NARVI

Narvi Heat



ASENNUS- JA KÄYTTÖOHJE 10,2 KW 11,9 KW 15,3 KW 20,4 KW 25,5 KW 30,6 KW 40,8 KW	FI
INSTALLATION AND INSTRUCTION MANUAL 10,2 kW 11,9 kW 15,3 kW 20,4 kW 25,5 kW 30,6 kW 40,8 kW	EN

VERSIO 04/2025

FI Sisällysluettelo

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This installation and user manual is intended for people responsible for the installation, maintenance and use of the heater. Please read the manual carefully before you start installing and using it and keep the manual for future reference. The products are meant only to be used as a sauna heater and for heating the sauna.

This equipment is not to be used by children or people whose physical and psychologicaltraits, mental functions, lack of experience or knowledge may hinder the safe operation of the equipment, if the person who is responsible for safety cannot supervise them or instruct them in theuse of the equipment.

1. TECHNICAL DATA

Product no.:	Power	Depth	Width	Height	Weight	Stone capasity	Sauna room volume
157671	10,2 kW	530 mm	475 mm	815 mm	43 kg	60 kg	9 – 12 m³
157715	11,9 kW	530 mm	625 mm	815 mm	51 kg	60 kg	11 – 14 m³
157670	15,3 kW	530 mm	625 mm	815 mm	52 kg	60 kg	15 – 18 m³
157669	20,4 kW	530 mm	775 mm	815 mm	65 kg	80 kg	19 – 23 m³
157668	25,5 kW	530 mm	925 mm	815 mm	75,5 kg	110 kg	24 – 28 m³
157614	30,6 kW	530 mm	1075 mm	815 mm	85,5 kg	150 kg	29 – 35 m³
157613	40,8 kW	530 mm	1375 mm	815 mm	105,5 kg	160 kg	36 – 46 m³

With heaters materials are mainly HST steel (AISI 316) and heating elements Incoloy fireproof steel.

Narvi Logi sauna controllers are suitable with Narvi Heat sauna heaters.

In case other controller than Narvi Logi is used, the controller must meet the current general standards and regulations and those specifically set for electrical heaters. The controller must be equipped with an external temperature sensor (i.e. thermostat) and safety devices (i.e. overheat protection) in accordance with standard EN 60335-2-53.

If the Narvi Heat electrical heater is used in a public sauna with a controller that does not have a timer; the device must be monitored constantly.

2. BEFORE INSTALLATION

Check the following:

- Make sure, that the contents of the delivery correspond to the order.
- Ensure (table 1) that the electrical sauna heater and the controller used with it are compatible, and that any additional power unit is of the correct size (A).
- Ensure from table 2 that the power of the Narvi Heat sauna heater is suitable for the sauna in question. The values given in the table assume a well-insulated sauna. If the sauna has brick or concrete walls, its volume must be increased by approximately 1.0 m³ for each square meter of brick/concrete wall, window, and other glass surface. The required power must be selected taking into account these added volumes. The sauna volumes given on the table and the volumes to be added to it must not be exceeded or undershot.
- Depending on the intended use, the power requirement is weighted as follows, with indoor swimming pools, spas and outdoor saunas: 1 kW / 1 m³ . Other saunas: 0.8 kW / 1 m³.
- The heater must not be installed in a recess, and no solid protection must be built around the heater.
- Make sure that the height of the sauna room is greater than the minimum height specified in Table 2 and that the specified minimum safety distances are met. Deviating from them causes a fire hazard.
- It is recommended to use the Narvi Heat installation base with adjustable legs with the heater, so that the sauna floor does not overheat, and any possible waterproofing is not damaged under the heater.

Effect	Group effect		Cables	400 V 3N~		Fuses			Control unit size	Extra control unit size
kW	kW	kW	Power unit	Connecting cable*) mm²		Front fuse (electrical centre)	Group fuses (control unit)			
				Group 1	Group 2		Group 1	Group 2		
			mm²	mm²	mm²	A	A	A	A	A
10,2	5,1	5,1	5x6	5x1,5	5x1,5	3x25	3x10	3x10	20	
	10,2		5x6	5x2,5		3x25	3x10		20	
11,9	5,1	6,8	5x6	5x1,5	5x1,5	3x25	3x10	3x10	20	
	11,9		5x6	5x2,5		3x25	3x10		20	
15,3	8,5	6,8	5x16	5x2,5	5x2,5	3x35	3x16	3x16	40	
	15,3		5x16	5x6		3x35	3x16		40	
20,4	10,2	10,2	5x16	5x2,5	5x2,5	3x35	3x16	3x16	40	
25,5	13,6	11,9	2 x5x16	5x6 (min 5x4)	5x6 (min 5x4)	3x50	3x25	3x25	63	
30,6	15,3	15,3	2 x5x16	5x6	5x6	3x50	3x25	3x25	63	
40,8	20,4	20,4	2 x5x16	5x10	5x10	3x60	3x30	3x30	80	
2x25,5	2x13,6	2x11,9	4 x5x16	2x5x6 (min 2x5x4)	2x5x6 (min 2x5x4)	2x3x50	2x3x25	2x3x25	63	63
2x30,6	2x15,3	2x15,3	4 x5x16	2x5x6	2x5x6	2x3x50	2x3x25	2x3x25	63	63
2x40,8	2x20,4	2x20,4	4 x5x16	2x5x10	2x5x10	2x3x60	2x3x30	2x3x30	80	80

Table 1. Heater connection information

*) Connection cable: rubber cable H07RN-F or equivalent. Minimum cable size specified by the manufacturer , final cable size is determined by the property's electrical plans.

