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ENTRESSE AIR CURTAIN



INSTRUCTION MANUAL








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ABOUT THE MANUAL

This manual was written to provide necessary information about the ENTRESSE air curtain concerning its operation, maintenance and service. Authorized persons must be thoroughly familiar with the contents of the manual before beginning any work with the device.

SYMBOLS USED IN THE MANUAL

SYMBOL	MEANING
	WARNING – these symbols warn about factors that may cause serious injury to the user or damage to the device. They also draw attention to important instructions, properties, procedures or measures that must be taken into account or abided by during operation and maintenance.
	
	ATTENTION – this symbol draws attention to an important activity or information that must be taken into account, but one that will not endanger health or damage the device.
	INFORMATION – this symbol draws attention to useful information about the device or its accessories.
	REFERENCE – this symbol indicates reference to another chapter in this manual.

IMPORTANT WARNINGS

- Read this manual carefully.
- Proceed exactly according to the instructions stated here in order to install the air curtain properly and safely and ensure its optimal use and long service life.
- Do not put the air curtain into operation unless you are thoroughly acquainted with all the instructions, warnings and recommendations contained in this manual, particularly those found in chapter Safety Information.
- Illustrations used in this manual may not always correspond to reality; their purpose is to help in understanding the installation steps. Texts, drawings, photos and other elements used here are, however, protected by copyright. Their abuse or unauthorised copying is a punishable offence.
- The manual must be considered an integral and inseparable part of the air curtain. Store it for future use and pass it on to any future owners of the air curtain.

MANUFACTURER'S CONTACT INFORMATION

Unexpected situations may occur in practice that could not be included and described in this manual. When in doubt about how to proceed, contact the manufacturer:

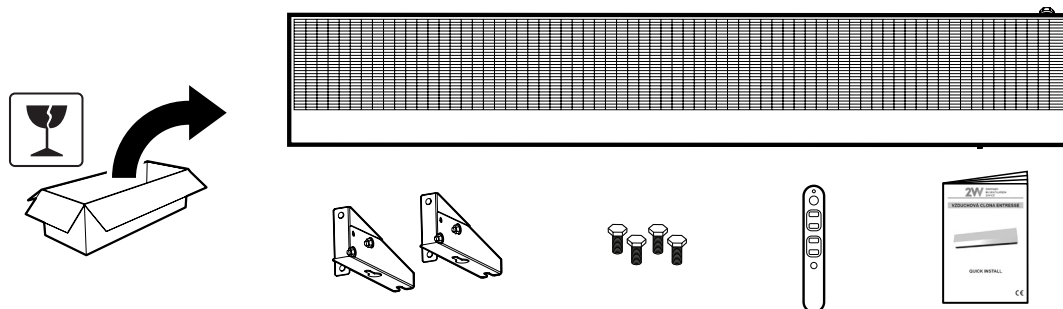
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DELIVERY AND UNPACKING

PACKAGING AND CONTENTS OF THE DELIVERY

The air curtain is supplied as a single, complete whole, packaged to protect it against damage. It is wrapped in a suitable plastic film and sections susceptible to damage are secured with a paper brace. The curtain is transported in a cardboard box to protect the device from damage.



The delivery includes the following:

- Transport packaging
- Complete air curtain
- Brackets (2×) for mounting the air curtain onto a wall, screws included (4×)
- Remote control (1×)
- Instructions for Quick Installation and Safe Use of Air Curtains



Check immediately after unpacking:

- if the air curtain is damaged

If it is damaged, contact the carrier company. If the complaint is submitted too late, it may not be accepted.

- if you received the air curtain type you ordered

If you find any defects or discrepancies, do not unpack the curtain and immediately inform the supplier. If you do not submit your complaint on time, future complaints will not be accepted.

HANDLING THE DELIVERY

The packaged air curtain may only be handled using a standard pallet jack. The minimum load capacity of the pallet jack must be 30 kg.



The packaged air curtain may only be transported in the position in which it was stored by the manufacturer. Do not under any circumstances transport it in a different position – risk of serious damaging of components.

It is recommended that the device and load is only handled by persons with corresponding qualifications.

The weight of the air curtain with accessories in packaging is between 15 to 28 kg depending on the model. It is recommended that the air curtain is loaded onto the handling equipment by two people.

Transport the delivery carefully to the place where it will be unpacked or stored.

STORAGE BEFORE UNPACKING

If you do not intend to unpack and install the air curtain immediately after delivery, store it in the following conditions:

- Store the air curtain in original packaging in a dry area protected against weather conditions that could damage the packaging and negatively affect the condition of the device. The ambient temperature must be between **+5 °C** and **+40 °C**.
- Do not remove the air curtain from the crate or turn it on the side or upside down. The air curtain must only be stored in the position marked on the packaging.
- Do not place any other objects or material on top of the packaged air curtain.

UNPACKING AT THE POINT OF INSTALLATION



While transporting the air curtain to the place where it will be installed, pay close attention to your surroundings and be mindful of your safety and that of other persons. It is recommended that at least two people transport the air curtain.

Make sure the load does not fall from the transport equipment and get damaged as a result.

If the air curtain is transported in temperatures below 0 °C, it is necessary to leave it for at least two hours in its standard environmental conditions, unpacked, without turning it on. This will stabilise the internal temperature of the air curtain.

When unpacking the air curtain, proceed as follows:

- 1** Remove the reinforcing tape and packaging material.



All packaging material is environmentally-friendly and can be reused or recycled. Have all non-eco-friendly parts properly disposed of or reprocessed.

- 2** Check visually that no parts of the air curtain were damaged during transport. Report any defects to the supplier or carrier as soon as possible.
- 3** Very carefully remove the air curtain from the box with the assistance of at least one other person. Be careful not to damage the lower corners or the bottom section of the air curtain when putting it down.



When pulling the air curtain from the box, be careful not to damage the housings of the air curtain and make sure no component falls out and gets damaged as a result.

- 4** Once you have finished unpacking, check that the air curtain and its accessories are in order. When in doubt, contact the supplier.



Do not under any circumstances install the air curtain if it is damaged!

DEVICE DESCRIPTION

INTRODUCTION

ENTRESSE air curtains are compact and practical air curtains designed for placement in smaller shops, restaurants, cafés and similar environments.

The air curtain forms an aerodynamic barrier and suppresses free air flow between indoors and outdoors (e.g. at an entrance to a building) or between spaces with different conditions (temperature differences, dustiness, insects, etc.). The air curtain is equipped with either electric heating, water-to-air heat exchanger or in a version without heating.

