

# Submittal Data

|                       |                  |             |
|-----------------------|------------------|-------------|
| PROJECT:              | UNIT TAG:        | QUANTITY:   |
| REPRESENTATIVE: _____ | TYPE OF SERVICE: | DATE: _____ |
| ENGINEER:             | SUBMITTED BY:    | DATE:       |
| CONTRACTOR:           | APPROVED BY:     | DATE:       |
|                       | ORDER NO.:       | DATE:       |

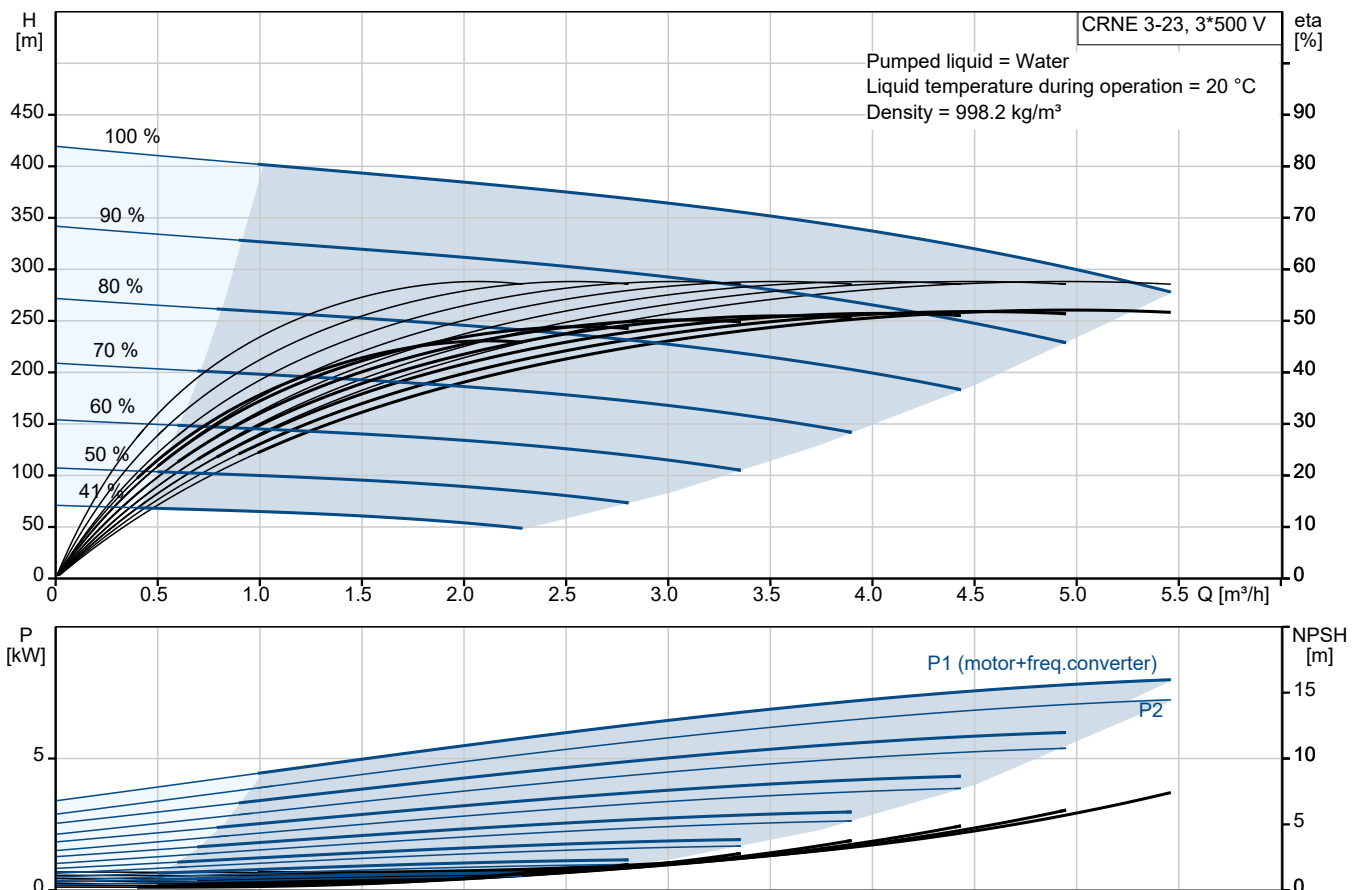


## CRNE 3-23 Q-FGJ-T-V-HQQV

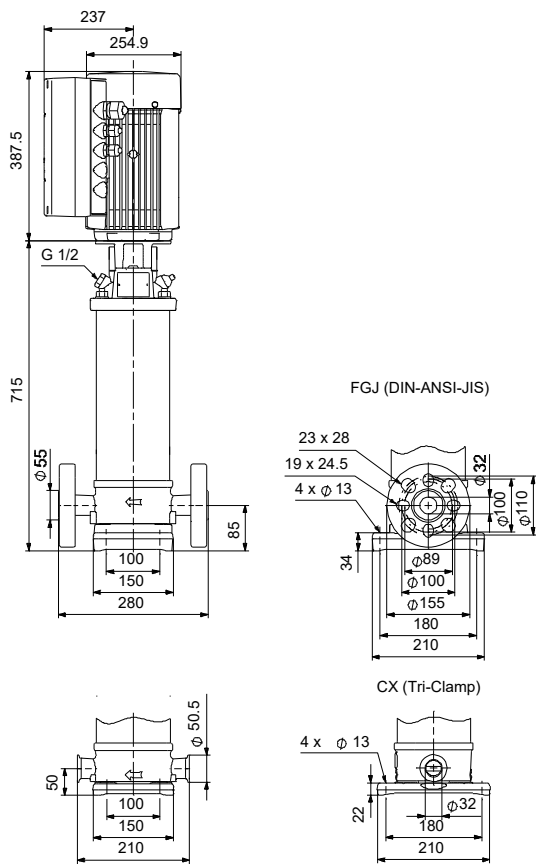
Vertical, multistage centrifugal pump with integrated frequency converter. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401)

Note! Product picture may differ from actual product

| Conditions of Service |       | Pump Data                    |                | Motor Data        |            |
|-----------------------|-------|------------------------------|----------------|-------------------|------------|
| Liquid:               | Water | Max pressure at stated temp: | 50 bar / 90 °C | Rated power - P2: | 7.5 kW     |
| Temperature:          | 20 °C | Liquid temperature range:    | -20 .. 90 °C   | Rated voltage:    | 380-500 V  |
| Specific Gravity:     | 1.000 | Maximum ambient temperature: | 50 °C          | Mains frequency:  | 50 / 60 Hz |
|                       |       | Shaft seal:                  | HQQV           | Enclosure class:  | IP55       |
|                       |       | Product number:              | On request     | Insulation class: | F          |
|                       |       |                              |                | Motor protection: | ELEC       |
|                       |       |                              |                | Motor type:       | 132SF      |



# Submittal Data



## Materials:

|                  |                   |
|------------------|-------------------|
| Pump housing:    | Stainless steel   |
| Pump housing:    | DIN W.-Nr. 1.4408 |
| Pump housing:    | ASTM A 351 CF 8M  |
| Impeller:        | Stainless steel   |
| Impeller:        | DIN W.-Nr. 1.4401 |
| Impeller:        | AISI 316          |
| Material code:   | T                 |
| Code for rubber: | V                 |

**Qty. Description**

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**Note! Product picture may differ from actual product**

Product No.: On request

Vertical, non-self-priming, high-pressure multistage centrifugal pump with suction and discharge ports on the same level (in-line) enabling installation in a horizontal one-pipe system. The chamber stack is turned upside-down to ensure that the shaft seal is not affected by the high pump discharge pressure. Pump materials in contact with the liquid are in high-grade stainless steel. A cartridge shaft seal ensures high reliability, safe handling and easy service and access. Power transmission is via a split coupling. Pipe connection is via combined DIN-ANSI-JIS flanges.

The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor. 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.

**Further product details**

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 operating panel has indicator lights for "Operation" and "Fault".