Effect	Sauna room Cables		Minimal safety clearances to the heater					
kW	Volume		Height	on the sides	at the front	at the front	to the ceiling	between heaters
	max	max	min	A**)	B**)	C**)	D**)	E**)
	m³	m³	mm	mm	mm	mm	mm	mm
10,2	9	12	2300	120	120	120	1490	250
			2300	120	120	120	1490	250
11,9	11	14	2300	120	120	120	1490	250
			2300	120	120	120	1490	250
15,3	15	18	2300	120	120	120	1490	250
			2300	120	120	120	1490	250
20,4	19	23	2300	120	120	120	1490	250
25,5	24	28	2300	120	120	120	1490	250
30,6	29	35	2300	120	120	120	1490	250
40,8	36	46	2300	120	120	120	1490	250
2x25,5	47	58	2300	120	120	120	1490	250
2x30,6	59	70	2300	120	120	120	1490	250
2x40,8	77	93	2300	120	120	120	1490	250

Table 2. Installation data for heaters

**) See figure 1

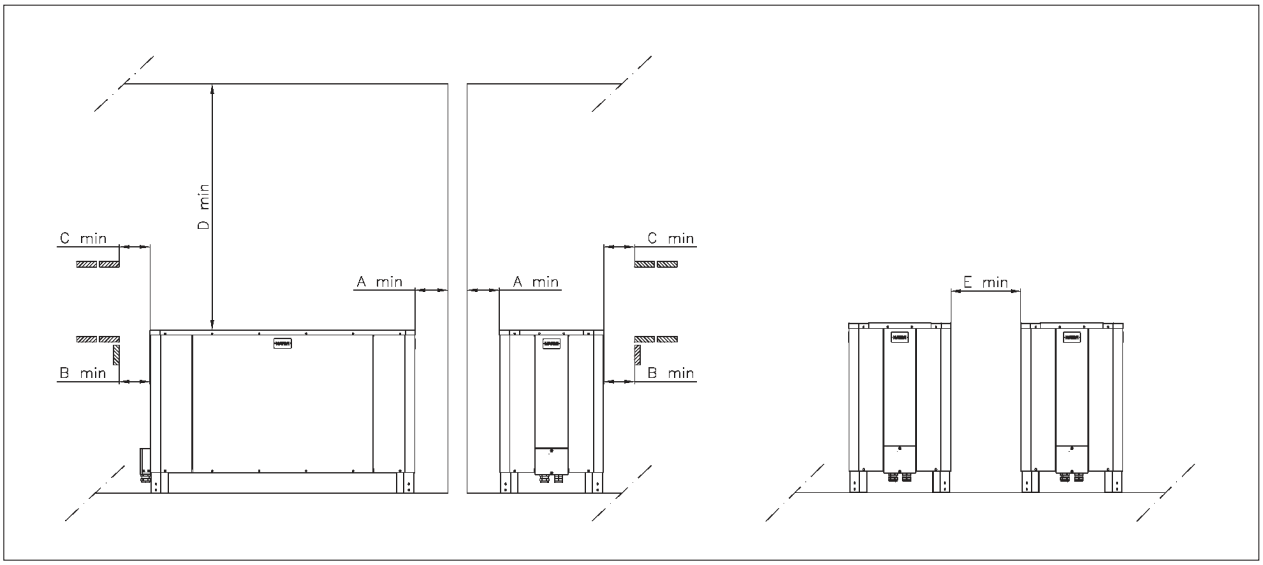


Figure 1. Safety distances for heaters

3. SAFETY DISTANCES

Minimum safety distances to combustible materials:

- On the sides 120 mm (non-combustible material 50 mm)
- In front 120 mm (non-combustible material 50 mm)
- To the ceiling 1490 mm (non-combustible material 1000 mm)
- Please note if using a installation base:

  - When using the Narvi Heat installation base, the height of the heater increases by +90 mm.

  - When using the Narvi Heat installation base with adjustable feet, the height of the heater increases by +98–138 mm.

  - Heat installation base with adjustable feet, adjustability is 40 mm.

- The safety distance in the sideways must be at least 120 mm from combustible material along the entire height of the side of the sauna heater. The safety distance from non-combustible material is 50 mm.
- If the sauna heater is equipped with a guardrail, the guardrail must be open in structure and maintain a safety distance of 120 mm from the heater. A guardrail made of non-combustible material must also be open in structure and maintain a safety distance of 50 mm.
- For the sauna heater, the safety distance from the top edge to the ceiling must be 1485 mm to combustible materials. With ceiling protector, the safety distance is 1120 mm. The ceiling and disc inter-air space must be at least 30 mm. When using double protection for ceiling, the empty air space between the ceiling and protector must always be at least 30 mm.
- The fire protective components must extend 120 mm beyond the external dimensions of the heater in all directions.
- When a protective wall component is used on the sides of the sauna heater, the safety distance can be reduced from 120 mm to 50 mm. The air space between the fire protection plate and the wall must be at least 30 mm. For combustible material, the existing distance from the wall to the sauna heater can be reduced to a minimum safety distance of 80 mm (30 mm + 50 mm = 80 mm, with the thickness of the fire protection component added to the measurement).
- The distance between two heaters in the same sauna is to be at least 250 mm, to ensure ventilation between the heaters.

4. INSTALLATION

4.1 INSTALLATION OF HEATER

- The minimum distances given on the heater's rating plate / table 2 must be observed.
- If the heater has a protective plastic film on the outer casing casing and/or cardboard support for the heating elements, they must be removed before using the product.
- Install the heater horizontally.
- When using the heater on movable platforms, the heater must be securely attached to the platform by its legs.
- The heater may only be connected to the electrical network by a certificated electrician in accordance with current regulations.
- The wiring diagrams are presented on page 20-26 of this manual and they can also be found on our website in PDF format.
- For Narvi Heat electrical heaters, it is recommended to always install two supply cables from the controller to the heater, this way heating element alternation is always in use.
- The heater can be connected semi-permanently using a rubber cable of type H07RN-F or equivalent as the connection cable. The minimum cross-section and fuse size of the cable are given in table 1.
- If the connection or installation cables enter the sauna or inside the sauna walls at a length of more than 1000 mm height from the floor, their insulation must withstand a temperature of at least 170°C under load (e.g. SSJ). Electrical equipment installed at a height of more than 1000 mm from the sauna floor comes to be approved for use 125°C at an ambient temperature (marked T 125).
- NOTE: The use of PVC-insulated connection cables as heater connection cables is prohibited due to their thermal fragility.

- The junction box must be suitable for the sauna room and its installation must comply with local regulations and the manufacturer's installation instructions.
- Leakage may occur during the insulation resistance measurement of the heater due to moisture in the air that has been absorbed into the insulation of the heating elements during storage or transport. The moisture can be removed from the elements after a couple of heating cycles.
- Do not connect the power supply to the electrical heater via a residual current device.

