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

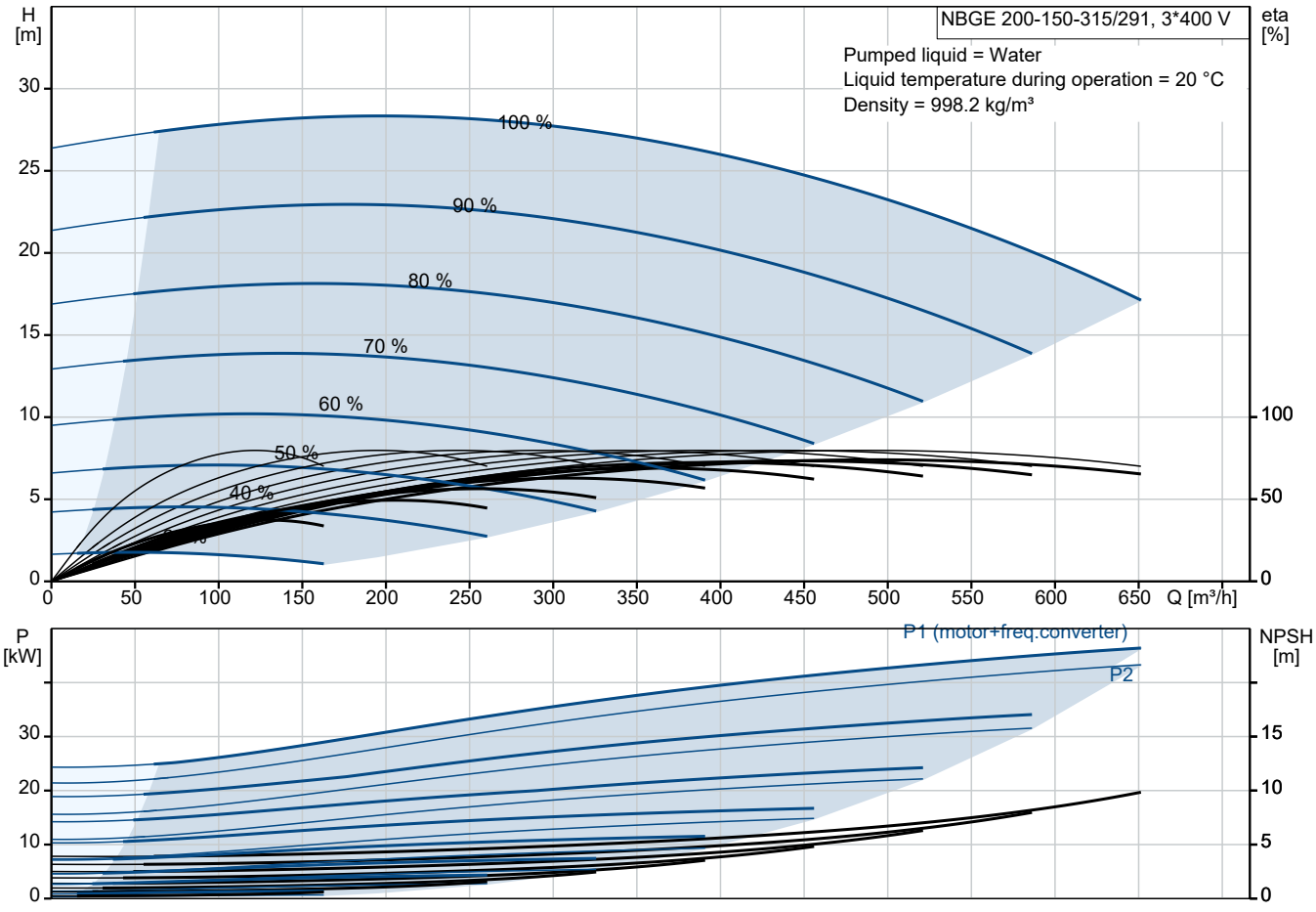
NBGE 200-150-315/291 AIASF2LESBQQETW3

End-suction close-coupled pumps according to ISO 2858 with frequency-controlled motors.