AIR CURTAIN IDENTIFICATION

VCEN1 A - 100 E1 AC - IR - 0 A0

1	2	3	4	5	6	7	8
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1 – Code for ENTRESSE air curtains

2 – Series designation

3 – 100 = 1000 mm length / 150 = 1500 mm length / 200 = 2000 mm length

4 – S0 – without heater / E1 – with electric heater / V2 – with water-to-air heat exchanger

5 – Motor type

6 – Regulation

7 – 0 = standard RAL 9016 colour / 9 = Atyp RAL colour

8 – 2VV version

PROPER USE OF THE AIR CURTAIN

- The air curtain is designed for indoor installation in a dry environment
- It is designed for horizontal installation above a doorway.
- Maximum recommended mounting height is up to 2.5 m.
- The air curtain is designed for operation at ambient air temperature of between 0 °C and +40 °C and relative humidity up to 80 %.
- The air curtain is designed for air free of dust, grease, chemical vapours or other pollutants.



Further information is provided in chapter INSTALLATION.

IMPROPER USE OF THE AIR CURTAIN



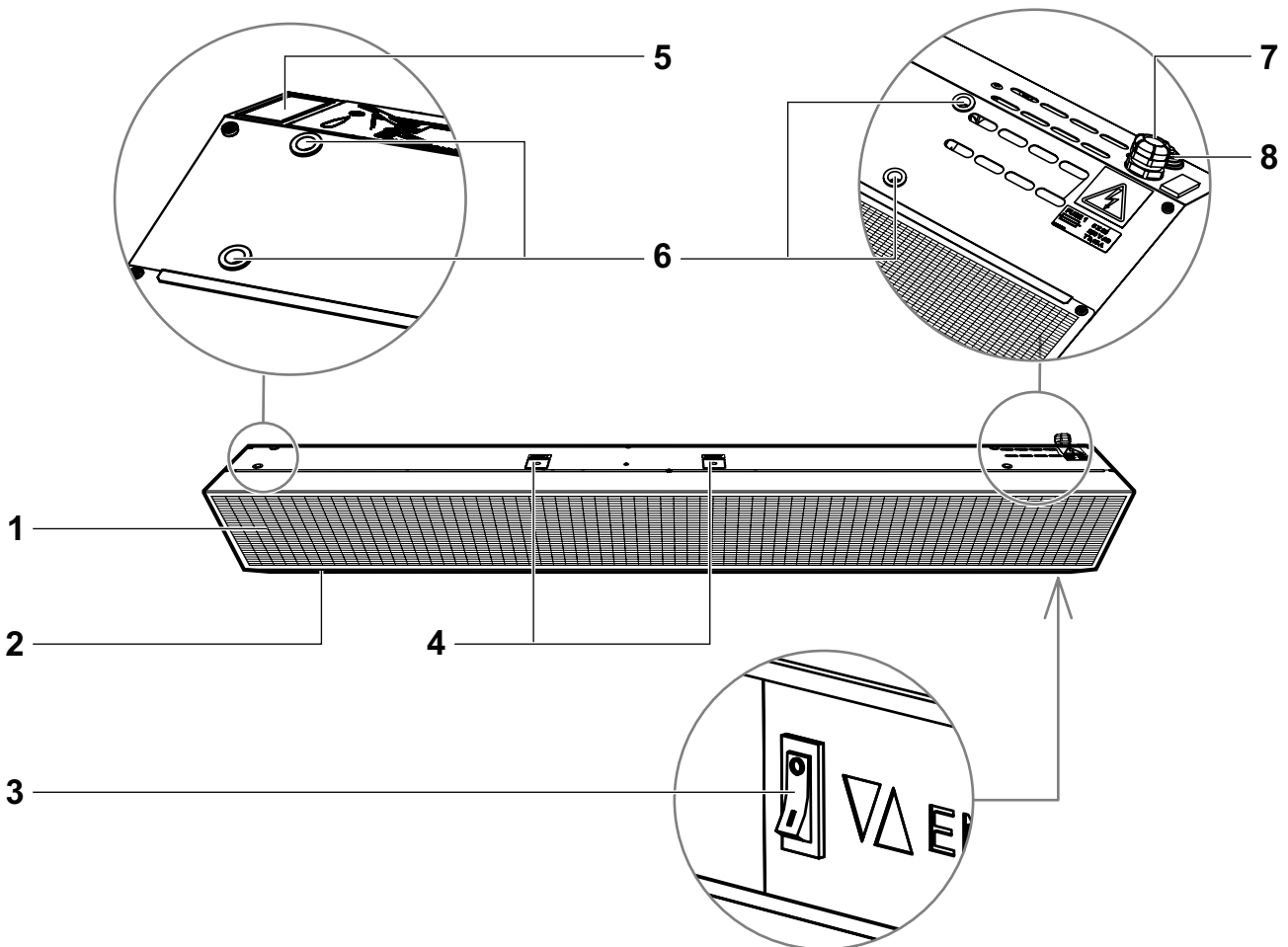
Any use of the air curtain contrary to the above proper uses is considered improper.

The manufacturer is not liable for damages caused by improper use. Such risks are born solely by the operator (i.e. the party that authorised the use of the device, usually the owner) of the air curtain.

- The air curtain must not under any circumstance be installed outdoors, not even under a hood or a roof, as it can be extremely dangerous to leave it exposed to rain and other weather conditions.
- The air curtain is not designed for installation in a vertical position and cannot be installed next to a doorway.
- Air curtains must not be installed in an environment where they would be exposed to strong ionising and non-ionising radiation (e.g. microwave, ultraviolet, laser, x-rays) or in an environment with risk of explosion.

Improper installation and use of unsuitable accessories or spare parts is also considered improper use. Any modification or intervention into the internal electrical wiring of the air curtain is forbidden and voids the warranty.