WARNING

- Deviation from the given minimum distances or other installation practices that are contrary to the instructions may cause a fire hazard.

4.2 INSTALLATION OF THE CONTROLLER AND SENSORS

- The heater operates via a separate controller.
- Narvi The Logi controller is intended for installation in a dry space outside the sauna room (IP20).
- Verify the suitability of the selected installation location for the controller by referring to the controller installation and operating instructions.
- Separate installation and operating instructions for the controller are delivered with the controller, and they can also be found on our website in PDF format.
- The sensor boxes are attached to the sauna room according to the installation and maintenance instructions supplied with the Narvi Logi controller.

5. PLACING OF SAUNA STONES

- Wear protective gloves when placing stones.
- Note. It is recommended to heat up the device until the heating elements are glowing, in order to burn off the protective grease. Ensure sufficient ventilation to remove any fumes.
- Let the heater cool down before adding stones.
- Always use Kerkes ceramic sauna stones for Narvi Heat electrical heaters, see separate warranty terms.

Stacking of ceramic sauna stones:

- Kerkes ceramic sauna stones do not need to be washed the first time they are laid.
- Good air circulation in the stone compartment is essential for the heating of the sauna air and the durability of the heating elements.
- The stone compartment must be filled according to the instructions. Heating the sauna heater with an underfilled stone compartment poses a fire hazard.
- Kerkes round stones are installed in the stone compartment of an empty heater at the height of the upper edge of the heater's heating elements protection. See figure 2. (60mm 10.2-15.3 kW) (80mm 20.4-40.8 kW)
- A small mound of surface tetra stones is placed on top of the heater, see picture 3. (Surface tetra stone 10.2-15.3 kW) (Small and Large tetra stones 20.4-40.8 kW are mixed in a 1/1 ratio)
- Narvi Kerkes sauna stone sets may contain a few kilos of extra stones for packaging reasons. Do not overload sauna stones on the heater.



Figure 2.



Figure 3.

Sauna heater	Effect	Round stones Ø (mm)	Round stones quantities (kg)	Tetra small quantity (kg)	Tetra large quantity (kg)	Quantity of stones to heater (kg)	Package size/ quantity (kg)
Narvi Heat 10,2 kW	10,2 kW	60 mm	30 (40) *)	20		50	60
Narvi Heat 11,9 kW	11,9 kW	60 mm	40	20		60	60
Narvi Heat 15,3 kW	15,3 kW	60 mm	40	20		60	60
Narvi Heat 20,4 kW	20,4 kW	80 mm	40	20	20	80	80
Narvi Heat 25,5 kW	25,5 kW	80 mm	60	30	20	110	110
Narvi Heat 30,6 kW	30,6 kW	80 mm	80	30	30 (40) *)	140	150
Narvi Heat 40,8 kW	40,8 kW	80 mm	80	40	30 (40) *)	150	160

Table 3. Kerkes ceramic sauna stone quantities. *) In brackets, the packing quantity of the stone size in kilograms.

6. VENTILATION OF THE STEAM ROOM

- Sauna ventilation must be carried out according to the plan of the HVAC designer.
- Sauna ventilation must be organized efficiently to achieve sufficient oxygen content and fresh air.
- Generally, fresh air is brought in close to the sauna heater and exhaust air is brought in on the opposite side of the sauna room.
- The air in the sauna room should be changed 3-6 times per hour.
- The distance between the temperature sensor and the fresh air pipe must be at least 1000 mm or 500 mm with a directed nozzle.

7. CONSTRUCTION OF SAUNA

- The sauna should be well insulated, especially the ceiling, where heat tends to escape the most.
- Due to humidity, it is recommended to protect the sauna's thermal insulation with a vapor barrier, e.g. aluminum paper.
- A 12–16 mm thick wooden panel is recommended for surface cladding.
- If the sauna's cladding uses materials that retain heat well (e.g. various decorative stones, regular glass, etc.), they will increase the sauna's preheating time.
- There must be a heat-resistant floor covering under the heater. Hot stone chips falling from the heater may damage the floor covering and pose a fire hazard.

7.1 PROTECTIVE BARRIER

- If necessary, a protective barrier can be built around the heater, but the minimum distances from the heater to structures given in Table 2 must be strictly observed.
- The protective barrier must be open in structure.

8. IMPORTANT ADDITIONAL INSTRUCTIONS

- A suitable temperature for the sauna room is between 60–80 °C.
- Staying in the hot sauna for a longer time, makes the body temperature rise, which may be dangerous.
- Do not sleep in sauna.
- Do not enter a hot sauna while under the influence of intoxicants.
- Children may not be left unsupervised and they should be supervised to make sure they do not play with the equipment.
- You should be careful in the vicinity of the hot heater, because the stones and metal parts of the heater may cause burns.
- Only a small amount of water (1-2 dl) should be thrown onto the heater stones, because the steaming water is scalding hot.
- Always check the sauna room before turning on the heater.
- Always check the sauna room before setting the remote control mode.
- The heater must not be covered. Flammable objects, such as towels, must not be hung above or near the heater, not even after sauna bathing, because these cause fire hazard.
- The improperly filed stone container is a fire hazard.
- Door and window must be closed when using the heater.
- Covering, short-circuiting or otherwise restricting the operation of the temperature sensor is prohibited as this causes a fire hazard.
- If the sensors do not function normally, the cause of the malfunction must be determined and corrected before continuing to use the sauna.
- Outer casing made of acid-resistant steel may change its color because of the heat, which is normal behavior for the material. Color changes are not covered by the warranty.
- Use normal clean domestic water for steam water. Do not use sea water (or other salty water) or chlorinated water.
- The Kerkes ceramic sauna stones must always be dry when starting the sauna heater. Do not

throw water on cold sauna stones. The heater should remain on for an additional 15 minutes after the last person has finished using the sauna. This allows the stones to dry and extends their lifespan.