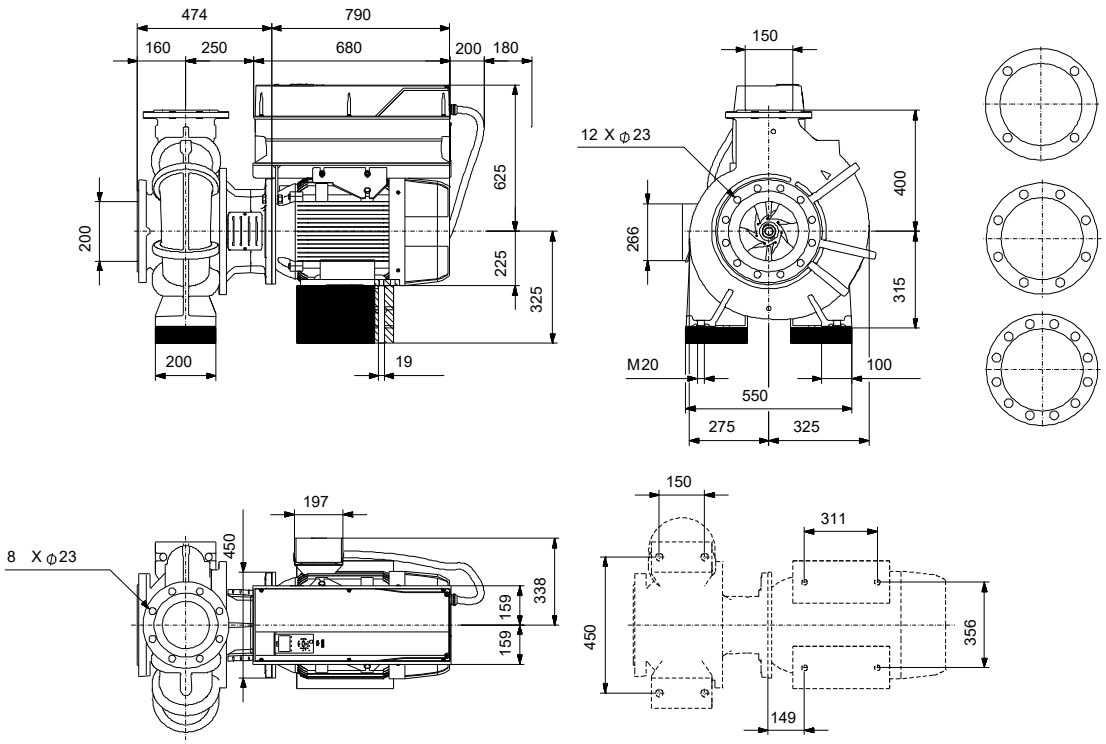
Conditions of Service	
Liquid:	Water
Temperature:	20 °C
Specific Gravity:	1.000

Pump Data	
Liquid temperature range:	-25 .. 120 °C
Maximum ambient temperature:	50 °C
Shaft seal:	BQQE
Product number:	On request

Motor Data	
Rated voltage:	380-420D/660-725Y V
Mains frequency:	50 Hz
Enclosure class:	IP55
Insulation class:	F
Motor protection:	PTC
Eta 1/1:	95.4 %



Submittal Data



Materials:

Pump housing:	Stainless steel
Pump housing:	ASTM CD4MCuN
Impeller:	Stainless steel
Impeller:	ASTM CD4MCuN
Impeller:	EN 1.4517
Material code:	L
Code for rubber:	E

GRUNDFOS

Company name:
Created by:
Phone:

Date: 24/10/2024

Qty.	Description
1	**NBGE 200-150-315/291 AIASF2LESBQQETW3**

Note! Product picture may differ from actual product

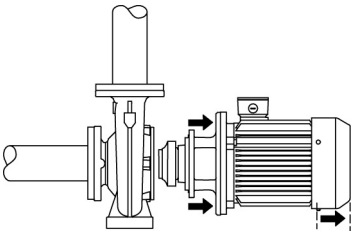
Product No.: On request

Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to ISO 2858 (16 bar). Flanges are PN 16 with dimensions according to EN 1092-1. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover and impeller without disturbing the pump housing or pipework.

The unbalanced rubber bellows seal is according to DIN EN 12756.

