

Qty.	Description
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1	CR 10-3 A-A-A-E-HQBE
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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.

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.

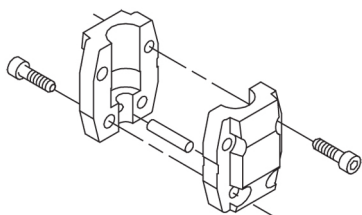
The entire process consists of these elements:

- 1) Alkaline-based cleaning.
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.
- 4) Curing to a dry film thickness 18-22 my m.

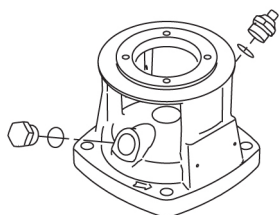
The colour code for the finished product is NCS 9000/RAL 9005.

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.



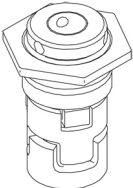
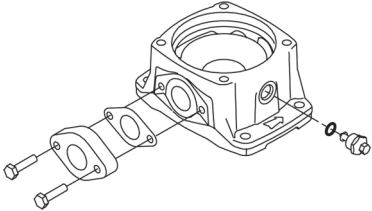
The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.

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.

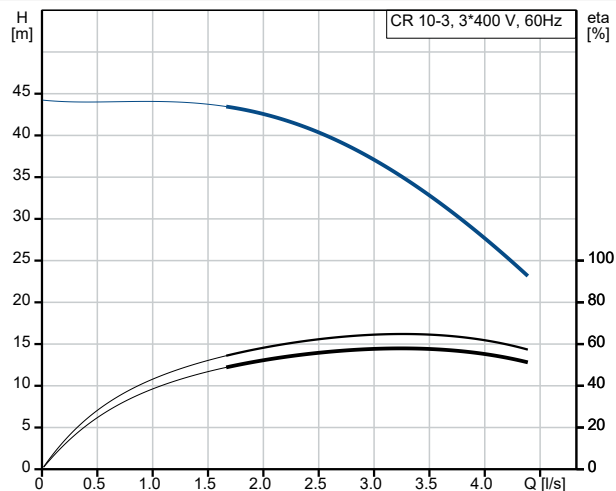
The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

Seal faces:

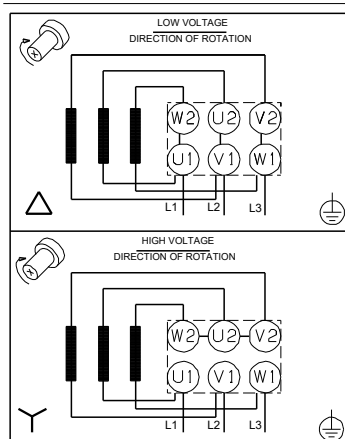
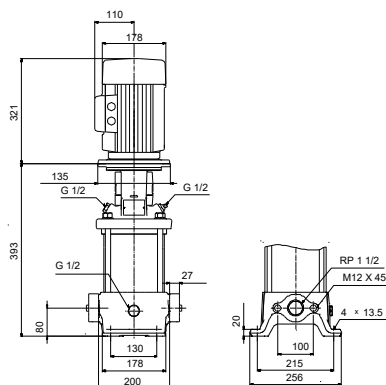
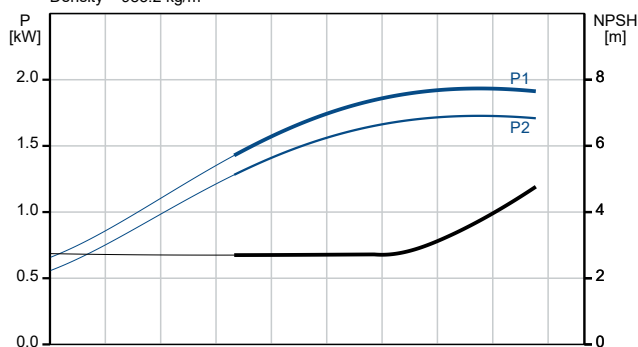
Qty.	Description																										
1	- Rotating seal ring material: silicon carbide (SiC) - Stationary seat material: carbon graphite, resin-impregnated This material pairing has a very good corrosion resistance and is especially suitable for water up to 90 °C. The seal life will be reduced significantly at temperatures above 90 °C. The material pairing is not recommended for liquids containing particles as this will result in heavy wear on the SiC face. 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 oval flanges are bolted to the base. 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 premium efficiency in accordance with EISA2007. 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 <table> <tr> <td>Liquid:</td><td></td></tr> <tr> <td>Pumped liquid:</td><td>Water</td></tr> <tr> <td>Liquid temperature range:</td><td>0 .. 120 °C</td></tr> <tr> <td>Selected liquid temperature:</td><td>60 °C</td></tr> <tr> <td>Density:</td><td>983.2 kg/m³</td></tr> </table> <table> <tr> <td>Technical:</td><td></td></tr> <tr> <td>Pump speed on which pump data are based:</td><td>3501 rpm</td></tr> <tr> <td>Rated flow:</td><td>3.361 l/s</td></tr> <tr> <td>Rated head:</td><td>34.9 m</td></tr> <tr> <td>Pump orientation:</td><td>Vertical</td></tr> <tr> <td>Shaft seal arrangement:</td><td>Single</td></tr> <tr> <td>Primary shaft seal:</td><td>HQBE</td></tr> <tr> <td>Code for shaft seal:</td><td>HQBE</td></tr> </table>	Liquid:		Pumped liquid:	Water	Liquid temperature range:	0 .. 120 °C	Selected liquid temperature:	60 °C	Density:	983.2 kg/m³	Technical:		Pump speed on which pump data are based:	3501 rpm	Rated flow:	3.361 l/s	Rated head:	34.9 m	Pump orientation:	Vertical	Shaft seal arrangement:	Single	Primary shaft seal:	HQBE	Code for shaft seal:	HQBE
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Qty.	Description
1	Approvals: CE,EAC,UKCA,SEPRO Curve tolerance: ISO9906:2012 3B Materials: Base: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B Impeller: Stainless steel EN 1.4301 AISI 304 Bearing: SIC Installation: Maximum ambient temperature: 50 °C Maximum operating pressure: 16 bar Max pressure at stated temp: 16 bar / 120 °C 16 bar / 0 °C Type of connection: Oval / Rp Size of inlet connection: 1 1/2 inch Size of outlet connection: 1 1/2 inch Pressure rating for connection: PN 16 Flange size for motor: FT115 Electrical data: Motor standard: IEC Motor type: 90LE Rated power - P2: 2.2 kW Power (P2) required by pump: 2.2 kW Mains frequency: 60 Hz Rated voltage: 3 x 230-277D/400-480Y V Rated current: 7,50-6,95/4,30-4,00 A Starting current: 820-1050 % Cos phi - power factor: 0.88-0.80 Rated speed: 3480-3530 rpm IE Efficiency class: NEMA Premium / IE3 60Hz Motor efficiency at full load: 86.5 % Motor efficiency at 3/4 load: 89.5-88.5 % Motor efficiency at 1/2 load: 89.2-86.3 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor No: 99820210 Controls: Frequency converter: None Others: Terminal box position: 6 Minimum efficiency index, MEI ≥: 0.70 Net weight: 47 kg Gross weight: 51 kg Shipping volume: 0.094 m³

Description	Value
General information:	
Product name:	CR 10-3 A-A-A-E-HQBE
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	3501 rpm
Rated flow:	3.361 l/s
Rated head:	34.9 m
Maximum head:	44.2 m
Stages:	3
Impellers:	3
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Primary shaft seal:	HQBE
Code for shaft seal:	HQBE
Approvals:	CE,EAC,UKCA,SEPRO
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:	50 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
	16 bar / 0 °C
Type of connection:	Oval / Rp
Size of inlet connection:	1 1/2 inch
Size of outlet connection:	1 1/2 inch
Pressure rating for connection:	PN 16
Flange size for motor:	FT115
Connect code:	A
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	0 .. 120 °C
Selected liquid temperature:	60 °C
Density:	983.2 kg/m³
Electrical data:	
Motor standard:	IEC
Motor type:	90LE
Rated power - P2:	2.2 kW
Power (P2) required by pump:	2.2 kW
Mains frequency:	60 Hz
Rated voltage:	3 x 230-277D/400-480Y V
Rated current:	7,50-6,95/4,30-4,00 A
Starting current:	820-1050 %



Pumped liquid = Water
Liquid temperature during operation = 60 °C
Density = 983.2 kg/m³





Company name: Modern pumps Co.