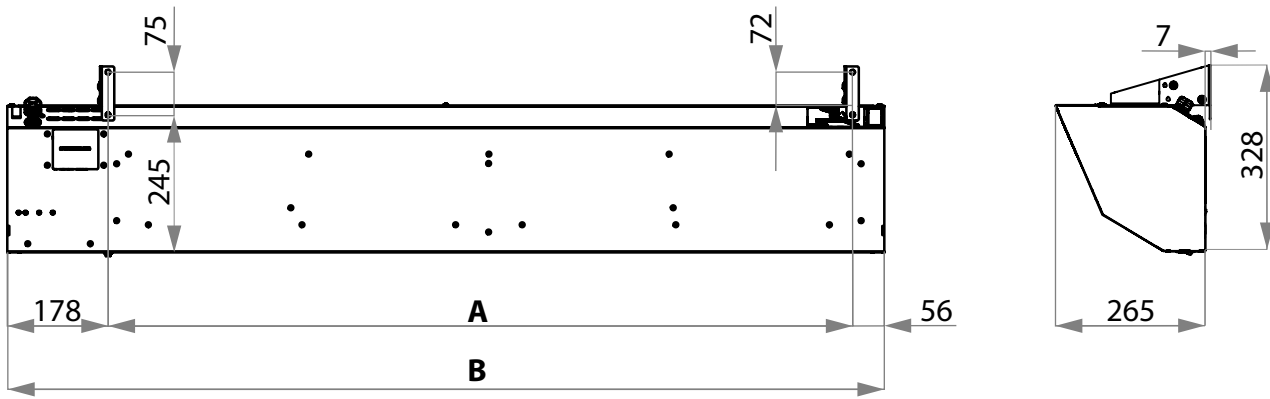
MAIN PARTS



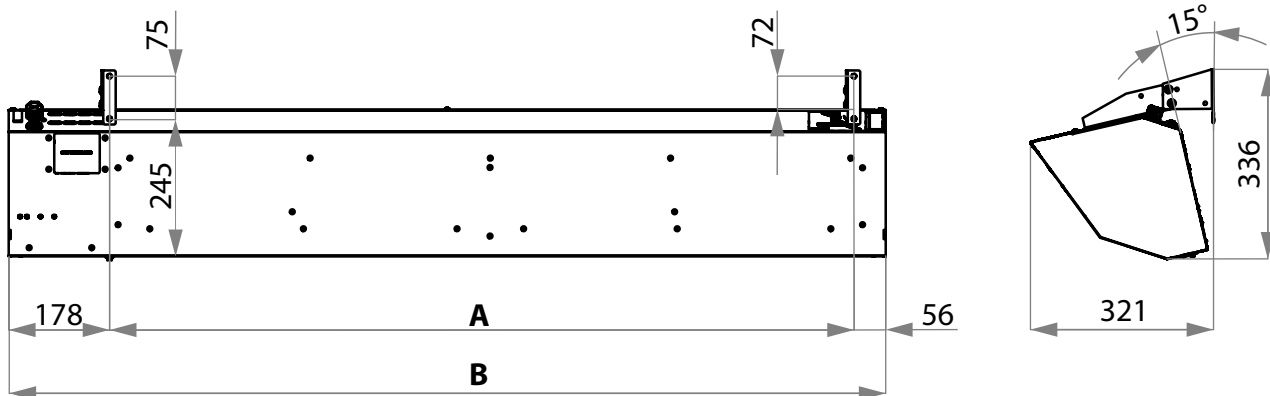
1	Front cover with inlet grill	5	Opening for connecting water hoses
2	Air outlet grill (underside)	6	Openings for mounting brackets
3	Main switch (underside)	7	Grommet for power cable
4	Electric heat exchanger reset	8	Grommet for accessories

DIMENSIONS

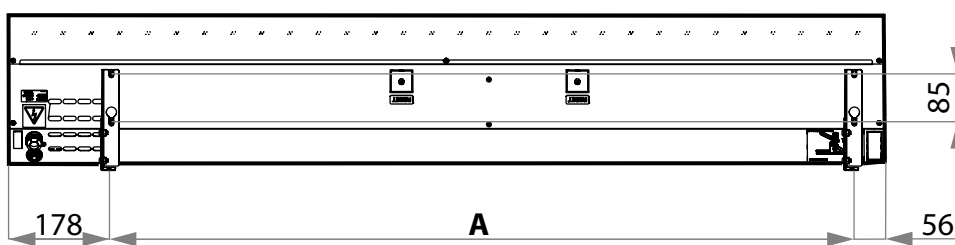
Back and left side view for standard installation



Back and left side view for air curtain installation with 15° blowing angle



View from above



MODEL	A [mm]	B [mm]
VCEN1A-100-E	809	1042
VCEN1A-100-V		
VCEN1A-100-S		
VCEN1A-150-E	1309	1542
VCEN1A-150-V		
VCEN1A-150-S		
VCEN1A-200-E	1809	2042
VCEN1A-200-V		
VCEN1A-200-S		

TECHNICAL PARAMETERS

MODEL	Supply voltage	Frequency	Fan power supply	Heater power supply	Motor fuse	Circuit breaker	Weight	Maximum height
	[V(AC)]	[Hz]	[V/A]	[V/A]	[A]	[A]	[kg]	[m]
VCEN1A-100-E	400	50/60	230/1	400/14,2	3.15	3x16	16	2.5
VCEN1A-100-V	230	50/60	230/1	-	3.15	1x6	17	
VCEN1A-100-S	230	50/60	230/1	-	3.15	1x6	15	
VCEN1A-150-E	400	50/60	230/1	400/21,6	3.15	3x25	22	
VCEN1A-150-V	230	50/60	230/1	-	3.15	1x6	23	
VCEN1A-150-S	230	50/60	230/1	-	3.15	1x6	21	
VCEN1A-200-E	400	50/60	230/1	400/27,9	3.15	3x32	27	
VCEN1A-200-V	230	50/60	230/1	-	3.15	1x6	26	
VCEN1A-200-S	230	50/60	230/1	-	3.15	1x6	28	

Electric Heater

MODEL	Voltage	Current, 1st level setting	Input power, 1st level setting	Current, 2nd level setting	Input power, 2nd level setting
	[V(AC)]	[A]	[kW]	[A]	[kW]
VCEN1A-100-E	400	7.2	3.4	14.2	6.6
VCEN1A-150-E	400	11.1	5.1	21.6	9.8
VCEN1A-200-E	400	14.2	6.6	27.9	12.9

Air Curtain with Water-to-Air Heat Exchanger for 90/70 °C Water Temperature Difference and +18 °C Incoming Air Temperature

Model	Air output	Heater power	Output temperature	Pressure drop	Water flow rate
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2-AC-RF-0A0	1250	10.03	41.63	3.37	0.12
VCEN1A-150-V2-AC-RF-0A0	2000	16.93	42.92	11.64	0.21
VCEN1A-200-V2-AC-RF-0A0	2640	23.24	43.92	25.85	0.28

