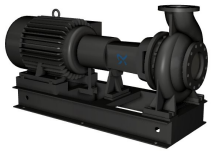
GRUNDFOS

Company name: -
Created by: -
Phone: -
Fax: -
Date: -

Position	Qty.	Description
	1	**NKG 200-150-315/338 A1-F-B-E-BAQE**



Product No.: On request

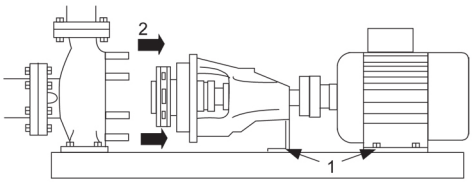
Non-self-priming, single-stage, centrifugal pump designed according to ISO 5199 with dimensions and rated performance according to ISO 2858. Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the motor, coupling, bearing bracket and impeller without disturbing the pump housing or pipework.

The unbalanced rubber bellows seal is according to DIN EN 12756.
The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.

Further product details

Pump and motor are mounted on a common steel base frame in accordance with ISO 3661. The back pull-out design makes it possible to make service on the pump when the pump housing is still connected to the inlet and discharge pipes.

1) Remove the bolts in the bearing bracket support foot and motor foot.
2) Remove the bearing bracket and the motor from the pump housing.



Cast-iron parts 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

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.

Wear rings used in pump housing and for impeller are made of bronze/brass or cast iron.

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.

Primary seal:

- Rotating seal ring material: Carbon graphite, metal-impregnated

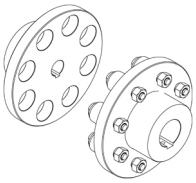
Position	Qty.	Description

- Stationary seat material: Silicon carbide (SiC)

This material pairing has a very good corrosion resistance and is especially suitable for water up to +120 °C. However, seal life will be reduced 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.

Secondary seal material: EPDM (ethylene-propylene rubber)
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

The shaft is made of stainless steel and has a diameter of 48 mm where the coupling is mounted.
The pump uses a standard coupling between the pump and motor shaft.



Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards and mounting designation B3 (IM 1001). Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE1 in accordance with IEC 60034-30.
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.

A variable speed drive makes adjustment of pump performance to any duty point possible. If the motor is to be connected to a variable speed drive, the pump should be ordered with an electrically insulated motor bearing.

Technical data

Liquid:

Pumped liquid:	0
Liquid temperature range:	0 .. 120 °C
Liquid temp:	20 °C
Density:	998.2 kg/m³
Kinematic viscosity:	1 mm2/s

Technical:

Speed for pump data:	1480 rpm
Actual calculated flow:	540 m³/h
Resulting head of the pump:	35.1 m
Actual impeller diameter:	338 mm
Impeller nom:	315 mm
Shaft seal:	BAQE
Secondary shaft seal:	NONE
Curve tolerance:	ISO 9906:1999 Annex A

Materials:

Pump housing:	Cast iron EN-GJL-250 ASTM A48-40 B
Impeller:	Bronze DIN W.-Nr. CuSn10

Position	Qty.	Description
		ASTM B584-C83600
		Rubber: EPDM
		Installation:
		Maximum ambient temperature: 60 °C
		Maximum operating pressure: 16 bar
		Flange standard: EN 1092-2
		Pump inlet: DN 200
		Pump outlet: DN 150
		Pressure stage: PN 16
		Coupling type: Standard
		Base frame: C - Channel
		Electrical data:
		Motor type: MMG250MC
		IE Efficiency class: IE1
		Number of poles: 4
		Rated power - P2: 75 kW
		Mains frequency: 50 Hz
		Rated voltage: 3 x 380-420D/660-725Y V
		Rated current: 132-120/75,5-69,0 A
		Starting current: 1000-1000 %
		Cos phi - power factor: 0,9
		Rated speed: 1480 rpm
		Efficiency: IE1 94,2%
		Motor efficiency at full load: 94,2-94,2 %
		Motor efficiency at 3/4 load: 94,0-94,0 %
		Motor efficiency at 1/2 load: 93,0-93,0 %
		Enclosure class (IEC 34-5): 55 (Protect. water jets/dust)
		Insulation class (IEC 85): F
		Lubricant type: Grease
		Others:
		Minimum efficiency index, MEI ≥: 0.48
		ErP status: EuP Standalone/Prod.
		Net weight: 1080 kg
		Gross weight: 1200 kg
		Shipping volume: 3.33 m3

