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REWARD YOURSELF

Instructions for use and installation MAGMA and SKLA

SAUNA HEATER

1101 – 181
1101 - 210 400V 3N~
1101 - 262

CONTROL PANEL + CONTACTOR BOX

1418-22-1517-3	+	2005-1
1418-22-1517	+	2005-1

SAUNA HEATER

1101 – 181
1101 - 210 400V 3N~
1101 - 260

CONTROL PANEL + CONTACTOR BOX

1601-12	+	2005-5
1601-13	+	2005-5

MAGMA

SKLA

USING.

Before you start to install and use the sauna heater check the following:
- that you have got all the parts needed.
- check that the voltage of the heater and the control box is the right one and that the control box suits your heater.
- chech that the effect of the heater suits your sauna. You must not exceed or go below the volumes mentioned in table 1.
- look at the installation distances in fig. 1. You have to follow these, otherwise it can cause a burn.
- study these installation- and using instructions carefully.

NOTE! Prior to switching the heater on, ensure that the sauna room is ready for heating

HOW TO CHOOSE THE EFFECT OF THE HEATER.

Noticing the volume of the sauna you choose the effect of the heater according to table 1. The volumes mentioned in table 1 are valid under the assumption that the sauna is well insulated. If there are walls of bricks or concrete in the sauna you have to add to the volume about 1,2m^3 for every brick- or concerete wall m^2 and then you choose the effect of the heater according to the composed volumes.

MOUNTING OF THE SAUNA HEATER

The sauna heaters are freestanding models and these heaters must be firmly fastened to the floor by screwbolts through two of the feet. When fastening the heater to the floor please follow the requirements about the minimum distances to combustible material indicated on the name plate of the heater and in table 1 and fig. 1. Do not protect the wall behind the heater with for instance asbest- or eternite plates, as these may cause a too high temperature increase in the wall.
Do not place the sauna heater in a nisch, and you must not have a compact quard rail around the heater. Draught from door, vents etc. should be avoided as this effects the thermostat.

QUARD RAIL

If you put a quard rail around the heater you have to note the minimum distances mentioned in table 1.

MOUNTING OF THE CONTROL BOX

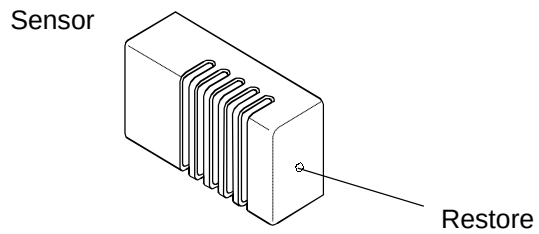
The control box must be installed in a suitable place outside the sauna room. The sensor unit should be fastened to the wall in the sauna according to fig 1. please follow the measurements mentioned in fig 1. otherwise it may cause a burn.

CONNECTION

The electrical installation of the sauna heater and the control panel must be made by a qualified electrician according to the requirements. The principal connection will be made in accordance with fig. 1. The required wiring diagrams are inside the heater and the control panel. The heater can be connected by using a rubber wire HO7RN-F, table 1. The connection box must be a splash water proof construction and its height from the floor may not be higher than 500mm.If the connection - and installationwires come inside the sauna or inside the walls of the sauna higher than 1000mm from the floor they must loaded take at least 170 ^{O}C (for instance HO7SS-K4G) All electrical appliances that are installed higher than 1000mm from the sauna floor must be accepted for use in 125 ^{O}C surrounding temperatures (marking T 125).