Air Curtain with Water-to-Air Heat Exchanger for 80/60 °C Water Temperature Difference and +18 °C Incoming Air Temperature

Model	Air output	Heater power	Output temperature	Pressure drop	Water flow rate
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2-AC-RF-0A0	1250	8.15	37.2	2.37	0.099
VCEN1A-150-V2-AC-RF-0A0	2000	13.9	38.46	8.33	0.17
VCEN1A-200-V2-AC-RF-0A0	2640	19.17	39.38	18.63	0.23

Air Curtain with Water-to-Air Heat Exchanger for 70/50 °C Water Temperature Difference and +18 °C Incoming Air Temperature

Model	Air output	Heater power	Output temperature	Pressure drop	Water flow rate
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2-AC-RF-0A0	1250	6.23	32.69	1.51	0.076
VCEN1A-150-V2-AC-RF-0A0	2000	10.85	33.98	5.49	0.13
VCEN1A-200-V2-AC-RF-0A0	2640	15.07	34.81	12.41	0.18

Air Curtain with Water-to-Air Heat Exchanger for 60/40 °C Water Temperature Difference and +18 °C Incoming Air Temperature

Model	Air output	Heater power	Output temperature	Pressure drop	Water flow rate
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2-AC-RF-0A0	1250	4.23	27.97	0.79	0.051
VCEN1A-150-V2-AC-RF-0A0	2000	7.75	29.41	3.12	0.094
VCEN1A-200-V2-AC-RF-0A0	2640	10.93	30.2	7.22	0.13

NOISE LEVEL

The noise level of individual models of the ENTRESSE air curtain is listed in the technical parameters and reaches a maximum of 76.8 dB during operation. It is not necessary to wear ear protection during the installation, maintenance, repair or operation of the air curtain.

Type	Speed	50 Hz		60 Hz	
		Acoustic power L_{WA} [dB(A)]	Acoustic pressure L_{PA} [dB(A)] 3 m	Acoustic power L_{WA} [dB(A)]	Acoustic pressure L_{PA} [dB(A)] 3 m
VCEN1A-100-E	Min	65.7 dB	44.5 dB	64.2 dB	43.0 dB
	Med	69.1 dB	47.9 dB	67.6 dB	46.4 dB
	Max	70.5 dB	49.3 dB	69.0 dB	47.8 dB
VCEN1A-100-V	Min	65.7 dB	44.5 dB	64.2 dB	43.0 dB
	Med	68.9 dB	47.7 dB	67.4 dB	46.2 dB
	Max	70.9 dB	49.7 dB	69.4 dB	48.2 dB
VCEN1A-100-S	Min	65.2 dB	44.0 dB	63.7 dB	42.5 dB
	Med	69.1 dB	47.9 dB	68.6 dB	47.4 dB
	Max	71.8 dB	50.6 dB	71.7 dB	50.5 dB
VCEN1A-150-E	Min	60.8 dB	39.4 dB	58.1 dB	36.7 dB
	Med	70.5 dB	49.1 dB	66.8 dB	45.4 dB
	Max	75.5 dB	54.1 dB	76.3 dB	54.9 dB
VCEN1A-150-V	Min	61.9 dB	40.5 dB	60.0 dB	38.6 dB
	Med	70.3 dB	48.9 dB	67.1 dB	45.7 dB
	Max	74.7 dB	53.3 dB	76.8 dB	55.4 dB
VCEN1A-150-S	Min	59.4 dB	38.0 dB	56.7 dB	35.3 dB
	Med	68.4 dB	47.0 dB	64.5 dB	43.1 dB
	Max	75.9 dB	54.5 dB	75.0 dB	53.6 dB
VCEN1A-200-E	Min	60.9 dB	40.4 dB	57.9 dB	36.4 dB
	Med	69.5 dB	49.0 dB	66.5 dB	66.5 dB
	Max	75.6 dB	54.1 dB	75.6 dB	54.1 dB
VCEN1A-200-V	Min	59.4 dB	38.9 dB	56.9 dB	35.4 dB
	Med	67.6 dB	47.1 dB	64.6 dB	43.1 dB
	Max	75.3 dB	53.8 dB	74.7 dB	53.2 dB
VCEN1A-200-S	Min	57.2 dB	35.7 dB	57.2 dB	35.7 dB
	Med	65.0 dB	43.5 dB	65.0 dB	43.5 dB
	Max	75.3 dB	53.8 dB	75.3 dB	53.8 dB

LABELS/PLATES AND THEIR MEANING

Machine Plate

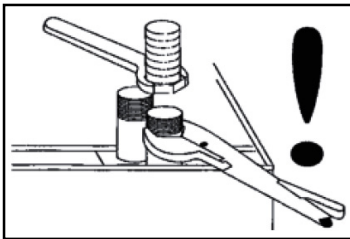
Označení clony			
U	= Napětí	I	= Celkový proud
f	= Frekvence	P	= Výkon
n	= Otáčky	m	= Hmotnost
ph	= Fáze	IP	= IP krytí
av	= Vzduch. Výkon	ver	=
Výrobní číslo			

The machine plate is located on the underside of the curtain and contains basic technical data.

Warning Labels



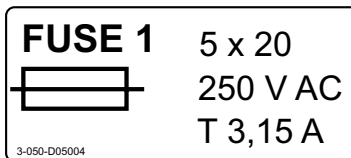
Warns about devices powered by electrical current and risk of injury by electrical current in the event of improper handling.



PLEASE NOTE!

Hold the heater outlets with pliers when connecting water hoses. Non-observance of this measure may result in damaging the outlets!

Information Label



Provides information about the air curtain's basic electrical parameters



It is strictly forbidden to remove or damage any of the labels/plates on the air curtain.

Should any of the labels/plates become damaged or illegible, contact the supplier or manufacturer of the air curtain to acquire an original replacement label/plate.

DECLARATION OF CONFORMITY

The product was designed, produced and put on the market in accordance with relevant provisions and conforms to the applicable requirements of European Parliament and Council regulations including amendments.

The product is safe under normal use conditions described in the manual. Evaluation of the product's safety was made using harmonised European standards listed in the relevant CE Declaration of Conformity.

The up-to-date, full version of the CE Declaration of Conformity can be found at www.2vv.cz

SAFETY INFORMATION

The purpose of this chapter is to provide basic information on occupational safety and health for all persons who come into contact with the air curtain during its operation, maintenance or servicing.

