

| Qty. | Description |
|------|-------------|
|------|-------------|

|   |                      |
|---|----------------------|
| 1 | CR 15-3 A-A-A-E-HQBE |
|---|----------------------|



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.

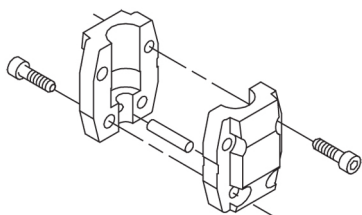
The entire process consists of these elements:

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

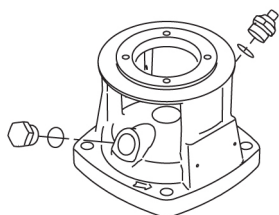
The colour code for the finished product is NCS 9000/RAL 9005.

### 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.



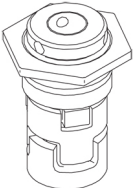
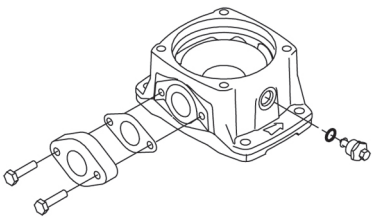
The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.

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.

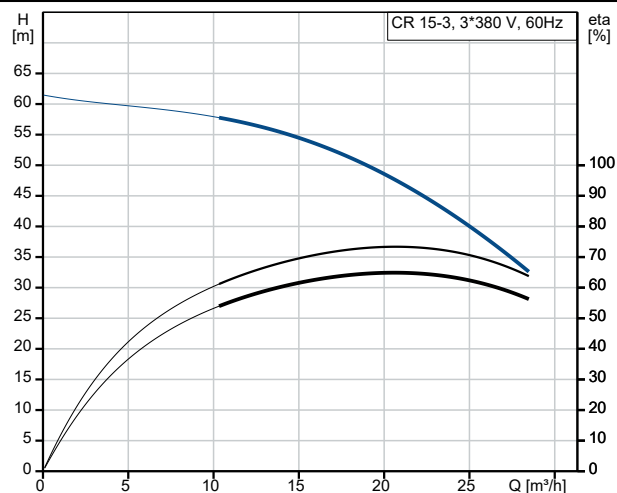
The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

Seal faces:

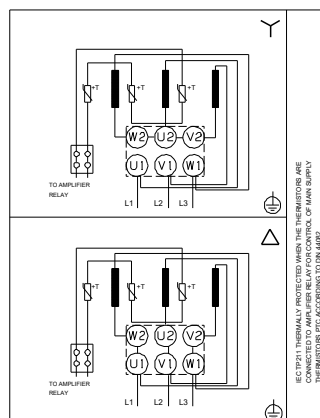
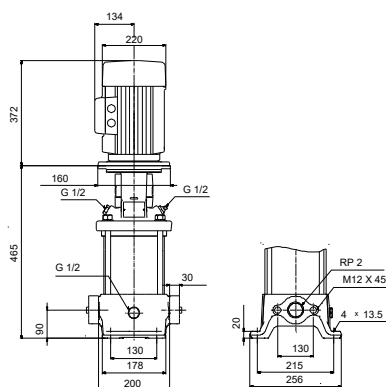
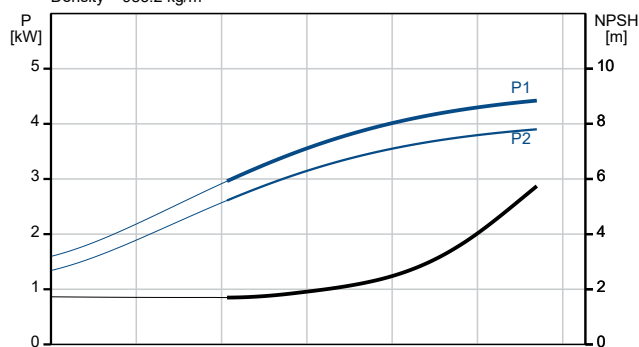
| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <ul style="list-style-type: none"> <li>Rotating seal ring material: silicon carbide (SiC)</li> <li>Stationary seat material: carbon graphite, resin-impregnated</li> </ul> <p>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.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)<br/>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>  <p>The shaft seal is screwed into the pump head.</p> <p>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.</p> <p>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.</p>  <p><b>Motor</b></p> <p>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).</p> <p>Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).</p> <p>Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as premium efficiency in accordance with EISA2007.</p> <p>The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p>Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p>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.</p> <p><b>Technical data</b></p> <p>Liquid:<br/>Pumped liquid: Water<br/>Liquid temperature range: 0 .. 120 °C<br/>Selected liquid temperature: 60 °C<br/>Density: 983.2 kg/m³</p> <p>Technical:<br/>Pump speed on which pump data are based: 3520 rpm<br/>Rated flow: 20.5 m³/h<br/>Rated head: 47.9 m<br/>Pump orientation: Vertical<br/>Shaft seal arrangement: Single</p> |

| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Primary shaft seal: HQBE<br/> Code for shaft seal: HQBE<br/> Approvals: CE,EAC,UKCA,SEPRO<br/> Approvals for drinking water: WRAS<br/> Curve tolerance: ISO9906:2012 3B</p> <p>Materials:<br/> Base: Cast iron<br/> EN 1561 EN-GJL-200<br/> ASTM A48-25B</p> <p>Impeller: Stainless steel<br/> EN 1.4301<br/> AISI 304</p> <p>Bearing: SIC</p> <p>Installation:<br/> Maximum ambient temperature: 60 °C<br/> Maximum operating pressure: 10 bar<br/> Max pressure at stated temp: 10 bar / 120 °C<br/> 10 bar / 0 °C</p> <p>Type of connection: Oval / Rp<br/> Size of inlet connection: 2 inch<br/> Size of outlet connection: 2 inch<br/> Pressure rating for connection: PN 10<br/> Flange size for motor: FT130</p> <p>Electrical data:<br/> Motor standard: IEC<br/> Motor type: 112MC<br/> Rated power - P2: 4 kW<br/> Power (P2) required by pump: 4 kW<br/> Mains frequency: 60 Hz<br/> Rated voltage: 3 x 220-277D/380-480Y V<br/> Rated current: 13,6-11,8/7,80-6,80 A<br/> Starting current: 1000-1470 %<br/> Cos phi - power factor: 0.91-0.82<br/> Rated speed: 3510-3540 rpm<br/> IE Efficiency class: NEMA Premium / IE3 60Hz<br/> Motor efficiency at full load: 88.5 %<br/> Motor efficiency at 3/4 load: 88.5-87.3 %<br/> Motor efficiency at 1/2 load: 86.9-84.7 %<br/> Number of poles: 2<br/> Enclosure class (IEC 34-5): 55 Dust/Jetting<br/> Insulation class (IEC 85): F<br/> Motor No: 85U05413</p> <p>Controls:<br/> Frequency converter: None</p> <p>Others:<br/> Terminal box position: 6<br/> Minimum efficiency index, MEI ≥: 0.70<br/> Net weight: 70 kg<br/> Gross weight: 74 kg<br/> Shipping volume: 0.13 m³<br/> Country of origin: HU<br/> Custom tariff no.: 841381200000</p> |

| Description                              | Value                   |
|------------------------------------------|-------------------------|
| <b>General information:</b>              |                         |
| Product name:                            | CR 15-3 A-A-A-E-HQBE    |
| Product No:                              | On request              |
| EAN number:                              | On request              |
| <b>Technical:</b>                        |                         |
| Pump speed on which pump data are based: | 3520 rpm                |
| Rated flow:                              | 20.5 m³/h               |
| Rated head:                              | 47.9 m                  |
| Maximum head:                            | 61.5 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       |
| Approvals for drinking water:            | WRAS                    |
| Curve tolerance:                         | ISO9906:2012 3B         |
| Pump version:                            | A                       |
| Model:                                   | A                       |
| <b>Materials:</b>                        |                         |
| 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                     |
| <b>Installation:</b>                     |                         |
| Maximum ambient temperature:             | 60 °C                   |
| Maximum operating pressure:              | 10 bar                  |
| Max pressure at stated temp:             | 10 bar / 120 °C         |
|                                          | 10 bar / 0 °C           |
| Type of connection:                      | Oval / Rp               |
| Size of inlet connection:                | 2 inch                  |
| Size of outlet connection:               | 2 inch                  |
| Pressure rating for connection:          | PN 10                   |
| Flange size for motor:                   | FT130                   |
| Connect code:                            | A                       |
| <b>Liquid:</b>                           |                         |
| Pumped liquid:                           | Water                   |
| Liquid temperature range:                | 0 .. 120 °C             |
| Selected liquid temperature:             | 60 °C                   |
| Density:                                 | 983.2 kg/m³             |
| <b>Electrical data:</b>                  |                         |
| Motor standard:                          | IEC                     |
| Motor type:                              | 112MC                   |
| Rated power - P2:                        | 4 kW                    |
| Power (P2) required by pump:             | 4 kW                    |
| Mains frequency:                         | 60 Hz                   |
| Rated voltage:                           | 3 x 220-277D/380-480Y V |
| Rated current:                           | 13,6-11,8/7,80-6,80 A   |



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





Company name: Modern pumps Co.