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.

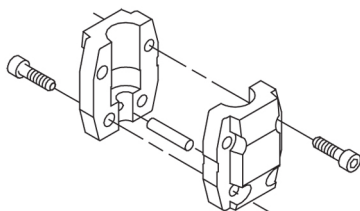
The entire process consists of these elements:

- 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**

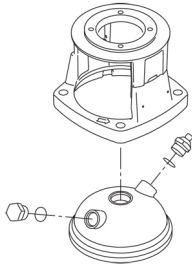
A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.



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.

**Qty. Description**

1



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.

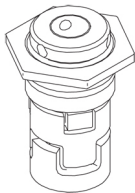
Seal faces:

- 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: FKM (fluorocarbon rubber)

FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.



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 pump has a stainless-steel base mounted on a separate base plate.

This 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 combined drain plug and bypass valve.

The pump is secured to the foundation by four bolts through the base plate.

The flanges and base are cast in one piece and prepared for connection by means of DIN, ANSI or JIS.

**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:

Frequency converter: Built-in

Liquid:

Pumped liquid: Water

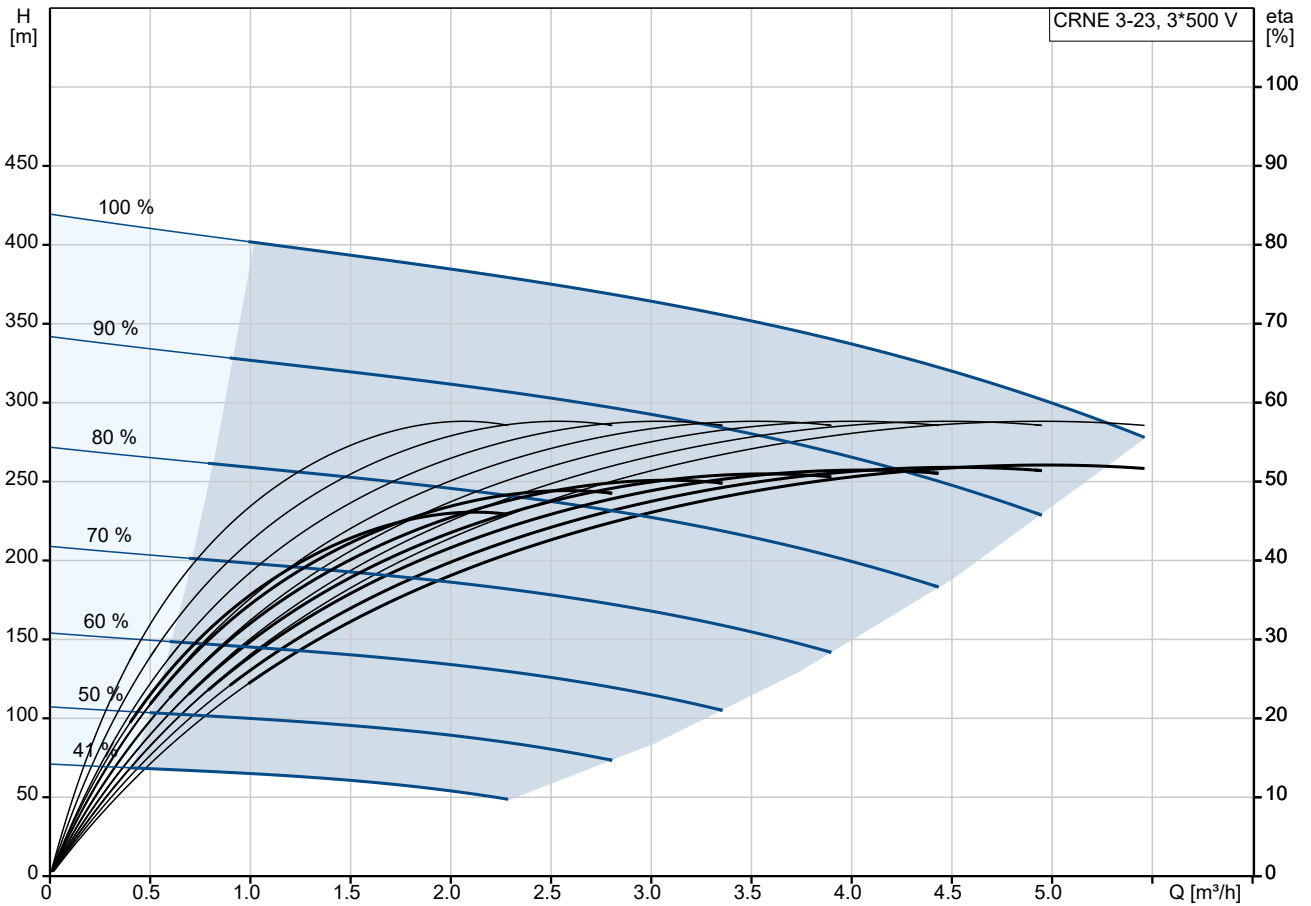
Liquid temperature range: -20 .. 90 °C

Selected liquid temperature: 20 °C

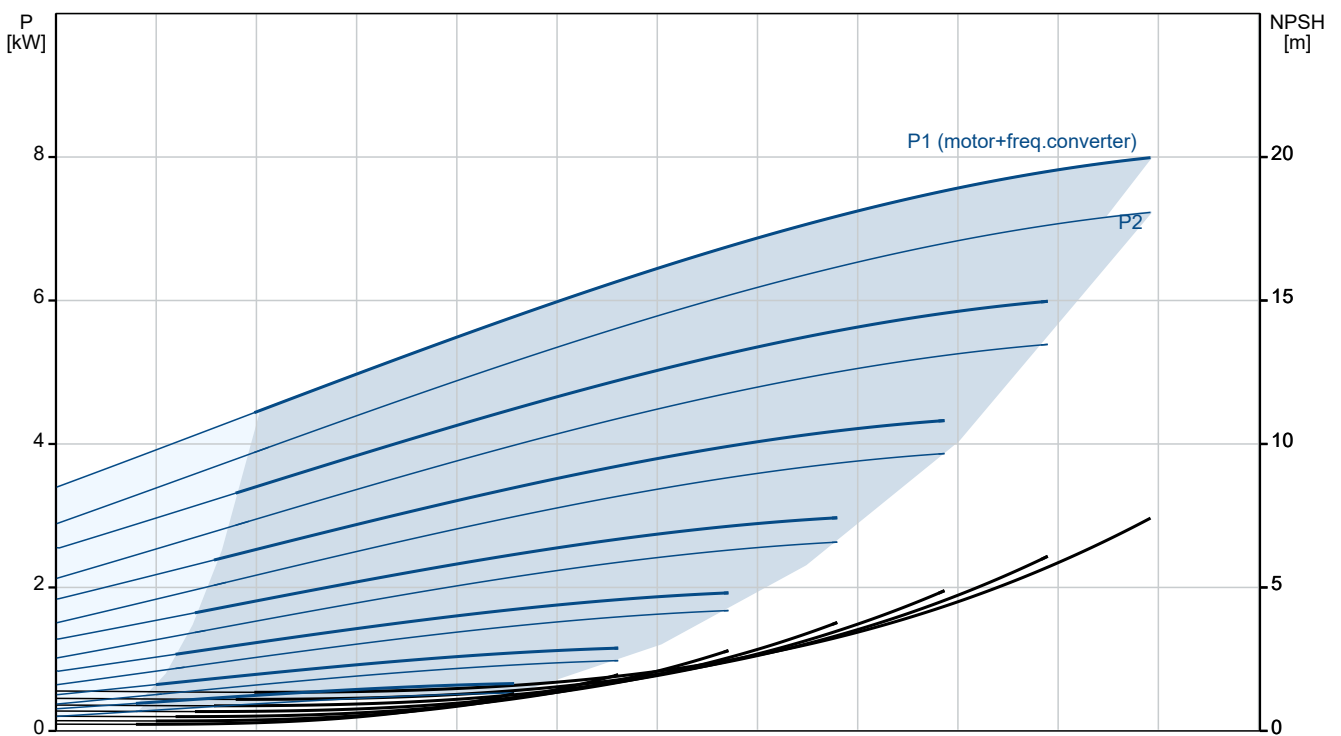
Density: 998.2 kg/m<sup>3</sup>



## On request CRNE 3-23 Q-FGJ-T-V-HQQV



Pumped liquid = Water  
 Liquid temperature during operation = 20 °C  
 Density = 998.2 kg/m³







