

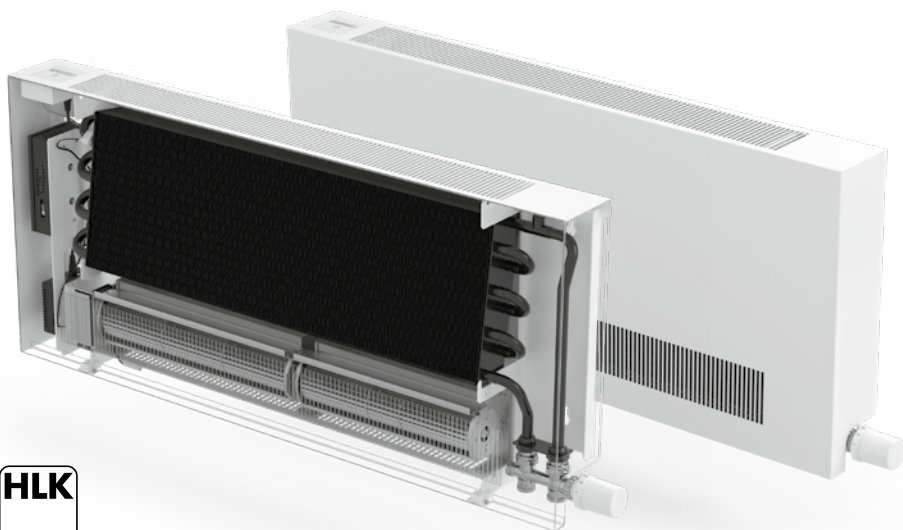
KORAWALL

Direct WVD 

Energy WVE 



- CZ** **MONTÁŽNÍ NÁVOD** KORAWALL (Direct WVD, Energy WVE) – instalace, provoz, servis a údržba
- SK** **NÁVOD NA MONTÁŽ** KORAWALL (Direct WVD, Energy WVE) – inštalácia, prevádzka, servis a údržba
- EN** **INSTALLATION INSTRUCTIONS** KORAWALL (Direct WVD, Energy WVE) – installation, operation, service and maintenance
- DE** **MONTAGEANLEITUNG** KORAWALL (Direct WVD, Energy WVE) – Installation, Betrieb, Service und Wartung
- FR** **INSTRUCTIONS D'INSTALLATION** KORAWALL (Direct WVD, Energy WVE) – installation, fonctionnement, entretien et maintenance
- RU** **ИНСТРУКЦИЯ ПО МОНТАЖУ** KORAWALL (Direct WVD, Energy WVE) – установка, эксплуатация, сервис и техническое обслуживание



member of KORADO Group

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Introduction

These instructions ensure safe and efficient handling of the convector. These instructions are an integral part of the equipment and must be kept in the immediate vicinity of the equipment and must be available to personnel at all times. All personnel must read this manual carefully before starting any work on the equipment. The basic prerequisite for safe work is to follow all the safety and other instructions contained in this manual. In addition, all local occupational health and safety regulations apply, as well as the general safety regulations governing the use of the equipment. The illustrations in this manual are for basic understanding; technical designs may be subject to change.

EN

Explanation of symbols

						
Risk of electric shock This symbol appears in front of activities where there is a risk of electric shock.	Warning This symbol appears where dangerous situations may occur.	Important notice This symbol appears where damage to the unit or surrounding property may occur.	Important note	Signalling LED light on keyboard not lit	Shining signalling LED light on the keyboard	Flashing signalling LED light on the keyboard

Tab. 1 – Symbols in the manual

Safety

Correct use of the KORAWALL Direct and Energy convectors

The KORAWALL wall-mounted heating convector with fan is designed for heating and cooling in dry and frost-proof rooms. The convector is also suitable for low-temperature heating systems. The convector must be connected to the heating/cooling system and the building's electrical network. The KORAWALL convector is not intended for drying laundry, storing small objects, or for resting people or animals. The KORAWALL convector is not intended for use in wet areas such as swimming pools, bathrooms, conservatories, etc. The KORAWALL convector is used for heating or cooling. However, passive cooling is only possible in a non-condensing zone, i.e. above the dew point temperature. The unit housing lacks a built-in condensate drain, and condensate must be prevented from forming in the convector.

Safety instructions

Always follow the safety instructions in this manual. Failure to comply with safety regulations, warnings, and instructions may result in injury, death of persons, or damage to property or to the heater or its accessories.

Personnel Qualification

- The electrical installation design must be carried out by a appropriately qualified person and must comply with the relevant standards.
- The KORAWALL convector must only be installed, connected, and commissioned by a trained professional.
- **All work on electrical equipment may only be carried out by personnel with the appropriate electrical qualifications and the necessary familiarity with the equipment.**
- The convector must be assembled and installed in accordance with the general building, safety, and installation regulations and standards in force at the location.
- Any interventions to the convector and its repairs may only be carried out by a specialist with the appropriate electrical qualifications, who is also trained for this purpose by the convector manufacturer.

Risk of electric shock! KORAWALL Energy WVE

- Contact with live parts can cause fatal electric shock.
Damage to insulation or electrical components can lead to fatal injury.
- Work on the electrical system should only be performed by qualified electricians

**Danger of fatal electric shock!**

- If the insulation is damaged, immediately disconnect the system from the power supply and have it repaired. Replace damaged parts only with original parts from the convector manufacturer.
- Avoid moisture on live parts, as this can cause short circuits.
- Ground the convector properly.
- Installation, maintenance, and servicing should be carried out with the convector disconnected from the mains. Prevent accidental restart.

General

- Children under 3 years of age should be prevented from accessing the device unless they are under constant supervision.
- This appliance may be used by children aged 8 years and older!
- Children from 3 to 8 years old may operate the appliance only if it is installed in the normal operating position and if they are supervised. They must not remove the front cover, clean the appliance, or carry out maintenance or servicing.
- Persons with reduced physical, sensory, or mental abilities, or with lack of experience and knowledge may operate the convector only if they are supervised or have been instructed in the safe use of the appliance and understand the potential hazards.

Protection against frost

- If the convectors are not used for a long period of time (e.g. in winter), disconnect them from the power supply. Protect the convector from freezing.



Prevent the heat exchanger from freezing. When used in unheated spaces, there is a risk of the heat exchanger freezing.

The right operating environment

- KORAWALL convectors are designed exclusively for indoor use. This means in a dry environment where there is no expectation of higher humidity and no other substances affecting the formation of corrosion are present.
- In particular: residential and non-residential interiors, office buildings, halls, production areas.
- Never use the device in wet areas such as swimming pools, winter greenhouses, botanical gardens, greenhouses, bathrooms, wellness centres, thermal baths, outdoor storage areas.
- Never use the device in rooms with an explosive atmosphere.
- Never use the unit in a chemically aggressive or corrosive atmosphere (e.g. sea air).
- Never use the unit over electrical equipment (e.g., junction boxes, computers, or other electrical equipment) or contacts that are not drip-proof).
- Do not place the convector over an electrical outlet.
- Never use the device in areas with high dust levels.
- Ensure that the air flow can circulate freely.



In case of improper use as described below, there is a risk of limitation or malfunction of the device.

Commissioning

- Before commissioning, the electrical equipment must be initially inspected according to the relevant national standards. During the period of operation, the user is obliged to ensure that regular inspections of the electrical equipment are carried out within the specified intervals according to the relevant national standards.
- Before the first start-up, check according to the chapter **Check before first start-up** (p 41)

General

- Do not block the air inlet and outlet. The unit may overheat and destroy the control unit, fans or power supply.
- Do not sit on the convector, do not climb on it, and do not place any objects on it.
- Do not make any modifications to the convector to alter its function.
- **ATTENTION:** Some parts can get very hot and cause burns (e.g. heat exchanger)!
- When installing, maintaining or servicing the convector, use protective work equipment.
- Some parts of the convector may contain sharp parts.

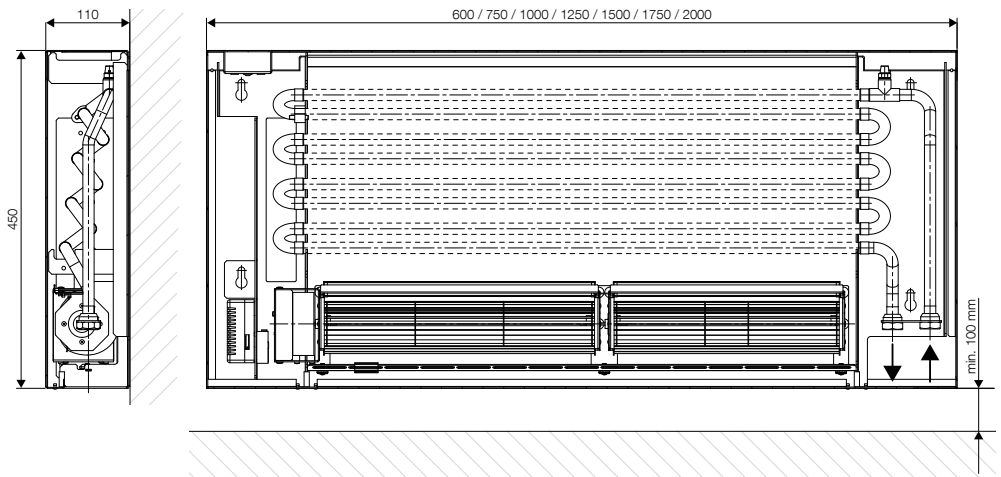
Technical parameters

EN

KORAWALL Direct WVD xxx/45/11							
Length [mm]	600	750	1 000	1 250	1 500	1 750	2 000
Width [mm]	110						
Height [mm]	450						
Heat output [W] 75/65/20 °C	190~1 688	278~2 467	424~3 766	570~5 064	716~6 363	862~7 661	1 008~8 960
Cooling output[W]	19~267	28~391	42~596	57~802	71~1 008	85~1 213	100~1 419
Sound pressure [dB]	23.2~40.8	24.9~42.3	26.3~43.9	26.7~44.9	28.7~46.4	30.2~47.6	30.5~48.2
Weight [kg]	11.5	14.5	18.5	23.5	27.5	31.5	36.5
Water volume [l]	0.6	0.8	1.1	1.4	1.7	2.0	2.4
Connecting thread	2× G½ female thread						

Operating conditions	
Max. operating pressure [MPa]	1.2
Max. and min. operating temperature [°C]	16~90
Max. and min. inlet air temperature	5~40
Max. and min. air humidity [%]	20~60

Electrical parameters	
Rated voltage of the convector [V]	24 DC
Class of protection	III
Ingress protection	IP 20
External mains power supply	230 V AC/24 V DC/1A. protection class II, round plug Ø 5.5/2.1 mm
Rated input power [W]	5.7 6.2 10.3 12.4 13.2 17.1 18.4
Rated current [A]	0.2 0.26 0.43 0.52 0.55 0.72 0.78
Fan voltage [V]	24 DC
Number of fans	1 1 1 1 1 2 2



Tab. 2 – Technical parameters of the KORAWALL Direct WVD convectors

KORAWALL Energy WVE xxx/45/11

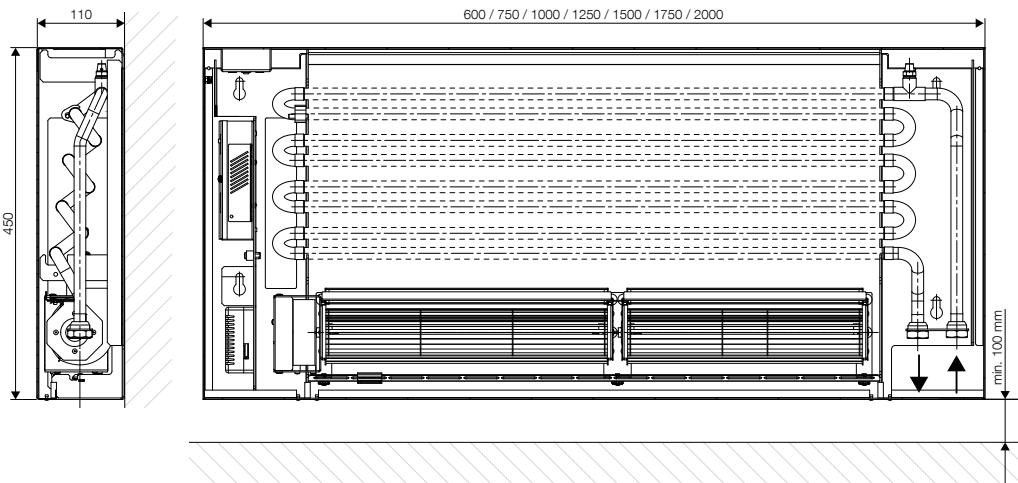
Length [mm]	600	750	1 000	1 250	1 500	1 750	2 000
Width [mm]	110						
Height [mm]	450						
Heat output [W] 75/65/20 °C	190~1 688	278~2 467	424~3 766	570~5 064	716~6 363	862~7 661	1 008~8 960
Cooling output [W]	19~267	28~391	42~596	57~802	71~1 008	85~1 213	100~1 419
Sound pressure [dB]	23.2~40.8	24.9~42.3	26.3~43.9	26.7~44.9	28.7~46.4	30.2~47.6	30.5~48.2
Weight [kg]	11.5	14.5	18.5	23.5	27.5	31.5	36.5
Water volume [l]	0.6	0.8	1.1	1.4	1.7	2.0	2.4
Connecting thread	2× G½ female thread						

Operating conditions

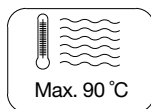
Max. operating pressure [MPa]	1.2
Max. and min. operating temperature [°C]	16~110
Max. and min. inlet air temperature	5~40
Max. and min. air humidity [%]	20~60

Electrical parameters

Rated voltage of the convector [V]	230 AC						
Power frequency [Hz]	50/60						
Class of protection	I						
Ingress protection	IP 20						
Internal mains power supply	230 V AC / 24 V DC / 1,5 A						
Rated input power [W]	6.0	6.8	11.2	13.5	14.4	18.7	21.2
Rated current [A]	0.026	0.033	0.048	0.059	0.066	0.087	0.10
Fan voltage [V]	24 DC						
Number of fans	1	1	1	1	1	2	2



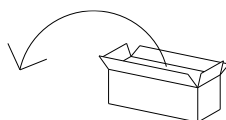
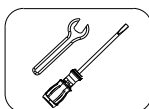
Tab. 3 – Technical parameters of the KORAWALL Energy WVE convector



Max. 90 °C

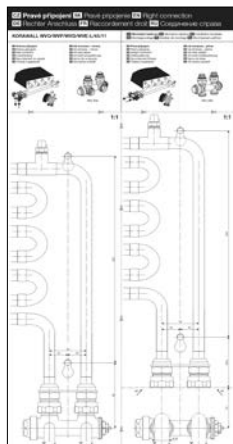


Max. 1.2 MPa



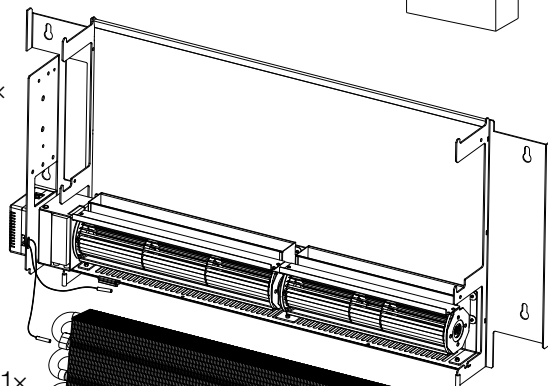
Contents of standard delivery KORAWALL Direct WVD

