

CR15-02 A-F-A-E-HQQE 3x400D 50 HZ

Grundfos pump 96501893



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

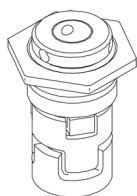
<https://www.lenntech.com/grundfos/CRFAM/96501893/CR-15-2-A-F-A-E-HQQE.html>

info@lenntech.com

tel. +31 152 610 900

fax. +31 152 616 289

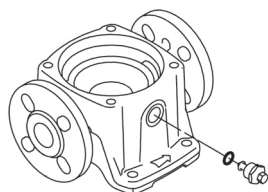
Position	Qty.	Description
	1	CR 15-2 A-F-A-E-HQQE  Product No.: On request Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, 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 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 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, pump head cover and flange for motor mounting is made in one piece. 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.

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. The flanges and base are cast in one piece. The outlet side of the base has a drain plug. The pump is secured to the foundation by four bolts through the base plate.



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 does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1).

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/m³

Technical:

Rated flow: 17 m³/h

Rated head: 22 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:

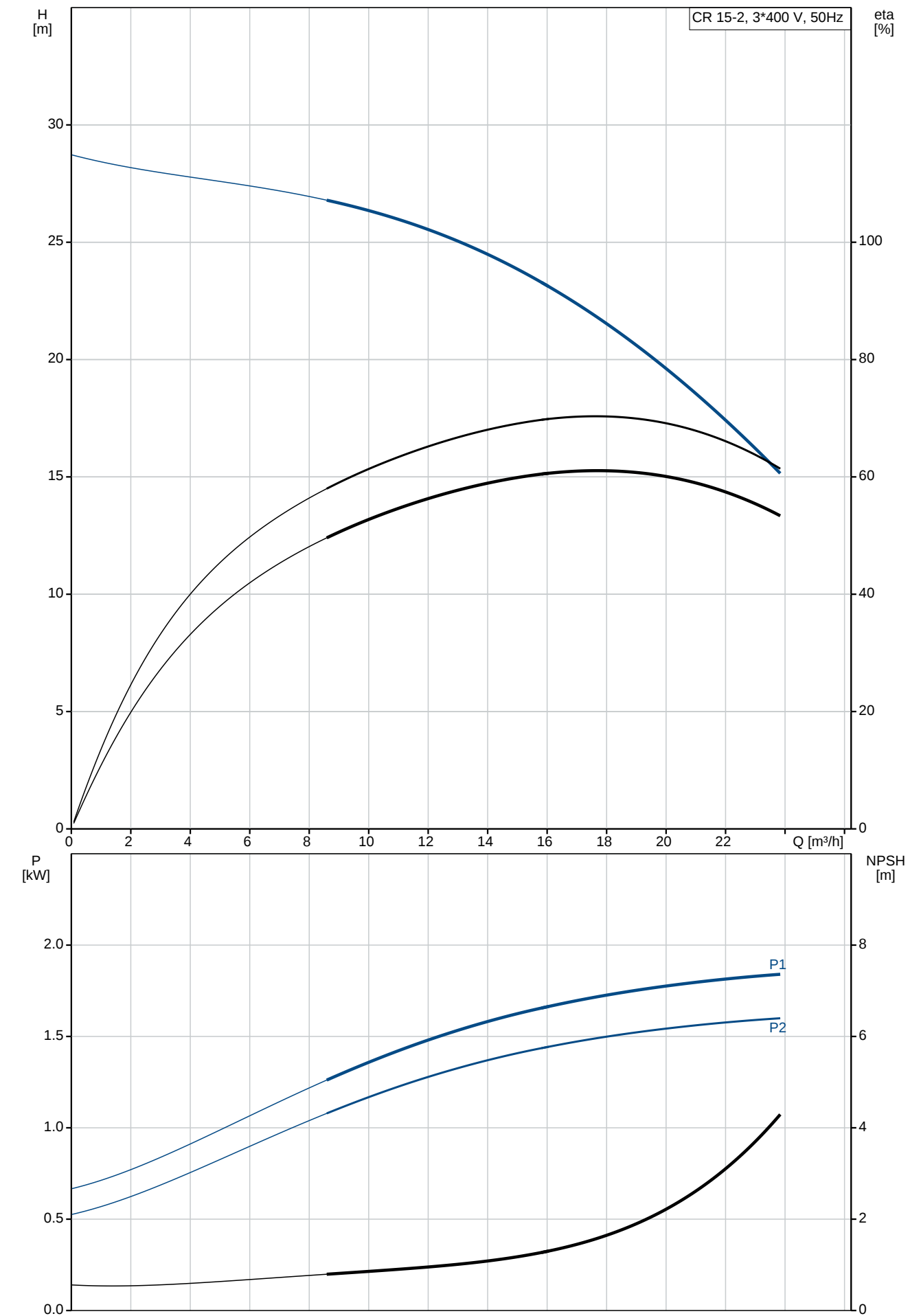
Base: Cast iron
EN 1561 EN-GJL-200

Impeller: ASTM A48-25B
Stainless steel
EN 1.4301

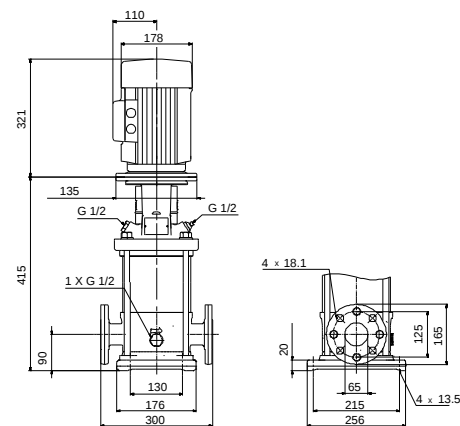
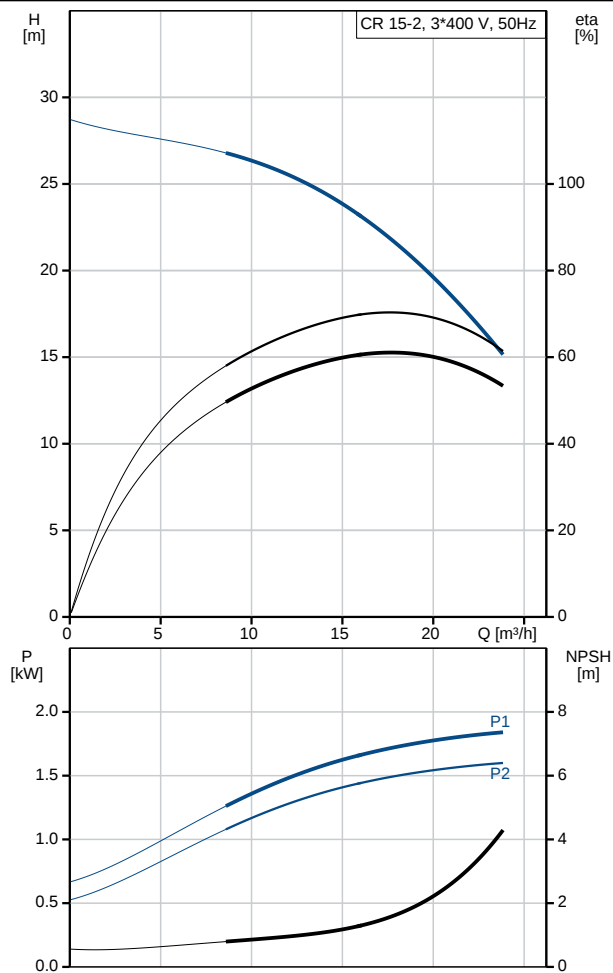
Bearing: AISI 304
SIC

Position	Qty.	Description
		Installation: 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: DIN Size of inlet connection: DN 50 Size of outlet connection: DN 50 Pressure rating for pipe connection: PN 25 Flange rating inlet: 300 lb Flange size for motor: FT115 Electrical data: Motor standard: IEC Motor type: 90LC IE Efficiency class: IE3 Rated power - P2: 2.2 kW Power (P2) required by pump: 2.2 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D V Rated current: 4.45 A Starting current: 850-950 % Cos phi - power factor: 0.89-0.87 Rated speed: 2890-2910 rpm Efficiency: IE3 85,9% Motor efficiency at full load: 85.9 % Motor efficiency at 3/4 load: 86.8 % Motor efficiency at 1/2 load: 86.0 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 54 kg Gross weight: 76 kg Shipping volume: 0.234 m³

