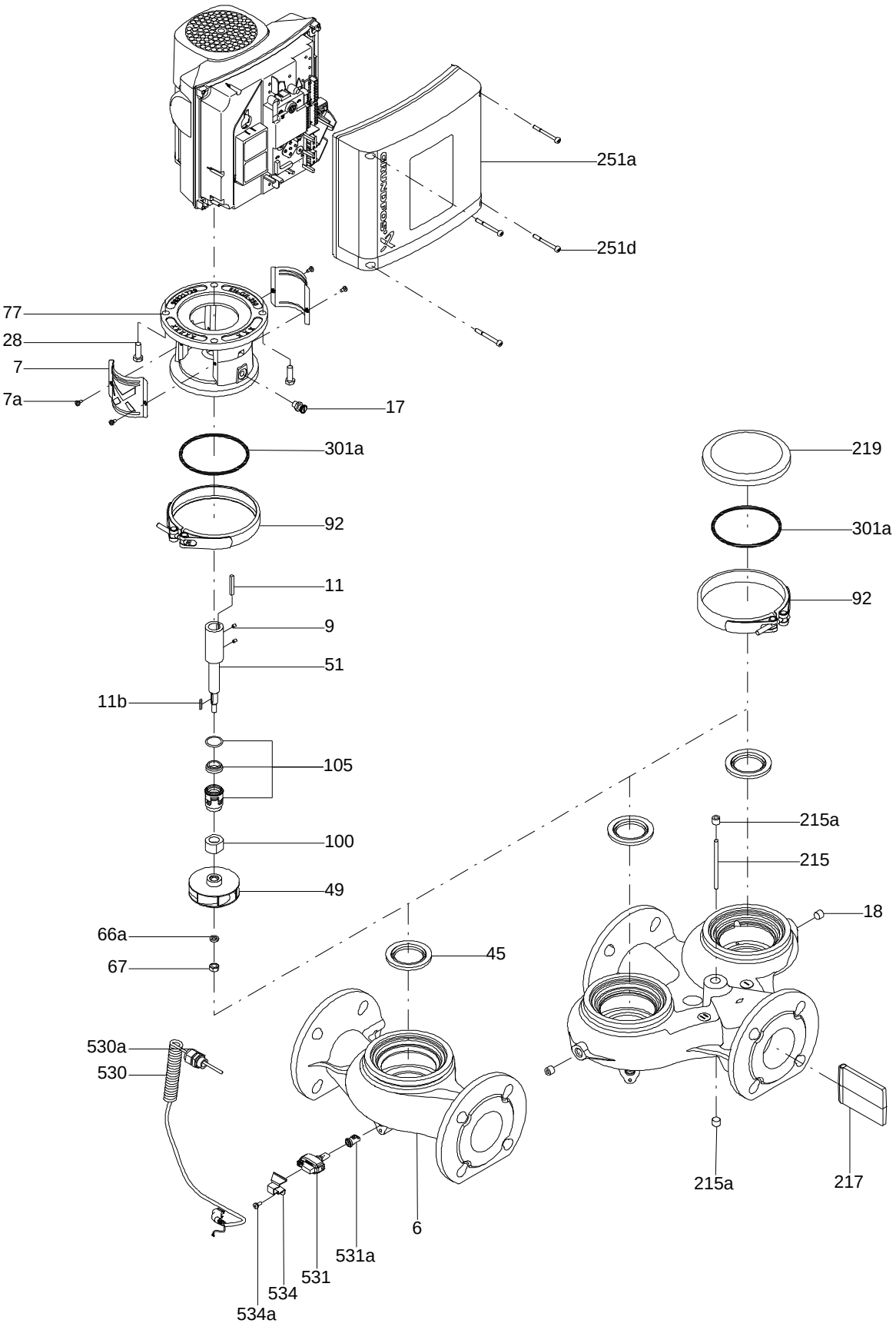


On request CRNE 15-3 N-P-A-E-HQQE 50 Hz

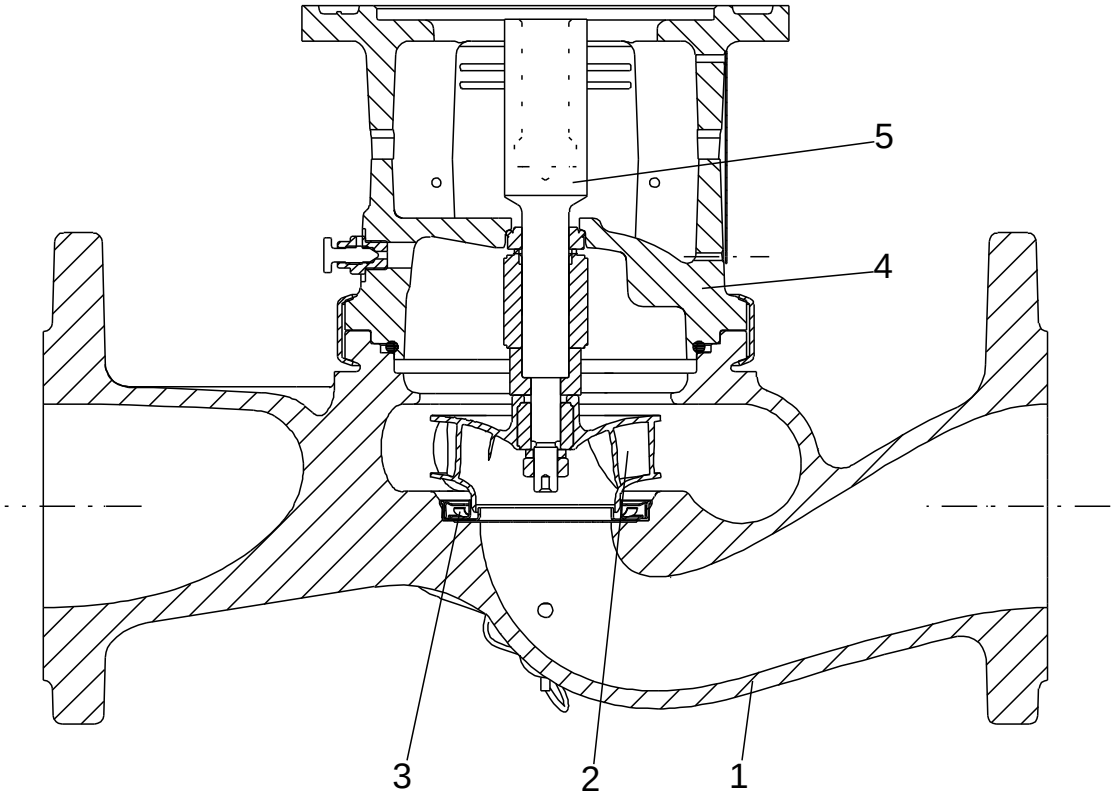


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

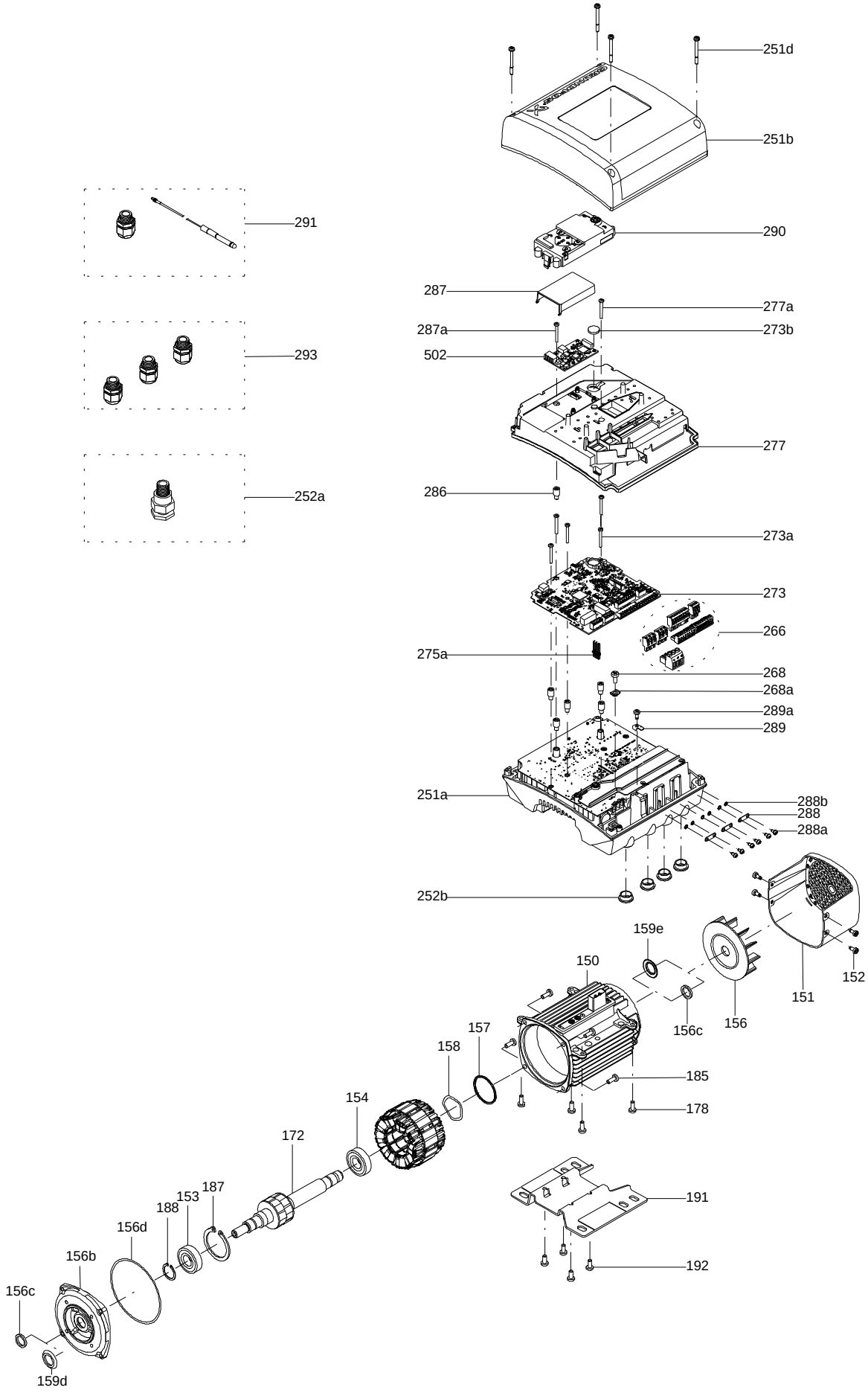


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CRNE 15-3, Product No. On request
Valid from 1.1.2004 (0401)

	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	
		Pressure transmitter				1	pcs
-		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				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
	28	Hex head screw		Length (mm): 25		4	
				Thread: M8			
	37.a	O-ring				1	
	76	Nameplate				1	
	76a	Rivet				2	