GENERAL WARNINGS

Read the complete manual and all warnings herein before installing, starting, operating, maintaining or repairing the air curtain. Always follow safety instructions stated in manuals. Doing so prevents risk of injuries, such as those caused by electrical current, burns etc.

The air curtain is an electrical appliance. Therefore, follow all safety regulations prescribing proper behaviour when handling electrical devices.

The air curtain is designed in accordance with international standards and regulations applicable to the production of such devices. This fact is confirmed by its manufacturer in the Declaration of Conformity.

The air curtain's electrical equipment meets international regulations on protection against hazardous contact voltage. All spaces containing electrical equipment are built with the prescribed enclosure rating.



The operator's personal safety during operation and maintenance of the air curtain is primarily the responsibility of the operator. The manufacturer of the air curtain is not liable for injuries to persons or environmental damage caused as a result of the air curtain not being used in accordance with the instruction manual and valid safety regulations.

Air curtains can be installed and used only in accordance with this documentation. The manufacturer nor the supplier are liable for damage caused by other uses. All risks are born by the user in that case.

OPERATOR REQUIREMENTS

The operator of the air curtain must:

- Clearly define the competences of workers and the scope of their responsibilities when operating and maintaining the air curtain.
- Ensure the owner receive proper training and clear instructions for safe use of the device.
- If the operator has their own workers perform maintenance and service of the device, the owner must ensure that these workers are well-versed in the principles of the air curtain's functioning and structure and are familiar with its safety features. The owner must provide these workers clear instructions about safe work procedures and potential hazards.
- Ensure that all who come into contact with the air curtain during their work can become thoroughly acquainted with the contents of the instruction manual, the complete technical documentation and with the air curtain's control and information elements as well as protective and safety features.
- Ensure inspection of operational safety of the air curtain before the curtain is put into operation.
- If the owner has their own workers perform installation of the air curtain, the operator must be mindful of the worker's health and safety and provide them suitable personal protective equipment (PPE).
- Check the proper functioning of the air curtain after any servicing or replacement of parts of the air curtain.

WORKERS AND OPERATING STAFF REQUIREMENTS

Workers performing mechanical installation:

- Mechanical installation must only be done by a person with corresponding technical education, special training or experience enabling the person to recognise risks and avoid hazards that can arise during installation of air curtains and similar devices.

Workers performing connection and maintenance of electrical wiring:

- Connection and maintenance of electrical wiring may only be performed by workers with appropriate qualifications or by a specialised company. These workers must have studied electrical installation in accordance with valid regulations of the country where the air curtain is operated.

Workers performing installation and maintenance of the hot water system:

- These workers must be knowledgeable and experienced in the field of water and heating installations.

Air curtain operator:

- The air curtain operator must be trained and acquainted with this manual. The staff may only operate the air curtain if they are properly authorised and trained for the purpose by the operator.
- The operator must not disable any protective features of the device.
- The operator must report malfunctions that emerge during the operation of the air curtain to their superior without delay and operation must be discontinued until safe operating conditions are restored.

Maintenance and service workers:

- Adjustment, repair and inspection of this type of device may only be performed by persons intimately familiar with its design and safety features.
- A reported malfunction must always be found and repaired. It is recommended to make a record of the repair stating the technical operations performed, spare parts used, with date and names of persons performing the inspection and repair.
- When the air curtain is under repair, it is recommended to label it with a suitable warning sign to make it clear the air curtain is under repair.
- When the air curtain is under repair, the operator must ensure the safety of all personnel that work and move in the vicinity of the air curtain with the operator's full knowledge.

FORBIDDEN ACTIVITIES

- It is forbidden to alter the the structure of the air curtain, modify it in any way or perform repairs that are not authorised by the manufacturer.
- It is forbidden to perform technical modifications of the air curtain's systems that would result in the reduction of their functionality.
- It is forbidden to disable the air curtain's safety features, unless doing so is required for service work which is performed by a trained and authorised person.
- It is forbidden to cover up the air inlet and outlet sections of the air curtain.
- It is strictly forbidden to remove or damage any of the labels/plates on the air curtain.
- It is forbidden to install accessories (external elements) that are not approved by the manufacturer.
- It is forbidden to allow unqualified persons to operate, service or perform maintenance of the device.
- It is forbidden to insert foreign objects into the air curtain.
- Never put your hands into the air inlet or outlet portion of the air curtain while the fan is spinning and the air curtain is running.
- It is forbidden to overstress the structure of the air curtain.
- It is forbidden to extinguish the air curtain with water in case of fire. Extinguish the air curtain using a CO₂ or powder fire extinguisher.

INSTALLATION



Installation and assembly of the air curtain may only be performed by a professional or a company that is qualified and suitably equipped for the activity!

If the air curtain is transported in temperatures below 0 °C, it is necessary to leave it for at least two hours in its standard environmental conditions, unpacked, without turning it on. This will stabilise the internal temperature of the air curtain.



Before installing the air curtain, it is necessary to ensure access to power at the installation spot based on the specific use of the air curtain and its electrical parameters. In the case of an air curtain with water heating, access to heating water must also be ensured.