9. MAINTENANCE INSTRUCTIONS

- Narvi Heat electrical heaters have undergone initial maintenance at the factory before delivery to the customer.
- The warranty is valid only if the maintenance according to the maintenance program is carried out properly and on time.
- For Narvi Heat electrical heaters, the maintenance tasks are as follows:
  - Swimming halls every 6 kk months
  - Spas every 6 kk months
  - Hotels every 12 kk months
- We recommend removing the Kerkes ceramic stones from the heater and re-installing them twice a year and washing the stones with citric acid once a year to remove limescale. Replace broken stones with new ones and remove crumbs and debris of stones from the heater.

Maintaining Narvi Heat:

1. Remove the ceramic sauna stones from the heater.

2. Lift the electrical heater on its side.

3. Remove the bottom cover using an allen key. Heating elements lower ends are now visible .

4. Brush CU-800 copper paste onto the heating elements to the lower extremities and nuts. Clean off the copper paste from the white porcelain part of the heating elements.

6. Check the tension and condition of the supply cables in the heater's junction box.

7. Attach base plate in place and put the heater on its feet.

8. Fill the heater with Kerkes ceramic sauna stones.

The instructions for replacing incoloy heating elements can be obtained by ordering them from Narvi (export@narvi.fi).

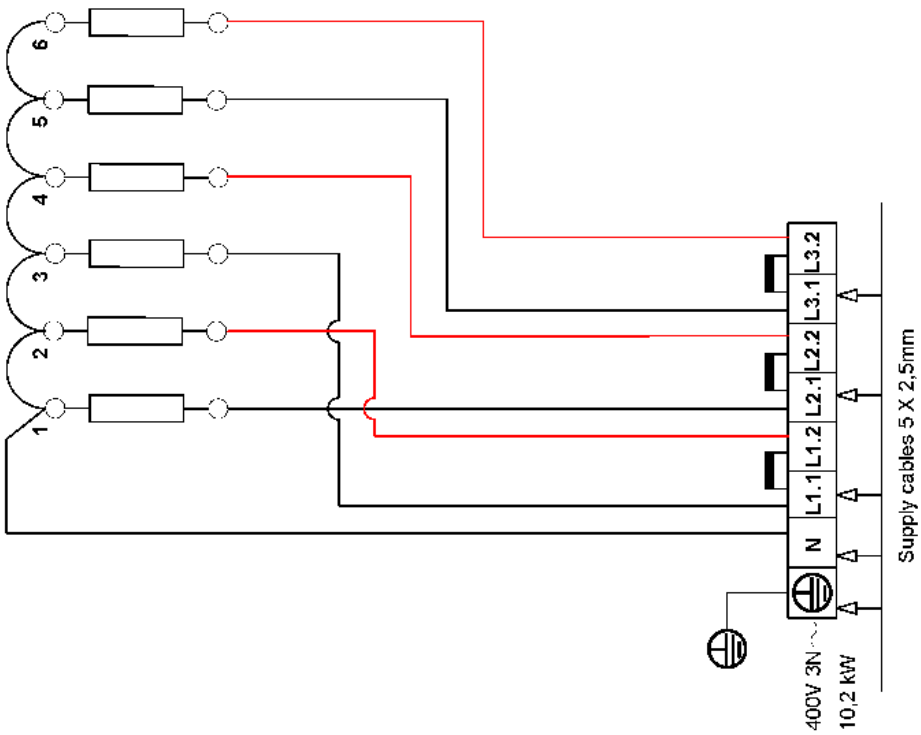
10. SPARE PARTS

- Temperature sensor 1 (resettable overheat protection)
- Temperature sensor 2 (non-resettable overheat protection)
- Incoloy heating elements 1,7 kW
- Copper paste
- Heating element rack