The pump is close-coupled to a fan-cooled asynchronous motor.

The back pull-out design means that the pump can be serviced by a single person without disturbing the pump housing or pipes.



Pump

The pump housing has both a priming and a drain hole closed by plugs. The impeller is a closed impeller with double-curved blades with smooth surfaces. The impeller is statically balanced according to ISO 1940-1 class G6.3 and hydraulically balanced to compensate for axial thrust.

The motor stool is made of cast iron (EN-GJL-250) and the pump cover is made of stainless steel (EN 1.4517). Coupling guards are fitted to the motor stool.

The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft.

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: EPDM (ethylene-propylene rubber)

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

The pump housing has feet.

The pump is to be secured to the foundation with bolts through the pump housing feet and motor feet. The pump is delivered with steel support blocks. The support blocks provide horizontal alignment of the pump and ensure clearance between the motor stool/motor flange and the foundation.

The pump has loose flanges.

The loose flanges are made of cast iron (EN-GJS-500-7/ASTM 70-50-05).

The language on the pump nameplate is English.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

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Company name:
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Qty.	Description
1	The motor efficiency is classified as IE4 in accordance with IEC 60034-30-1. 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. 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. 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. The motor is equipped with bearing current protection. This protects the bearings from failure due to bearing currents, which can be caused e.g. by the high-frequency switching of a variable frequency drive.

Further product details

Technical data

Controls:	
VFD product number:	99616825
Frequency converter:	Built-in
Type of frequency converter:	CUE 3X380-500V IP55 RUG 45KW
Appr. for VFD:	CE, CULUS, C-TICK
Pressure sensor:	N
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Technical:	
Pump speed on which pump data are based:	1485 rpm
Rated flow:	489.8 m³/h
Rated head:	23.6 m
Actual impeller diameter:	291 mm
Nominal impeller diameter:	315
Type of impeller:	Standard
Shaft seal arrangement:	Single
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Bearing design:	Standard
Materials:	
Pump housing:	Stainless steel EN 1.4517 ASTM CD4MCuN
Wear ring:	Stainless steel
Flange:	Cast iron EN-GJS-500-7 ASTM 70-50-05
Impeller:	Stainless steel EN 1.4517 ASTM CD4MCuN
Internal pump house coating:	No coating
Shaft:	Stainless steel EN 1.4462 SAF 2205

GRUNDFOS

Company name:
Created by:
Phone:

Date: 24/10/2024

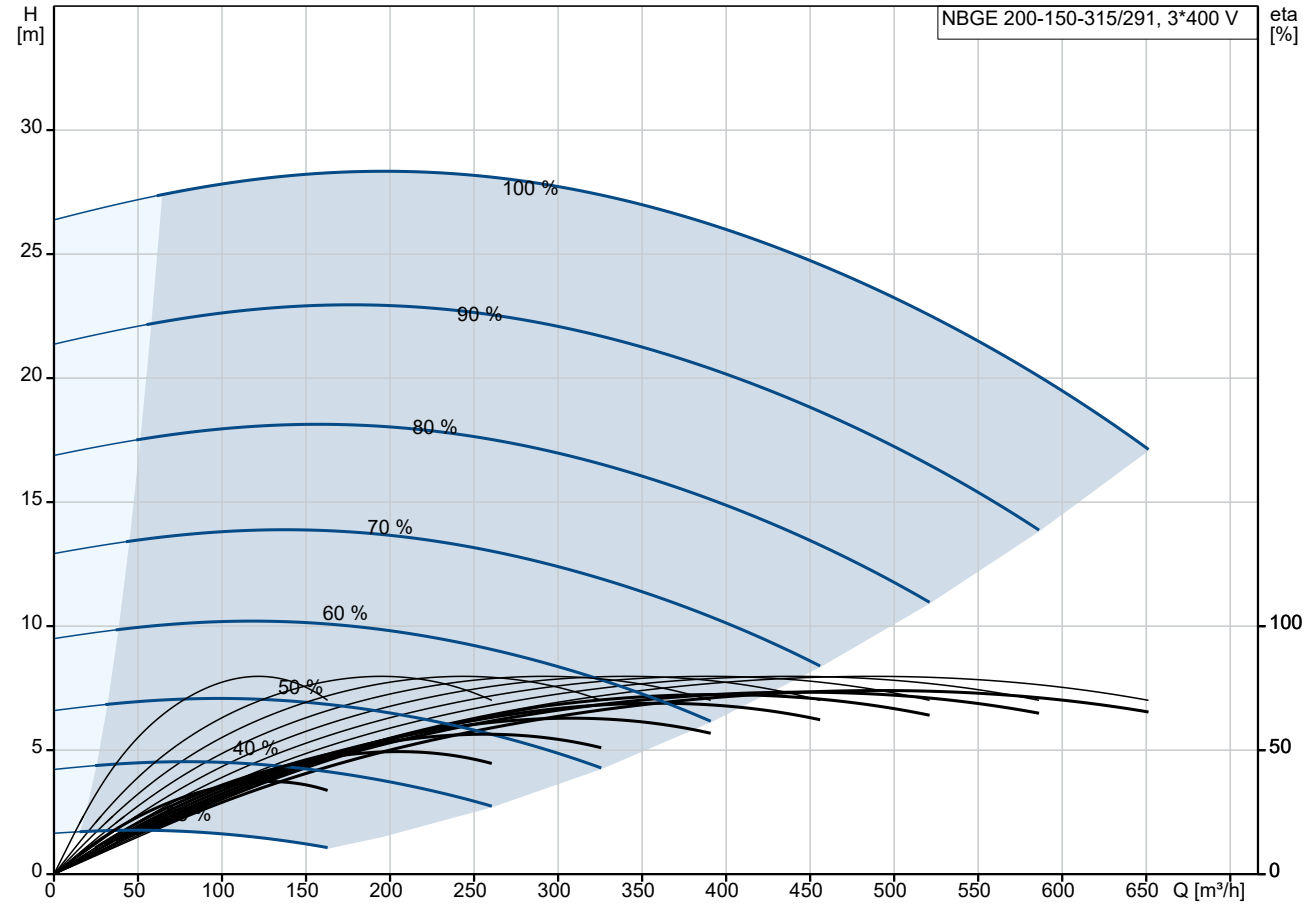
Qty.	Description	
1	Installation:	
	Range of ambient temperature:	-10 .. 50 °C
	Maximum operating pressure:	16 bar
	Pipe connection standard:	EN 1092-1
	Size of inlet connection:	DN 200
	Size of outlet connection:	DN 150
	Pressure rating for connection:	PN 16
	Bearing lubrication:	Grease
	Pump housing with feet:	Yes
	Support block (Yes/No):	Y
	Electrical data:	
	Rated power - P2:	45 kW
	Mains frequency:	50 Hz
	Rated voltage:	3 x 380-420D/660-725Y V
	Rated current:	81.0/47.0 A
	Starting current:	800 %
	Cos phi - power factor:	0.84
	Rated speed:	1485 rpm
	IE efficiency:	IE4 95,4%
	IE Efficiency class:	IE4
	Motor efficiency at full load:	95.4 %
	Motor efficiency at 3/4 load:	95.7 %
	Motor efficiency at 1/2 load:	95.4 %
	Number of poles:	4
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	92691594
	Bearing insulation type N-end:	CERAMIC SHAFT COATING
	Others:	
	Minimum efficiency index, MEI ≥:	0.53
	Net weight:	648 kg
	Gross weight:	735 kg
	Shipping volume:	1.88 m³
	Country of origin:	HU
	Custom tariff no.:	84137051
	Language on pump nameplate:	GB