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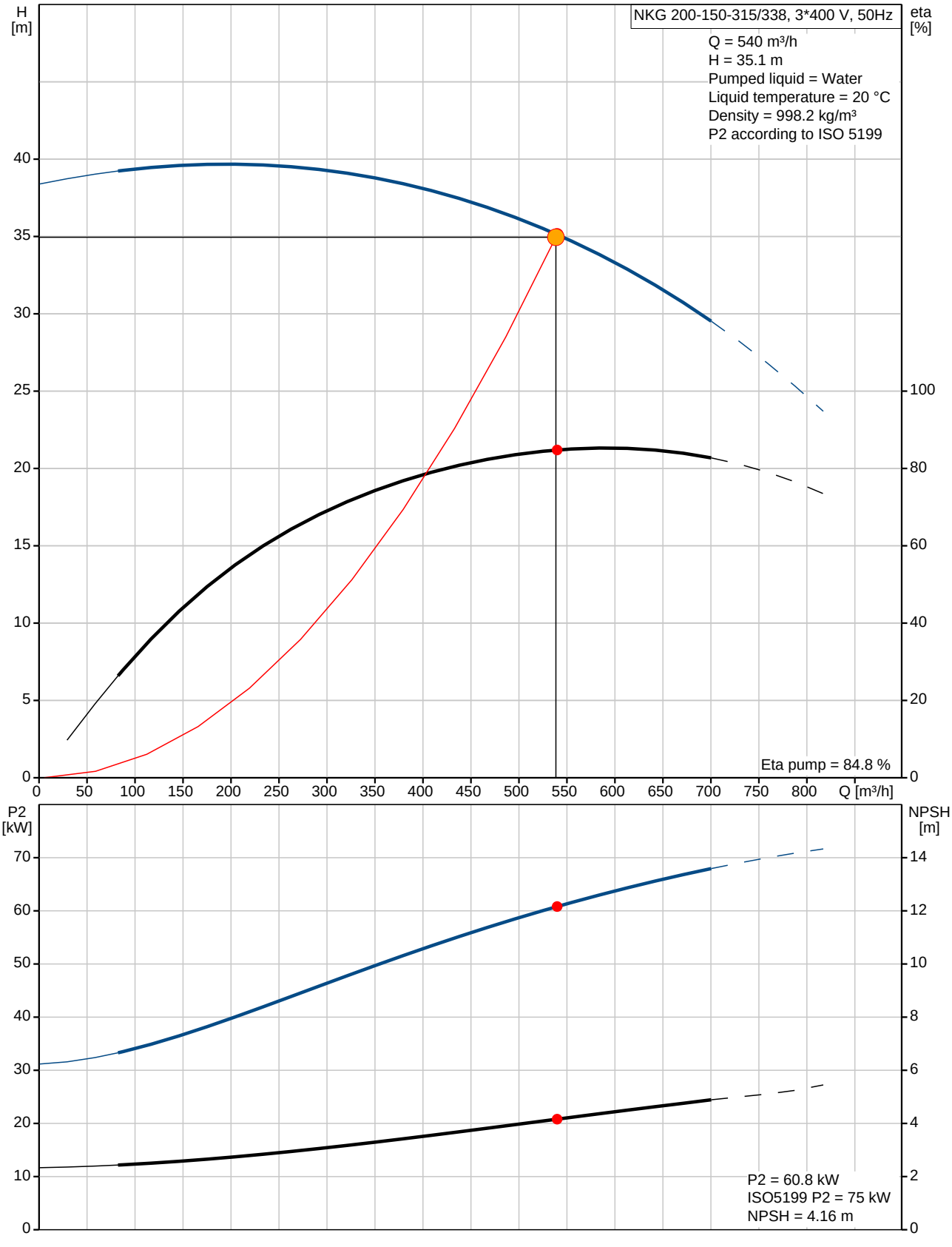
NKG 200-150-315/338 50 Hz