1x



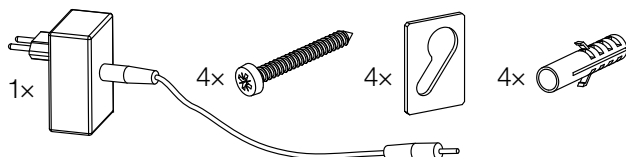
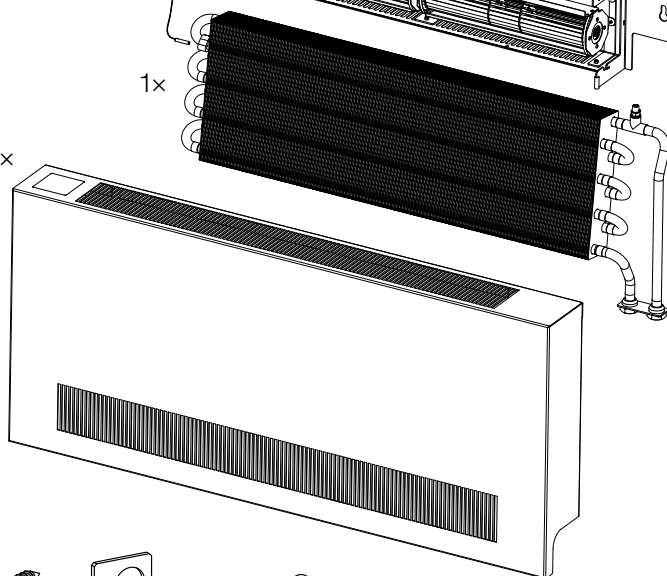
Mounting template

1x

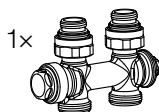


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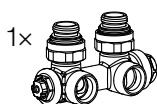
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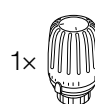
Optional accessories



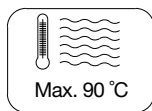
REG-TMS



REG-TMA



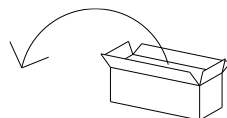
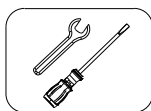
REG-TOW



Max. 90 °C



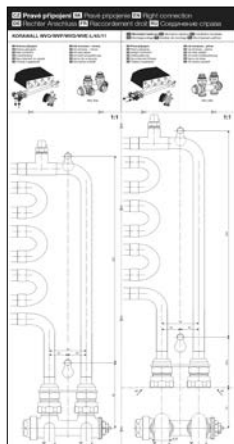
Max. 1.2 MPa



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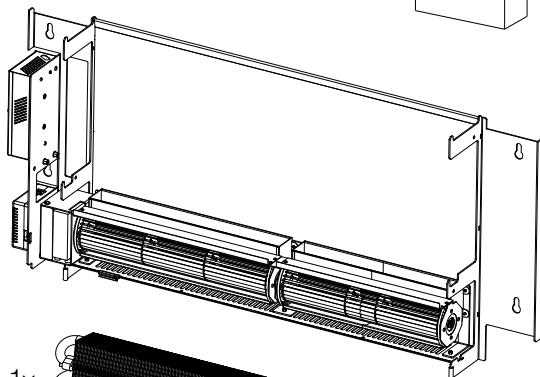
Contents of standard delivery KORAWALL Energy WVE

1x

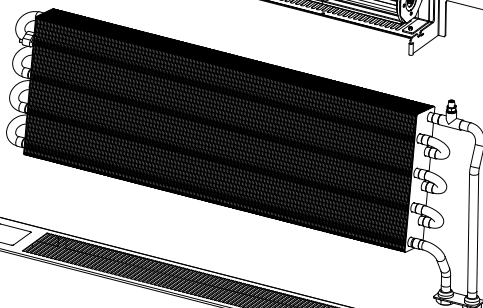


Mounting template

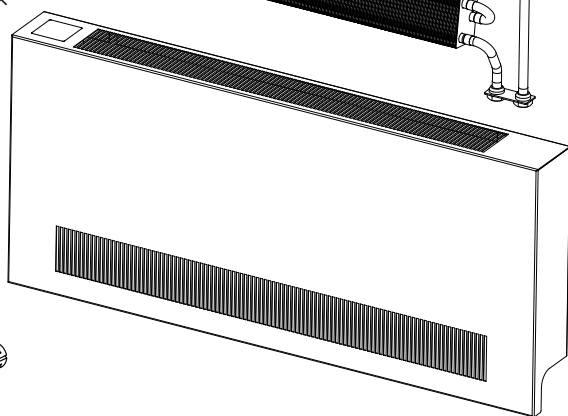
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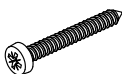
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1x



4x



4x

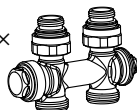


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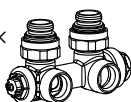
Optional accessories

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REG-TMS

1x



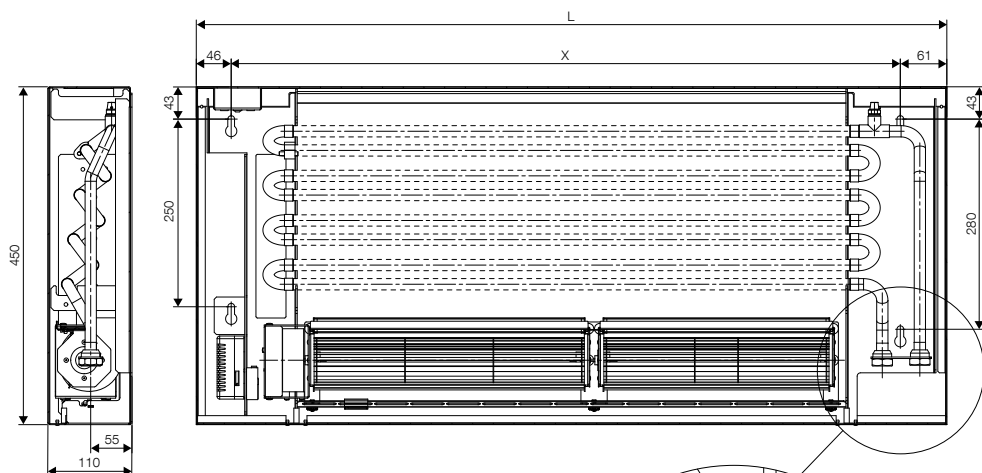
REG-TMA

1x

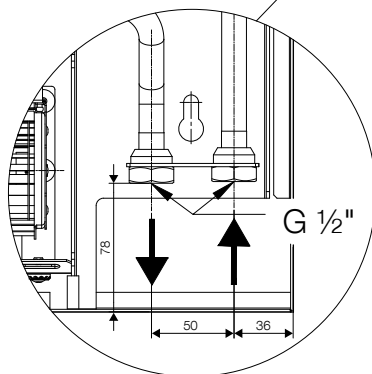


REG-TCW

Mounting dimensions



	L [mm]	X [mm]
WVx-060/45/11	600	493
WVx-075/45/11	750	643
WVx-100/45/11	1 000	893
WVx-125/45/11	1 250	1 143
WVx-150/45/11	1 500	1 393
WVx-175/45/11	1 750	1 643
WVx-200/45/11	2 000	1 893



Installation – connection to the heating system

Installation of the convector

Construction part

Install the convector according to the enclosed installation instructions.

- 2 persons are required to install the unit.
- Make sure the convector is firmly anchored to the wall.
- The convector must be placed horizontally, at least 10 cm above the ground. There should be at least 10 cm clearance next to the unit (to accommodate the thermostatic head, ease of installation and handling of the cover).
- Make sure the air can circulate freely.

The convector may contain sharp parts. Wear protective equipment.

Connection to the heating system

When connecting to the heating system, follow the enclosed installation instructions.

- Connection to the heating system is possible on right bottom or left bottom.
- When using LM connection and regulation fittings, use the mounting emplate.
- Route the piping to avoid mechanical stress on the heat exchanger and to ensure that the unit is easily accessible for maintenance and repair.
- Seal and tighten the joints. Avoid shearing and twisting the connection nuts.
- Tighten all threaded joints and check for live connections after pipe installation.
- Bleed the exchanger.
- Perform a pressure test according to the standards of the relevant country.
- Use the correct tools.

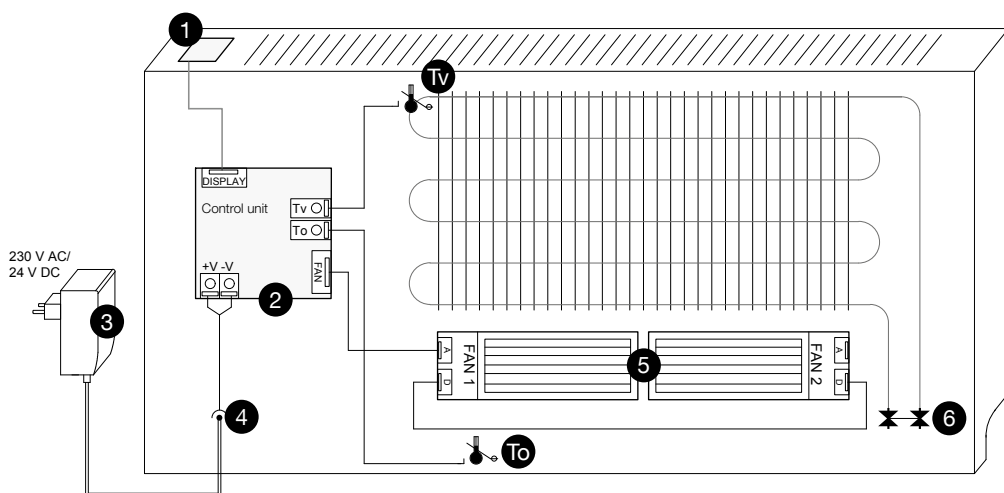
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Connecting the KORAWALL Direct WVD to the electrical system

The convector is connected via an external power supply to a standard socket. It is connected to the convector by a connection port (jack $\varnothing$ 5.5/2.1 mm), located inside the convector.

- Equip the electrical network with the circuit breaker required according to the values in *Tab. 2 Technical parameters of the KORAWALL Direct WVD* convector and according to the standards of the country.

Electrical diagram of the KORAWALL Direct WVD convector



- 1 control keypad for heating/cooling fan speed
- 2 convector control unit
- 3 power supply 230 V AC/24 V DC
- 4 connection connector
- 5 tangential fans with EC regulation
- 6 thermostatic and connection fitting
- To ambient temperature sensor
- Tv water temperature sensor in the heat exchanger

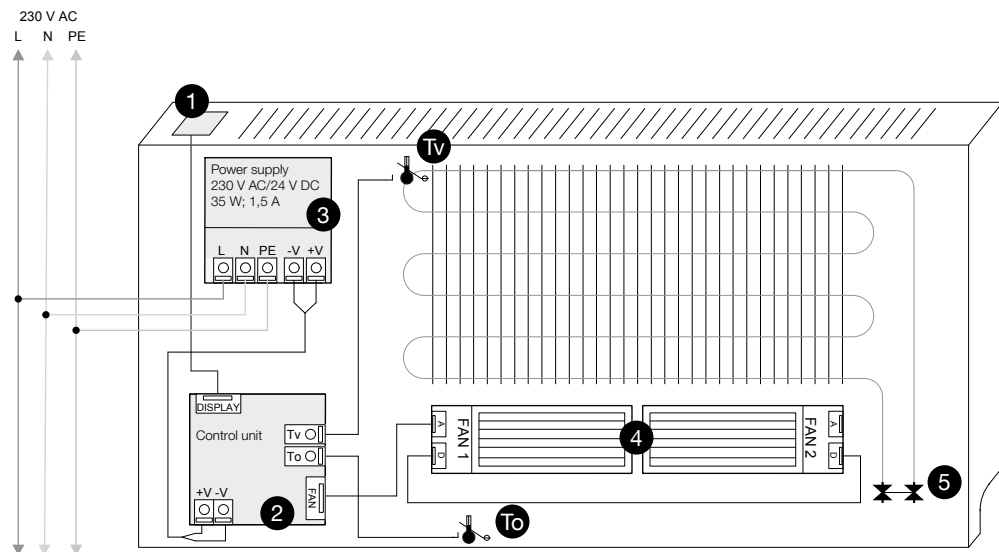
Connecting the KORAWALL Energy WVE to the electrical system

According to the wiring diagram, connect the 230 V AC mains supply voltage to the voltage source inside the convector.

- Equip the electrical network with the circuit breaker required according to the values in *Tab. 3 – Technical parameters of the KORAWALL Energy WVE convector* and according to the standards of the country.
- Connect the electrical voltage to the **L**, **N** and **PE** connectors.
- Make sure the convector is properly grounded!
- Check that the cables are connected correctly and firmly.
- Check that the power supply and the terminal block are covered with the correct marked cover plate.

The convector must be assembled and installed in accordance with the general building, safety installation regulations and standards in force at the location.

Electrical diagram of the KORAWALL Energy WVE convector



- ① control keypad for heating/cooling fan speed
- ② convector control unit
- ③ power supply 230 V AC/24 V DC
- ④ = L, N and PE terminals for connection to the mains
- ④ tangential fans with EC regulation
- ⑤ thermostatic and connection fitting

- To ambient temperature sensor
- Tv water temperature sensor in the heat exchanger

Check before the first start-up

When the instrument is first put into operation, make sure that all the requirements are met so that the instrument can operate safely and in accordance with its intended use.

Mounting part

- Check that the convector is firmly and securely anchored.
- Check the horizontal installation/hanging of the convector.
- Check that all components are correctly fitted.
- Check that all dirt has been removed, e.g. from the packaging or the construction site.

EN

Connecting the heating medium

- Check that all inlet and outlet pipes are connected correctly.
- Check that the heat exchanger is vented and the vent screw is tightened.
- Check for leaks (pressure test and visual inspection).
- Check that all shut-off valves fitted are open.
- Check that all valves are working properly and are set correctly.
- Check that the cooling system is set to prevent condensation on the heat exchanger.

Electrical part

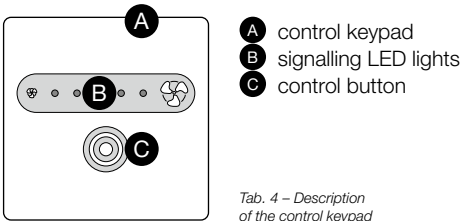
- Check that the connector from the power supply is correctly inserted into the connection connector located inside the convector (WVD).
- Check the correct wiring according to the wiring diagram (WVE).
- Check that the connection cable between the keyboard and the control unit is connected correctly.
- Check the correct sensor mounting connections. The sensor on the heat exchanger should have a tight contact with the pipe (WVD).
- Check the grounding of the convector including the front cover (WVE).

Airflow

- Check that the airflow is not obstructed and remove obstructions if necessary.
- Check that the filter is properly attached and clean of debris. Reposition or clean as necessary.

Service

Function description



Commissioning

After the connection to the mains, an internal function check will be run on the control unit and the connected fans. (initial initialization). Immediately after the power supply is connected, all fans will spin for 10 seconds. All the signalling LED lights on the control keypad will flash one by one

Stage of speed	Signalling LED light	Fan speed
0	○ ○ ○ ○ ○	0 – off
1	● ○ ○ ○ ○	1 – minimum
2	● ● ○ ○ ○	2 – low
3	● ● ● ○ ○	3 – medium
4	● ● ● ● ○	4 – high
5	● ● ● ● ●	5 – maximum

Tab. 5 – Fan speed indication

Fan speed selection

Fan speed selection ◀→ **Short, repeated press of the control button**

Heating mode ◀→ **LEDs are lit continuously**

Cooling mode ◀→ **LEDs are blinking**

Changing between heating and cooling modes ◀→ **Hold the control button for 10 seconds**

Changing the “heating/cooling” mode

To change the mode, hold the control button down for 10 seconds. In the “heating” mode, the signalling LED lights are permanently lit; in the “cooling” mode, the signalling LED lights flash

“Heating” mode

The fans are controlled based on the temperature of the heating element (Tv sensor) and the ambient temperature (To sensor), see *Tab. – 6*. The convector can be equipped with a manually operated thermostatic head.