OPERATING CONDITIONS

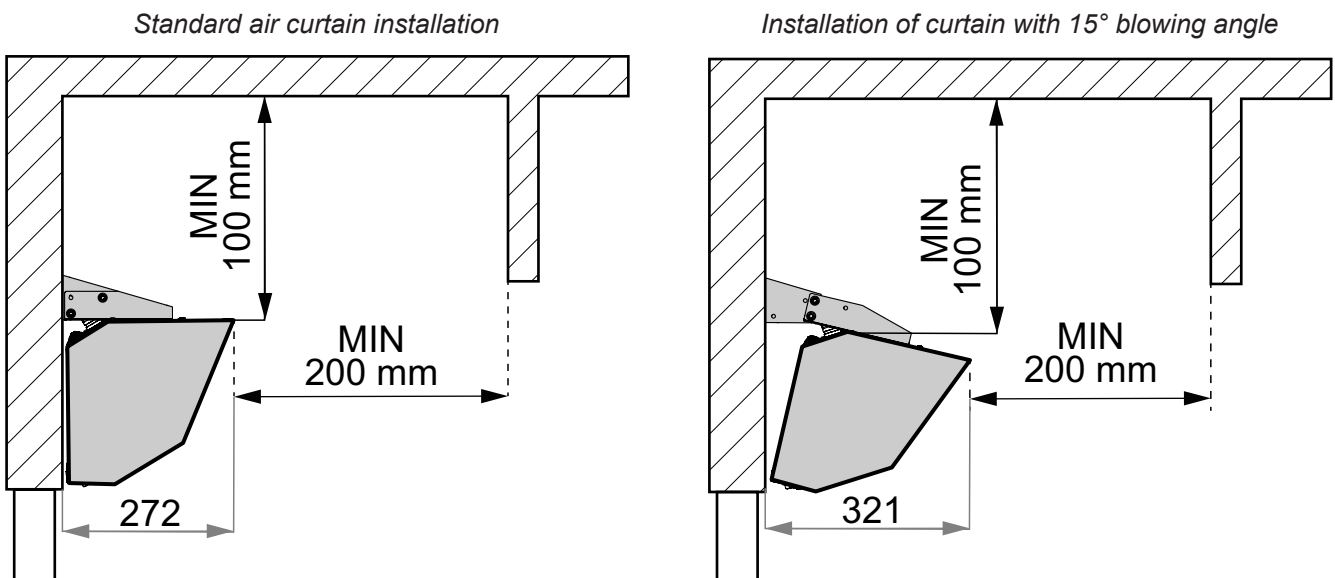
- Ambient temperature must be between 0 °C and +40 °C, and relative humidity must be up to 80 %.
- The air must be free of dust, grease, chemical vapours and other pollutants.
- The air curtain variant with water-to-air heat exchanger (VCEN1A-xxx-V) is not fitted with anti-freeze protection and must be installed in an environment without the risk of freezing, i.e. at 0 °C to +40 °C. Otherwise, a sufficient supply of heating water must be ensured to prevent the medium inside the heat exchanger from freezing.

CHOOSING AN INSTALLATION SPOT

When choosing an installation spot, abide by the following:

- Choose an installation spot that allows easy access for servicing.
- Place the air curtain as close to the upper edge of the doorway as possible and as close to a wall as possible.
- Make sure the air inlet and outlet of the air curtain is not obstructed by anything and air can flow freely.
- Air flow from the air curtain must not interfere with fire prevention systems.

Distancing from Solid Obstacles

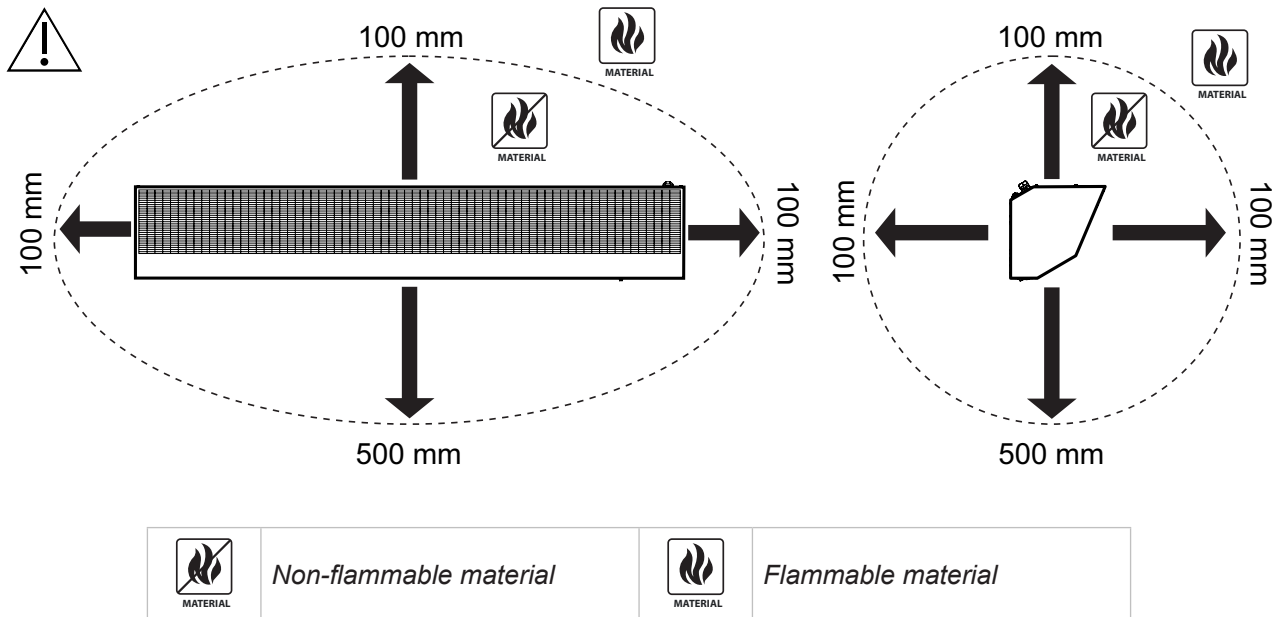


Insulating Distance

There must only be non-flammable (do not burn, incandesce or carbonise) or difficult to ignite (do not burn, mostly incandesce or carbonise – e.g. plasterboard) materials within the immediate vicinity of the air curtain and within 100 mm of it in all directions. However, these materials must not obstruct the air inlet and outlet openings. Safe distance of flammable materials from electrical products is regulated by national technical standards.

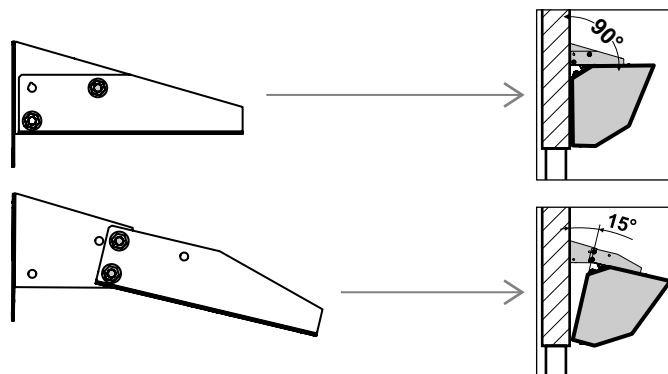
Safe distance to surfaces of structures, flooring and objects made of flammable materials from air curtains with electrical heating is as follows:

- safe distance of flammable materials in the direction of the main air stream (past the air outlet) is 500 mm
- safe distance of flammable materials above the air curtain is 500 mm
- safe distance of flammable materials in other directions is 100 mm



MOUNTING THE AIR CURTAIN ONTO A WALL

The package includes two brackets for mounting the air curtain onto a wall. Depending on the chosen operating position of the air curtain, i.e. either standard position (air flow direction perpendicular to the ground) or angled position (air outlet at 15° angle), the brackets must be adjusted by placing the screws into the corresponding holes.

