Submittal Data

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

Note! Product picture may differ from actual product

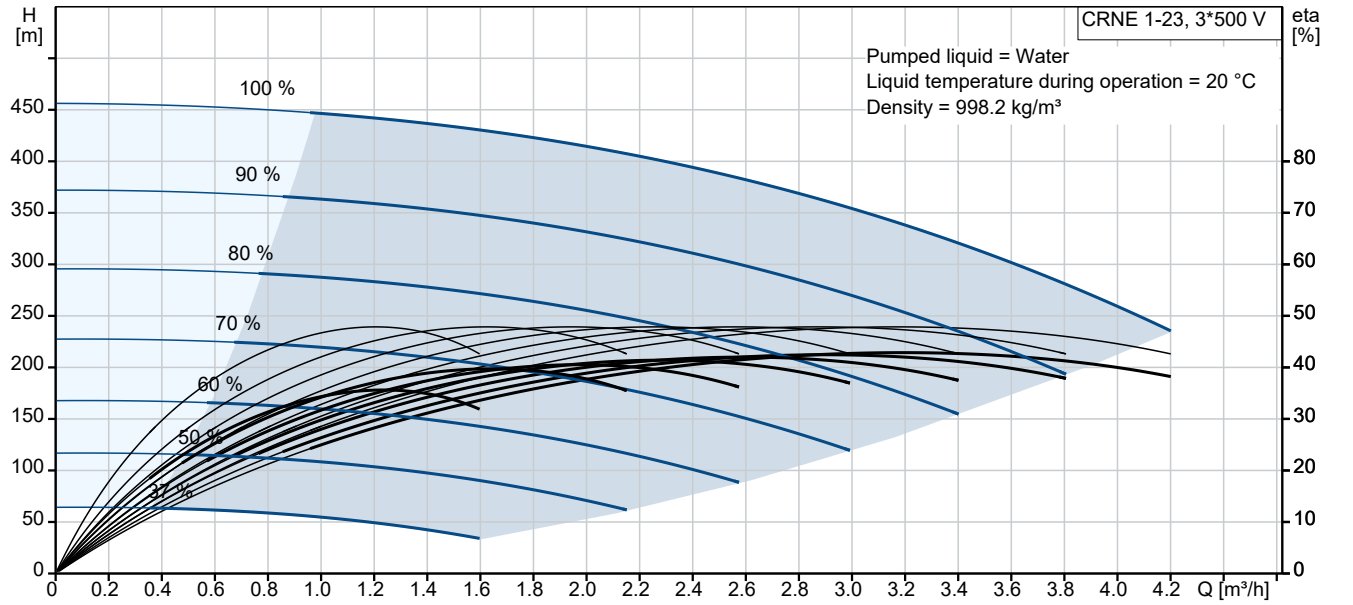
CRNE 1-23 Q-P-T-V-HQQV

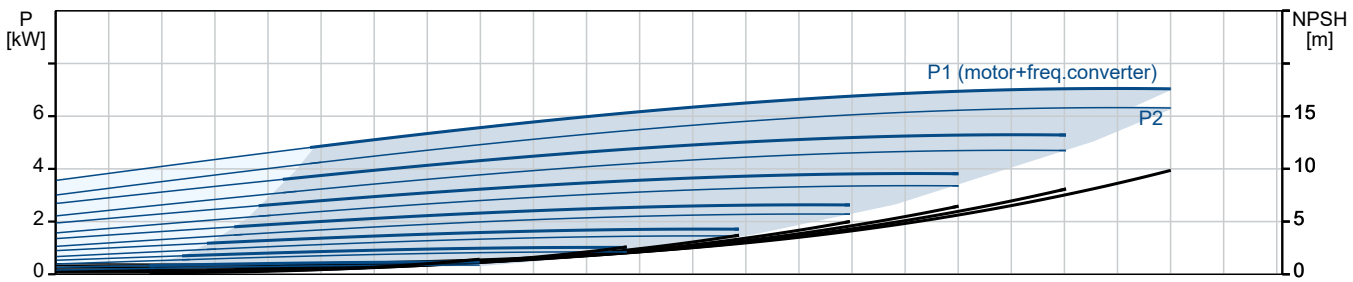
Vertical, multistage centrifugal pump with integrated frequency converter. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401)