GRUNDFOS

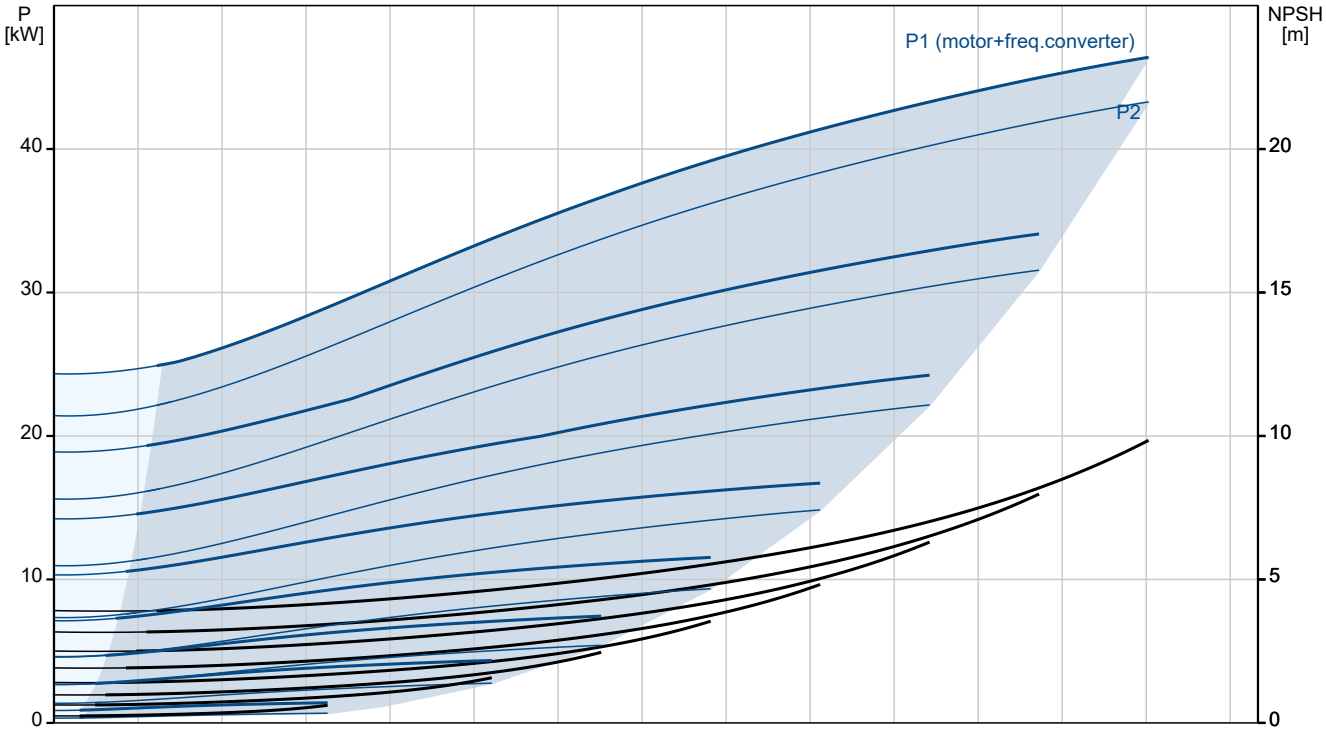
Company name:
Created by:
Phone:

Date: 24/10/2024

On request NBGE 200-150-315/291 AIASF2LESBQQETW3 50 Hz



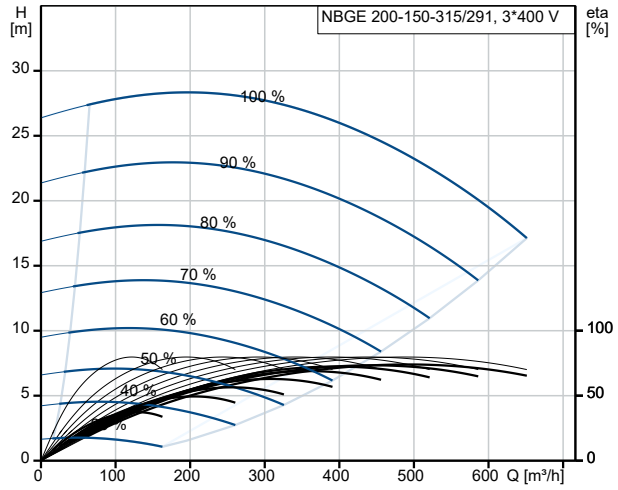
Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³