Ambient temperature sensor To	Temperature sensor on the heat exchanger Tv	Status of fans
Ambient temperature 0–60 °C	Water temperature 0–28 °C	Fans off (cold water)
Ambient temperature 0 ≤ 27 °C	Water temperature ≥ 32 °C	Fans on
Ambient temperature 0 < 27 °C	Water temperature ≤ 28 °C	Fans off (cold water)
Ambient temperature ≥ 27 °C	Water temperature 0–90 °C	Fans off (heated room)

Tab. 6 – Heating mode

“Cooling” mode

The fans are controlled according to the temperature of the heating element (Tv sensor) and the ambient temperature (To sensor). The function is described in *Tab. 7*. The convector can also be equipped with a special thermostatic head, adapted for cooling. The value for cooling is set on the head. If the unit is equipped with an ordinary thermostatic head, the head must be manually set to the maximum possible value of the thermostatic head in the “cooling” mode.



In the cooling mode, condensate formation must be prevented to avoid short-circuiting and destroying the fans. The temperature of the cooling medium must be above the dew point of the room air to prevent condensation from forming on the heat exchanger. The convector is not an air conditioning unit and does not have a condensate drain.

Ambient temperature sensor To	Temperature sensor on the heat exchanger Tv	Status of fans
Ambient temperature < 24 °C	Water temperature 0–90 °C	Fans off (low ambient temperature)
Ambient temperature ≥ 24 °C	Water temperature ≤ 22 °C	Fans on
Ambient temperature < 23 °C	Water temperature ≤ 23 °C	Fans off (cold room)
Ambient temperature ≤ 23 °C	Water temperature > 23 °C	Fans off (water too hot)

Tab. 7 – Cooling mode

Maintenance

- Maintenance should be carried out with the convector disconnected from the mains. Avoid restarting. Unauthorized or uncontrolled restarting of the device may result in serious injury or death.
- Before fitting the outer cover with the control keypad, make sure that the cover is properly grounded and the cable is connected to the keypad.
- Before restarting, make sure that all components are in the correct place and there is no danger to the person operating the convector.
- Vent the convector regularly.
- Regularly remove dust from the exchanger (vacuum cleaner, broom).
- Regularly remove dust from the convector. Do not use abrasive cleaners or solvents for cleaning.
- Any intervention in the control electronics, power supply and fans must only be carried out by a qualified electrician.

Do not make any modifications to the convector that will alter its function. For additional maintenance requirements for Licon convectors, please visit **www.licon.cz** or **www.korado.cz** for the current Warranty and Post-Warranty Terms and Conditions.

Equipment malfunctions

Diagnostic mode

The control unit automatically checks the function of the temperature sensors and the operation of the fans. If a fault is detected, the fans are switched off and the signalling LED lights on the keypad indicate the cause of the fault *Tab. 8 – Diagnostic mode*.

Signalling LED light	Failure	Description of the defect
	Temperature sensor on the heat exchanger Tv	1) Faulty sensor 2) Broken/shorted sensor cable 3) Disconnected sensor connector
	Ambient temperature sensor To	1) Faulty sensor 2) Broken/shorted sensor cable 3) Disconnected sensor connector
	Fan	1) Defective fan 2) Interrupted fan supply cable 3) Fan cable not connected

Tab. 8 – Diagnostic mode

If a fault is detected, visually check the supply cables of the temperature sensors and fans. If you cannot find the cause of the fault, contact your dealer or the manufacturer of the convector.

Primary initialization did not take place

- Check the mains supply connection to the power supply (WVE)
- Check the low voltage supply connection from the power supply to the control unit – terminals **+V**, **-V** (WVE)
- Check the power cable connection from the control unit to the keypad

Fans do not work – “heating” mode

The heating water temperature is $> 32\text{ }^{\circ}\text{C}$:

- Check the position and mounting of the temperature sensor **Tv** on the heat exchanger. The sensor must be placed on the upper tube of the heat exchanger, and the sensor must be tightly adjacent to the surface of the tube.

Heat exchanger temperature $< 32\text{ }^{\circ}\text{C}$:

- Check the heating medium supply.

The ambient temperature is $< 27\text{ }^{\circ}\text{C}$:

- Check the ambient temperature sensor **To**. Air must flow freely around the sensor, and the sensor must not be covered with dust.

Fans not working – “cooling” mode

The heating water temperature is $< 23\text{ }^{\circ}\text{C}$:

- Check the position and mounting of the temperature sensor **Tv** on the heat exchanger. The sensor must be placed on the upper tube of the heat exchanger, and the sensor must be tightly adjacent to the surface of the tube.

The temperature at the heat exchanger is $> 23\text{ }^{\circ}\text{C}$

- Check the cooling medium supply.

The ambient temperature is $> 24\text{ }^{\circ}\text{C}$:

- Check the ambient temperature sensor **To**. Air must flow freely around the sensor, and the sensor must not be covered with dust.

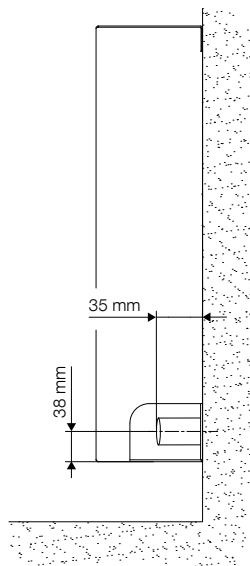
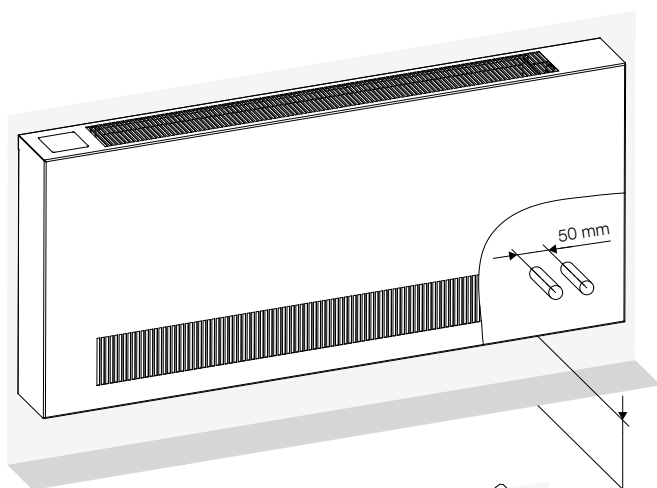
Old electrical and electronic equipment



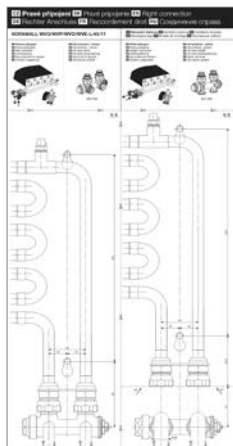
Electrical or electronic equipment that is no longer fit for use must be collected separately and sent for environmentally friendly recycling (European Directive on old electrical and electronic equipment). Use nationally established return and collection systems to dispose of old electrical or electronic equipment.

CZ Montáž – stavební část **SK** Inštalácia – stavebná časť **EN** Assembly – construction part **DE** Montage – Bauteil **FR** Montage – partie construction **RU** Монтаж – строительная часть

CZ Připojení na rohovou LM armaturu **SK** Pripojenie na rohový LM armatúru **EN** Connection to elbow LM-valve **DE** Anschluss an LM Ventil Direktausführung **FR** Raccordement à la vanne LM équerre **RU** Подключение к угловой LM арматуре

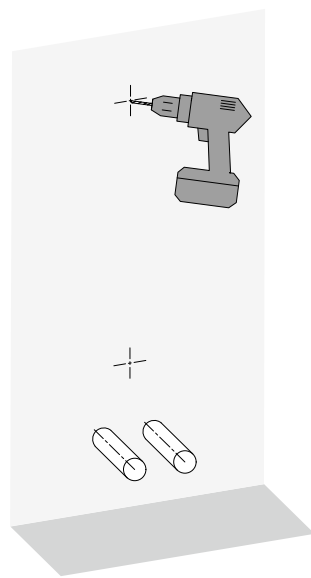
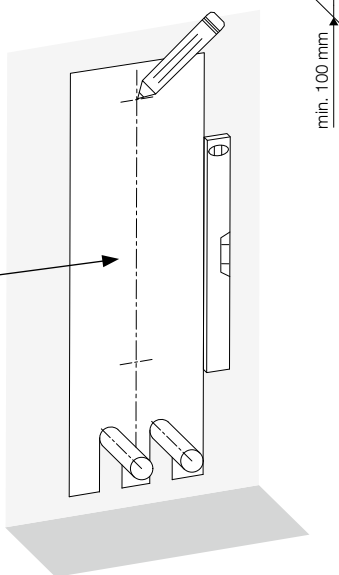


1)



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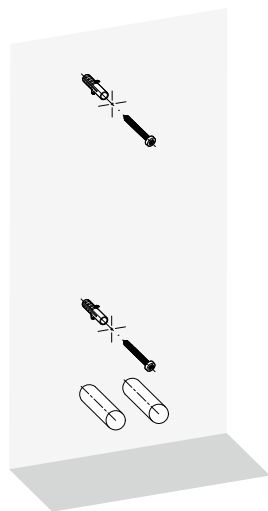
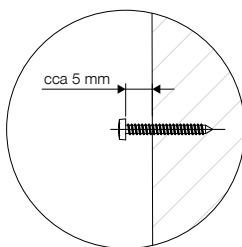
Montážní šablona, Montážna šablóna,
Mounting template, Montageschablone,
Gabarit de montage, Монтажный шаблон



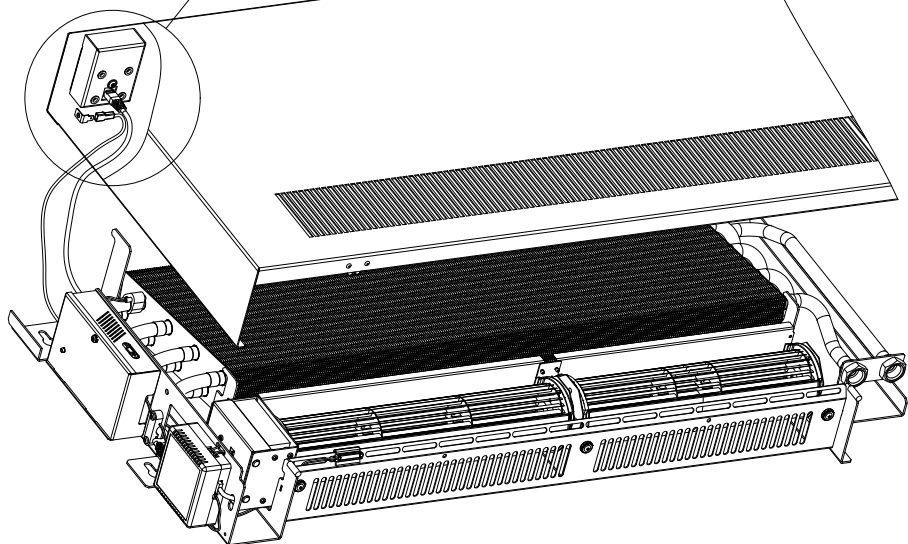
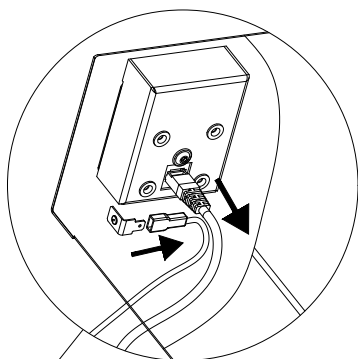
2)