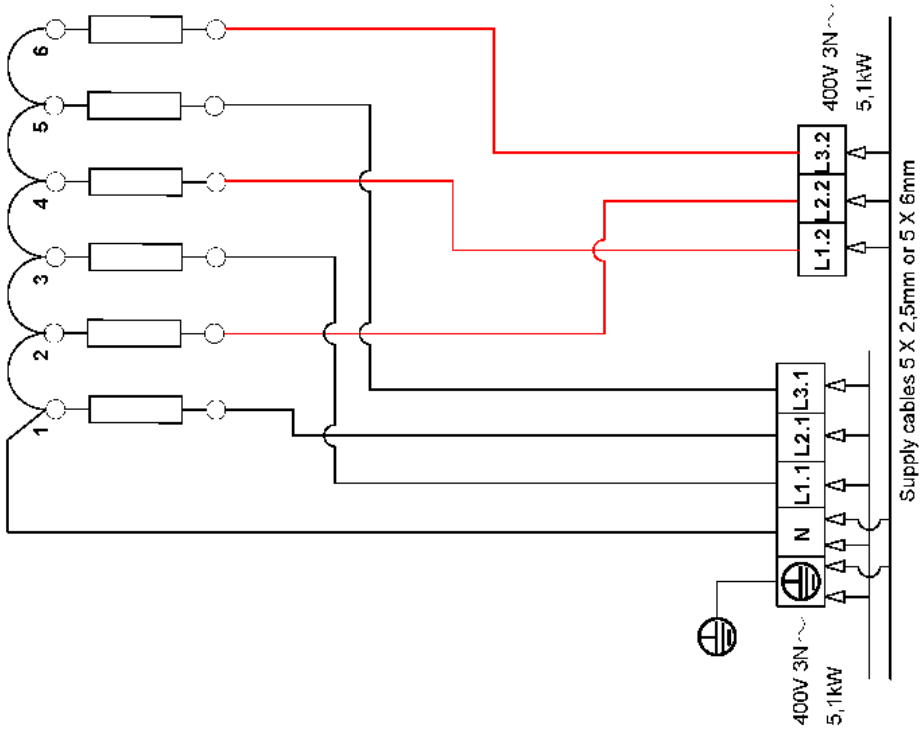


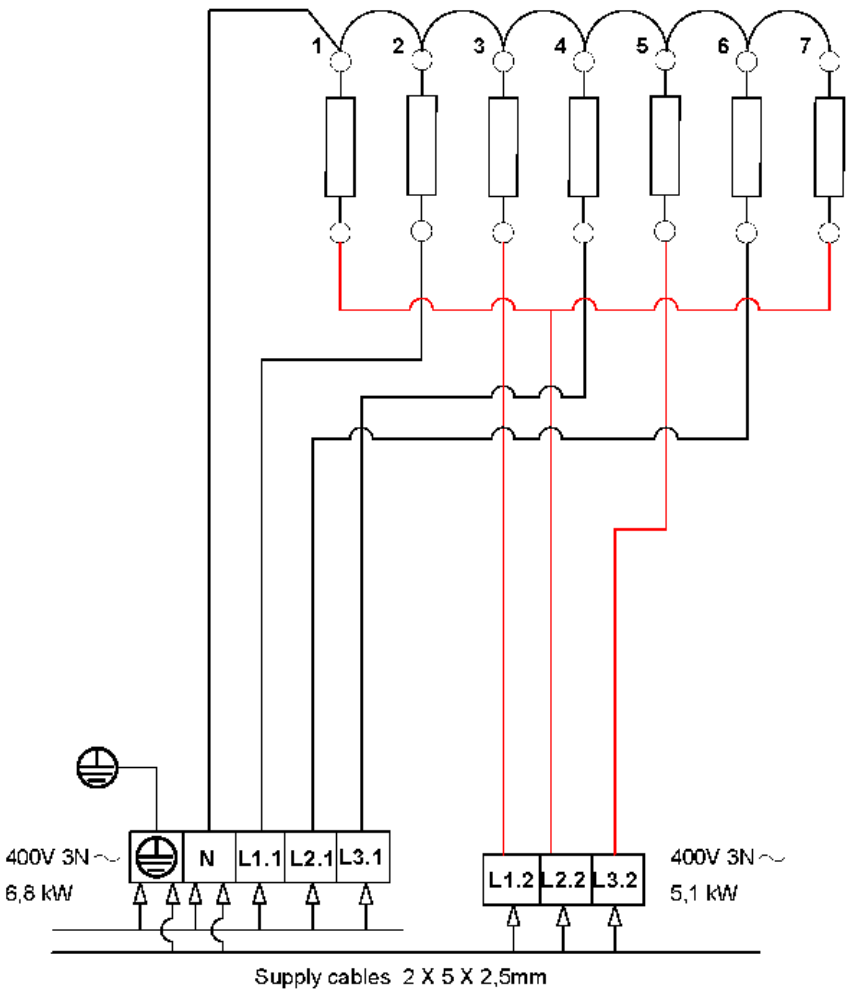
11. KYTKENTÄKAAVIOT JA VIRRANSYÖTTÖ/ CONNECTION SCHEMES AND POWER SUPPLY

NARVI HEAT 10,2 KW

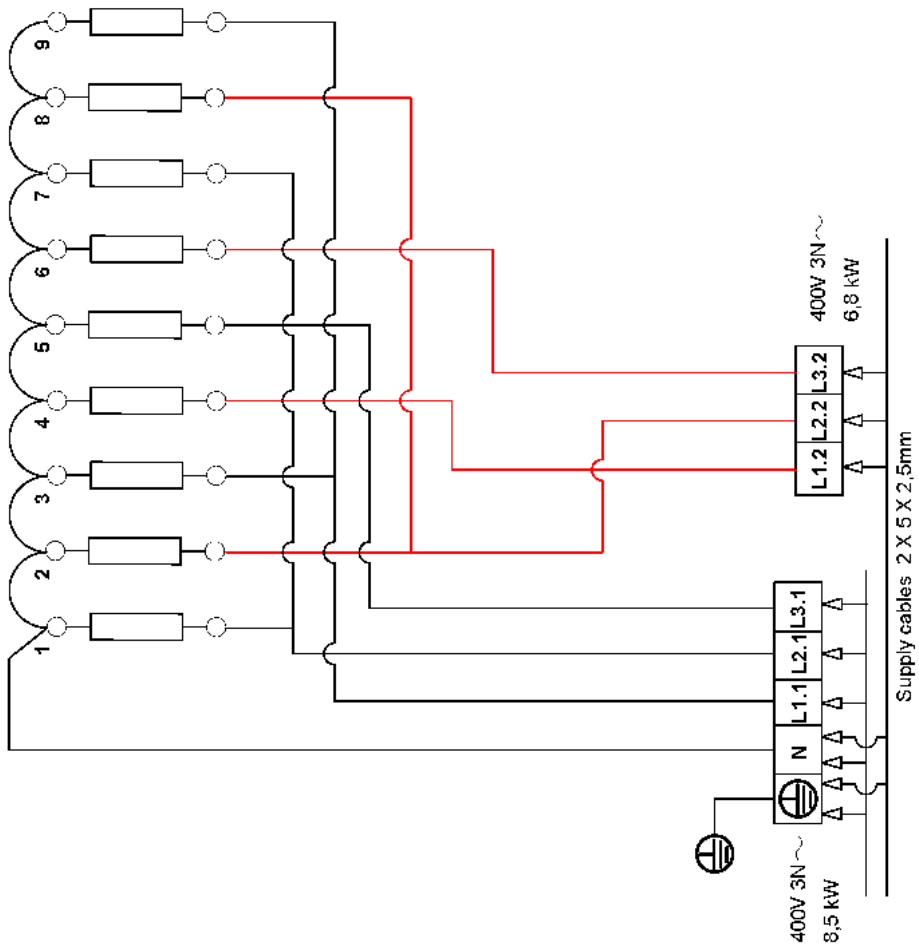