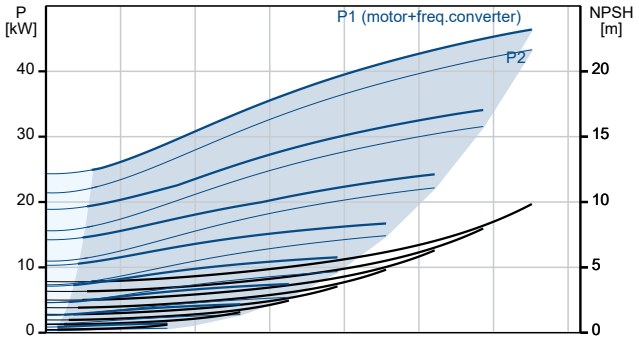
Company name:
Created by:
Phone:

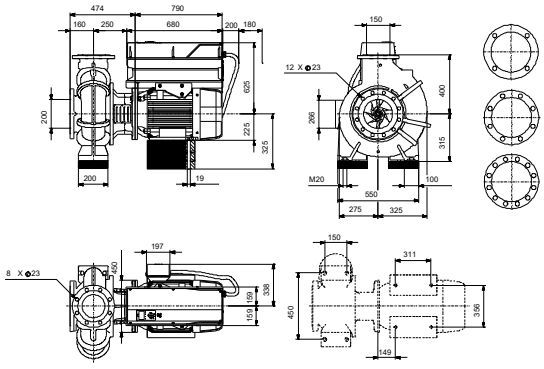
Date: 24/10/2024

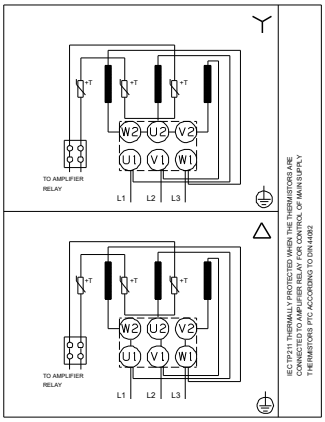
Description	Value
General information:	
Product name:	NBGE 200-150-315/291 AIASF2LESBQQETW3
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	1485 rpm
Rated flow:	489.8 m³/h
Rated head:	23.6 m
Actual impeller diameter:	291 mm
Nominal impeller diameter:	315
Type of impeller:	Standard
Shaft seal arrangement:	Single
Shaft diameter:	48 mm
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	AS
Bearing design:	Standard
Materials:	
Pump housing:	Stainless steel
Pump housing:	EN 1.4517
Pump housing:	ASTM CD4MCuN
Wear ring:	Stainless steel
Flange:	Cast iron
Flange:	EN-GJS-500-7
Flange:	ASTM 70-50-05
Impeller:	Stainless steel
Impeller:	EN 1.4517
Impeller:	ASTM CD4MCuN
Internal pump house coating:	No coating
Material code:	L
Code for rubber:	E
Shaft:	Stainless steel
Shaft:	EN 1.4462
Shaft:	SAF 2205
Installation:	
Range of ambient temperature:	-10 .. 50 °C
Maximum operating pressure:	16 bar
Pipe connection standard:	EN 1092-1
Size of inlet connection:	DN 200
Size of outlet connection:	DN 150
Pressure rating for connection:	PN 16
Bearing lubrication:	Grease
Pump housing with feet:	Yes
Support block (Yes/No):	Y
Connect code:	F2
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Rated power - P2:	45 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	81.0/47.0 A
Starting current:	800 %



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







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Company name:
Created by:
Phone:

Date: 24/10/2024

Description	Value
Cos phi - power factor:	0.84
Rated speed:	1485 rpm
IE efficiency:	IE4 95,4%
IE Efficiency class:	IE4
Motor efficiency at full load:	95.4 %
Motor efficiency at 3/4 load:	95.7 %
Motor efficiency at 1/2 load:	95.4 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	92691594
Mount. design. acc. IEC 34-7:	IM B35
Bearing insulation type N-end:	CERAMIC SHAFT COATING
Controls:	
VFD product number:	99616825
Frequency converter:	Built-in
Type of frequency converter:	CUE 3X380-500V IP55 RUG 45KW
Appr. for VFD:	CE, CULUS, C-TICK
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.53
Net weight:	648 kg
Gross weight:	735 kg
Shipping volume:	1.88 m³
Country of origin:	HU
Custom tariff no.:	84137051
Language on pump nameplate:	GB