On request CR 15-2 A-F-A-E-HQQE 50 Hz

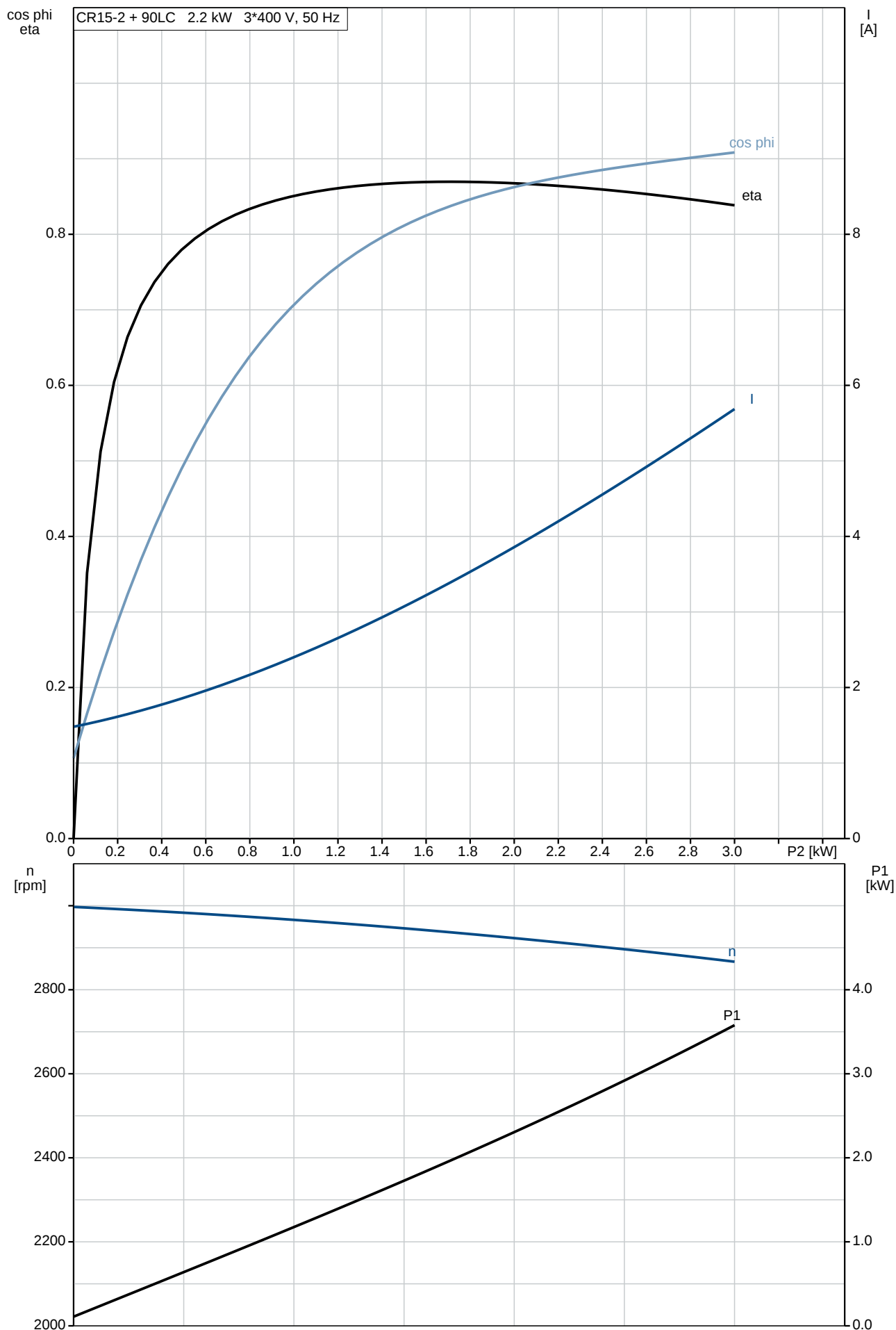


Description	Value
General information:	
Product name:	CR 15-2 A-F-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	17 m³/h
Rated head:	22 m
Stages:	2
Impellers:	2
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC,ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Base:	Cast iron
	EN 1561 EN-GJL-200
	ASTM A48-25B
Impeller:	Stainless steel
	EN 1.4301
	AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Installation:	
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:	DIN
Size of inlet connection:	DN 50
Size of outlet connection:	DN 50
Pressure rating for pipe connection:	PN 25
Flange rating inlet:	300 lb
Flange size for motor:	FT115
Connect code:	F
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:	90LC
IE Efficiency class:	IE3
Rated power - P2:	2.2 kW
Power (P2) required by pump:	2.2 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D V
Rated current:	4.45 A
Starting current:	850-950 %
Cos phi - power factor:	0.89-0.87
Rated speed:	2890-2910 rpm
Efficiency:	IE3 85,9%
Motor efficiency at full load:	85.9 %
Motor efficiency at 3/4 load:	86.8 %
Motor efficiency at 1/2 load:	86.0 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F