2x 

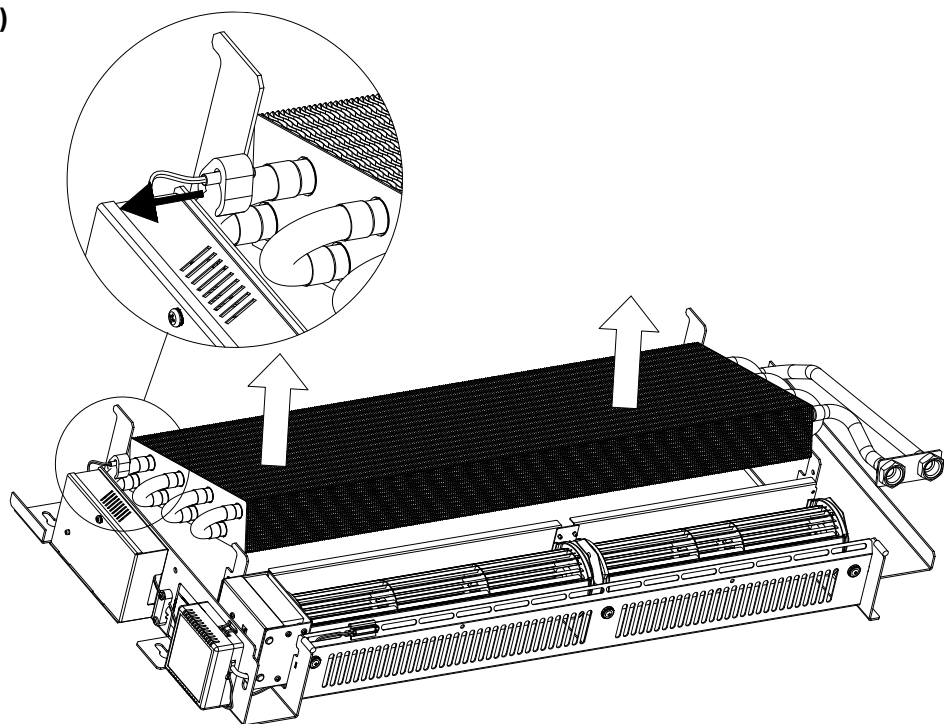
2x 



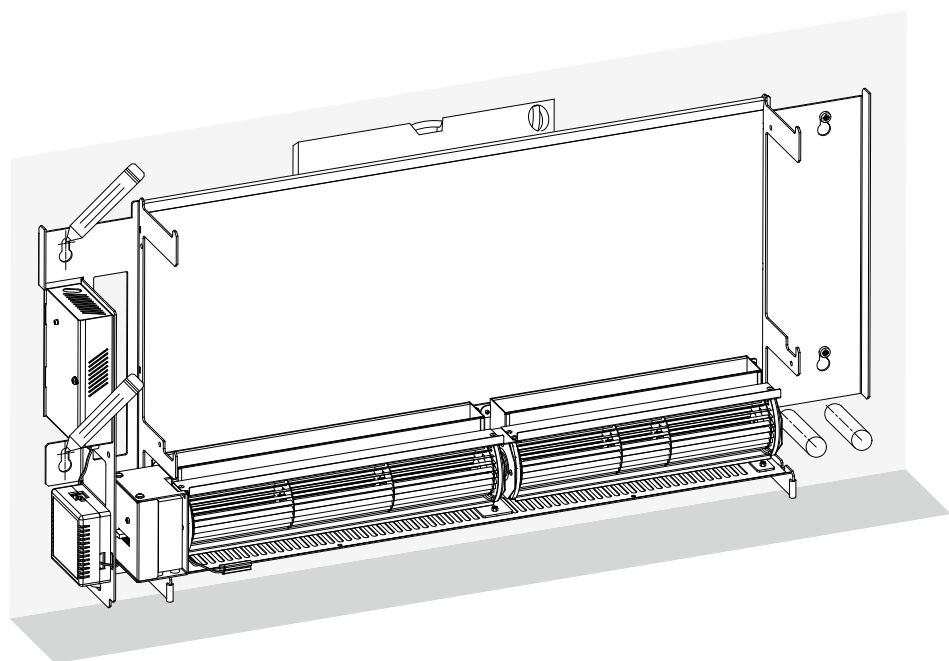
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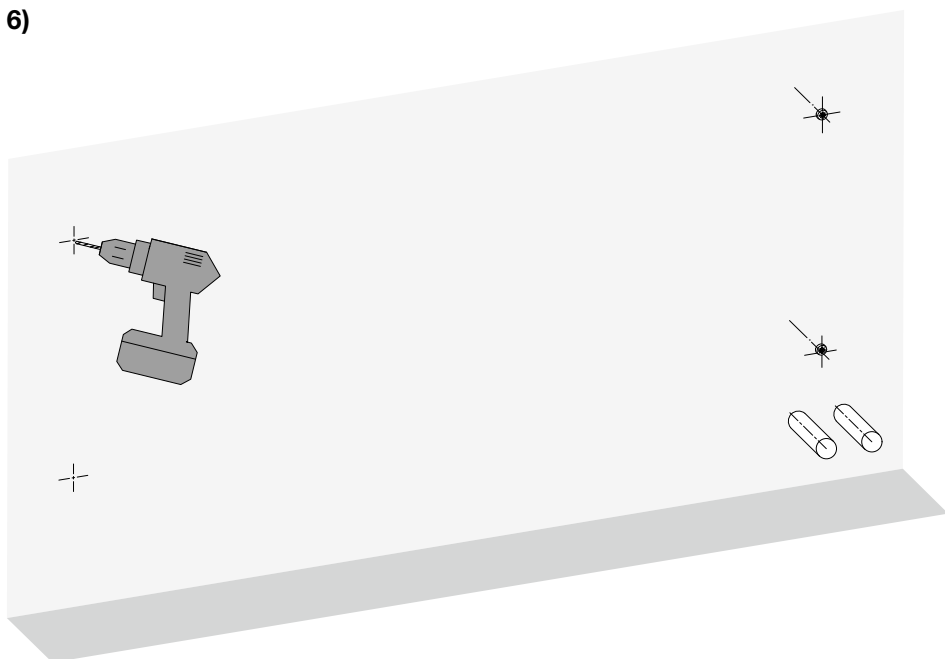
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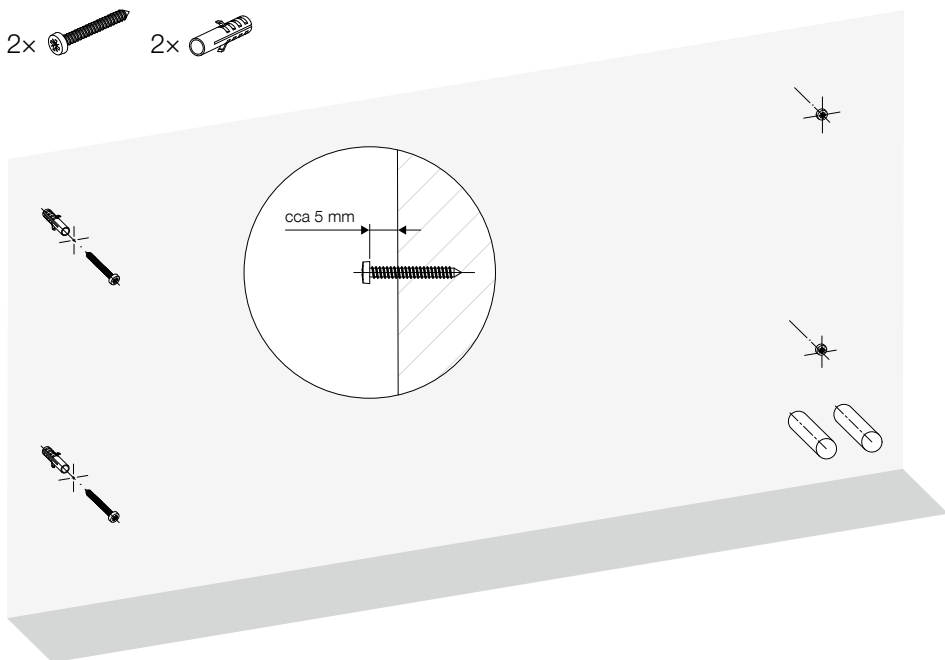
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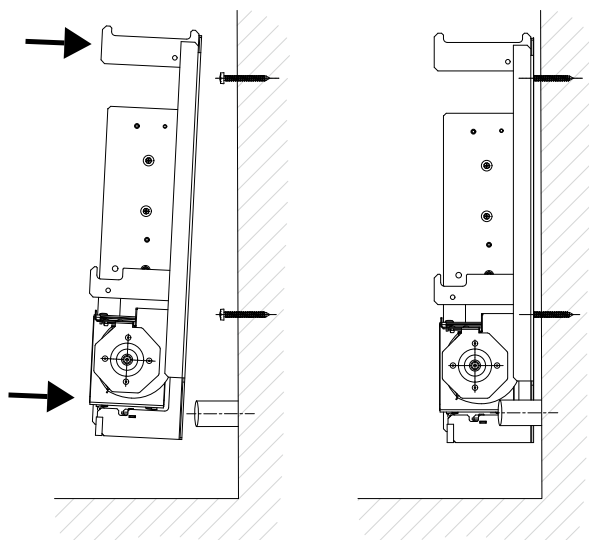
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7)

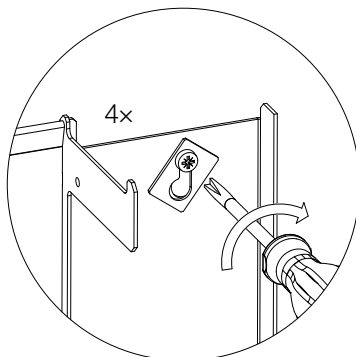
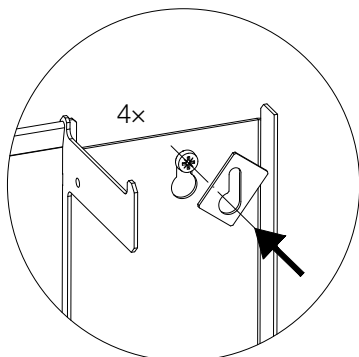


8)

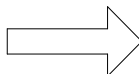
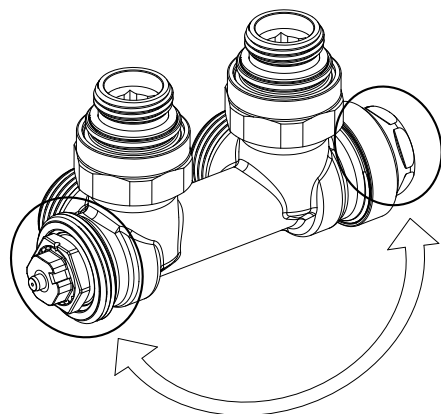


9)

4x



CZ Právě připojení **SK** Právě pripojenie
EN Right connection **DE** Rechter Anschluss
FR Raccordement droit **RU** Соединение справа



CZ Manuál LM armatury
SK Manuál LM armatury
EN LM valve manual
DE Anleitung für das LM-Ventil
FR Instructions pour la vanne LM
RU Инструкция по эксплуатации
 LM-клапана

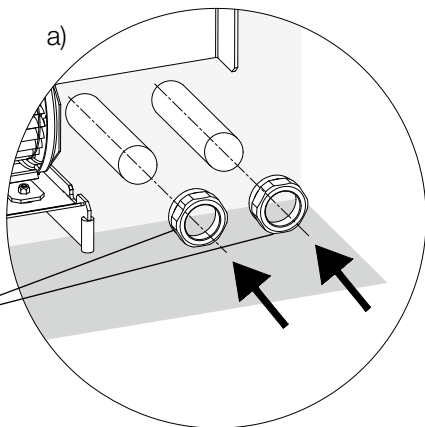
10)

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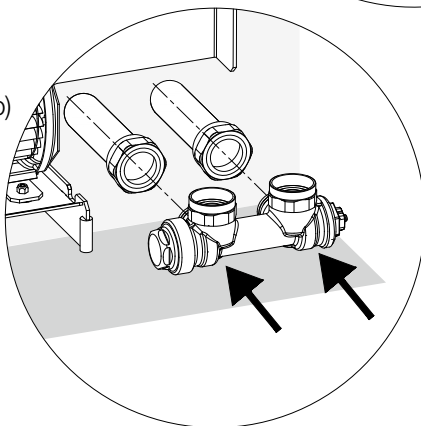


- CZ** Připojovací šroubení není součástí balení
SK Pripojovacie šróbenie nie je súčasťou balenia
EN Connection fitting a e not a part of the package
DE Anschlussverschraubung ist nicht im Lieferumfang enthalten
FR Vis de raccordement ne sont pas inclus avec les accessoires
RU Соединительное резьбовое соединение не входят в комплект стандартной поставки

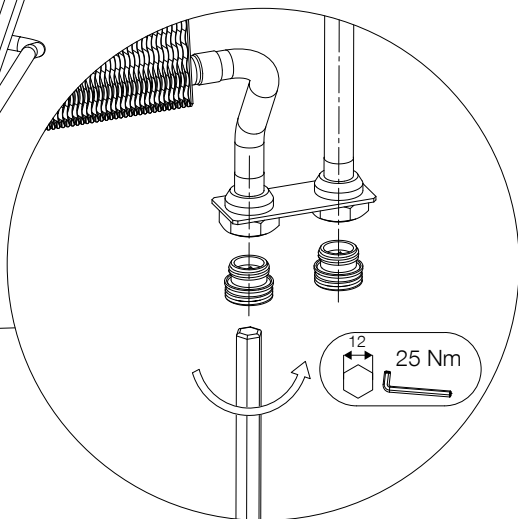
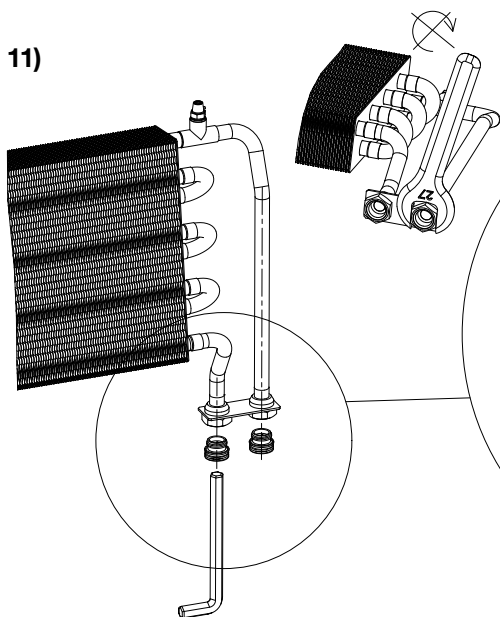
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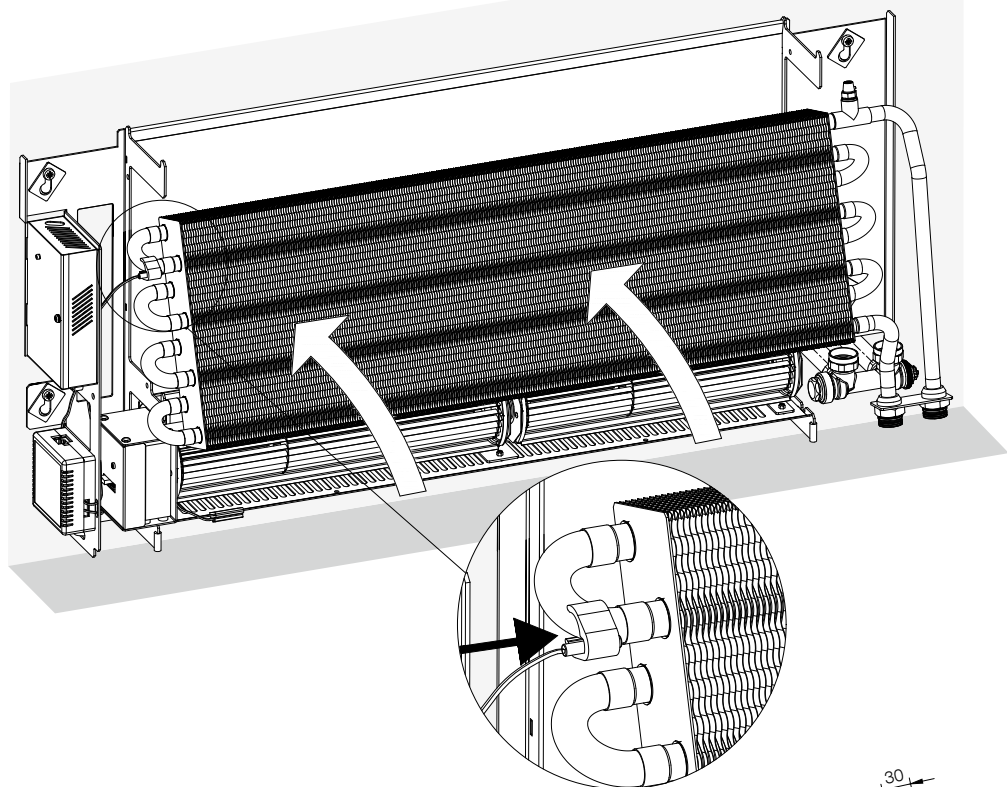
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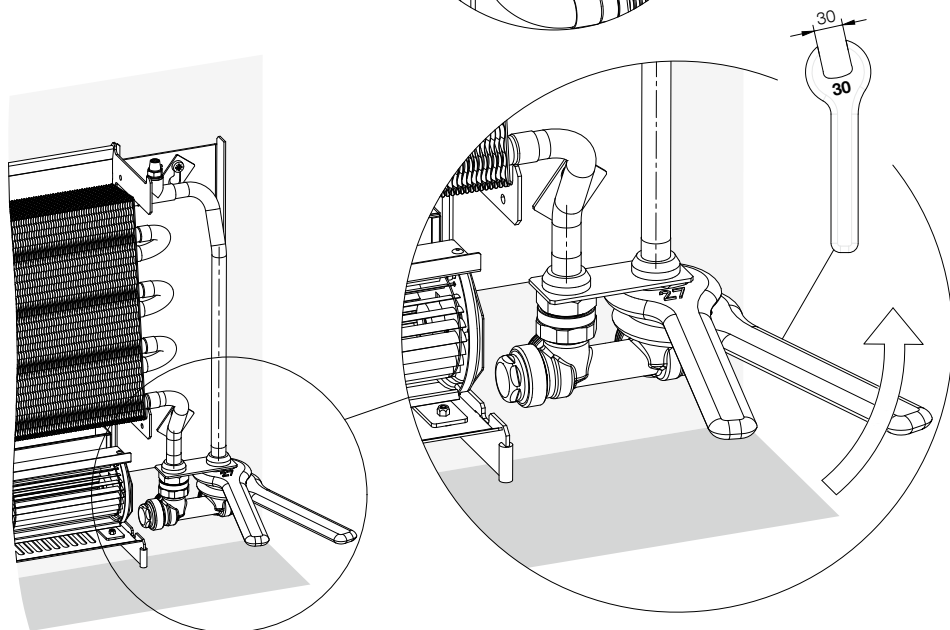
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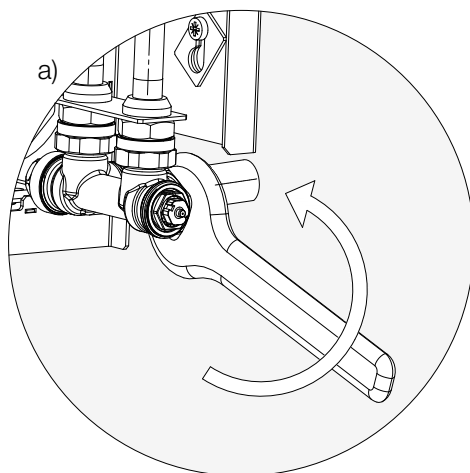
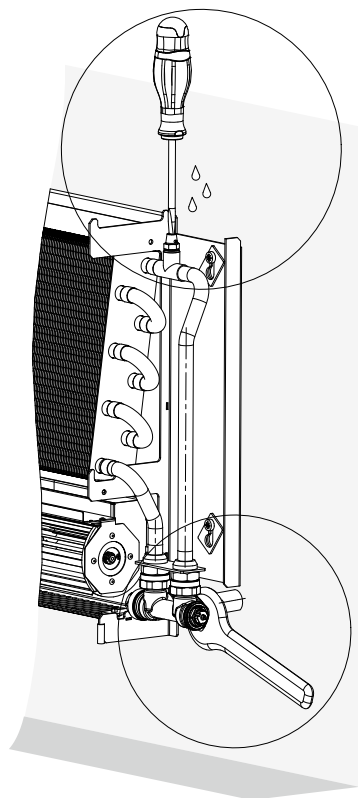
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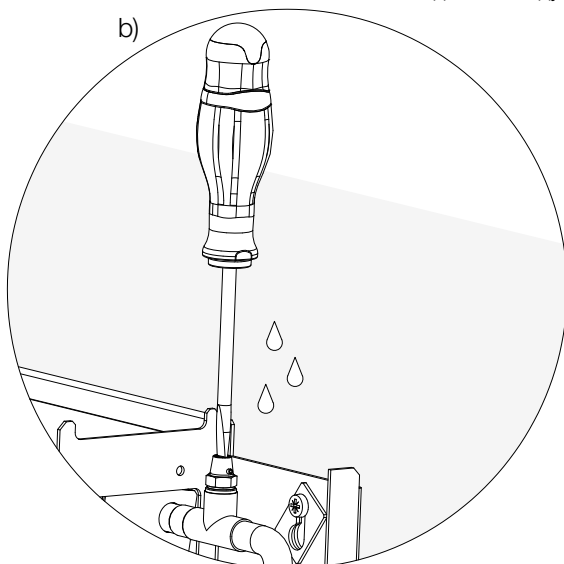
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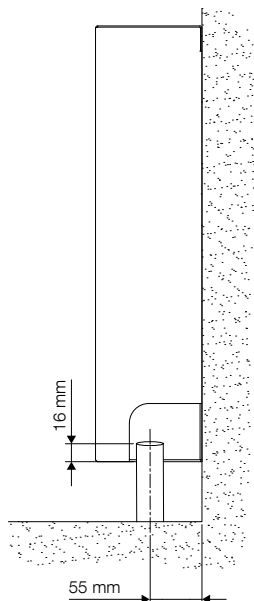
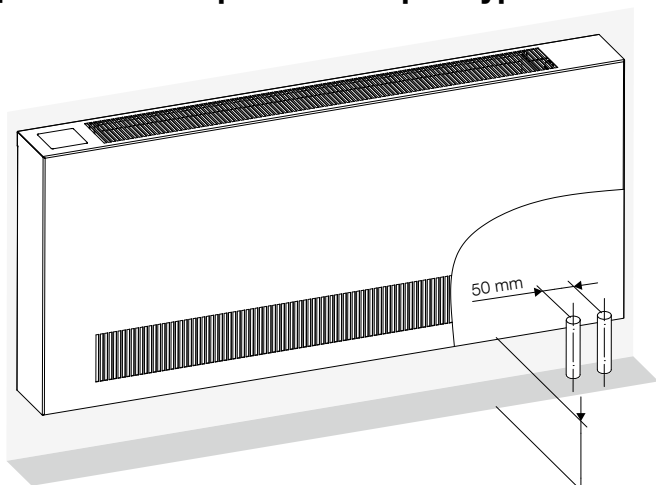
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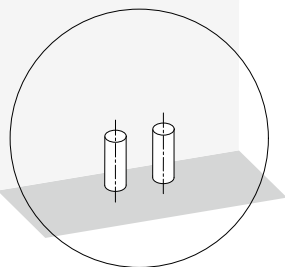
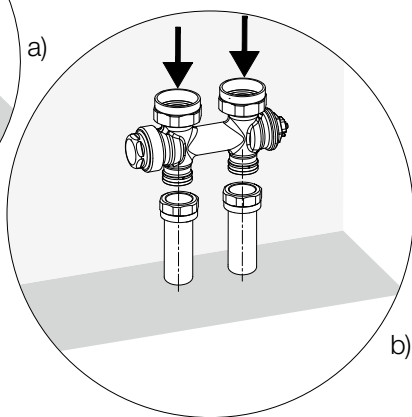
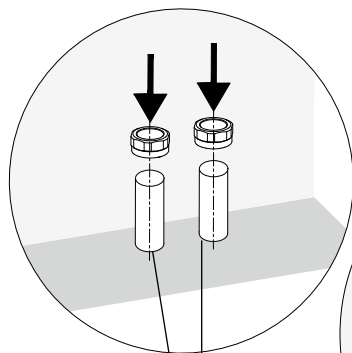
CZ Odvzdušněte
EN Bleed
DE Entlüften
FR Purgez
RU Удалите воздух