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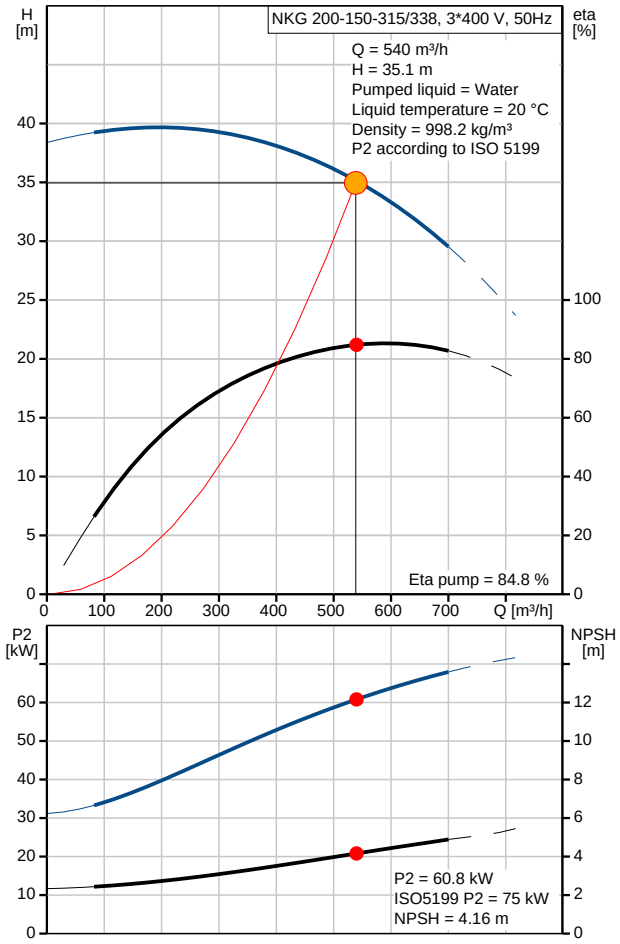
Description	Value
General information:	
Product name:	NKG 200-150-315/338 A1-F-B-E-BAQE
Product No:	On request
EAN number:	On request
Price:	On request
Technical:	
Speed for pump data:	1480 rpm
Rated flow:	595 m³/h
Rated head:	34.4 m
Actual impeller diameter:	338 mm
Impeller nom:	315 mm
Shaft seal:	BAQE
Secondary shaft seal:	NONE
Shaft diameter:	48 mm
Curve tolerance:	ISO 9906:1999 Annex A
Pump version:	A1
Materials:	
Pump housing:	Cast iron
	EN-GJL-250
	ASTM A48-40 B
Impeller:	Bronze
	DIN W.-Nr. CuSn10
	ASTM B584-C83600
Material code:	B
Rubber:	EPDM
Code for rubber:	E
Installation:	
Maximum ambient temperature:	60 °C
Maximum operating pressure:	16 bar
Flange standard:	EN 1092-2
Connect code:	F
Pump inlet:	DN 200
Pump outlet:	DN 150
Pressure stage:	PN 16
Coupling type:	Standard
Wear ring(s):	neckring(s)
Base frame:	C - Channel
Liquid:	
Liquid temperature range:	0 .. 120 °C
Kinematic viscosity:	1 mm2/s
Electrical data:	
Motor type:	MMG250MC
IE Efficiency class:	IE1
Number of poles:	4
Rated power - P2:	75 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	132-120/75,5-69,0 A
Starting current:	1000-1000 %
Cos phi - power factor:	0,9
Rated speed:	1480 rpm
Efficiency:	IE1 94,2%
Motor efficiency at full load:	94,2-94,2 %
Motor efficiency at 3/4 load:	94,0-94,0 %
Motor efficiency at 1/2 load:	93,0-93,0 %
Enclosure class (IEC 34-5):	55 (Protect. water jets/dust)
Insulation class (IEC 85):	F

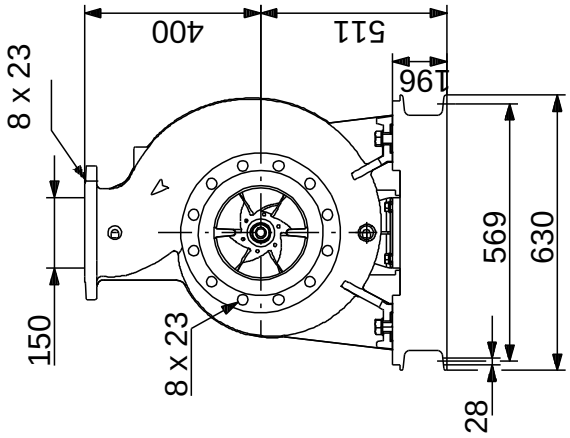


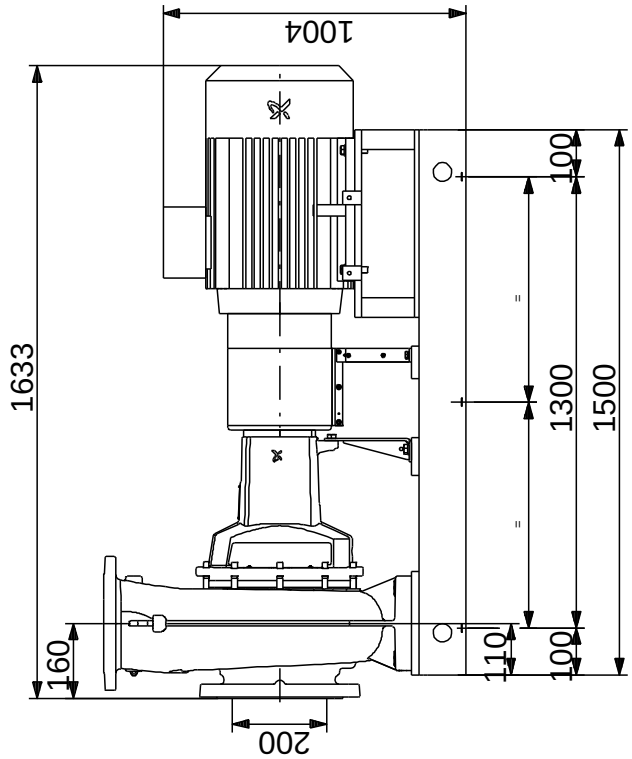
Description	Value
Motor protec:	PTC
Motor No:	96162778
Lubricant type:	Grease