INSTALLATION OF THE CONTROL UNIT AND SENSOR ELEMENTS

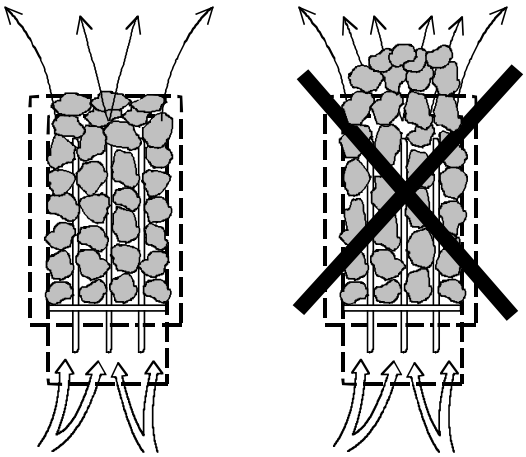
The control unit is electrically connected via a cable to the contactor box. The control unit is intended for installation outside the sauna room. Check the control unit location from the control unit installation and user instructions.The sensor is fixed to the wall of the sauna, directly on the middle line of the heater, 40mm from the ceiling. Any deviation from the given installation measurements will cause a risk of fire.
The temperature limiter in the sensor element cuts off all the electricity to the heating elements if the heater temperature increases to a level where it causes a danger to the wooden parts of the sauna. Once the temperature is reduced the limiter can be restored by pressing the reset button.
Before pressing the reset button, the reason for the triggering of the temperature limiter must always be clarified!



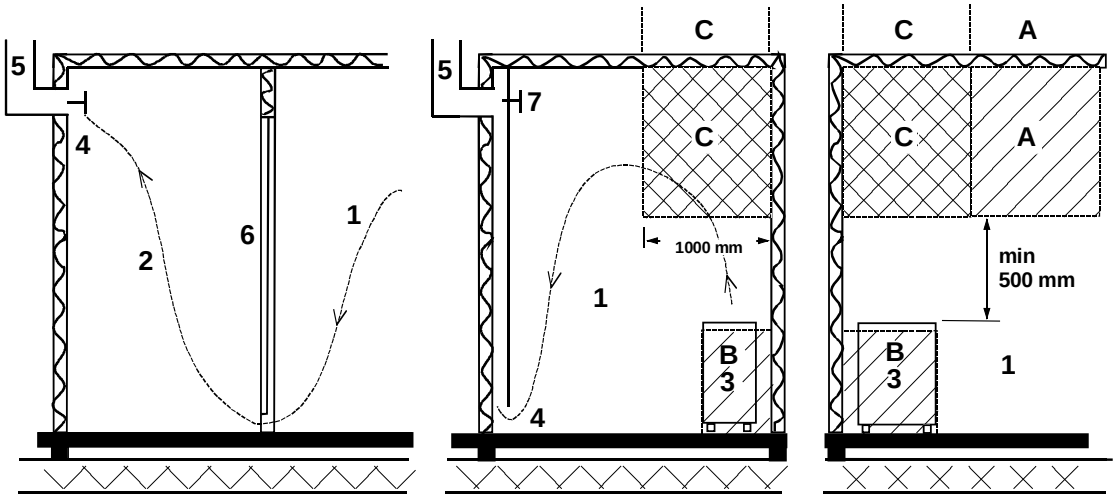
SAUNA HEATER STONES

Quality stones meet the following requirements:

- Sauna stones should withstand heat and heat variation caused by vaporisation of the water thrown on the stones.
- Stones should be rinsed before use in order to avoid odour and dust.
- Sauna stones should have an uneven surface to supply a larger surface for the water to evaporate from.
- Sauna stones should be large enough, measuring about 80–120 mm to allow good ventilation between the stones. This extends the useful life of the heating elements. The maximum rocks capacity is about 80kg
- Sauna stones should be piled sparsely in order to enhance ventilation between the stones. Do not bend the heating elements together or against the frame.
- Rearrange the stones regularly (at least once a year) and replace small and broken stones with new, larger stones.
- Stones are piled so that they cover the heating elements. Do not, however, pile a large heap of stones on the heating elements. Any small stones in the package of stones must not be piled on the sauna heater.
- The warranty does not cover defects resulting from poor ventilation caused by small and tightly packed stones.
- Structural clay tiles are not allowed. They may cause damage to the sauna heater that will not be covered by the warranty.
- Do not use soapstone as sauna rocks. Any damages resulting from this will not be covered by the stove warranty.
- Do not use lava stone as sauna rocks. Any damages resulting from this will not be covered by the stove warranty.
- **DO NOT USE THE HEATER WITHOUT STONES.**



Recommended sauna room ventilation



1. Sauna room
2. Washroom
3. Electric sauna heater
4. Exhaust valve
5. Exhaust flue or channel
6. Door to the sauna room
7. A ventilation valve can be installed here to be kept closed while the sauna is heated and during bathing.