Conditions of Service	
Liquid:	Water
Temperature:	20 °C
Specific Gravity:	1.000

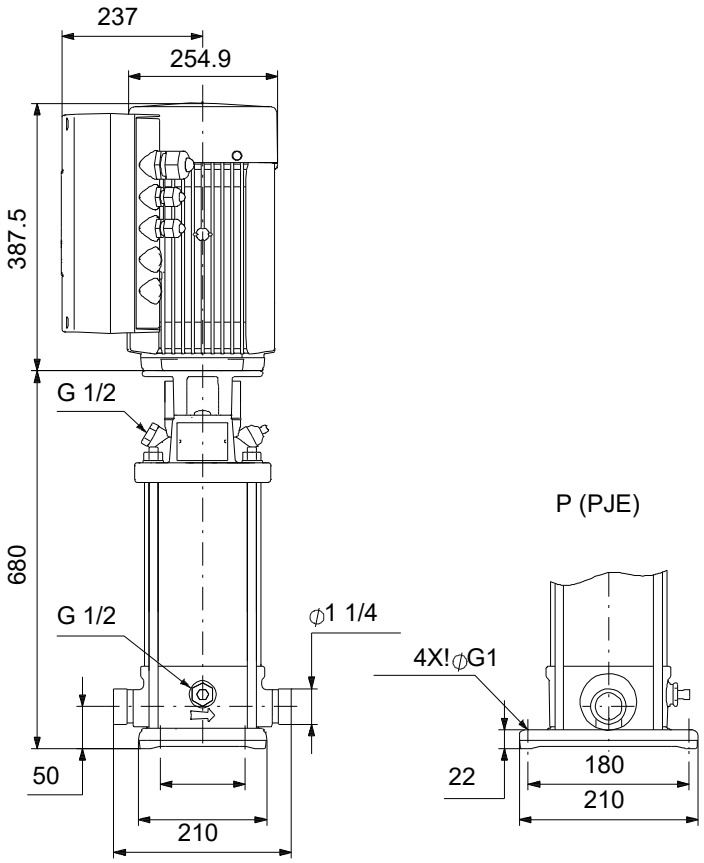
Pump Data	
Max pressure at stated temp:	50 bar / 90 °C
Liquid temperature range:	-20 .. 90 °C
Maximum ambient temperature:	50 °C
Shaft seal:	HQQV
Product number:	On request

Motor Data	
Rated power - P2:	7.5 kW
Rated voltage:	380-500 V
Mains frequency:	50 / 60 Hz
Enclosure class:	IP55
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

Company name:
Created by:
Phone:

Date: 20/10/2024

Qty.	Description
1	**CRNE 1-23 Q-P-T-V-HQQV**

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 PJE (Victaulic®) couplings.

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.

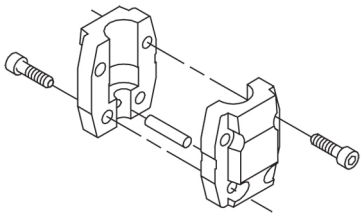
The entire process consists of these elements:

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.

GRUNDFOS

Company name:
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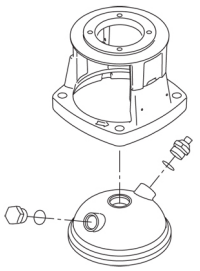
Phone:

Date: 20/10/2024

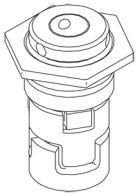
Qty.	Description
1	



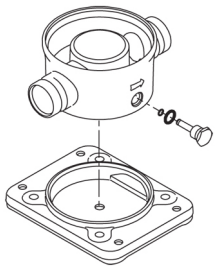
The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.
This seal type is assembled in a cartridge unit which makes replacement safe and easy.
Due to the balancing, this seal type is suitable for high-pressure applications.
The cartridge construction also protects 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.
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 combined drain plug and bypass valve.
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 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

GRUNDFOS

Company name:
Created by:
Phone:

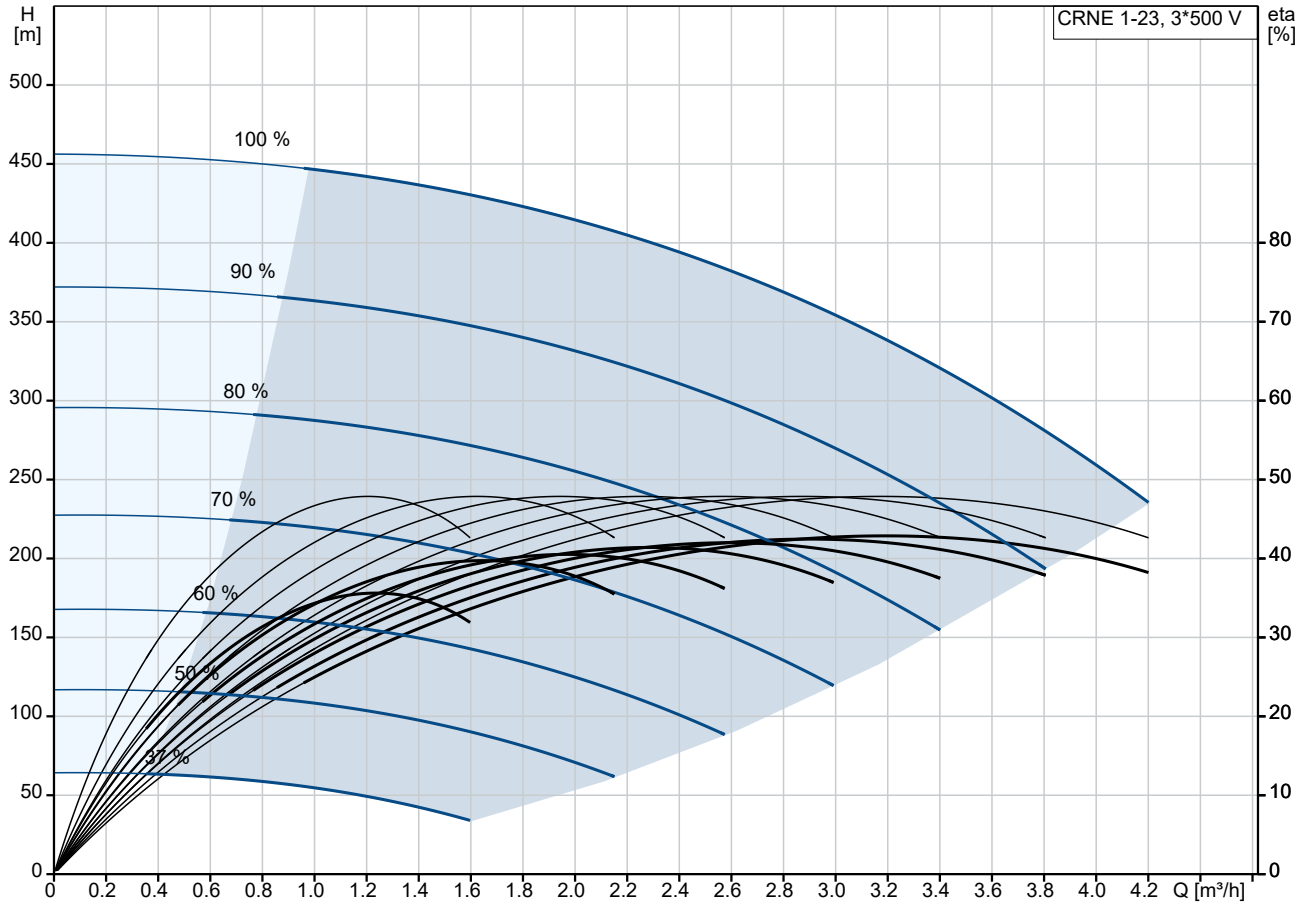
Date: 20/10/2024

Qty.	Description	
1	Controls:	
	Frequency converter:	Built-in
	Liquid:	
	Pumped liquid:	Water
	Liquid temperature range:	-20 .. 90 °C
	Selected liquid temperature:	20 °C
	Density:	998.2 kg/m³
	Technical:	
	Pump speed on which pump data are based:	5500 rpm
	Rated flow:	3.5 m³/h
	Rated head:	357.1 m
	Code for shaft seal:	HQQV
	Approvals:	CE,EAC,UKCA,CURUS,SEPRO
	Curve tolerance:	ISO9906:2012 3B
	Materials:	
	Pump housing:	Stainless steel DIN W.-Nr. 1.4408 ASTM A 351 CF 8M
	Impeller:	Stainless steel DIN W.-Nr. 1.4401 AISI 316
	Installation:	
	Maximum ambient temperature:	50 °C
	Max pressure at stated temp:	50 bar / 90 °C 50 bar / -20 °C
	Type of connection:	PJE
	Size of connection:	1 1/4 inch
	Flange size for motor:	FT130
	Electrical data:	
	Motor standard:	IEC
	Motor type:	132SF
	Rated power - P2:	7.5 kW
	Over/undersize motor:	Standard motor size
	Mains frequency:	50 / 60 Hz
	Rated voltage:	3 x 380-500 V
	Service factor:	0.00
	Rated current:	14.2-11.3 A
	Cos phi - power factor:	0.93-0.89
	Rated speed:	480-5900 rpm
	IE Efficiency class:	IE5
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	93095013
	Others:	
	Minimum efficiency index, MEI ≥:	0.70
	Net weight:	73.8 kg
	Gross weight:	98 kg
	Country of origin:	DK
	Custom tariff no.:	84137075