- CZ** Připojení na přímou LM armaturu
SK Pripojenie na priamu LM armatúru
EN Connection to straight LM-valve
DE Anschluss an LM Ventil Eckausführung
FR Raccordement à la vanne LM droite
RU Подключение к прямой LM арматуре



1)  1x

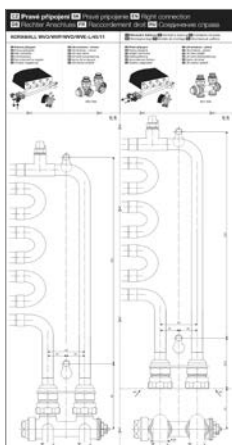


- CZ** Připojovací šroubení není součástí balení
SK Pripojovacie šróbenie nie je súčasťou balenia
EN Connection fittings are not a part of the packaging
DE Anschlussverschraubung ist nicht im Lieferumfang enthalten
FR Vis de raccordement ne sont pas inclus avec les accessoires
RU Соединительное резьбовое соединение не входит в комплект стандартной поставки

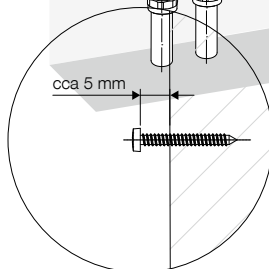
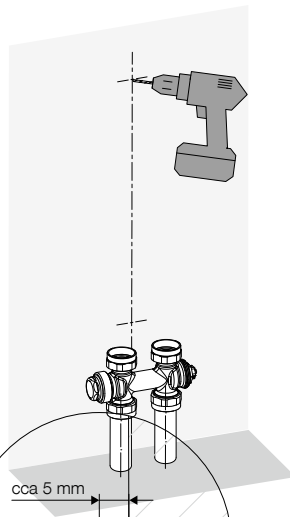
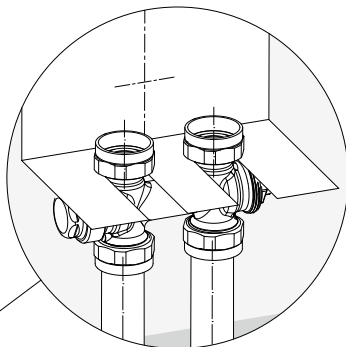
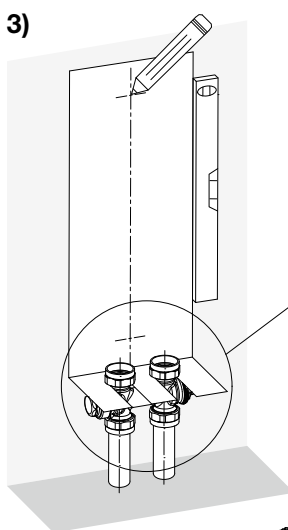
2)

1×

Montážní šablona
Montážna šablóna
Mounting template
Montageschablone
Gabarit de montage
Монтажный шаблон



3)

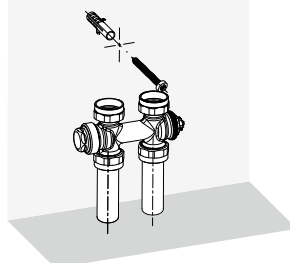


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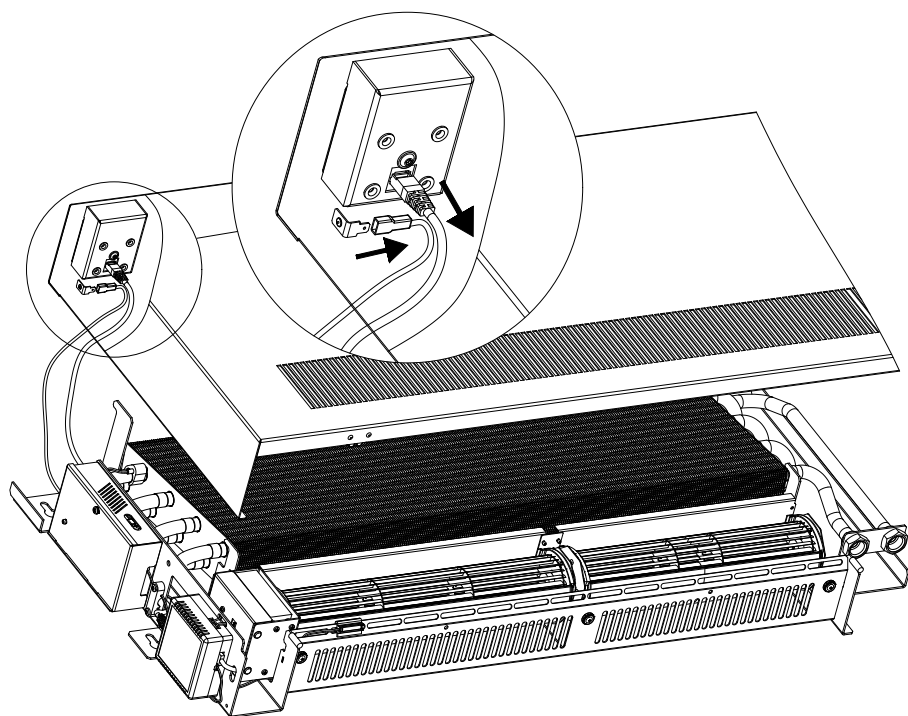


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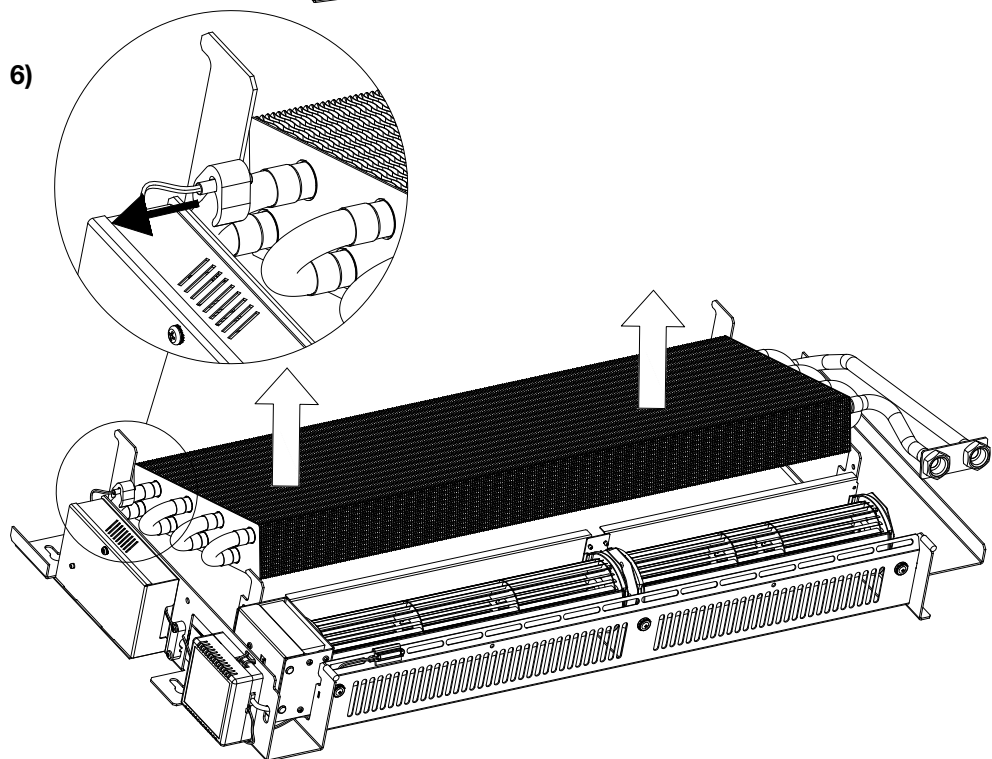
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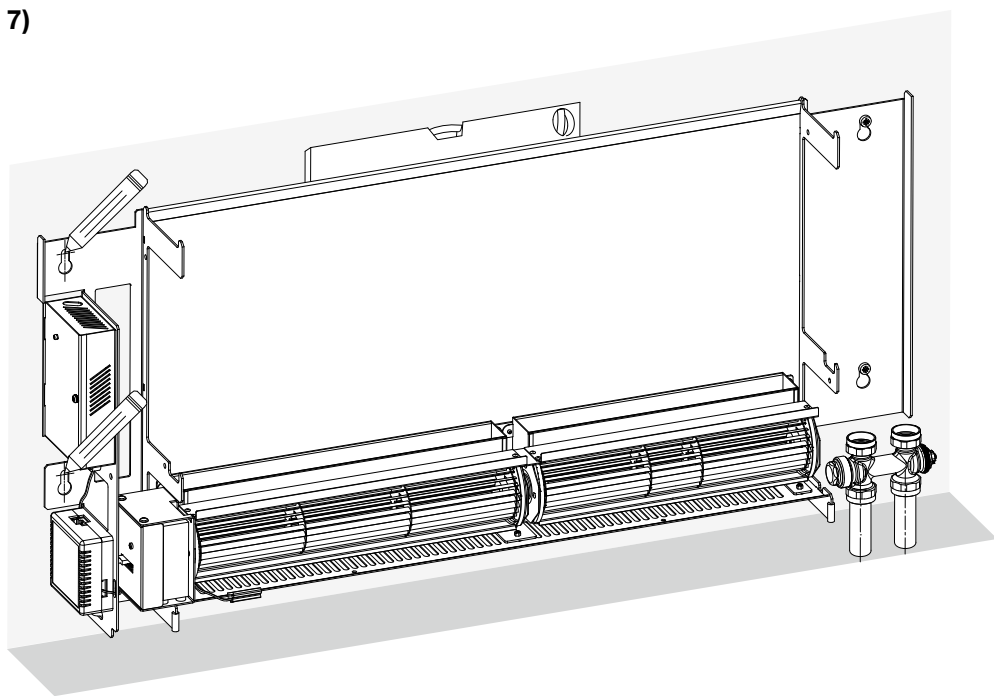
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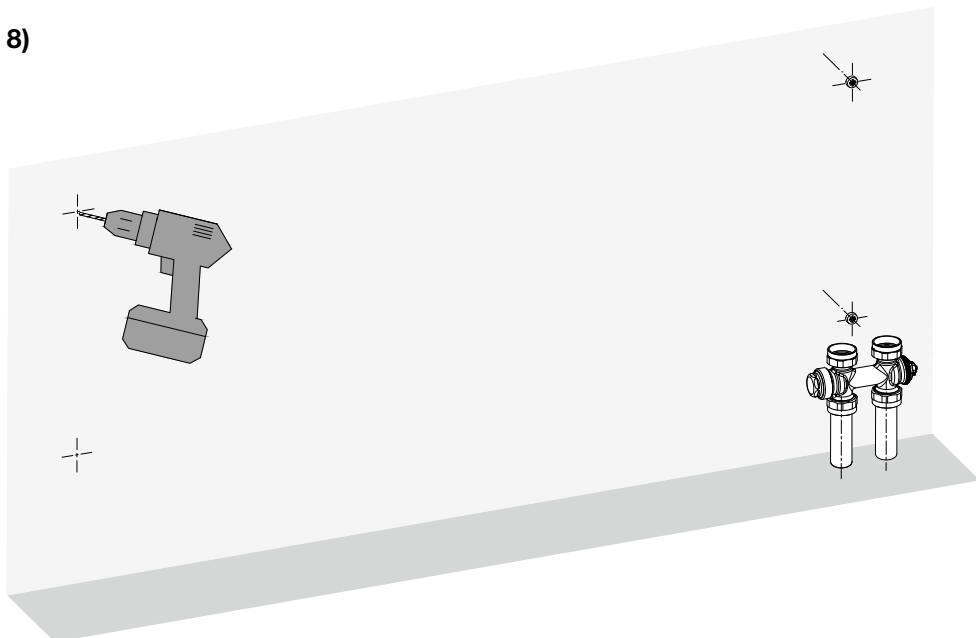
6)



7)