Inlet vent can be positioned in the A zone. Make sure the incoming fresh air will not interfere with (i.e. cool down) the sauna heater's thermostat near the ceiling.

The B zone serves as the incoming air zone, if the sauna room isn't fitted with forced ventilation. In this case, the exhaust valve is installed min 1m higher than the inlet valve.

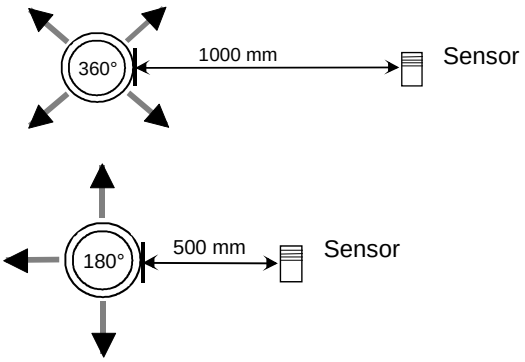
DO NOT ISTALL INLET VALVE WITHIN ZONE C, IF THE SAUNA HEATER'S CONTROL THERMOSTAT IS LOCATED AT THE SAME ZONE.

Installing the sensor near a supply air vent

The sauna room air should be exchanged six times in an hour. The diameter of the supply air pipe should be between 50 and 100 mm.

A circular air supply vent (360°) must be installed at least 1000 mm away from the sensor.

An air supply vent with a flow-directing panel (180°) must be installed at least 500 mm away from the sensor. Air flow must be directed away from the sensor.