Created by:

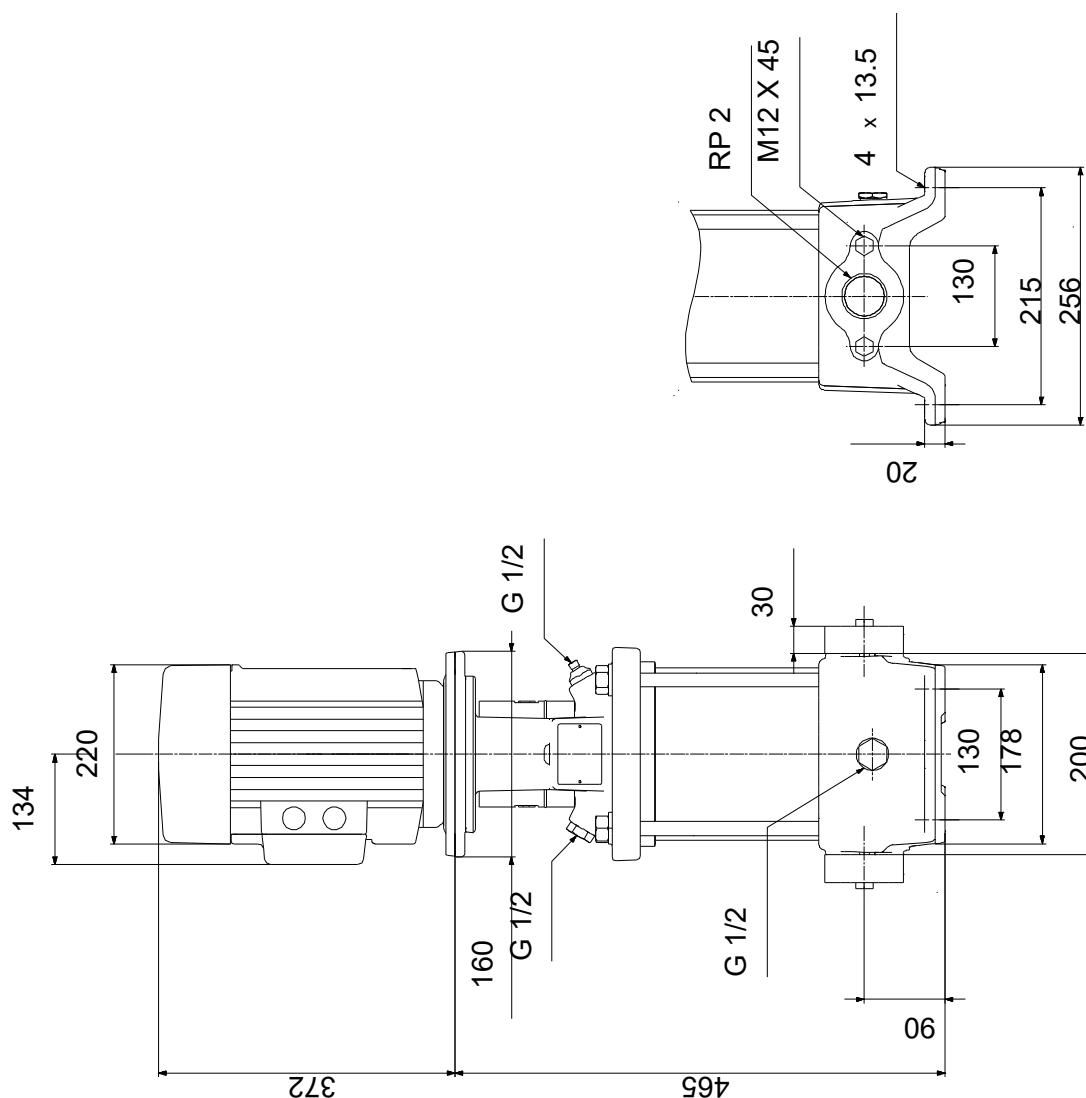
Phone:

Email:

Date:

| Description                      | Value                      |
|----------------------------------|----------------------------|
| Starting current:                | 1000-1470 %                |
| Cos phi - power factor:          | 0.91-0.82                  |
| Rated speed:                     | 3510-3540 rpm              |
| IE Efficiency class:             | NEMA Premium / IE3<br>60Hz |
| Motor efficiency at full load:   | 88.5 %                     |
| Motor efficiency at 3/4 load:    | 88.5-87.3 %                |
| Motor efficiency at 1/2 load:    | 86.9-84.7 %                |
| Number of poles:                 | 2                          |
| Enclosure class (IEC 34-5):      | 55 Dust/Jetting            |
| Insulation class (IEC 85):       | F                          |
| Built-in motor protection:       | PTC                        |
| Motor No:                        | 85U05413                   |
| <b>Controls:</b>                 |                            |
| Frequency converter:             | None                       |
| <b>Others:</b>                   |                            |
| Terminal box position:           | 6                          |
| Minimum efficiency index, MEI ≥: | 0.70                       |
| Net weight:                      | 70 kg                      |
| Gross weight:                    | 74 kg                      |
| Shipping volume:                 | 0.13 m <sup>3</sup>        |
| Sales region:                    | Saudi Arabia               |
| Country of origin:               | HU                         |
| Custom tariff no.:               | 841381200000               |

## On request CR 15-3 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.