Others:

Minimum efficiency index, MEI ≥:	0.48
ErP status:	EuP Standalone/Prod.
Net weight:	1080 kg
Gross weight:	1200 kg
Shipping volume:	3.33 m3

NKG 200-150-315/338 50 Hz





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

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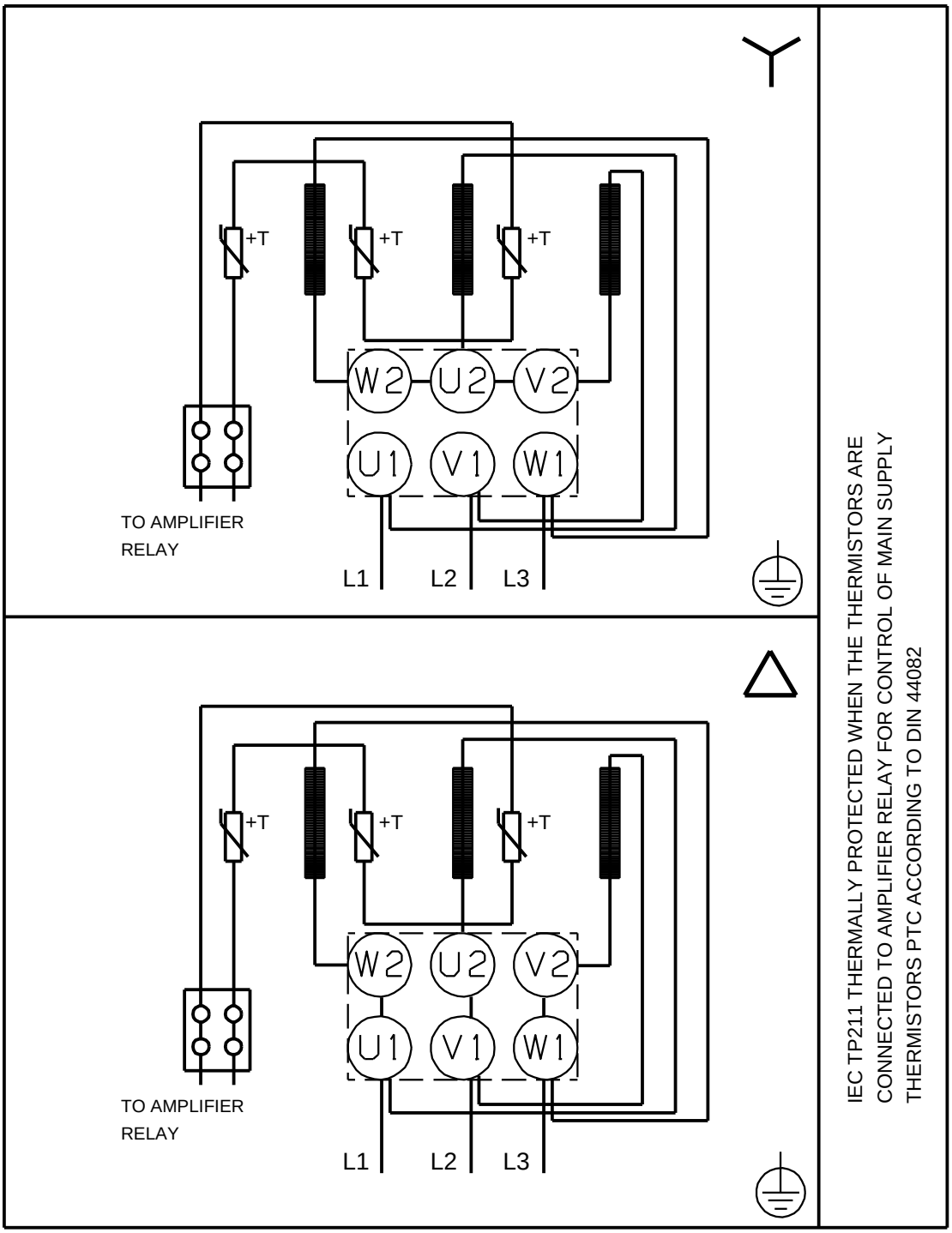
NKG 200-150-315/338 50 Hz



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