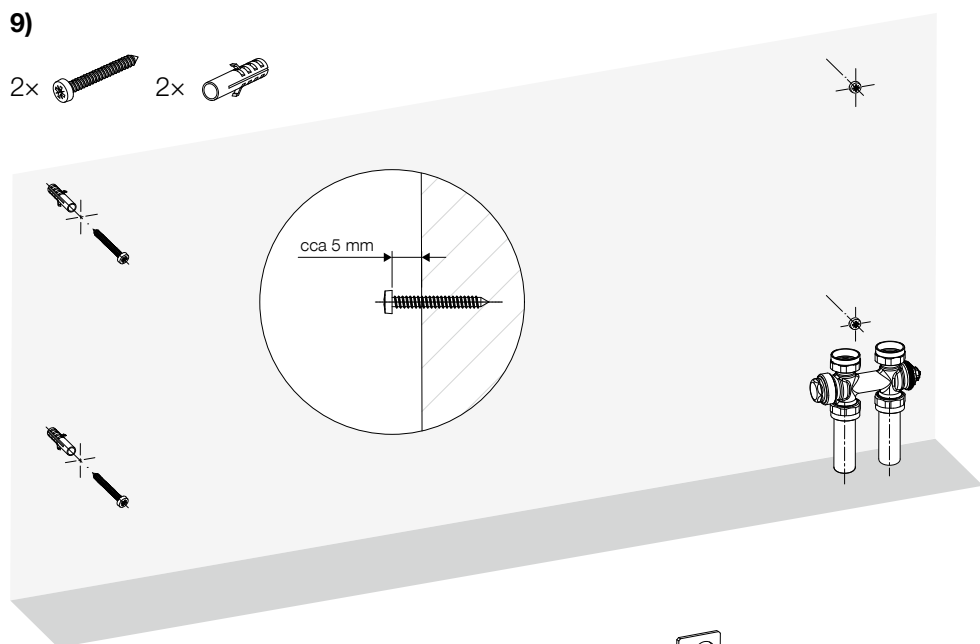


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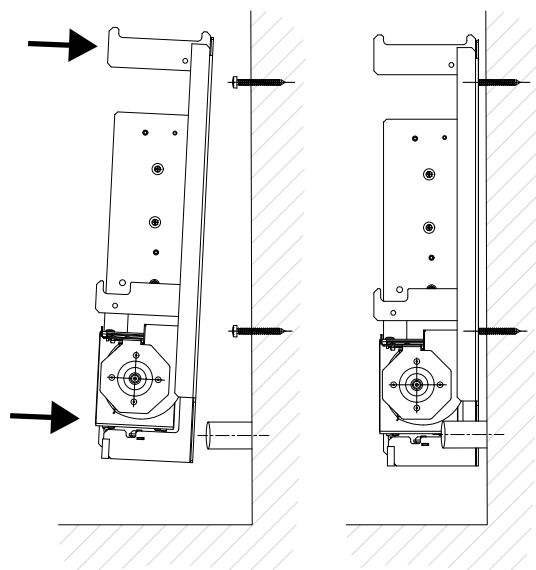


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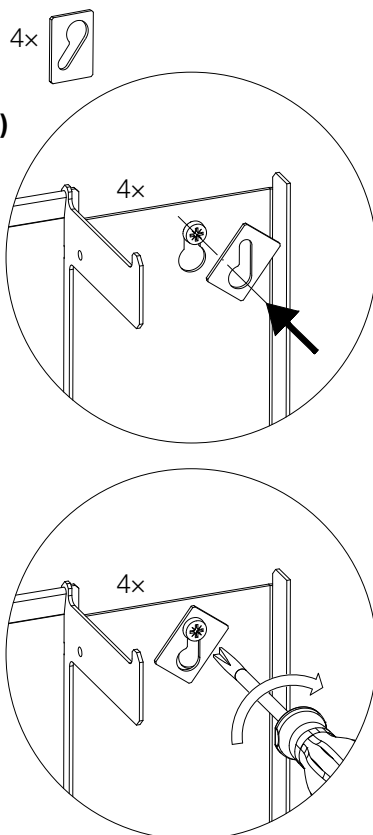
2x  2x 



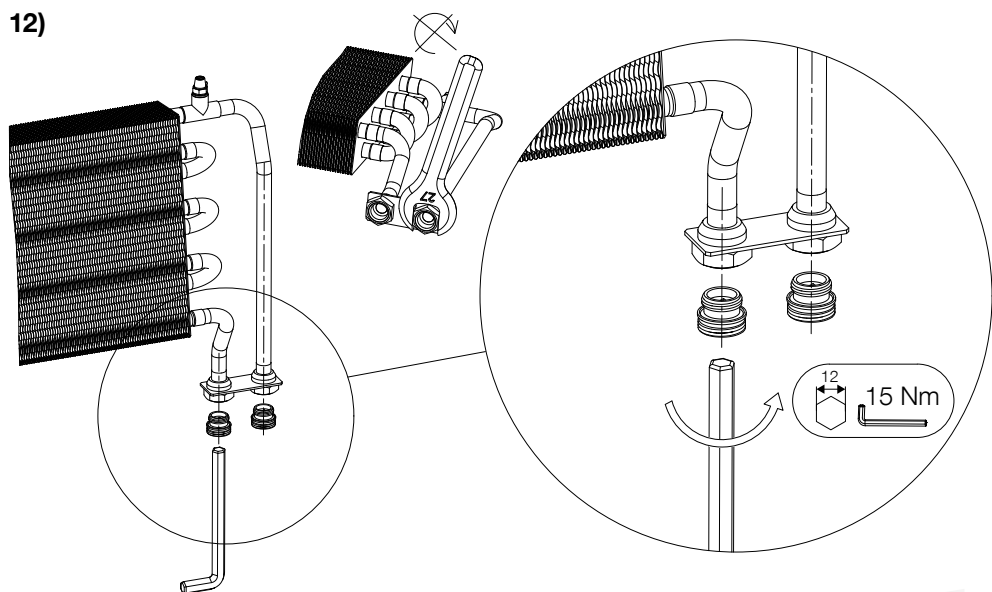
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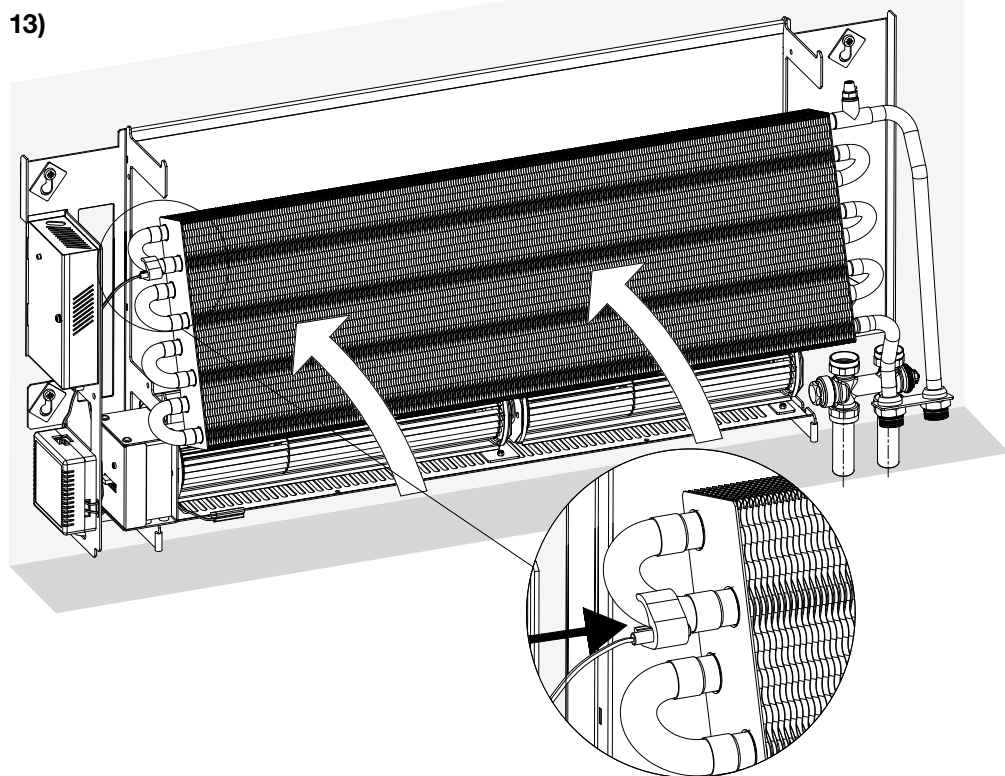
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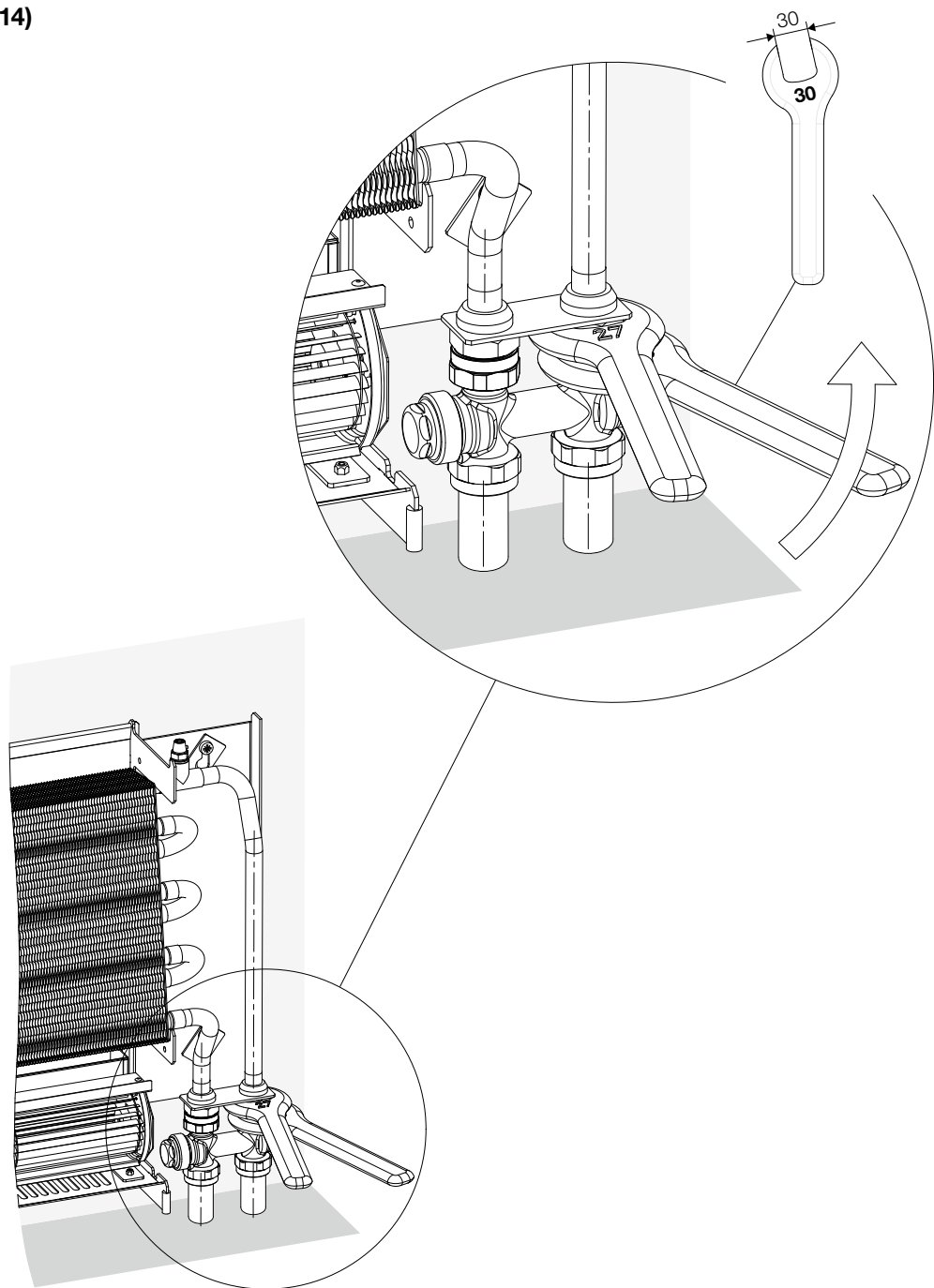
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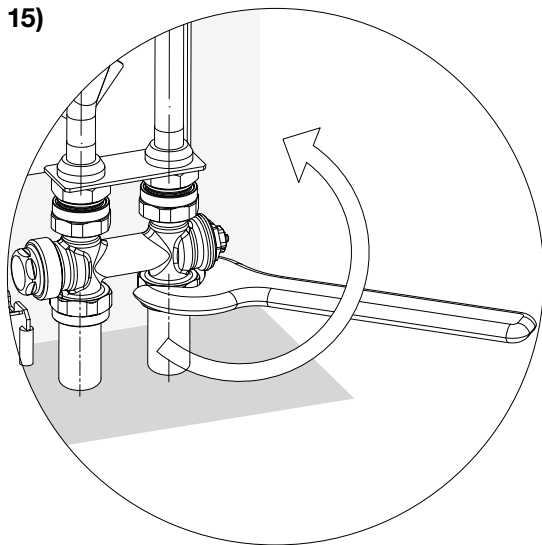
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14)

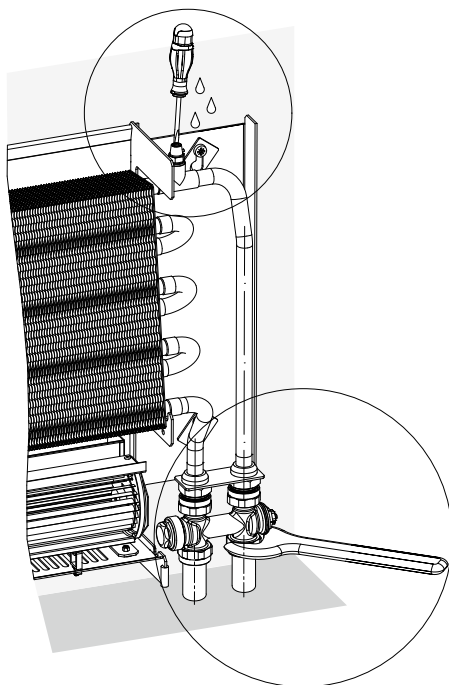


15)

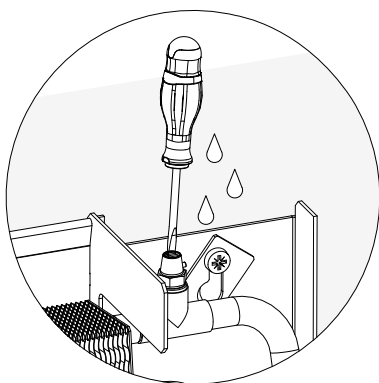


a)

CZ Odvzdušněte
EN Bleed
DE Entlüften
FR Purgez
RU Удалите воздух



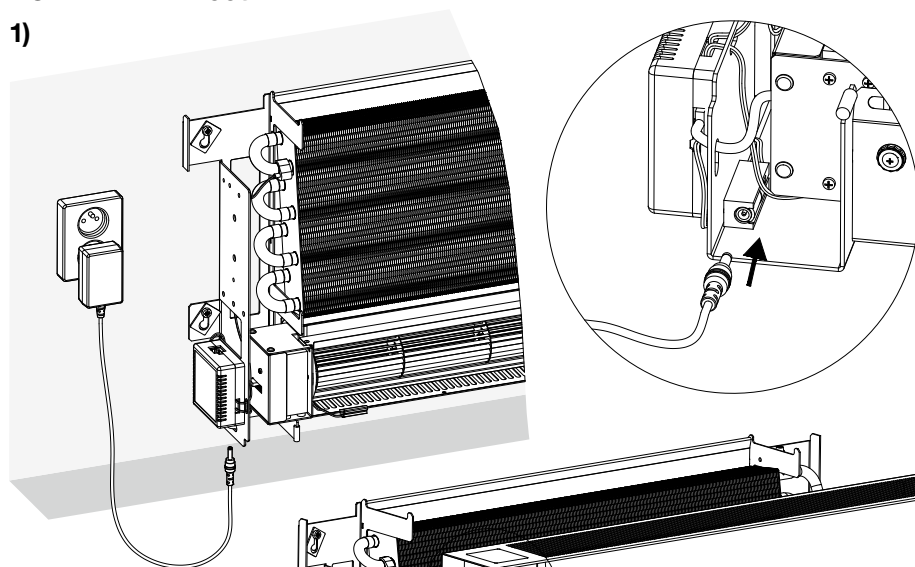
b)