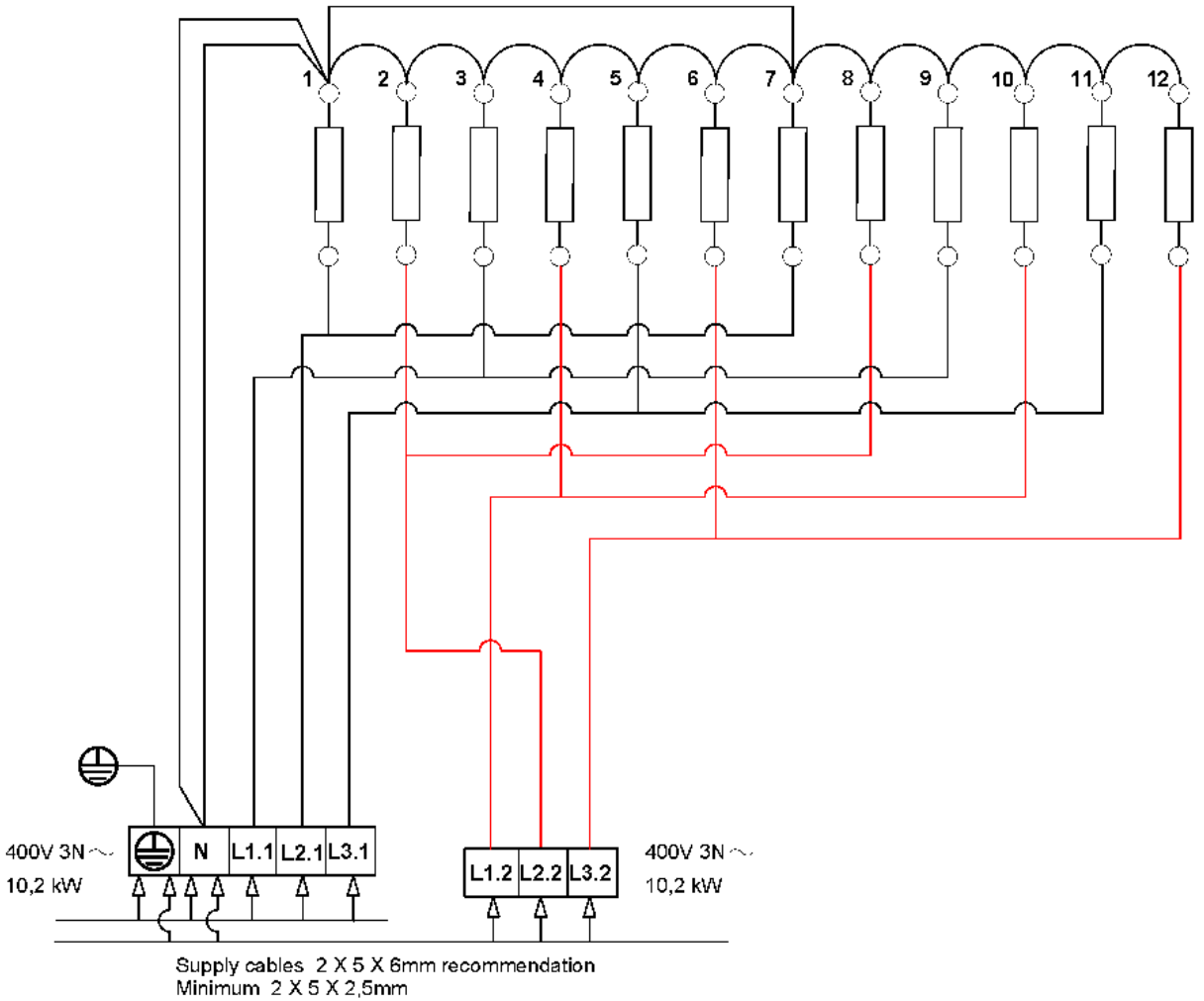
NARVI HEAT 10,2 KW



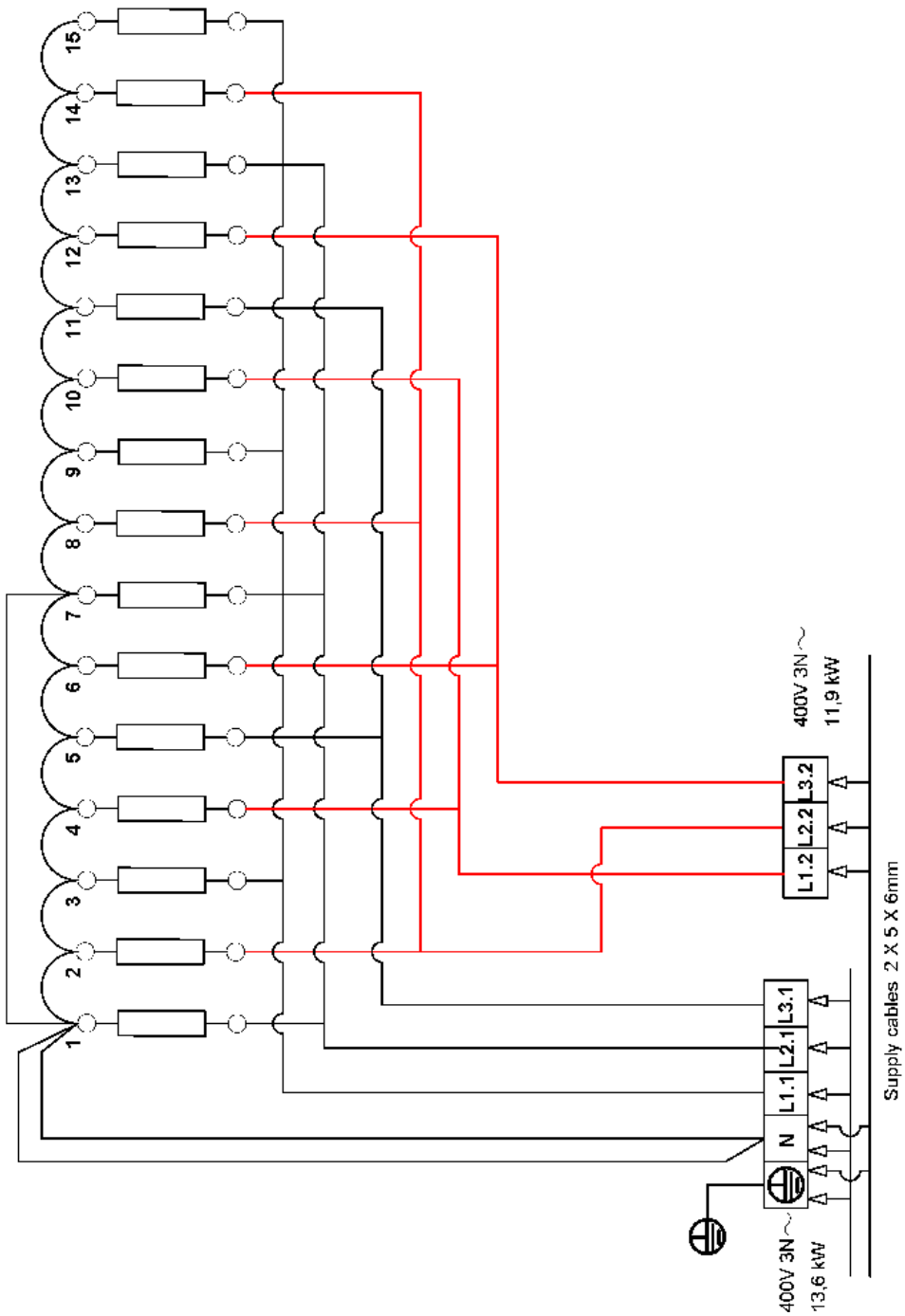

1
2
3
4
5
6
7
400V 3N~
6,8 kW
N
L1.1
L2.1
L3.1
L1.2
L2.2
L3.2
400V 3N~
5,1 kW
Supply cables 2 X 5 X 2,5mm

NARVI HEAT 15,3 KW