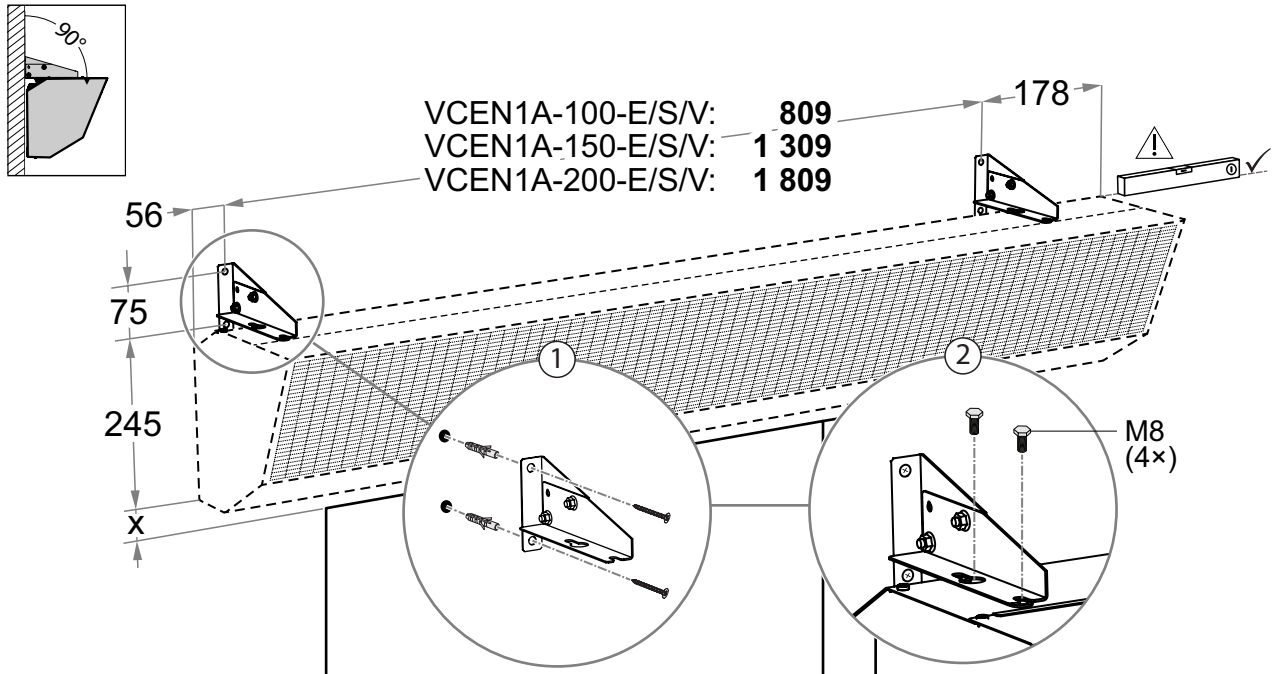


Screws and wall plugs for mounting the brackets onto a wall must be chosen based on the properties of the wall onto which the air curtain is to be mounted.

Mounting the air curtain:

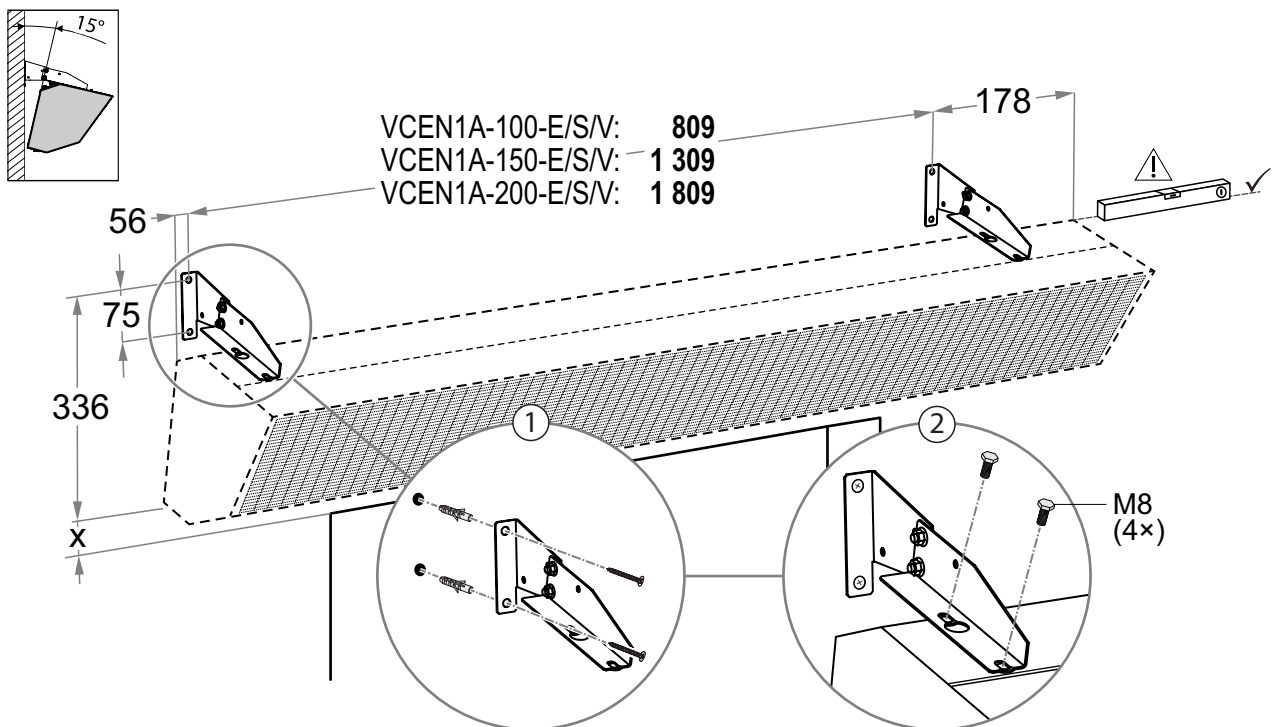
- 1 Measure and mark out the dimensions of the air curtain and the spacing of the brackets onto the wall, drill holes for the wall plugs and screws and mount the brackets onto the wall.
- 2 With the assistance of suitable lifting equipment or at least two other persons, lift the air curtain and attach it to the brackets using the supplied M8 screws.