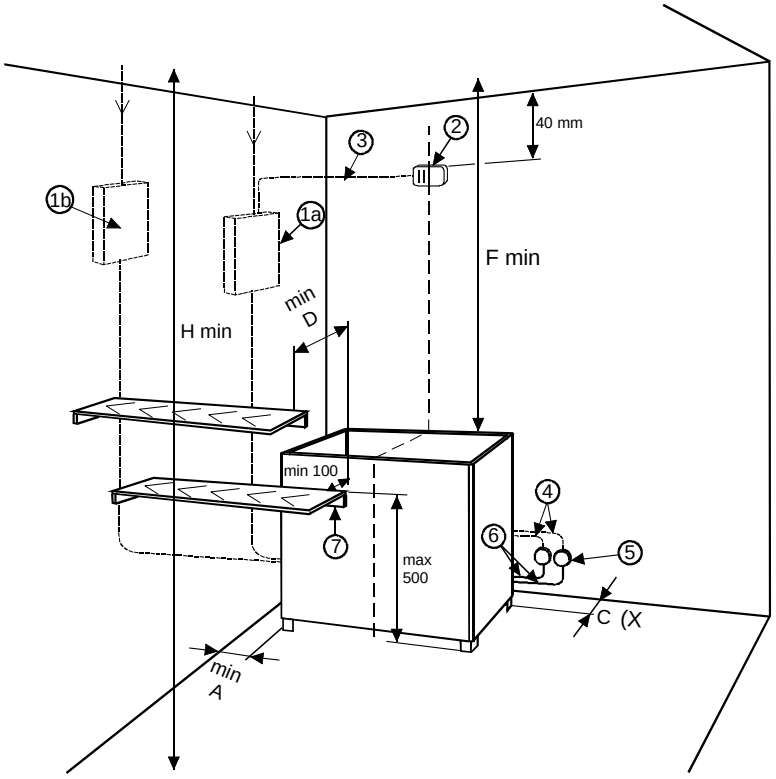


Installation when useing control panel

1418-22-1517-3 + 2005-1
1418-22-1517 + 2005-1
1418-22-1519 + 2005-1

Table 1

Heater				Sauna			Minimum distance				Cable to			Main Fuse		Control Panel		
Type	Effekt	Group-effekt		Volume Min Max		Height	From heater to				Ther-mostat	Controlpanel and heater		Group fuse				
		I	II			H min	Cei-ling	Front wall	Side wall	Back side Absolute		Group I H07RN-F	Group II H07RN-F	I	II	1418-221-517-3	1418-221-517	2005-1
	kW	kW	kW	m^3	m^3	mm	mm	mm	mm	mm	mm^2	mm^2	mm^2	A	A			
1101-181	18	9	9	18	30	2100	1400	160	140	160	4x0,25	5x2,5	5x2,5	16	16	X	X	X
1101-210	21	9	12	24	36	2100	1400	160	140	160	4x0,25	5x2,5	5x4	16	20	X	X	X
1101-262	26	10,5	15,5	30	46	2200	1500	160	140	160	4x0,25	5x2,5	5x6	16	25	X	X	X



Picture 1

1a. Timer and thermastat in control bex
1b. Contactor box
2. Sensor unit
3. Heat resistant cable
4. 2 kpl. Feeder cable to heater
5. Junction box
6. 2 kpl. Connection cable to heater
7. Lover bench or heater guard rail

(X= The given measurement is absolute, no variations acceptable

Installation when useing control panel

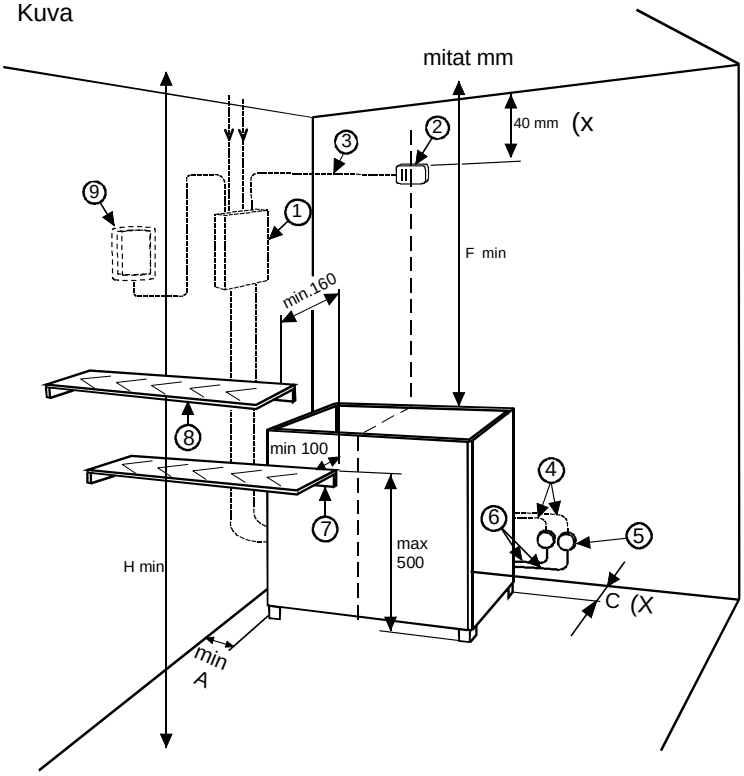
1601 – 12 + 2005-5
1601 – 13 + 2005-5

Table 1

Heater				Sauna			Minimum distance				Cable to			Main Fuse	
Type	Effekt	Group-effekt		Volume Min Max		Height	From heater to				Ther-mostat	Controlpanel and heater		Group fuse	
		I	II			H min	Cei-ling	Front wall	Side wall	Back side Absolute		Group I H07RN-F	Group II H07RN-F	I	II
	kW	kW	kW	m^3	m^3	mm	mm	mm	mm	mm	mm^2	mm^2	mm^2	A	A
1101-181	18	9	9	18	30	2100	1400	160	140	160	4 x 0,25	5 x 2,5	5 x 2,5	16	16
1101-210	21	9	12	24	36	2100	1400	160	140	160	4 x 0,25	5 x 2,5	5 x 4	16	20
1101-260	26	13	13	30	46	2200	1500	160	140	160	4 x 0,25	5 x 6	5 x 6	25	25