Company name:
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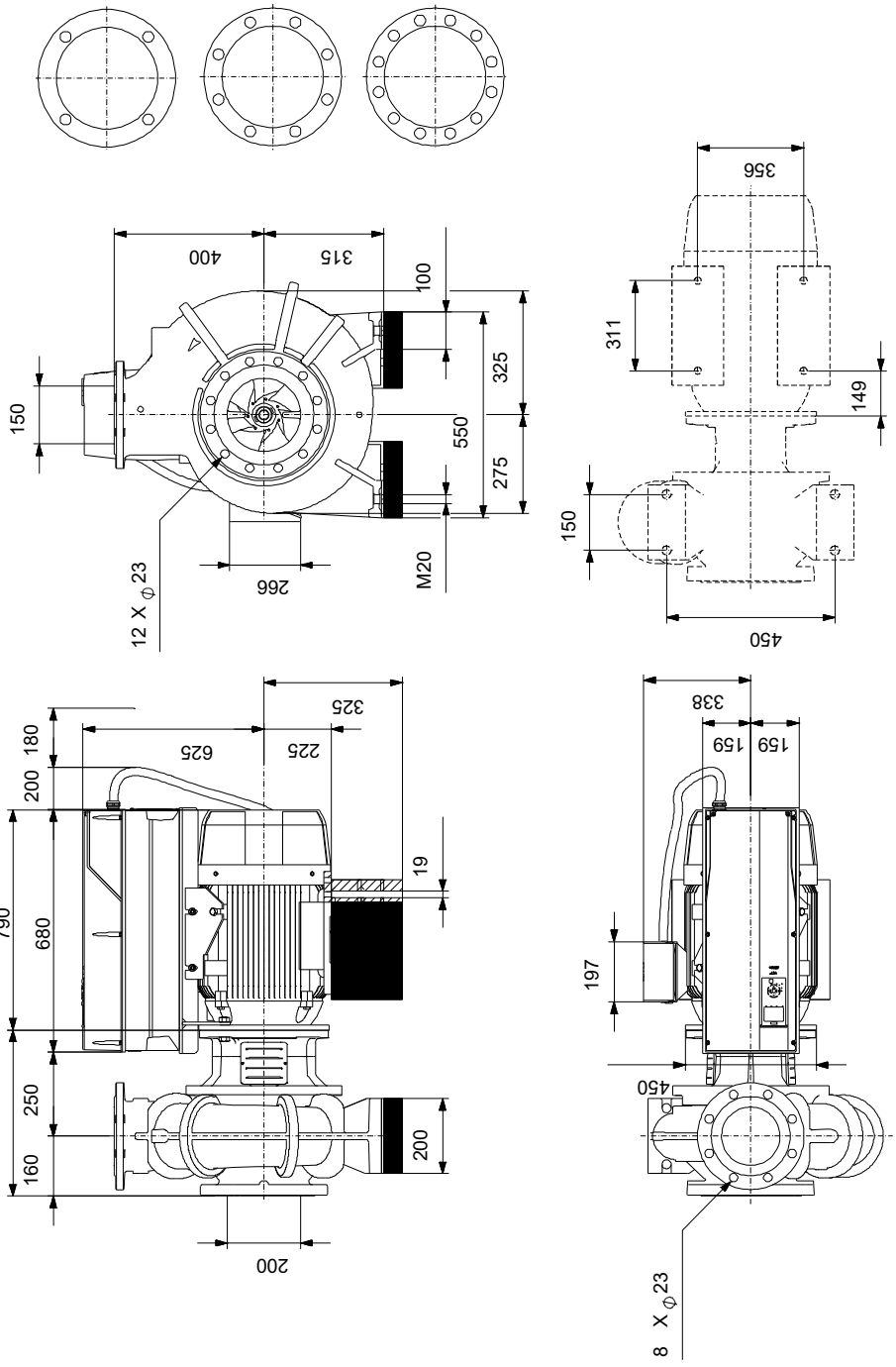
Phone:

Date: 24/10/2024

On request NBGE 200-150-315/291 AIASF2LESBQQETW3 50 Hz

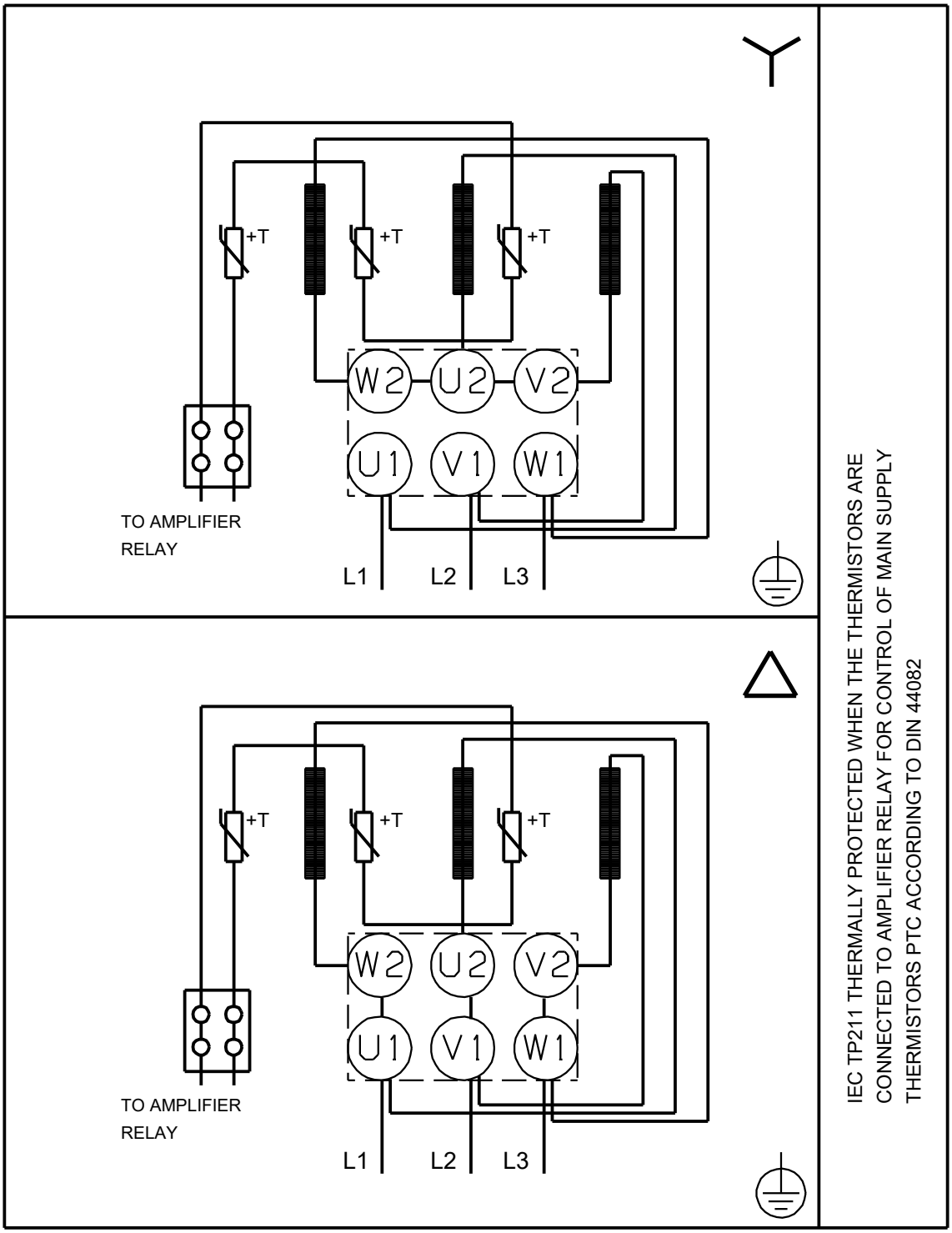


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name:
Created by:
Phone:

Date: 24/10/2024

On request NBGE 200-150-315/291 AIASF2LESBQQETW3 50 Hz



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

GRUNDFOS

Company name:
Created by:
Phone:

Date: 24/10/2024

Order Data:

Position	Your pos.	Product name	Amount	Product No	Total
		NBGE 200-150-315/291 AIASF2LESBQQETW3	1	On request	