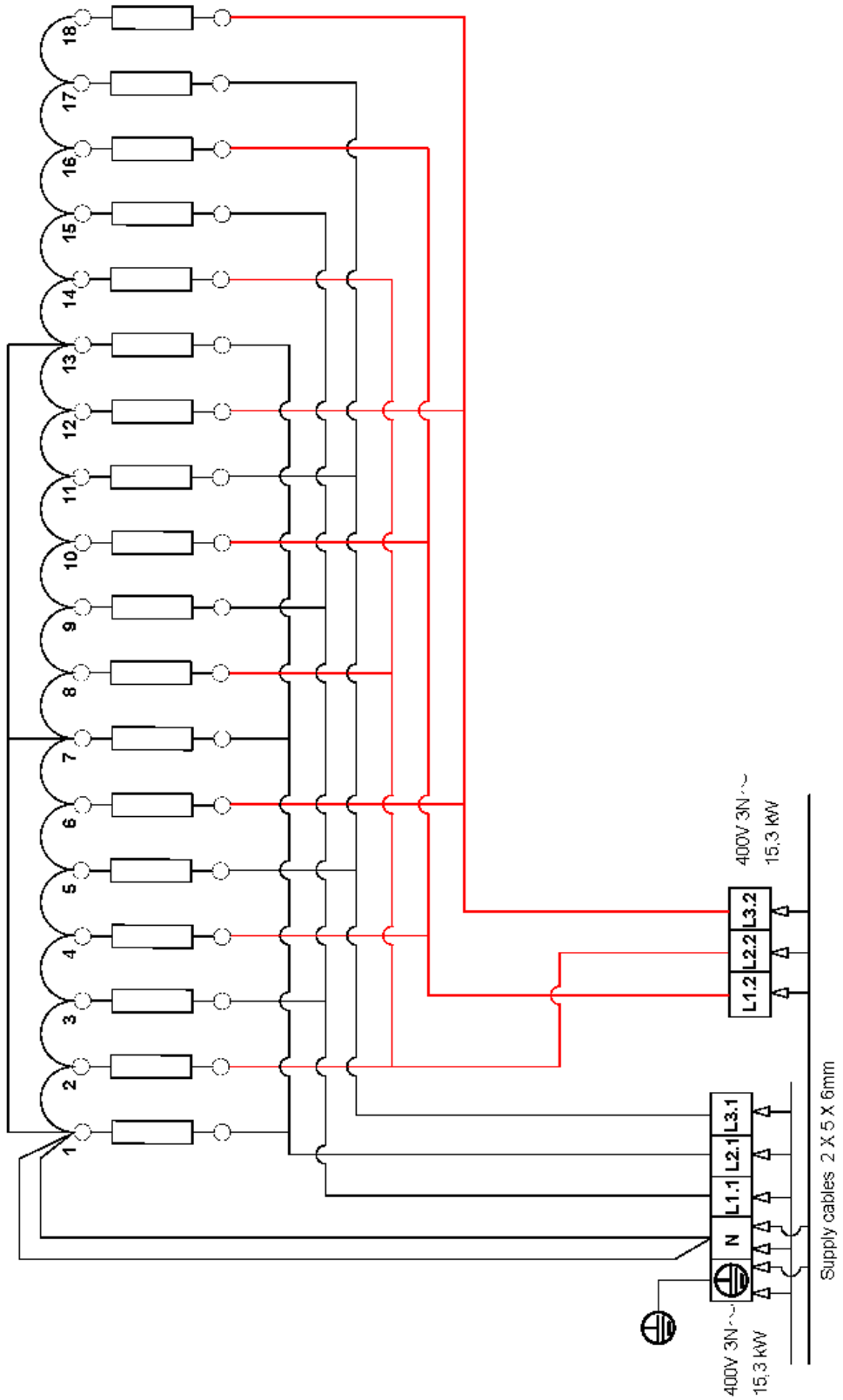



1
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11
12
400V 3N ~
10,2 kW
N
L1.1
L2.1
L3.1
L1.2
L2.2
L3.2
400V 3N ~
10,2 kW
Supply cables 2 X 5 X 6mm recommendation
Minimum 2 X 5 X 2,5mm