Measurements in mm

Kuva



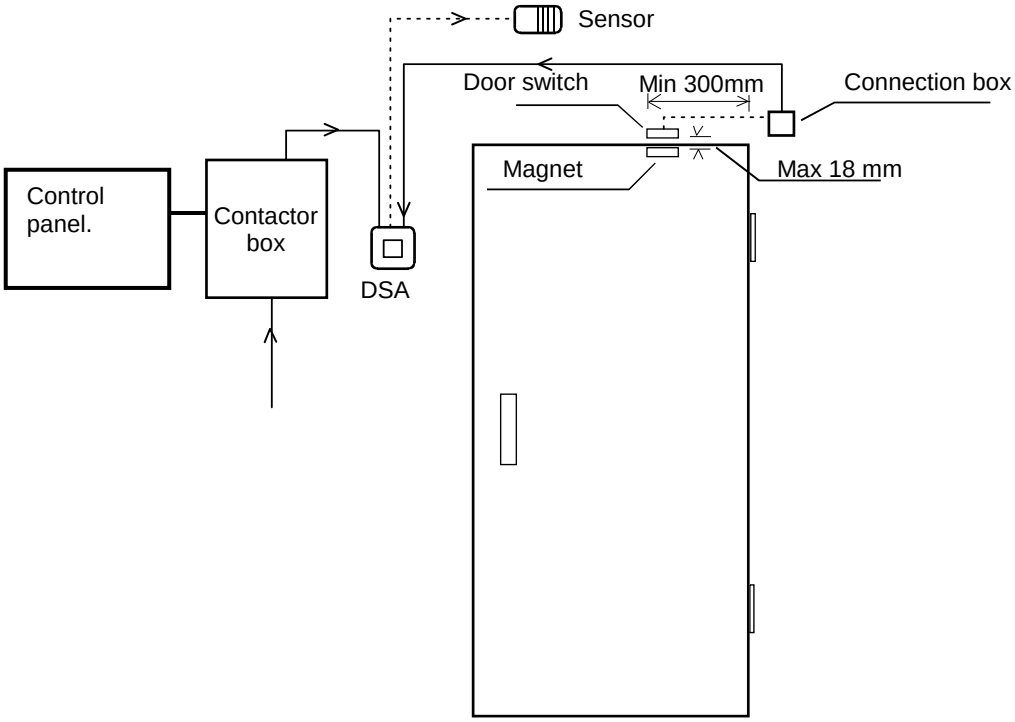
Picture

1. Contactor box
2. Sensor
3. Heat resistant cable
4. Feeder cable to heater
5. Junction box
6. Connection cable to heater
7. Lower bench or heater guard rail
8. Upper bench or heater guard rail
9. Control panel

