Company name:
Created by:
Phone:

Date: 3/21/2019

Count	Description
1	**CRN 155-2-2 A-G-A-E-HQQE**

Product photo could vary from the actual product

Product No.: On request

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in high-grade stainless steel. The Grundfos 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 ANSI flanges.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

Further product details

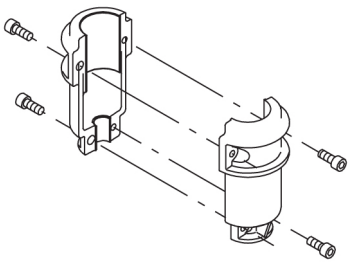
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An 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.

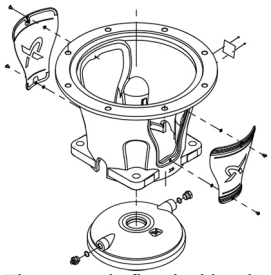
The colour code for the finished product is NCS 9000/RAL 9005.

Pump

A long split coupling connects the pump and motor shaft. It is enclosed in the motor stool by means of two coupling guards. The long coupling makes it possible to replace the shaft seal without removing the motor from the pump.



The motor stool connects the pump head and motor. 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.

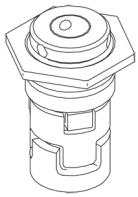
Primary seal:

- 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)

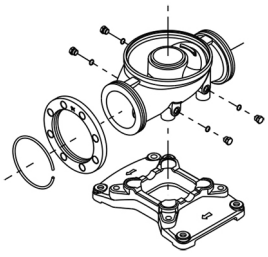
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



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 PEEK 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 cast-iron base plate. The base and base plate are kept in position by the tension of the staybolts which hold the pump together. Both the inlet and the outlet side of the base have two pressure gauge tappings. The pump is secured to the foundation by four bolts through the base plate. The flanges are fastened to the base by means of locking rings.



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 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.

GRUNDFOS

Company name:
Created by:
Phone:

Date: 3/21/2019

Count	Description

Technical data

Controls:

Frequency converter:	NONE

Liquid:

Pumped liquid:	Water
Liquid temperature range:	-40 .. 248 °F
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft³

Technical:

Rated pump speed:	3544 rpm
Rated flow:	820 US gpm
Rated head:	171.3 ft
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Curve tolerance:	ISO9906:2012 3B

Materials:

Base:	Stainless steel EN 1.4408 ASTM A351 CF8M
Impeller:	Stainless steel EN 1.4401 AISI 316
Bearing:	WC/WC
Support bearing:	Graflon
Material certified according to:	European standards

Installation:

Maximum ambient temperature:	122 °F
Maximum operating pressure:	232 psi
Max pressure at stated temperature:	232 psi / 250 °F
Type of connection:	ANSI
Size of suction port:	6 inch
Size of outlet port:	6 inch
Pressure rating for pipe connection:	150 lb
Flange size for motor:	326TSC

Electrical data:

Motor standard:	NEMA
Motor type:	Baldor
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	50 HP
Power (P2) required by pump:	50 HP
Main frequency:	60 Hz
Rated voltage:	3 x 230/460 V
Service factor:	1.15
Rated current:	112/56 A
Cos phi - power factor:	0.87
Rated speed:	3540 rpm
IE efficiency:	IE3 93,6%
Number of poles:	2
Enclosure class (IEC 34-5):	54 Dust/Splashing
Insulation class (IEC 85):	F

Others:

GRUNDFOS

Company name:
Created by:
Phone:

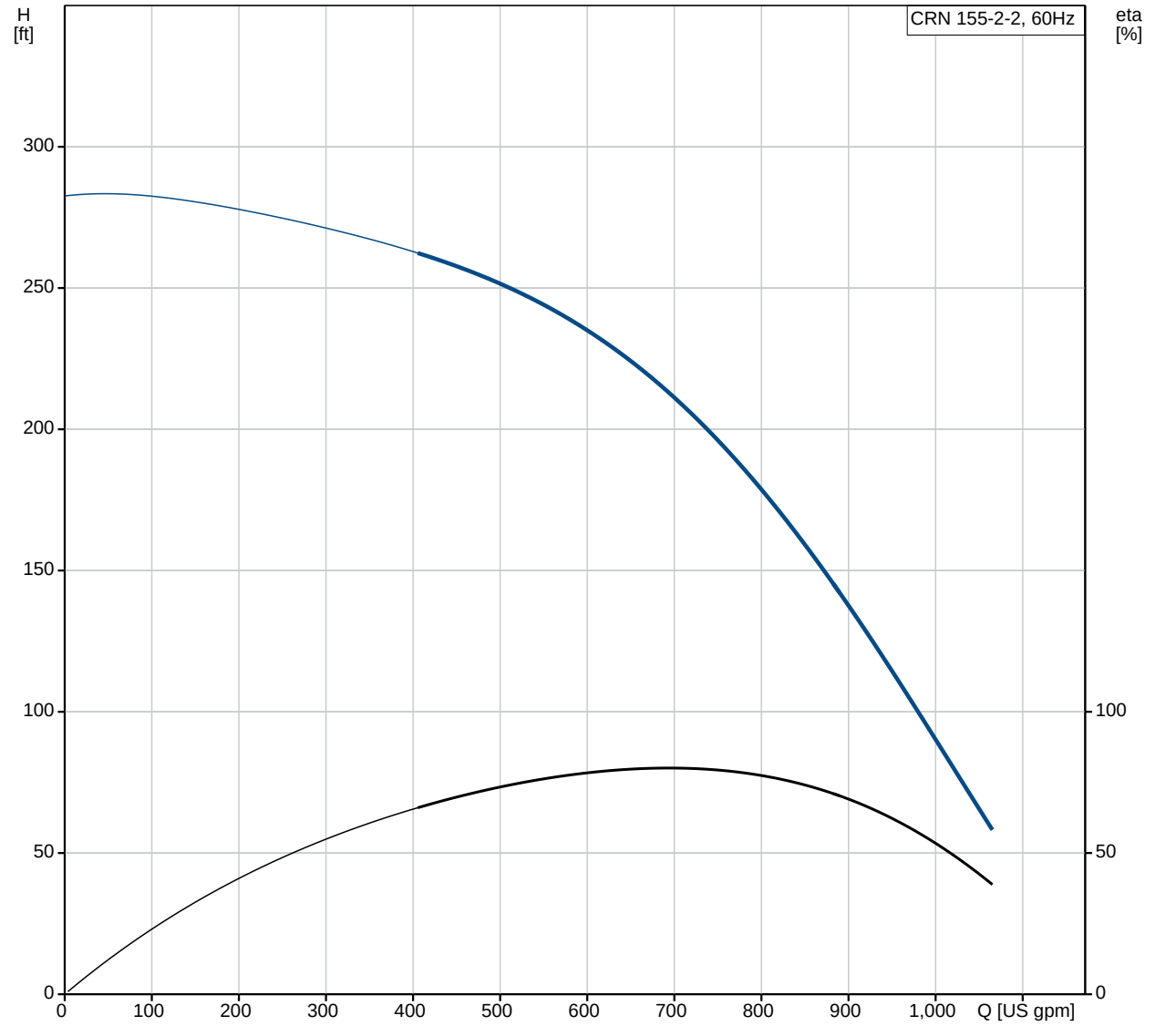
Date: 3/21/2019

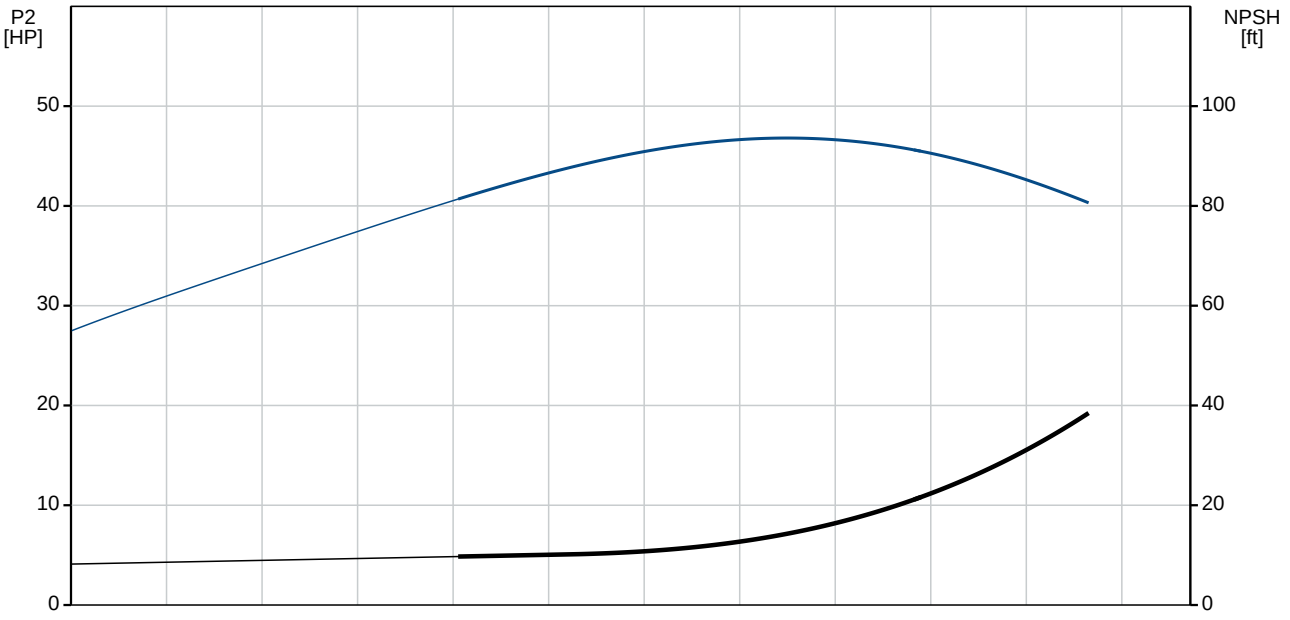
Count	Description	
	Net weight:	935 lb
	Gross weight:	1250 lb
	Shipping volume:	71.9 ft³
	Thrust handling device:	N
	Approvals:	NSF/ANSI 61, NSF/ANSI 372

Company name:
Created by:
Phone:

Date: 3/21/2019

On request CRN 155-2-2 A-G-A-E-HQQE 60 Hz

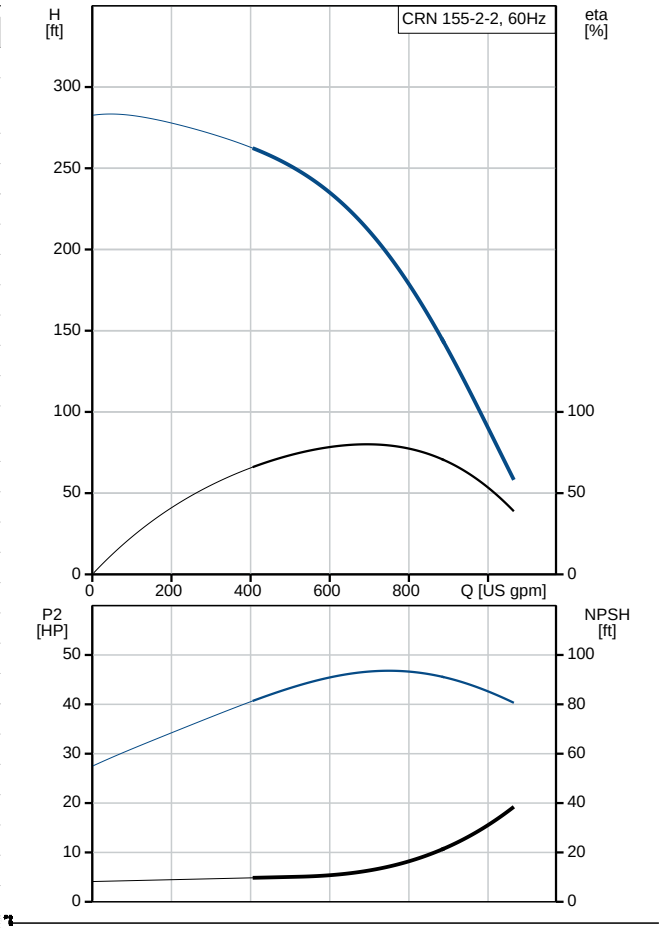


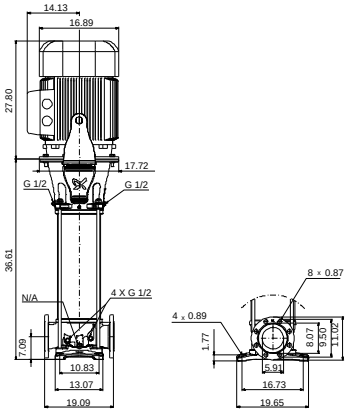


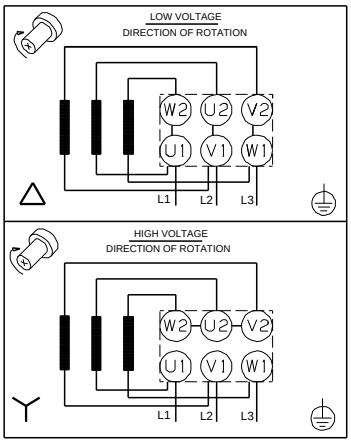
Company name:
Created by:
Phone:

Date: 3/21/2019

Description	Value
General information:	
Product name:	CRN 155-2-2 A-G-A-E-HQQE
Product No.:	On request
EAN:	On request
Technical:	
Rated pump speed:	3544 rpm
Rated flow:	820 US gpm
Rated head:	171.3 ft
Head max:	283.5 ft
Stages:	2
Impellers:	2
Number of reduced-diameter impellers:	2
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Cooling:	TEFC
Materials:	
Base:	Stainless steel
	EN 1.4408
	ASTM A351 CF8M
Impeller:	Stainless steel
	EN 1.4401
	AISI 316
Material code:	A
Code for rubber:	E
Bearing:	WC/WC
Support bearing:	Graflon
Material certified according to:	European standards
Installation:	
Maximum ambient temperature:	122 °F
Maximum operating pressure:	232 psi
Max pressure at stated temperature:	232 psi / 250 °F
Type of connection:	ANSI
Size of suction port:	6 inch
Size of outlet port:	6 inch
Pressure rating for pipe connection:	150 lb
Flange size for motor:	326TSC
Connect code:	G
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-40 .. 248 °F
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor standard:	NEMA
Motor type:	Baldor
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	50 HP
Power (P2) required by pump:	50 HP
Main frequency:	60 Hz
Rated voltage:	3 x 230/460 V
Service factor:	1.15
Rated current:	112/56 A







GRUNDFOS

Company name:
Created by:
Phone:

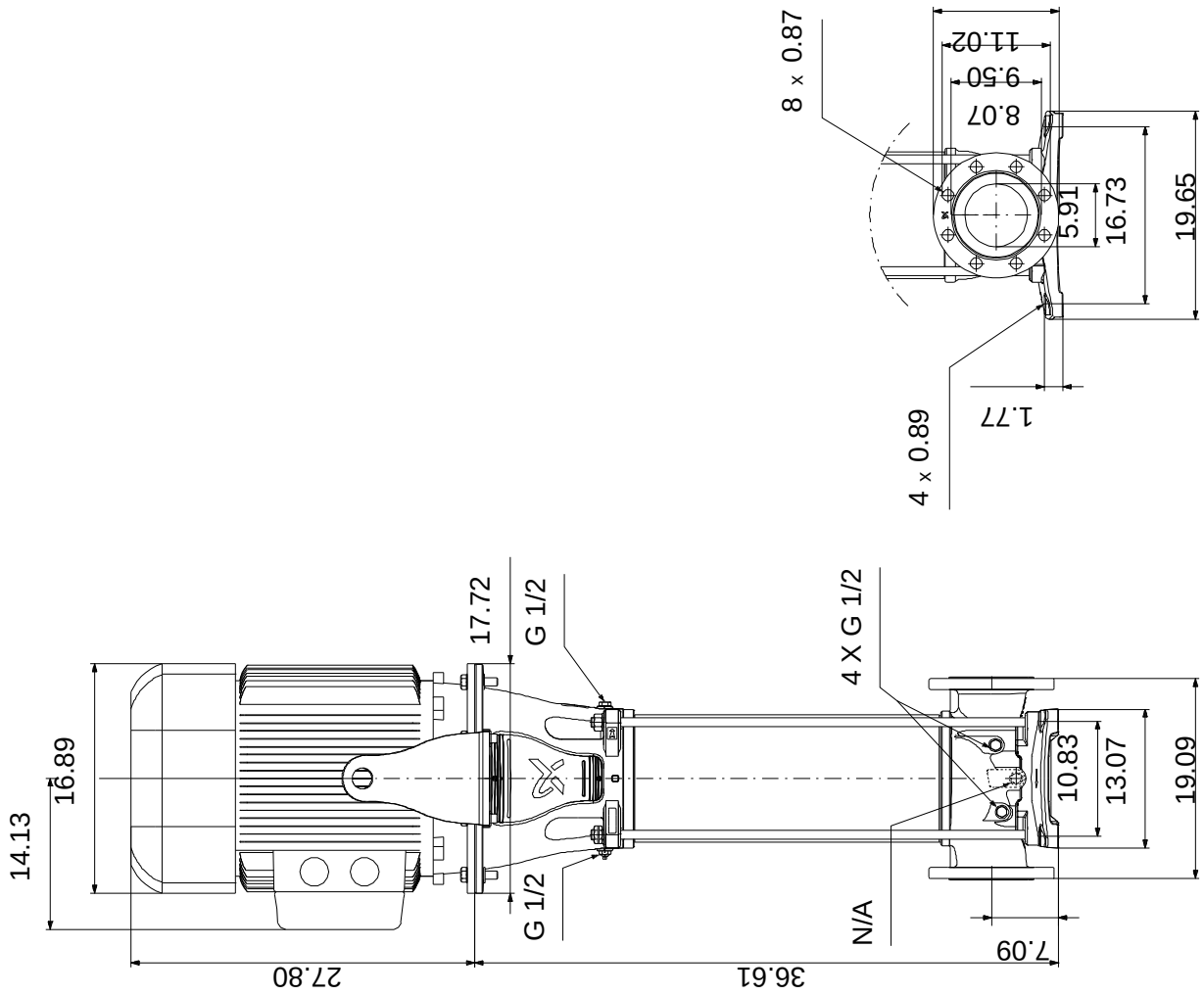
Date: 3/21/2019

Description	Value
Load current:	128/64 A
Cos phi - power factor:	0.87
Rated speed:	3540 rpm
IE efficiency:	IE3 93,6%
Number of poles:	2
Enclosure class (IEC 34-5):	54 Dust/Splashing
Insulation class (IEC 85):	F
Motor protection:	NONE
Motor Number:	84Z03650
Controls:	
Frequency converter:	NONE
Others:	
Net weight:	935 lb
Gross weight:	1250 lb
Shipping volume:	71.9 ft³
Thrust handling device:	N
Approvals:	NSF/ANSI 61, NSF/ANSI 372

Company name:
Created by:
Phone:

Date: 3/21/2019

On request CRN 155-2-2 A-G-A-E-HQQE 60 Hz

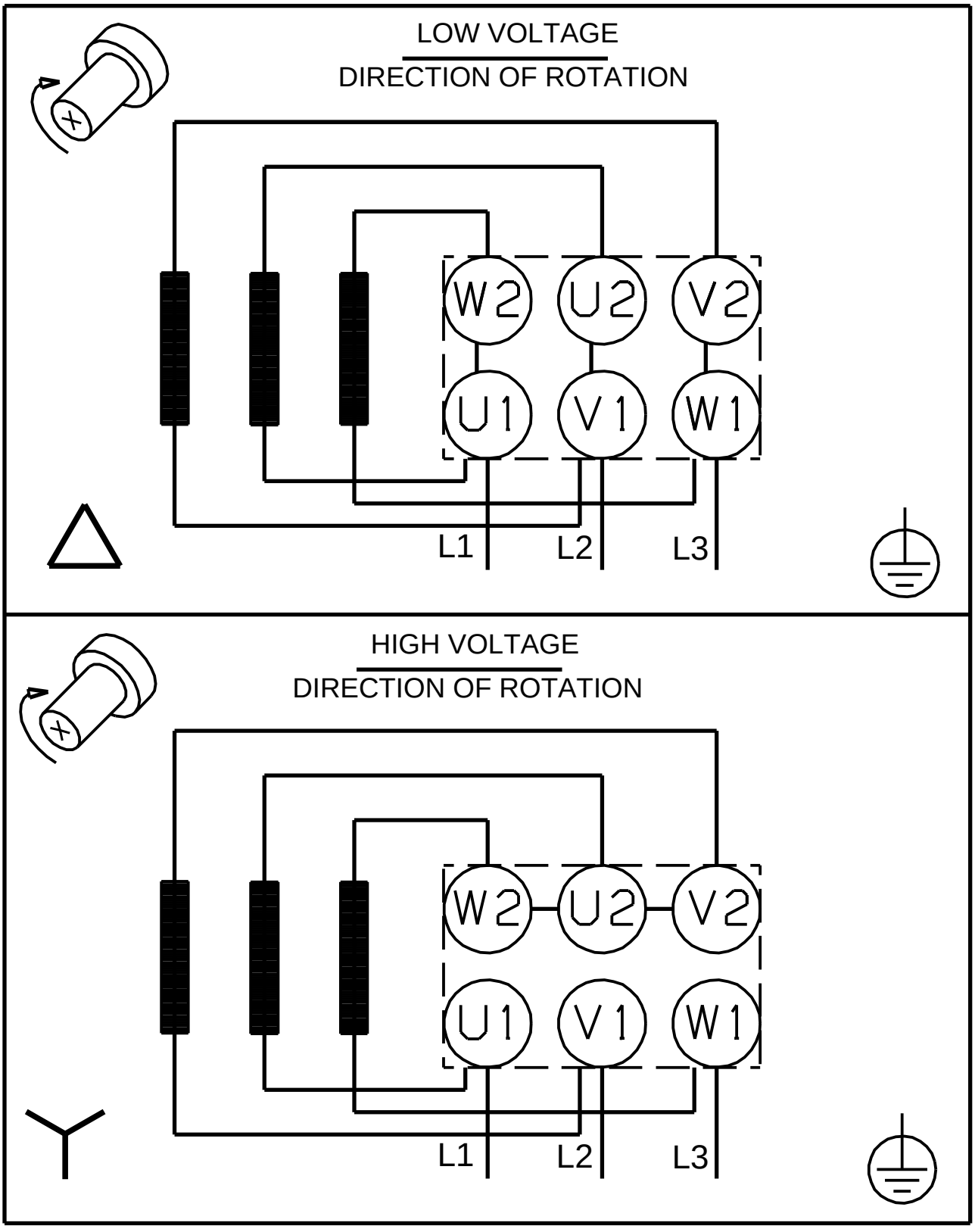


Note! All units are in [mm] unless otherwise stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name:
Created by:
Phone:

Date: 3/21/2019

On request CRN 155-2-2 A-G-A-E-HQQE 60 Hz



All units are [mm] unless otherwise presented.