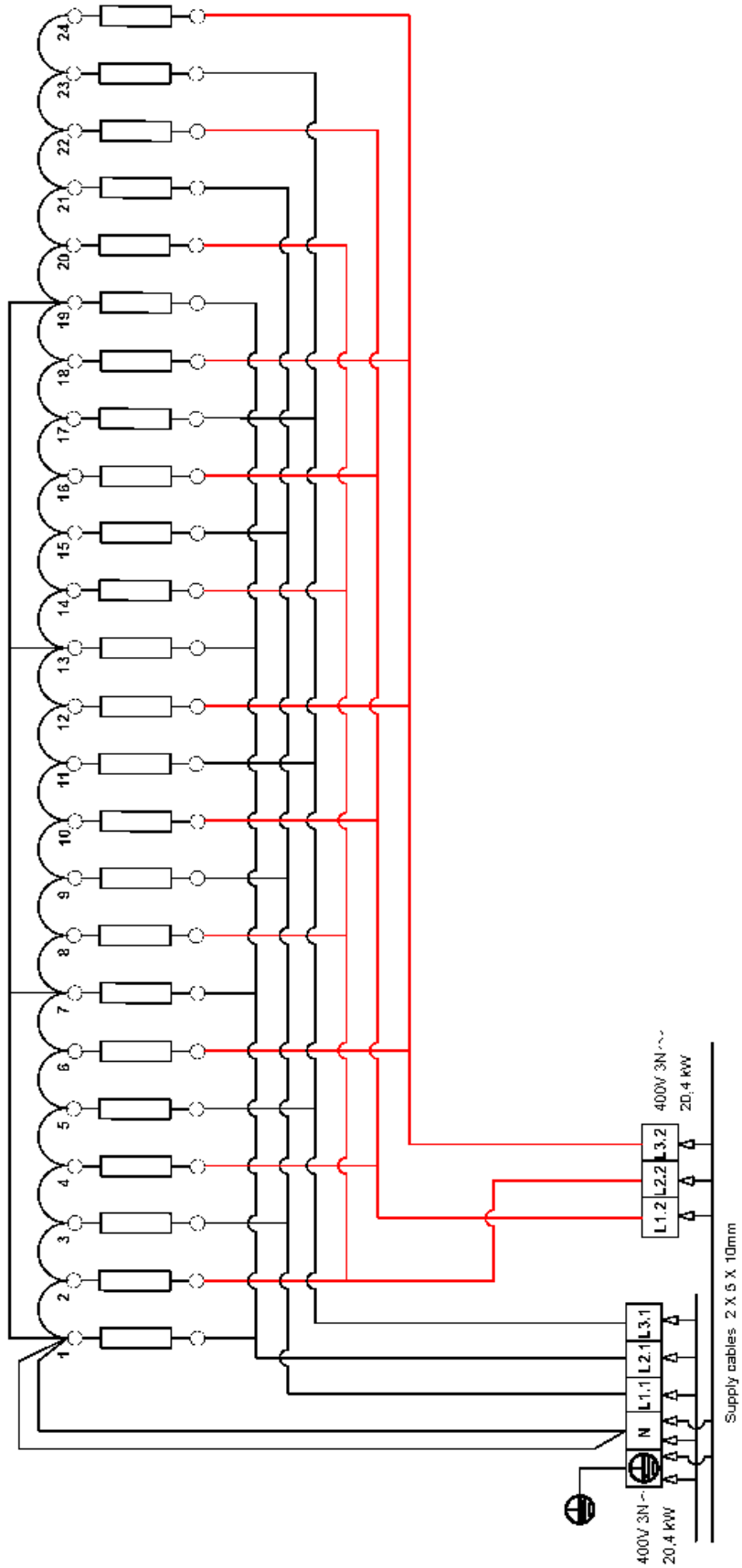
NARVI HEAT 25,5 KW

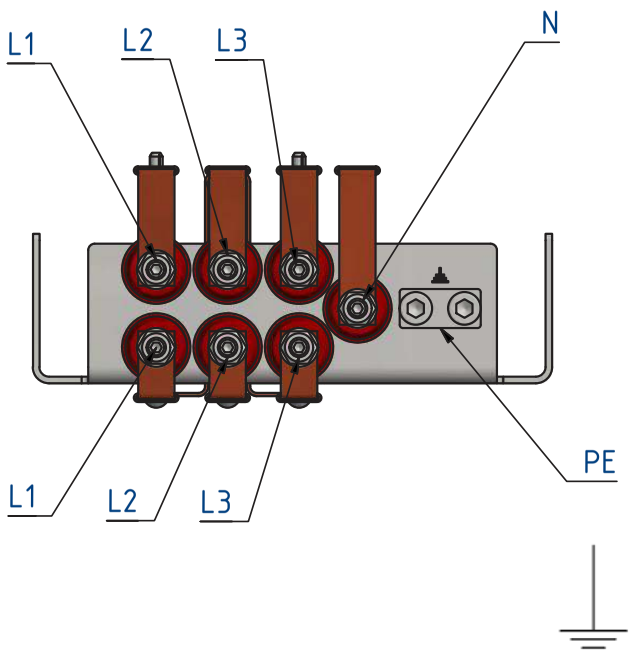


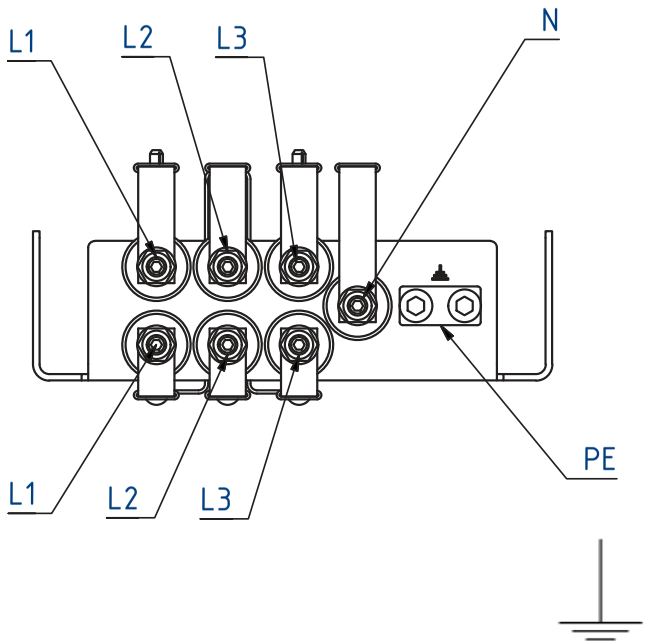
NARVI HEAT 30,6 KW



NARVI HEAT 40,8 KW







Virransyöttö kahdella kaapelilla Narvi Heat -laitosähkökiukaalle.

Power supply with two cables for the Narvi Heat electric heater.

NARVI

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Narvi Oy pidättää oikeudet tuotteisiin tuleviin muutoksiin.