(X = The given measurement is **absolute**, **no variations** are acceptable

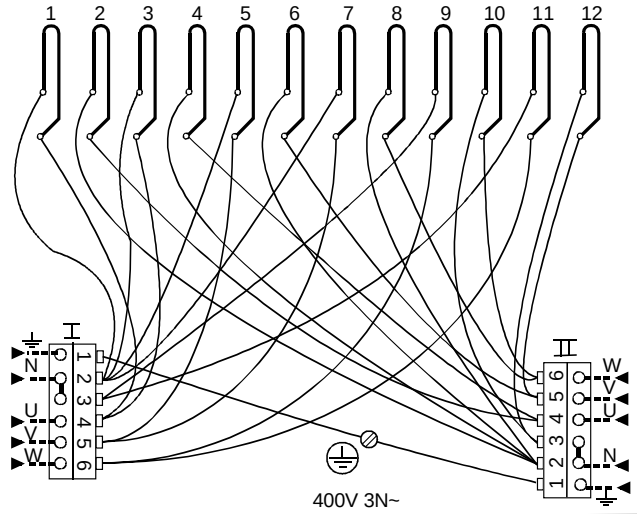
Door switch

The door switch refers to the switch on the sauna door. This switch complies with the regulations laid down in Section 22.100 of the standard EN 60335 2-53. Public and private saunas, i.e. saunas where the heater can be switched on from outside the sauna or by using a timer, must have a door switch.
Helo Control panel and Contactor box and control panel can be fitted with either a Helo DSA 1601 – 35 (RA – 35) door switch adapter (item number 001017) or a Helo door switch adapter (item number 0043233). For more information, please refer to the use and installation instructions for the DSA device.



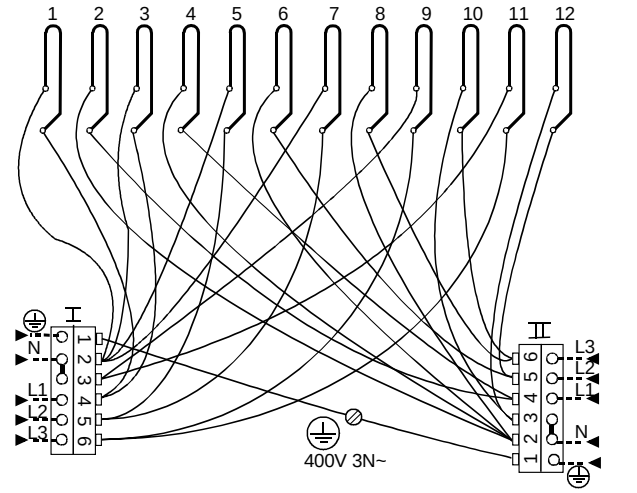
Installing the door switch

Kiuas Ugn Heater Ofen Keris Chauffe-sauna Calentador	Teho Effekt Input Leistung Vöimsus Entrée Entrada	Ryhmäteho Gruppeffekt Stages Gruppeeffekt Rühmavöimsus Groupes Fases		Lämpövastukset Värmeelement 230V Heating elements Heizelemente Tennid Éléments chauffants Resistencias		
	kW	I kW	II kW	SEPC 12 1,5kW	SEPC 11 2,0kW	SEPC 59 2,6kW
1101-181	18,0	9,0	9,0	1,— 12		
1101-210	21,0	9,0	12,0	1,3,5,7,9,11	2,4,6,8,10,12	
1101-262	26,0	10,5	15,5	3,7,11	1,5,9	2,4,6,8,10,12



354 SKLA 91 C

Kiuas Ugn Heater Ofen Keris Chauffe-sauna Calentador Piec do sauny ЭЛЕКТРОКАМЕНКИ	Teho Effekt Input Leistung Vöimsus Puissance Entrada Moc власть	Ryhmäteho Gruppeffekt Group of power Gruppe der leistung Rühmavöimsus Groupe der puissance Grupo de potencia Grupowe zasilanie Группа власти		Lämpövastukset Värmeelement 230V Heating elements Heizelemente Tennid, Elementy grzewcze Éléments chauffants Resistencias, ТЭНы,		
	kW	I kW	II kW	SEPC 12 1,5kW	SEPC 11 2,0kW	SEPC 10 2,5kW
1101-181	18,0	9,0	9,0	1,— 12		
1101-210	21,0	9,0	12,0	1,3,5,7,9,11	2,4,6,8,10,12	
1101-260	26,0 x)	13,0	13,0		3,4,5,6,7,8,9,10	1,2,11,12



x) Epäsymmetrinen kuorma
Osymmetrisk last
Unbalanced load
Unsymmetrische Belastung
Ebasümmeetriline koormus
Asymetryczne obciążenie
Асимметричная нагрузка
Charge non équilibrée
Carga desequilibrada

I	II
L1 -4,5kW	L1 -4,5kW
L2 -4,0kW	L2 -4,5kW
L3 -4,5kW	L3 -4,0kW

354 SKLA 81 J