Created by:

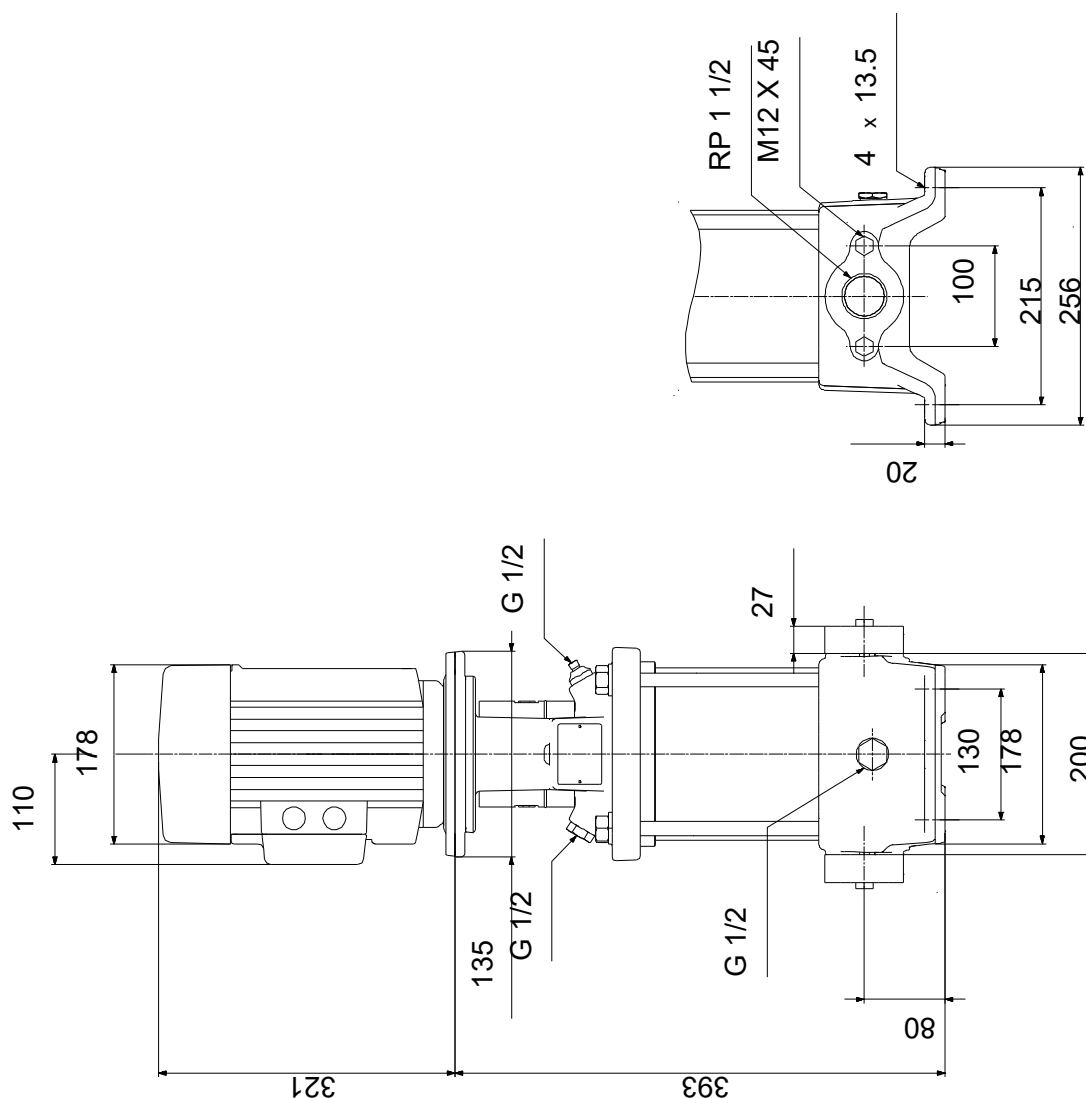
Phone:

Email:

Date:

Description	Value
Cos phi - power factor:	0.88-0.80
Rated speed:	3480-3530 rpm
IE Efficiency class:	NEMA Premium / IE3 60Hz
Motor efficiency at full load:	86.5 %
Motor efficiency at 3/4 load:	89.5-88.5 %
Motor efficiency at 1/2 load:	89.2-86.3 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Built-in motor protection:	NONE
Motor No:	99820210
Controls:	
Frequency converter:	None
Others:	
Terminal box position:	6
Minimum efficiency index, MEI ≥:	0.70
Net weight:	47 kg
Gross weight:	51 kg
Shipping volume:	0.094 m ³
Sales region:	Saudi Arabia

On request CR 10-3 A-A-A-E-HQBE 60 Hz



Note! All units are in [mm] unless others are stated.

Disclaimer: This simplified dimensional drawing does not show all details.