Company name:

Created by:

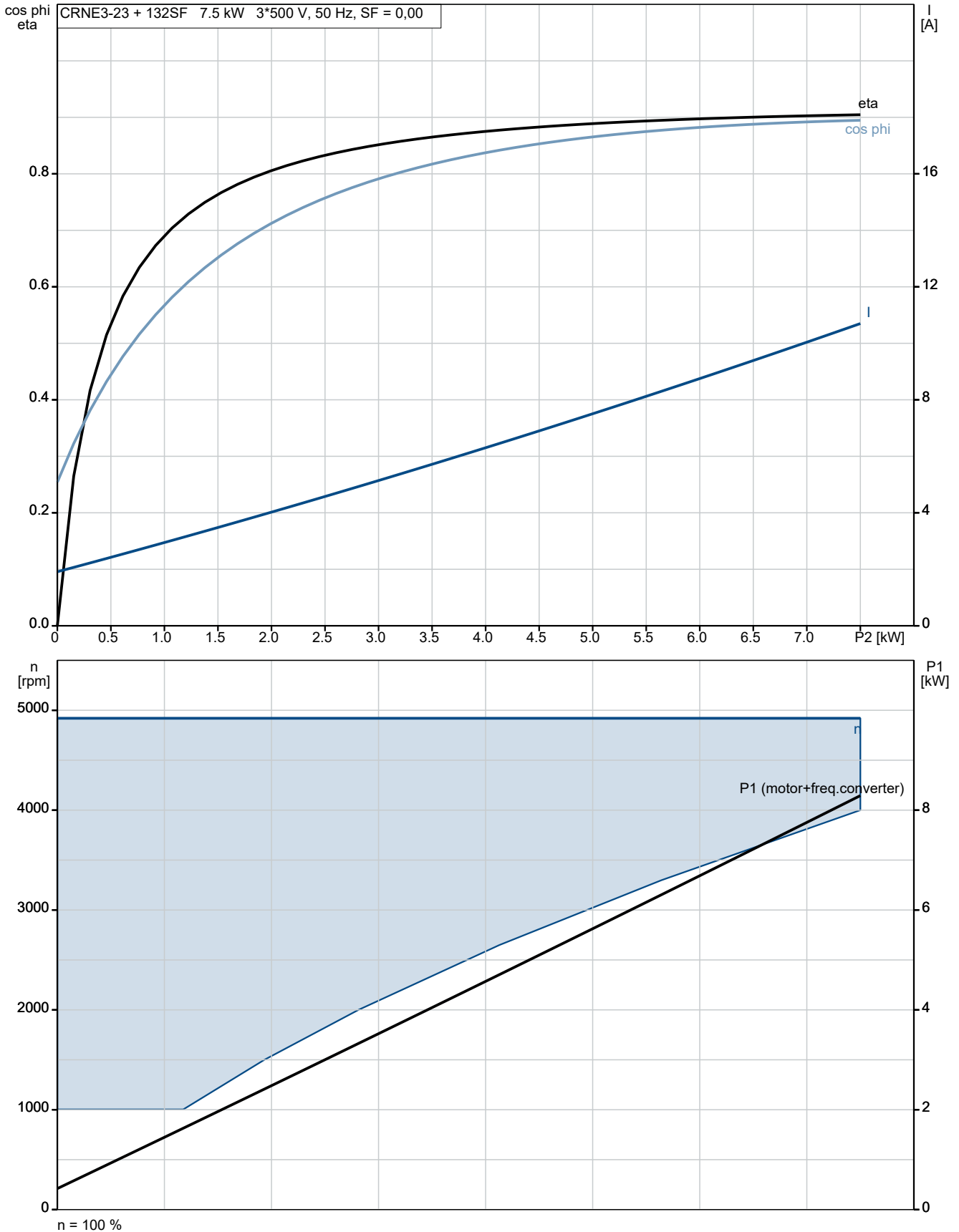
Phone:

Date:

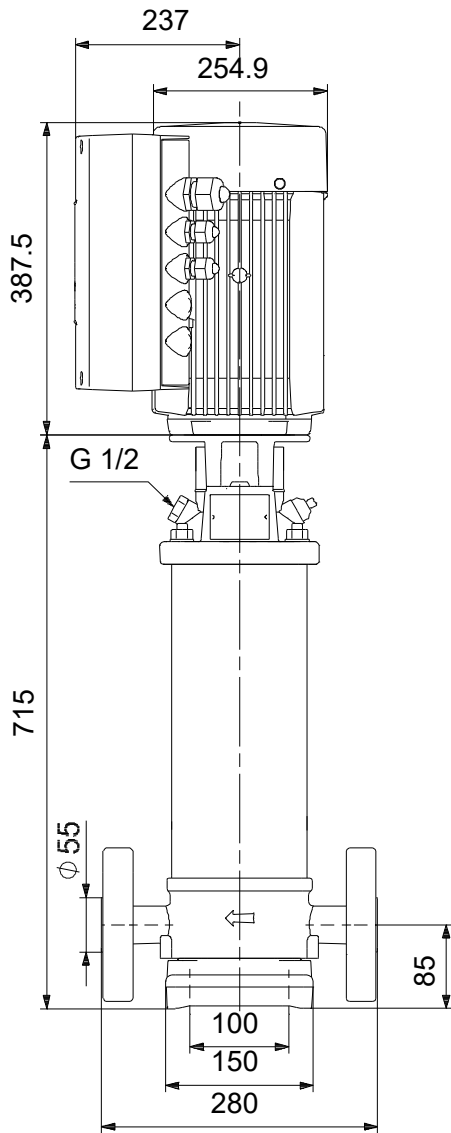
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| Description                      | Value             |
|----------------------------------|-------------------|
| Control panel:                   | HMI200 - Standard |
| Function Module:                 | FM310 - Advanced  |
| Frequency converter:             | Built-in          |
| <b>Others:</b>                   |                   |
| Minimum efficiency index, MEI ≥: | 0.70              |
| Net weight:                      | 89.1 kg           |
| Gross weight:                    | 113 kg            |
| Config. file no:                 | 93130458          |
| Country of origin:               | DK                |
| Custom tariff no.:               | 84137075          |

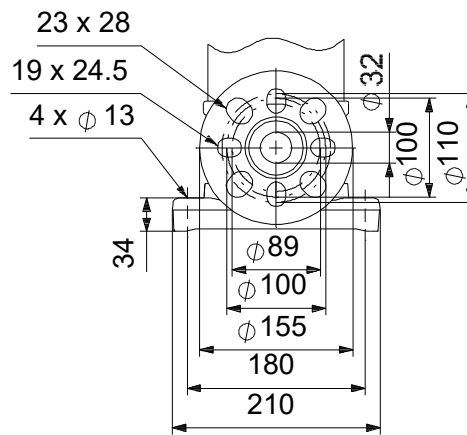
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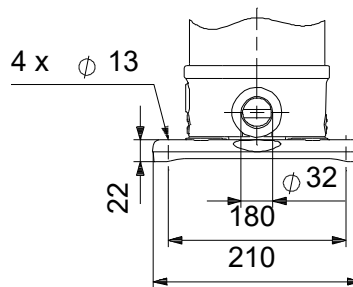
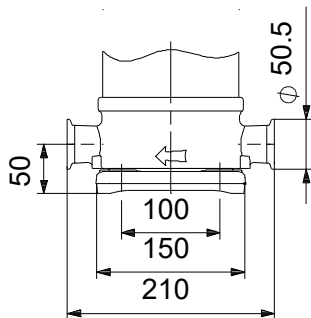
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FGJ (DIN-ANSI-JIS)