	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	Nut		Thread: M16		4	pcs
	55	Outer sleeve				1	pcs
	66a	Washer		Designation: DIN 125 A2		4	pcs
				Internal diameter: 17			
				Outer diameter: 30			
				Thickness: 3			
-	80	Chamber stack				1	pcs
-	3	Top intermediate chamber				1	
		Cover plate					1
		Guide vane					10
	3	Intermediate chamber					1
-	4	Intermediate chamber cpl.				1	
		Intermediate chamber					1
	45	Neck ring cpl.					1
	65	Retainer					1
-	4a	Intermediate chamber cpl.				1	
		Guide vane					10
		Bearing plate					1
		Bearing bush					1
		Intermediate chamber					1

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
		Guide cup				1	
		Sand Lifter				1	
	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	
	45	Neck ring cpl.				1	
	65	Retainer				1	
	44b	Inlet part				1	
	47a	Bearing ring				1	
-	49	Impeller cpl.				3	
		Impeller				1	
	49c	Wear ring				1	
-	51	Shaft, spline, cpl.				1	
		Bar				0	
	62	Stop ring				1	
	64b	Spacing bush				1	
	64c	Spacing pipe		Length (mm): 12.7		1	
	66	Wedge lock washer				1	
	69	Spacing pipe		Length (mm): 43.6		1	
	69	Spacing pipe		Internal diameter: 17,5		1	
				Length (mm): 17			
	69	Spacing bush				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.

All information is copyright Grundfos.

info@lenntech.com
https://www.lenntech.com
tel. +31 152 610 900
fax. +31 152 616 289