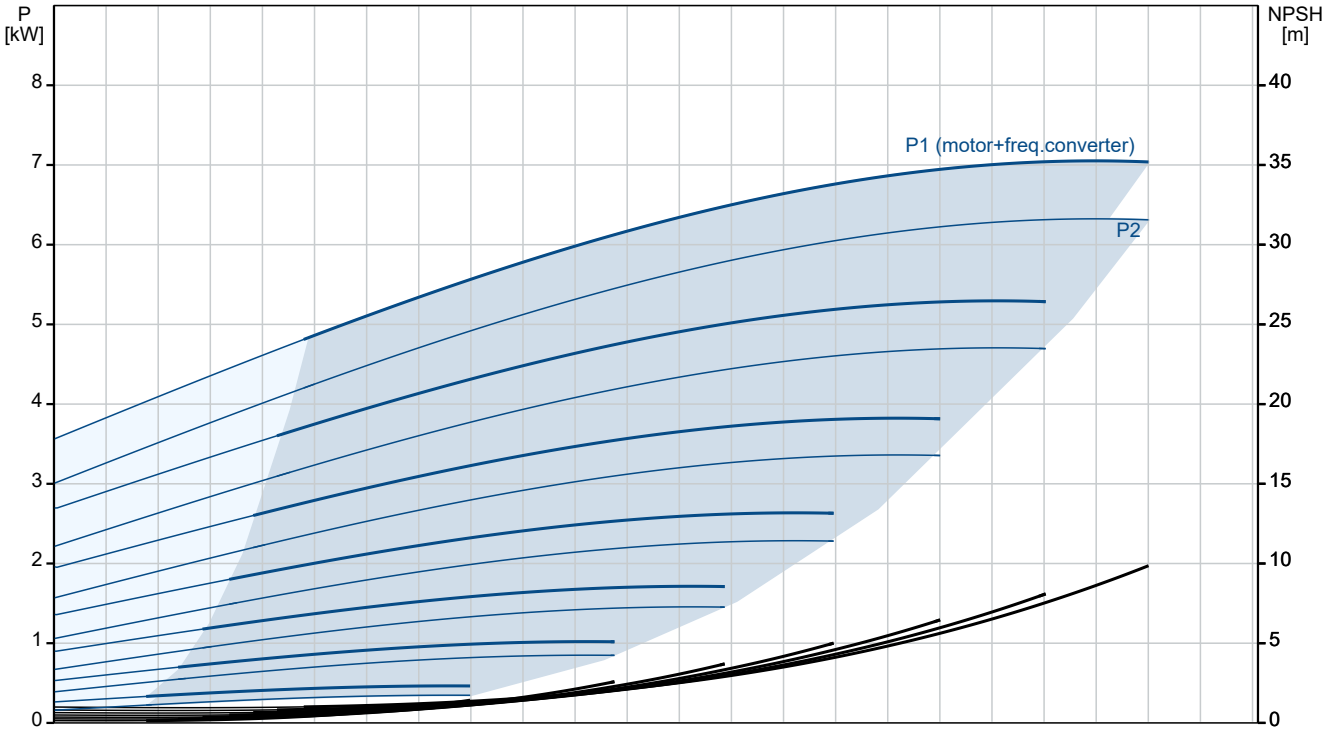
Company name:
Created by:
Phone:

Date: 20/10/2024

On request CRNE 1-23 Q-P-T-V-HQQV



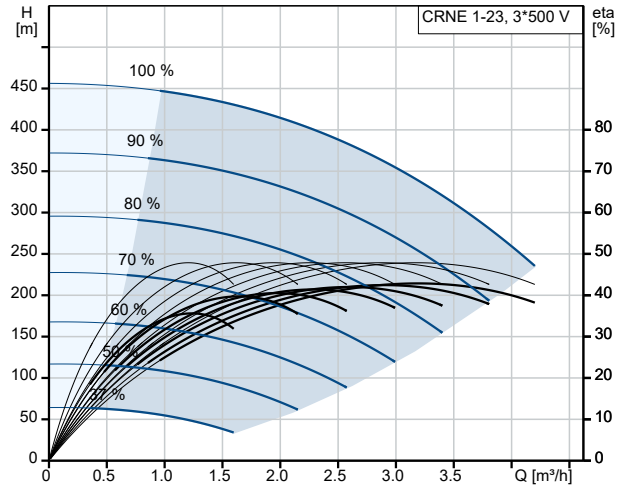
Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³



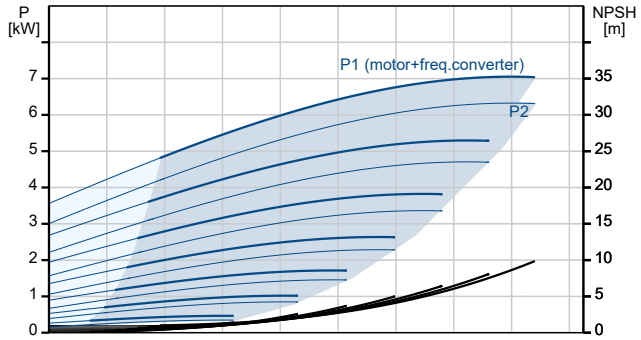
Company name:
Created by:
Phone:

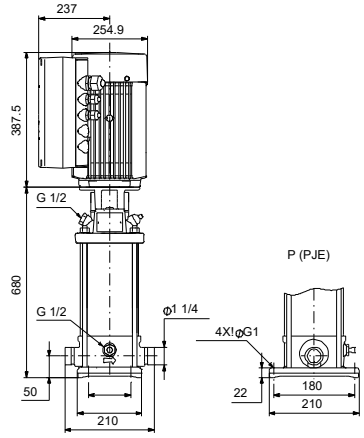
Date: 20/10/2024

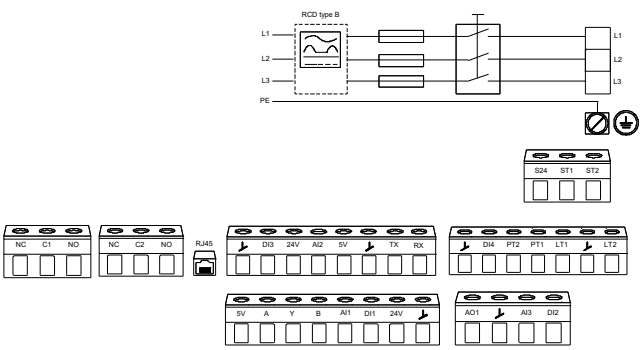
Description	Value
General information:	
Product name:	CRNE 1-23 Q-P-T-V-HQQV
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	5500 rpm
Rated flow:	3.5 m³/h
Rated head:	357.1 m
Head max:	486.8 m
Stages:	23
Impellers:	23
Low NPSH:	N
Code for shaft seal:	HQQV
Approvals:	CE,EAC,UKCA,CURUS,SEPRO
Curve tolerance:	ISO9906:2012 3B
Pump version:	Q
Model:	A
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
Installation:	
Maximum ambient temperature:	50 °C
Max pressure at stated temp:	50 bar / 90 °C
Max pressure at stated temp:	50 bar / -20 °C
Type of connection:	PJE
Size of connection:	1 1/4 inch
Flange size for motor:	FT130
Connect code:	P
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 90 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor standard:	IEC
Motor type:	132SF
Rated power - P2:	7.5 kW
Over/undersize motor:	Standard motor size
Mains frequency:	50 / 60 Hz
Rated voltage:	3 x 380-500 V
Service factor:	0.00
Rated current:	14.2-11.3 A
Cos phi - power factor:	0.93-0.89
Rated speed:	480-5900 rpm
IE Efficiency class:	IE5
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	93095013
Controls:	



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







GRUNDFOS

Company name:
Created by:
Phone:

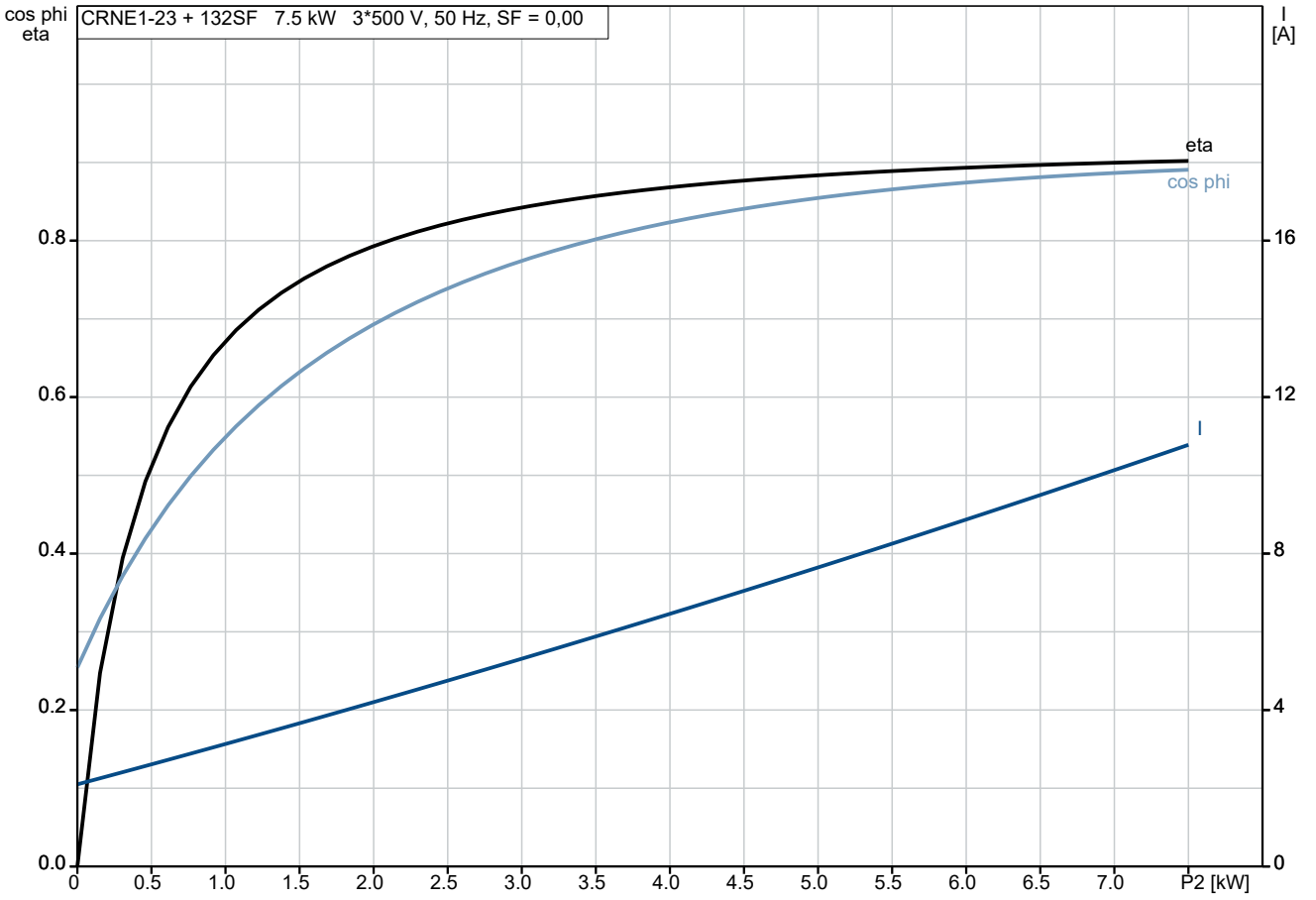
Date: 20/10/2024

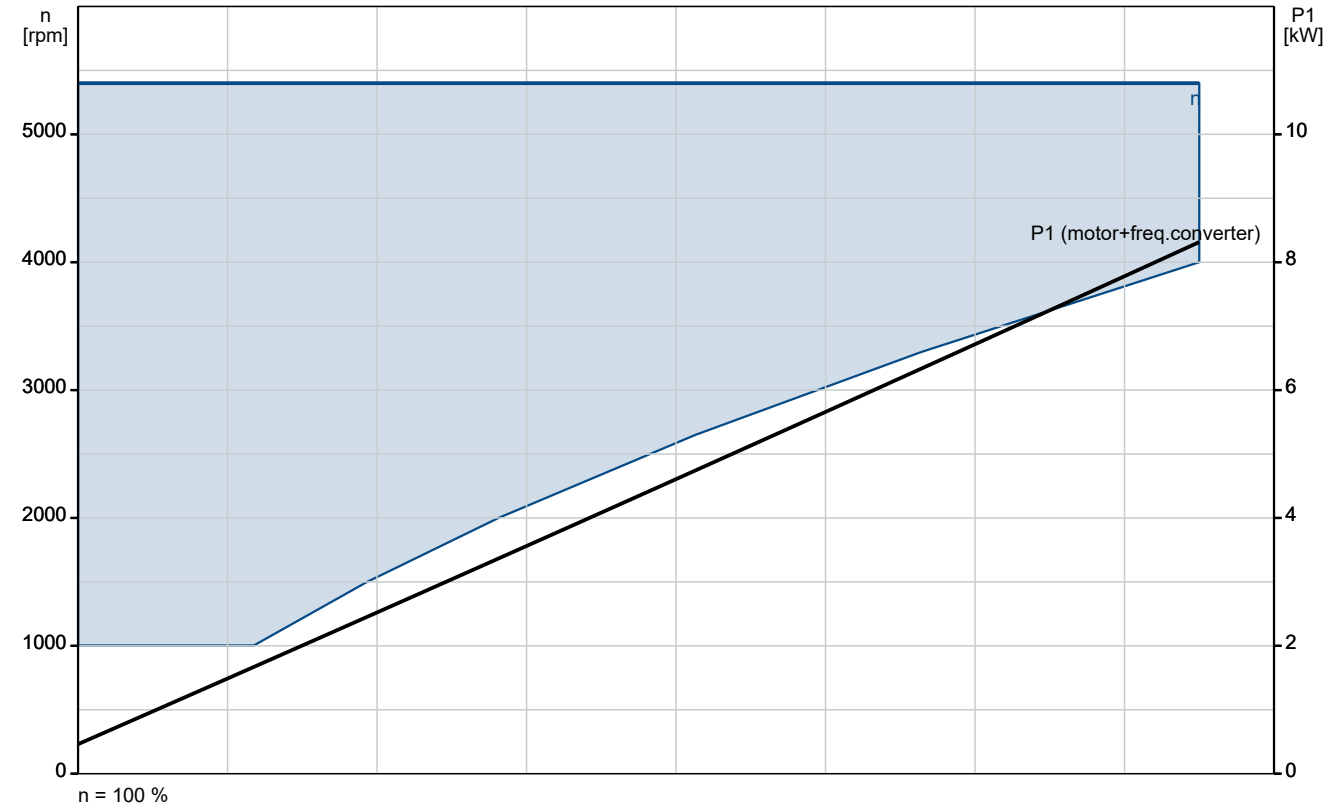
Description	Value
Control panel:	HMI200 - Standard
Function Module:	FM310 - Advanced
Frequency converter:	Built-in
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	73.8 kg
Gross weight:	98 kg
Config. file no:	93131578
Country of origin:	DK
Custom tariff no.:	84137075