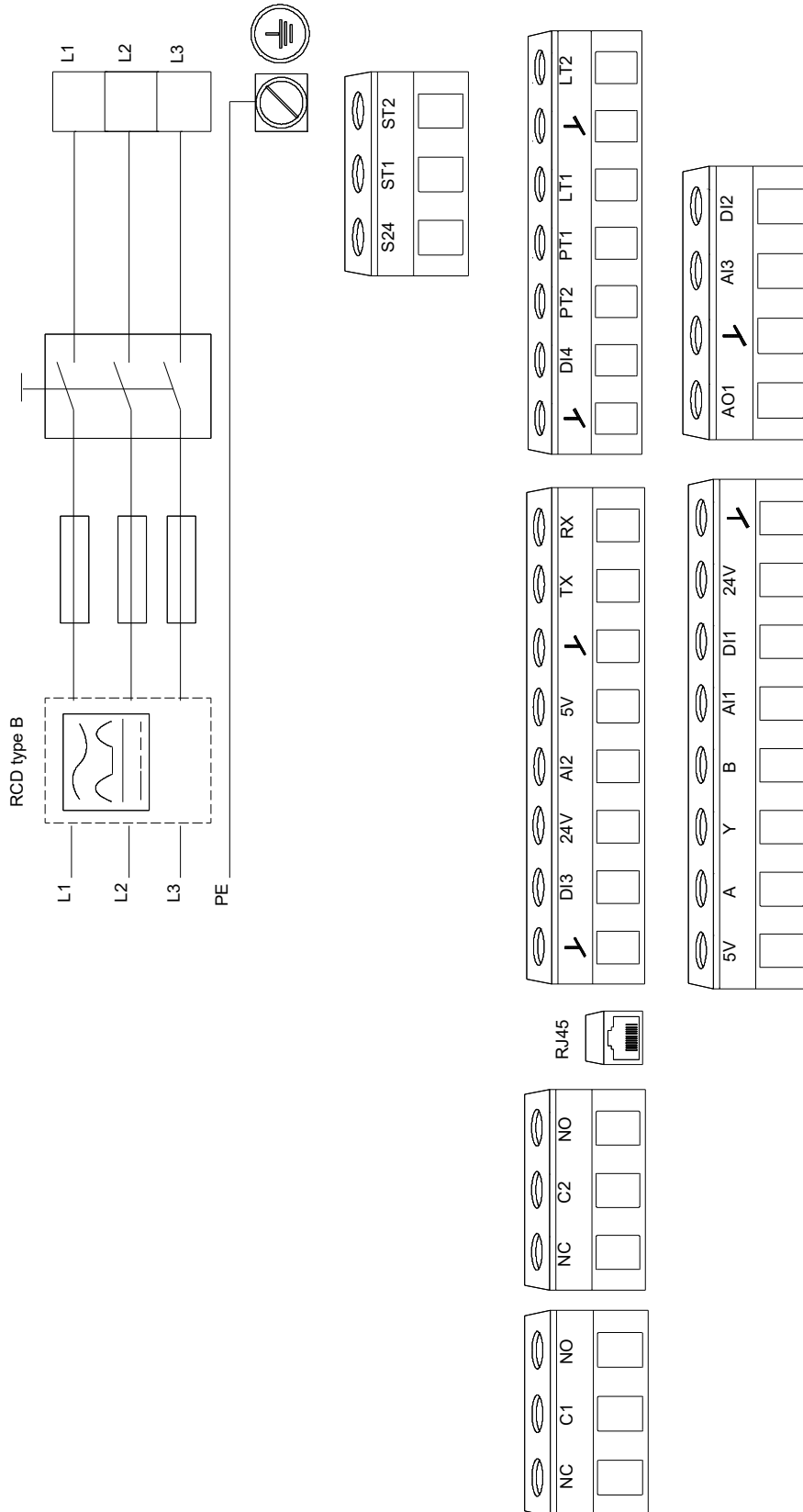


CX (Tri-Clamp)



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

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