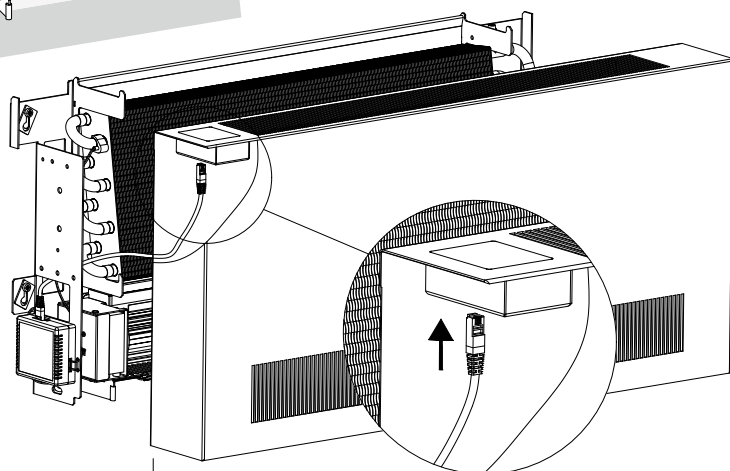
CZ Nasazení předního krytu **SK Nasadenie predného krytu**
EN Mounting of the front cover **DE Anbringung der vorderen Abdeckung**
FR Installation du caisson **RU Установка передней крышки**

KORAWALL Direct WVD

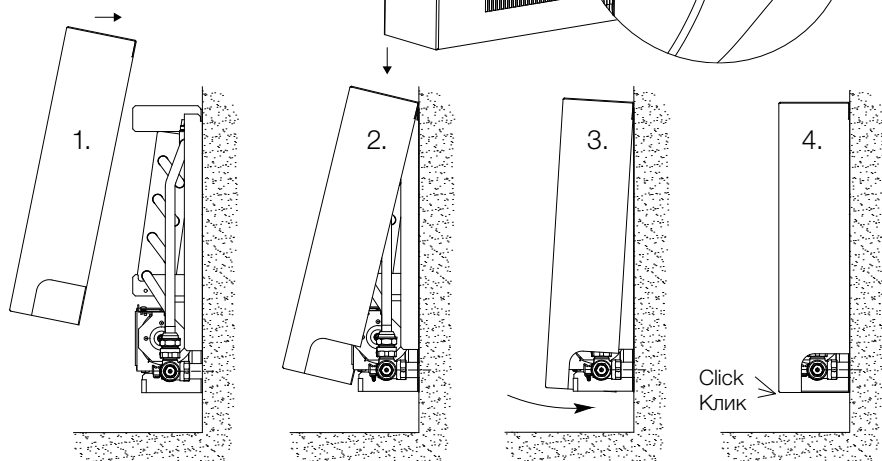
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2)

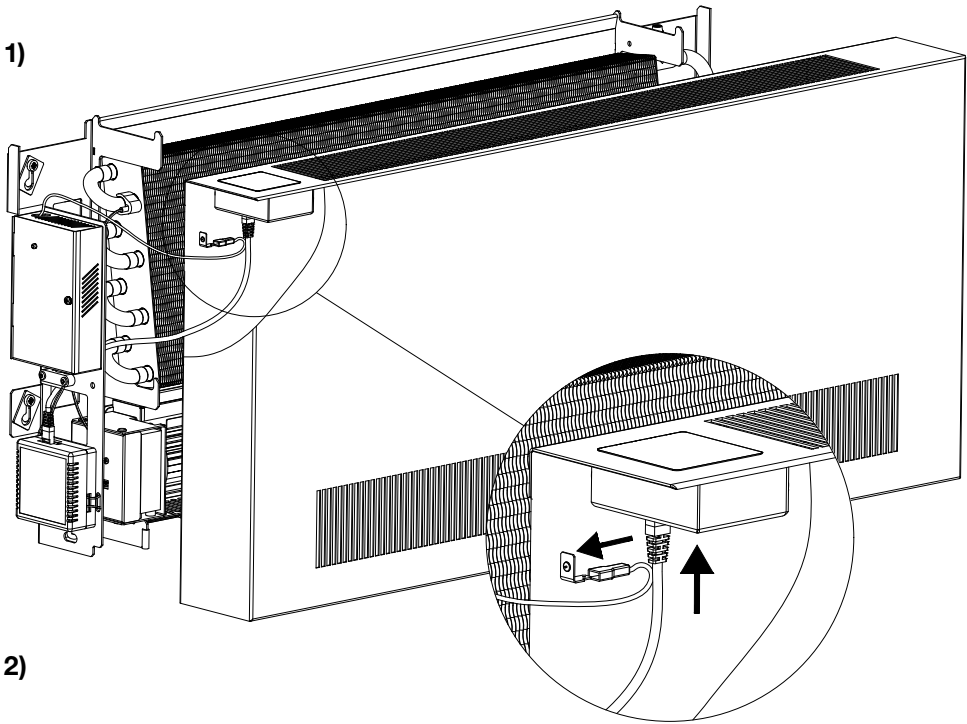


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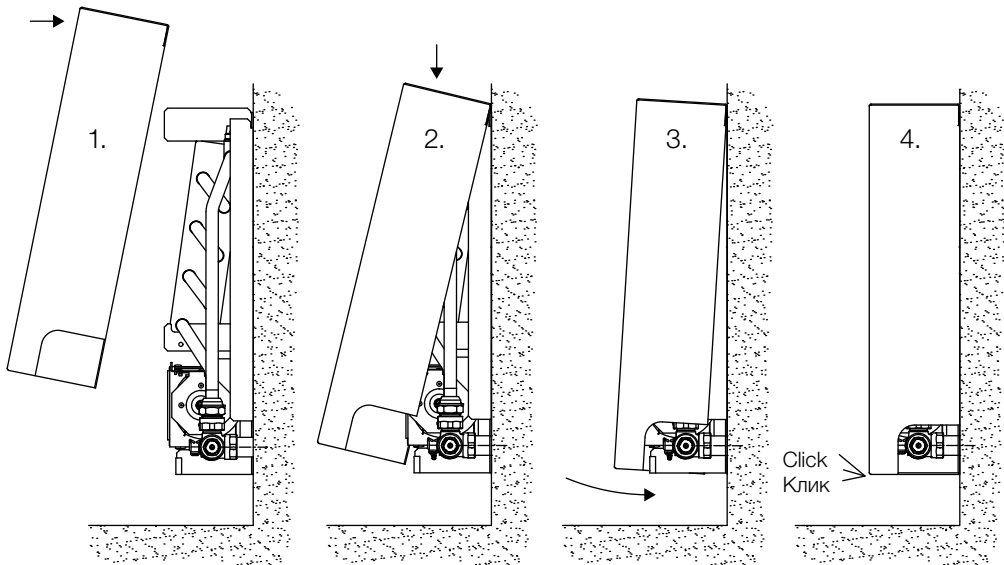


KORAWALL Energy WVE

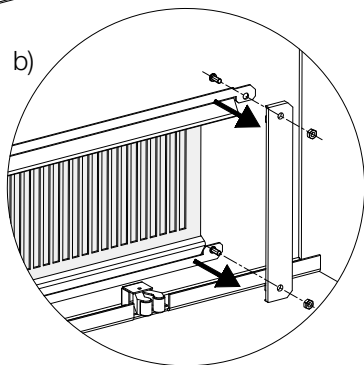
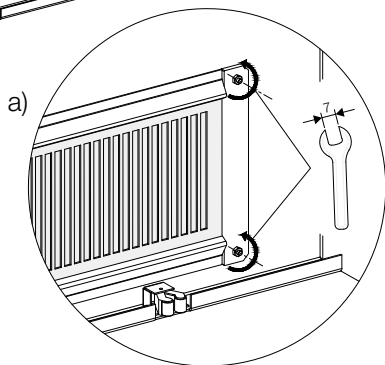
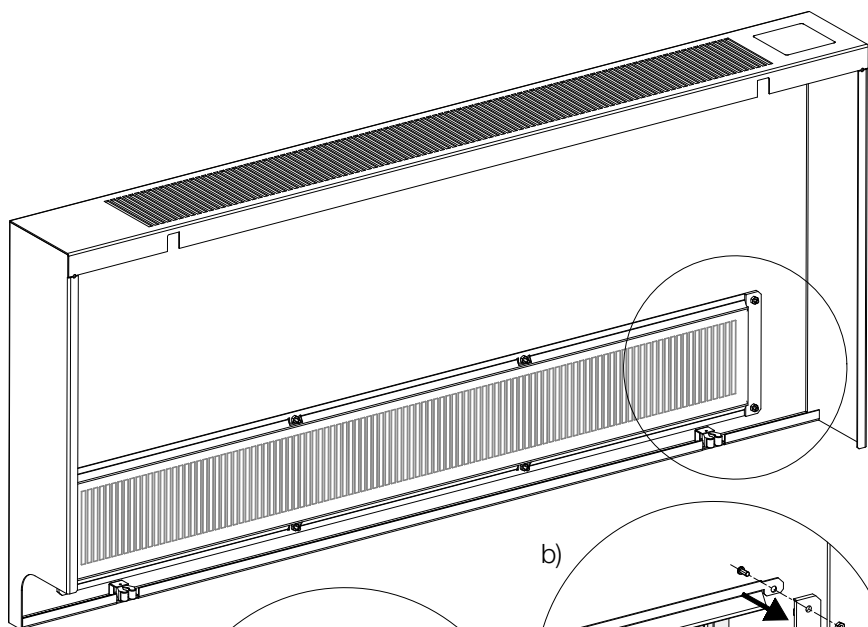
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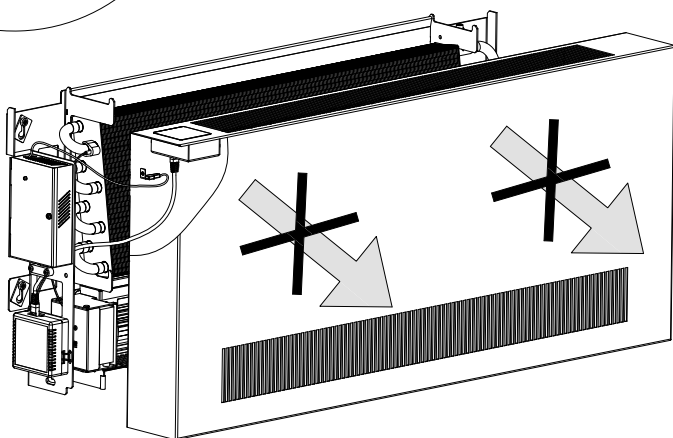
2)



CZ Čištění prachového filtru SK Čistenie prachového filtra
EN Cleaning of dust filter DE Reinigung des Staubfilters
FR Nettoyage du filtre antipoussière RU Чистка пылевого фильтра



- CZ POZOR!** Hrozí utržení kabelu. Délka kabelu 1 m.
SK POZOR! Hrozí odtrhnutie kábla. Dĺžka kábla 1 m.
EN WARNING! Cable detachment risk. Cable length 1 m.
DE ACHTUNG! Es besteht die Gefahr eines Kabelbruchs. Kabellänge 1 m.
FR ATTENTION ! Le câble risque de se rompre. Longueur du câble 1 m.
RU ВНИМАНИЕ! Существует риск обрыва кабеля. Длина кабеля 1 м.



CZ, BG, DE, DK, EE, ES, FR, HR, GB, LT, LV, NL, PL, RU, SK, UA	
	
1 Heating system in building	
2 Reaction to fire	A1
3 Release of dangerous substances	NONE
4 Pressure tightness	no leakage at 1,3 x MOP
5 Resistance to pressure	no breakage at 1,69 x MOP
6 Maximum operating pressure (MOP)	1200 kPa
7 Surface temperature	Maximum 90 °C
8 Rated thermal outputs	$\Phi_{90^\circ} \Phi_{25} [W]$
9 Thermal output in different operating conditions (characteristic curve)	$\Phi = K_{90^\circ} \cdot \Delta t^2 [W]$
10 Durability as:	
11 Resistance against corrosion	No corrosion after 100 h humidity
12 Resistance against minor impact	Class 0

CZ 1. V topných soustavách v budovách / 2. Reakce na oheň: A1 / 3. Uvolňování nebezpečných látek: NENÍ / 4. Těsnost: Žádná netěsnost topného tělesa při 1,3 násobku nejvyššího přípustného provozního přetlaku [kPa] / 5. Odolnost proti přetlaku: Žádné známky roztržení topného tělesa při 1,69 násobku nejvyššího přípustného provozního přetlaku [kPa] / 6. Nejvyšší přípustný provozní přetlak / 7. Povrchová teplota: Nejvýše 90 °C / 8. Tepelné výkony / 9. Tepelný výkon za odlišných provozních podmínek (charakteristická křivka) / 10. Trvanlivost jako / 11. Odolnost proti korozi: Žádná koroze po vystavení vlhkosti na dobu 100 hodin / 12. Odolnost proti mechanickému poškození menšími nárazy: Třída 0

BG 1. Отоплителни системи в сгради / 2. Реакция на огън: A1 / 3. Освобождаване на опасни вещества: ОТГОВАРЯ НА НОРМА / 4. Изпитателно налягане: 1,3x от максимално работно налягане [kPa] / 5. Устойчивост срещу налягане: 1,69x от максимално работно налягане [kPa] / 6. Максимално работно налягане / 7. Температура на повърхността: Максимално 90 °C / 8. Номинална топлинна мощност / 9. Топлинна мощност при различни експлоатационни условия (характеристична крива) / 10. Продължителност като / 11. Устойчивост срещу корозия: Липса на корозия след 100 h влажност / 12. Устойчивост при минимален натиск: Клас 0

DE 1. Heizsysteme in Gebäuden / 2. Brandverhalten: A1 / 3. Freisetzen von gefährlichen Stoffen: BESTANDEN / 4. Dichtigkeit: keine Undichtigkeit bei 1,3fachem maximal zulässigem Betriebsdruck [kPa] / 5. Druckfestigkeit: kein Riss bei 1,69-fachem maximal zulässigem Betriebsdruck [kPa] / 6. Maximal zulässiger Betriebsdruck / 7. Oberflächentemperatur: Maximal 90 °C / 8. Minimalwärmelastleistung / 9. Wärmeleistung bei verschiedenen Betriebsbedingungen (Kennlinie) / 10. Widerstand / 11. Korrosionswiderstand: Ohne Korrosion nach 100 Stunden im naßen Raum / 12. Kleinschlagwiderstand: Klasse 0

DK 1. Varmesystemer i bygninger / 2. Reaktion ved brand: A1 / 3. Frigivelse af farlige stoffer: INGEN / 4. Tryktæthed: Ingen leakage ved 1,3 x MOP [kPa] / 5. Modstandsdygtighed over for tryk: Ingen brud ved 1,69 x MOP [kPa] / 6. Maksimalt driftstryk (MOP) / 7. Overflade temperatur: maks. 90 °C / 8. Nominal termisk effekt / 9. Termisk effekt under forskellige driftsbetingelser (karakteristisk kurve) / 10. Holdbarhed / 11. Modstandsdygtighed over for korrosion: Ingen korrosion efter 100 timer i fugtige omgivelser / 12. Modstand mod mindre påvirkninger: Klasse 0

EE 1. Hoone küttesüsteimid / 2. Tuletundlikkus: A1 / 3. Ohtlike ainete eraldumine: PUUDUB / 4. Tihedus: 1,3-kordse maksimaalne lubatud töölüürõhu [kPa] korral lekkek puuduvad / 5. Rõhukindlus: 1,69-kordse maksimaalne lubatud töölüürõhu [kPa] korral radiatori purunemise märgid puuduvad / 6. Maksimaalne lubatud töölüürõhk / 7. Pinnatemperatuur: Maksimaalselt 90 °C / 8. Soojusvõimsused / 9. Soojusvõimsuste teistestugustes tööttingimustes (karakteristikküved) / 10. Püsivus / 11. Korrosioonikindlus: Pärast 100 tundi niiskuse mõju korraldamis puudub / 12. Väiksemate löökide põhitjustatud mehaanilise kahjustuse kindlus: Klass 0