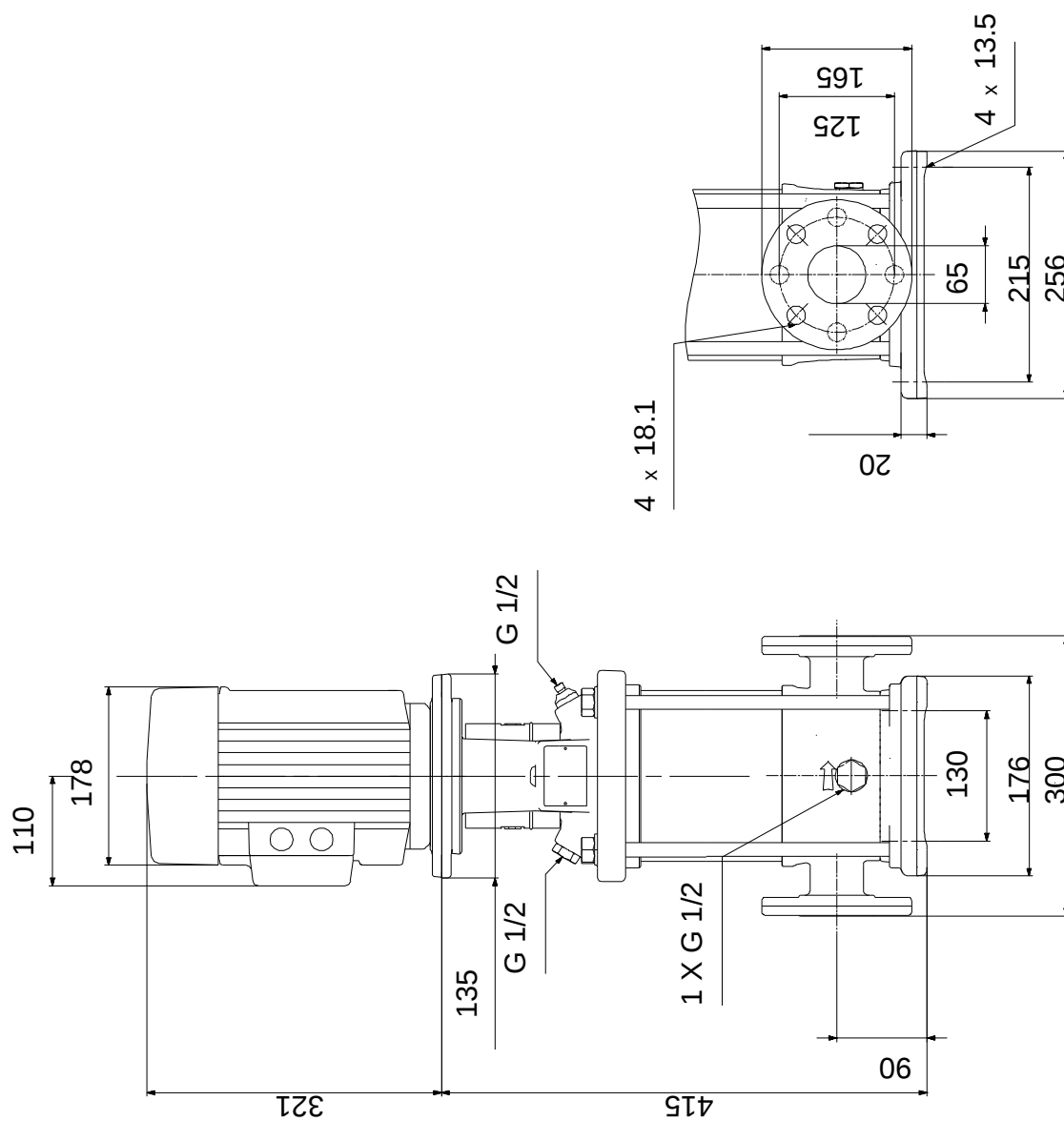


Description	Value
Motor protec:	NONE
Motor No:	85U15908
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	54 kg
Gross weight:	76 kg
Shipping volume:	0.234 m ³

On request CR 15-2 A-F-A-E-HQQE 50 Hz



On request CR 15-2 A-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 CR 15-2, Product No. On request
Valid from 1.1.2011 (1152)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
-	Base cpl.				1	pcs
6	Base				1	
25	Drain plug				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	
28	Hex head screw		Length (mm): 20		4	
			Thread: M8			
76	Nameplate				1	
76a	Rivet				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		Length (mm): 163		4	pcs
			Thread: M16			
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				1	pcs
- 4	Intermediate chamber cpl.				1	
	Guide vane				10	
	Front plate				1	
3	Top intermediate chamber				1	
- 4a	Intermediate chamber cpl.				1	
	Bearing plate				1	
	Bearing bush				1	
3a	Intermediate chamber				1	
45	Neck ring cpl.				1	
65	Retainer for upper seal ring				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	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
45	Neck ring cpl.				1	
65	Retainer for upper seal ring				1	
47a	Bearing ring				1	
+ 49	Impeller cpl.				2	
- 51	Shaft, spline, cpl.				1	
	Bar				0	
62	Stop ring				1	
64b	Spacing bush		Length (mm): 5.00		1	
64b	Spacing bush				1	
64c	Spacing pipe		Length (mm): 12.7		1	
66	Wedge lock washer				1	
69	Spacing pipe		Internal diameter: 17,5		1	
			Length (mm): 17			
69	Spacing bush				1	
105	Shaft seal		Material type: HQQE		1	pcs
+ 2099	Motor				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