Company name:
Created by:
Phone:

Date: 20/10/2024

On request CRNE 1-23 Q-P-T-V-HQQV





GRUNDFOS

Company name:
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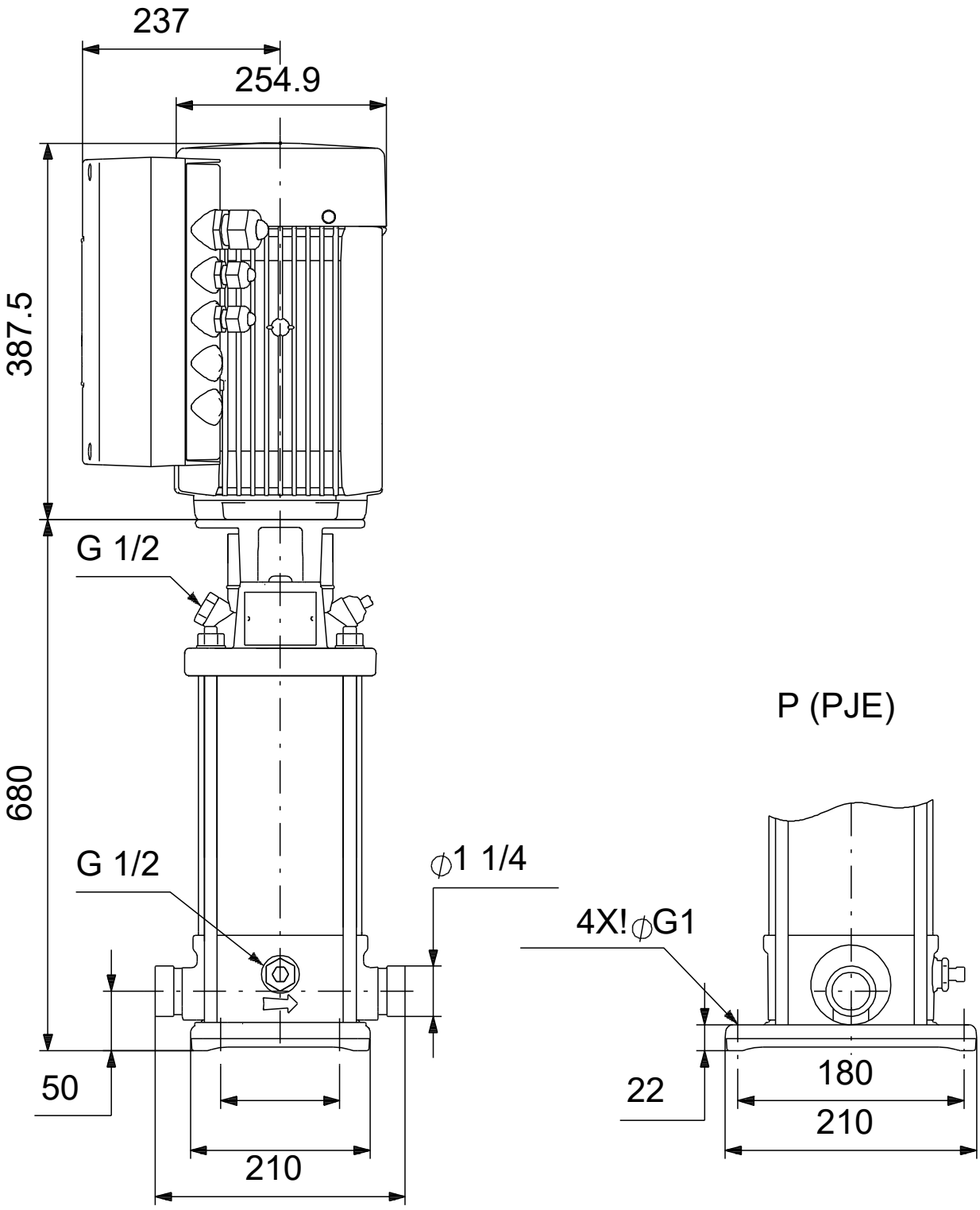
Phone:

Date: 20/10/2024

On request CRNE 1-23 Q-P-T-V-HQQV

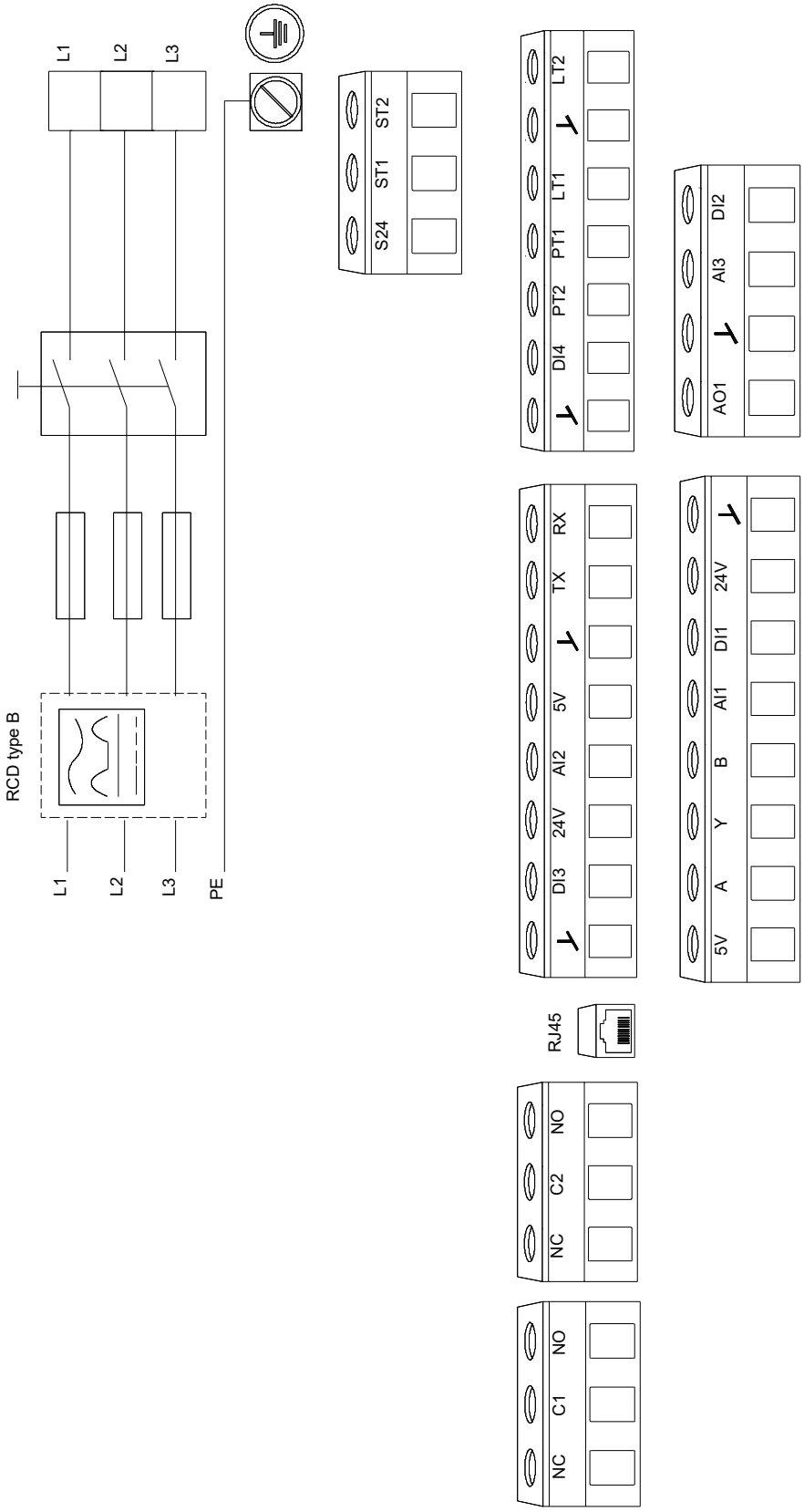


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name:
Created by:
Phone:

Date: 20/10/2024

On request CRNE 1-23 Q-P-T-V-HQQV



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

GRUNDFOS

Company name:
Created by:
Phone:

Date: 20/10/2024

Order Data:

Position	Your pos.	Product name	Amount	Product No	Total
		CRNE 1-23 Q-P-T-V-HQQV	1	On request	