ES 1. Sistemas de calefacción en edificios / 2. Reacción al fuego: A1 / 3. Liberación de sustancias peligrosas: NO HAY / 4. Estancidad: Ninguna falta de estanqueidad en caso de presión de servicio máxima admisible multiplicada por 1,3 [kPa] / 5. Resistencia a la sobrepresión: Ningunos signos de rotura del calentador en caso de presión de servicio máxima admisible multiplicada por 1,69 [kPa] / 6. Presión de servicio máxima admisible / 7. Temperatura superficial: 90 °C como máximo / 8. Salidas de calor nominales / 9. Salida de calor en condiciones de servicio diferentes (curva característica) / 10. Durabilidad / 11. Resistencia a la corrosión: Ausencia de corrosión tras 100 horas de exposición a la humedad / 12. Resistencia a daños mecánicos causador por golpes pequeños: Clase 0

FR 1. Systèmes de chauffage dans les bâtiments / 2. Réaction au feu: A1 / 3. Relâchement des substances dangereuses: CONFORME À LA NORME / 4. Étanchéité à la pression: Aucune fuite de l'élément chauffant à 1,3 fois pression de service maximale admissible [kPa] / 5. Résistance contre la surpression: 1,69 de la surpression d'exploitation maximale [kPa] / 6. Suppression d'exploitation maximale / 7. Température de la surface: Maximum 90 °C / 8. Puissance thermique nominale / 9. Puissance thermique dans des diff érentes conditions d'exploitation (la courbe caractéristique) / 10. Résistance / 11. Résistance à la corrosion: Sans corrosion après 100 h dans un milieu humide / 12. Résistance contre une petite percussion: Classe 0

GB 1. Heating systems in buildings / 2. Reaction to fire: A1 / 3. Release of dangerous substances: NONE / 4. Pressure tightness: no leakage at 1,3 x MOP [kPa] / 5. Resistance to pressure: no breakage at 1,69 x MOP [kPa] / 6. Maximum operating pressure (MOP) / 7. Surface temperature: Maximum 90 °C / 8. Rated thermal outputs / 9. Thermal output in diff erent operating conditions (characteristic curve) / 10. Durability as / 11. Resistance against corrosion: No corrosion after 100 h humidity / 12. Resistance against minor impact: Class 0

HR 1. Sustavi za grijanje u zgradama / 2. Reakcija na plamen: A1 / 3. Oslobađanje opasnih tvari / 4. Oslobađanje opasnih tvari: Bez propuštanja pri 1,3 x MOP [kPa] / 5. Otpornost na tlak: Bez pucanja pri 1,69 x MOP [kPa] / 6. Maksimalni radni tlak (MOP) / 7. Površinska temperatura: Najviše 90 °C / 8. Nazivne tolnske energije / 9. Toplinska energija u različitim radnim uvjetima (radna krivulja) / 10. Trajnost kao / 11. Otpornost na koroziju: Bez korozije nakon 100 h vlažnosti / 12. Otpornost na manje udarce: Razred 0

LT 1. Pastatų šildymo sistemose / 2. Reakcija į ugnį: A1 / 3. Pavojingų medžiagų išskyrimas: ATITINKA STANDARTĄ / 4. Bandyimo slėgis: 1,3 x maksimalus darbinio slėgio [kPa] / 5. Atsparumas slėgiui: 1,69 x maksimalus darbinio slėgio [kPa] / 6. Maksimalus darbinis slėgis / 7. Paviršiaus temperatūra: Maksimaliai 90 °C / 8. Vardinė šiluminė galia / 9. Šiluminė galia skirtingomis eksploatacinėmis sąlygomis (būdingoji lygtis) / 10. Atsparumas / 11. Atsparumas korozijai: Be korozijos po 100 val. drėgnose aplinkoje / 12. Atsparumas nedideliam smūkiui: Kategorija 0

LV 1. Ēku apkures sistēmās / 2. Reakcija uz uguni: A1 / 3. Bīstamo vielu izdalīšana: NAV / 4. Hermētiskums: Kad 1,3 reiz pārsniedz maksimālo pieļaujamā darba spiediena [kPa], radiatori ir hermētiski / 5. Izturība pret spiedienu: Kad 1,69 reiz pārsniedz maksimālo pieļaujamā darba spiedienu [kPa], radiatoru bojājumu nav / 6. Maksimālais pieļaujamais darba spiediens / 7. Virsmas temperatūra: Maksimāli 90 °C / 8. Siltuma atdevē / 9. Siltuma atdevē esot atšķirīgiem ekspluatācijas apstākļiem (raksturīgā) / 10. Izturība kā / 11. Izturība pret koroziju: Nekāda korozija pēc 100 stundām mitrumā / 12. Izturība pret mehāniskiem bojājumiem no mazākiem triecieniem: Klase 0

NL 1. Verwarming in gebouwen / 2. Gedrag bij brand: A1 / 3. Vrijlaten van gevaarlij e stoffen: VOLDOET AAN DE NORM / 4. Druktheid: 1,3 x van de maximale bedrijfsdruk [kPa] / 5. Drukbestendigheid: 1,69 x van de maximale bedrijfsdruk [kPa] / 6. Maximale bedrijfsdruk / 7. Oppervlaktetemperatuur: maximaal 90 °C / 8. Nominaal vermogen / 9. Thermisch vermogen onder verschillende bedrijfsomstandigheden (karakteristieke vergelijking) / 10. Duurzaamheid / 11. Weerstand tegen corrosie: Zonder corrosie na 100 u vochtigheid / 12. Slagvastheid bij geringe impact: Klasse

PL 1. Układy grzewcze w budynkach / 2. Reakcja na ogień: A1 / 3. Uwolnienie substancji niebezpiecznych: SPŁYNIA NORME / 4. Nadościnienie próbne: 1,3 x maksymalnego ciśnienia roboczego [kPa] / 5. Odporność na nadciśnienie: 1,69 x maksymalnego ciśnienia roboczego [kPa] / 6. Maksymalne ciśnienie robocze / 7. Temperatura powierzchni: Maksymalnie 90 °C / 8. Nominalna moc cieplna / 9. Moc cieplna przy odmiennych warunkach eksploatacyjnych (równanie charakterystyczne) / 10. Odporność / 11. Odporność na korozję: Bez korozji po 100 godzinach w środowisku wilgotnym / 12. Odporność na niewielkie uderzenia: Klasa 0

RU 1. Системы отопления в зданиях / 2. Реакция на огонь: A1 / 3. Выделение опасных веществ: ИЕТ / 4. Герметичность под давлением: отсутствие утечки при 1,3 кратном максимальном допустимом рабочем избыточном давлении [kPa] / 5. Устойчивость к избыточному давлению: отсутствие признаков разрыва отопительного прибора при 1,69 кратном максимальном допустимом рабочем избыточном давлении [kPa] / 6. Максимальное допустимое рабочее избыточное давление / 7. Температура поверхности: максимальное 90 °C / 8. Значения номинальной тепловой мощности / 9. Тепловая мощность при различных условиях работы (характерная кривая) / 10. Долговечность / 11. Устойчивость к коррозии: отсутствие коррозии после 100 часов пребывания в условиях повышенной влажности / 12. Устойчивость к воздействию механического повреждения несильными ударами: Класс 0

SK 1. Tepelné systémy v budovách / 2. Reakcia na oheň: A1 / 3. Uvoľňovanie nebezpečných látok: NIE JE / 4. Skúšobný pretlak: 1,3 x maximálneho operačného tlaku [kPa] / 5. Odolnosť proti pretlaku: 1,69 x maximálneho operačného tlaku [kPa] / 6. Maximálny prevádzkový tlak / 7. Teplota povrchu: Maximálne 90 °C / 8. Menovitý tepelný výkon / 9. Tepelný výkon za odlišných prevádzkových podmienok (charakteristická rovnica) / 10. Odolnosť / 11. Odolnosť voči korozi: Bez korózie po 100 h vo vlhkom prostredí / 12. Odolnosť voči malému nárazu: Trieda 0

UA 1. Опалювальні системи в будівлях / 2. Реакція на вогонь: A1 / 3. Виділення небезпечних речовин: НЕМАЄ / 4. Герметичність: При 1,3-кратному перевищенні максимального робочого тиску [kPa] без порушень герметичності / 5. Стійкість до перевищення тиску: При 1,69-кратному перевищенні максимального робочого тиску [kPa] без ознак розриву радіатора / 6. Максимальний робочий тиск / 7. Температура поверхні: Не більше 90 °C / 8. Номинальна теплова потужність / 9. Теплова потужність при різних режимах роботи (графічна характеристика) / 10. Строк служби / 11. Стійкість до корозії: Після дії вологості протягом 100 годин корозія відсутня / 12. Стійкість до механічного пошкодження від незначних поштовхів: Клас 0

CZ Všeobecné informace

- Výrobky se nesmějí používat v agresivním prostředí (chlór, žíraviny či jiné chemikálie) nebo být takovými látkami "išť" ny.
- Výrobky nesmějí být umístěny v prostředí se zvýšenou vlhkostí (bazény, skleníky, apod.) pokud nejsou vyrobeny v úpravě, která je odolná tomuto prostředí.
- Výrobky musí být po zabudování pečlivě zakryty až do úplného ukončení všech stavebních prací, tak aby nedošlo k jejich následnému poškození "i zne" išť ní.
- Tepelný výměnník je třeba pravidelně kontrolovat a udržovat v čistotě tak, aby nedošlo k jeho mechanickému poškození a následné celkové nefunkčnosti. V případě znečištění je nutné ho vhodným způsobem vyčistit (např. vysávařem).
- Tělesa je nutné pravidelně odvodzňovat. Pozor aby nedošlo k opaření horkou vodou, která mže při odvodušnění vystřiknout. Soustava musí být vždy zabezpečena expanzním a pojistným zařízením.
- Podrobnější informace jsou k dispozici v provozních a záručních podmínkách, které jsou ke stažení na www.licon.cz nebo na vyžádání u obchodního oddělení společnosti LICON.

SK Všeobecné informácie

- Výrobky sa nesmú používať v prostredí s agresívnou atmosférou (chlór, žieraviny alebo iné chemikálie) ani sa takýmito látkami "išť" ň.
- Výrobky sa nesmú umiestňovať do prostredia so zvýšenou vlhkosťou (bazény, skleníky a pod.), ak nie sú vyrobené v úprave, ktorá je odolná proti tomuto prostrediu.
- Výrobky sa musia po zabudovaní dôkladne zakryť až do úplného skončenia všetkých prác, aby nedošlo k ich následnému poškodeniu "i zne" isteniu.
- Tepelný výmenník je potrebné pravidelne kontrolovať a udržiavať v istote tak, aby nedošlo k jeho mechanickému poškodeniu a následnej celkovej nefunkčnosti. V prípade znečistenia je nutné ho vhodným spôsobom vyčistiť (napr. vysávačom).
- Tiesla je nutné pravidelne odvzdušňovať. Pozor, aby nedošlo k obareniu horúcou vodou, ktorá môže pri odvzdušnení vystreknúť. Sústava musí byť vždy zabezpečená expanzným a pojistným zariadením.
- Podrobnejšie informácie sa nachádzajú v Prevádzkových a záručných podmienkach, ktoré sa dajú stiahnuť z webovej stránky www.licon.cz alebo sú dostupné na vyžiadanie od obchodného oddelenia spoločnosti LICON.

DE Allgemeine

- Die Produkte dürfen weder in aggressiver atmosphärischer Umgebung angewendet werden (Chlor, Ätzmittel oder andere Chemikalien) noch mit solchen Stoffen gereinigt werden.
- Die Produkte dürfen nicht in Umgebungen mit erhöhter Feuchtigkeit platziert werden (Schwimmbaden, Gewächshäuser u. ä.), soweit sie nicht in einer Ausführung hergestellt sind, welche gegen diese Umgebung beständig ist.
- Die Produkte müssen nach dem Einbau bis zur völligen Beendigung aller Bauarbeiten sorgfältig abgedeckt werden, damit es zu keiner anschließenden Beschädigung oder Verschmutzung kommt.
- Der Wärmetauscher muss regelmäßig kontrolliert und sauber gehalten werden, so dass es nicht zu dessen mechanischer Beschädigung und nachfolgender Nichtfunktionsfähigkeit kommen kann. Bei einer Verschmutzung muss er in geeigneter Weise gereinigt werden (z.B. mit einem Staubsauger).
- Der Körper muss regelmäßig entlüftet werden. Achtung, bei der Entlüftung kann heißes Wasser austreten, dass zu Verbürhungen führen kann. Das System muss immer mit einer Expansions- und Sicherheitsanlage abgesichert sein.
- Nähere Informationen sind in den Betriebs- und Garantiebedingungen zu finden, welche auf www.licon.cz heruntergeladen werden können oder auf Wunsch bei der Geschäftsabteilung der Gesellschaft LICON zur Verfügung stehen.

EN General

- The products should not be used in aggressive atmospheric environment (chlorine, caustic or other chemicals) or cleaned with such substances.
- The products may not be located in increased humidity environment (swimming pools, greenhouses, etc.) if the manufactured version is not resistant to such environment.
- To avoid subsequent damage or fouling the products must be carefully covered after installation until the complete cessation of all building work.
- Inspection and cleaning of the heat exchanger is necessary in order to prevent mechanical damage and subsequent total inoperability. If cleanliness is not maintained, the heat exchanger must be cleaned in the appropriate manner (e.g. with a vacuum cleaner).
- Any air trapped in the units must be regularly released. Take care not to scald one's self with hot water that may spray out when releasing air. The system must always be fitted with an expansion control valve.
- Detailed information is available in Operational and guarantee conditions, downloadable on www.licon.cz or upon request from LICON.

FR Informations générales

- Les produits ne peuvent pas être utilisés dans un environnement atmosphérique agressif (chlore, caustiques ou autres produits chimiques) ou être nettoyés avec de tels produits ou substances.
- Les produits ne peuvent pas être installés dans un environnement à haute humidité relative (piscines, jardins d'hiver, etc.) s'ils ne sont pas produits en version résistante à ce type d'environnement.
- Les produits doivent être soigneusement couverts après leur encastrement jusqu'à la terminaison complète de tous travaux de construction pour éviter leur pollution ou endommagement conséquent.
- L'échangeur de chaleur doit être régulièrement contrôlé et conservé propre pour que sa détérioration mécanique n'ait pas lieu, entraînant son dysfonctionnement total. En cas d'encrassement, il faut le nettoyer de manière appropriée (par ex. à l'aide d'un aspirateur).
- Les corps doivent être désaérés régulièrement. Faites attention à ne pas vous ébouillanter par de l'eau chaude qui peut alors gicler. L'ensemble doit être toujours sécurisé par un dispositif d'expansion sécuritaire.
- Les informations détaillées sont disponibles dans les Conditions de service et de garantie – à télécharger depuis le site www.licon.cz ou sur demande au service commercial de la société LICON.

RU Общие правила

- Продукты нельзя устанавливать в агрессивных средах (хлор, щелочь или другие химические вещества), так же, как и с помощью таких веществ нельзя чистить.
- Продукты нельзя устанавливать в среде с повышенной влажностью (бассейны, парники и т.д.), если они не являются "редуцированными для такой среды".
- После установки изделия должны быть тщательно закрыты вплоть до полного окончания строительных работ, чтобы не "произошло" их загрязнения.
- Теплообменник необходимо регулярно "ровнять" и сливать в чистом виде, чтобы он не был механически поврежден. При загрязнении необходимо соответствующим образом вычистить (например, с помощью пылесоса).
- В системе необходимо регулярно выпускать воздух. – Внимание! Будьте осторожны, чтобы не обжечься горячей водой, которая разбрызгается во время выпуска воздуха. Система всегда должна быть защищена посредством расширительного и предохранительного клапана.
- Более подробная информация может быть найдена в/об условиях эксплуатации, которые можно скачать на сайте www.licon.cz или запросить у торгового отдела компании LICON.



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