Standard Air Curtain Installation



X = As close to the top of the doorway as possible

Installation of Curtain with 15° Blowing Angle

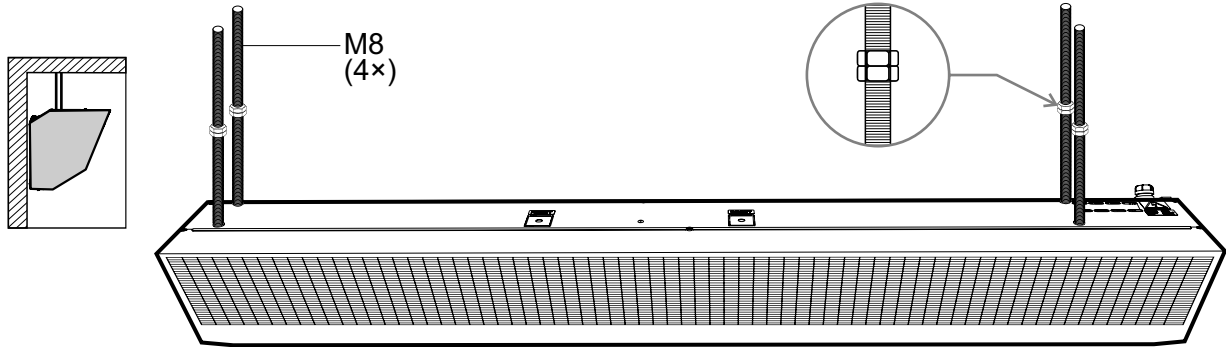


X = As close to the top of the doorway as possible

Mounting the Air Curtain onto the Ceiling

The air curtain can also be mounted onto the ceiling if needed. The method for suspending the air curtain must be chosen depending on the conditions in the place of operation, which is why this manual does not provide specific steps for mounting. It is recommended to consult a qualified professional company or the manufacturer of the air curtain for details.

The below figure serves only as an illustrative example with use of M8 threaded rods and nuts.



Before mounting the air curtain onto the ceiling, make sure the ceiling structure is able to carry the weight of the air curtain.

CONNECTION

POWER CONNECTION



Electrical connection of the air curtain must be done based on a project drawn up by a professional, qualified project planner for electrical equipment.

Electrical connection must only be done by a worker with technical education and training in electrical wiring with observance of valid national regulations and directives.

The main power supply must be switched off before any intervention into the internal parts of the air curtain.

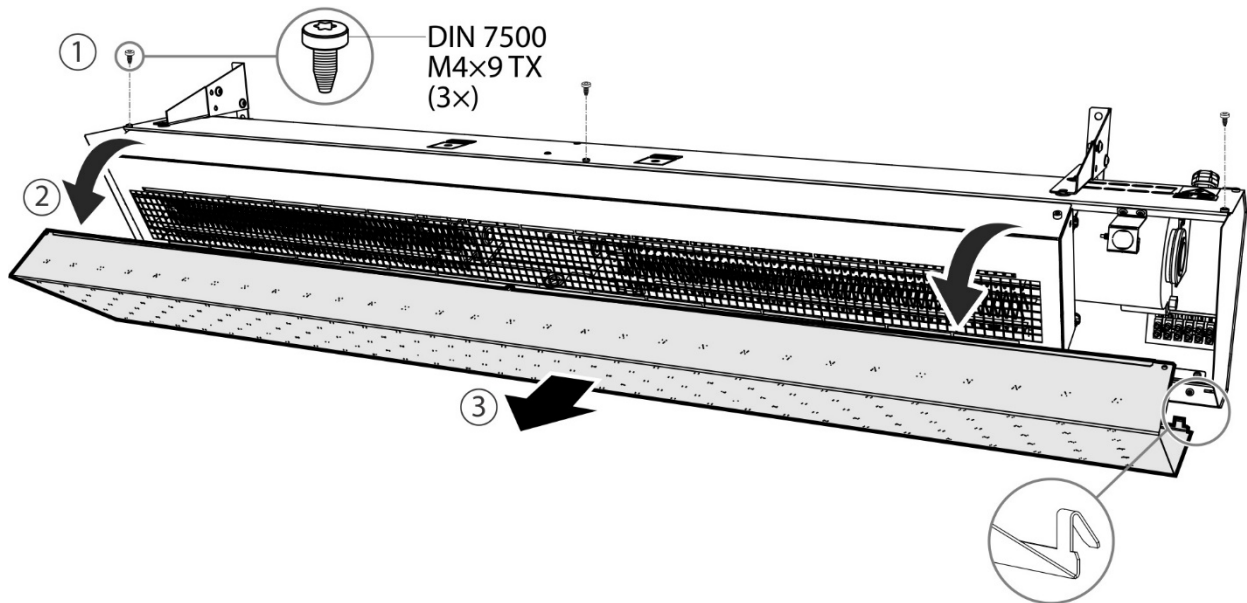
Electrical parameters including enclosure rating (IP) are listed on the air curtain's machine plate.

The air curtain must be protected by a suitable circuit breaker that corresponds to its electrical parameters.

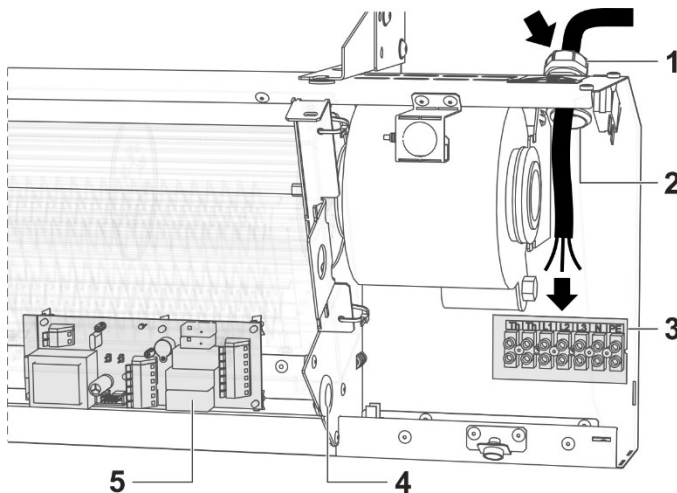
The neutral conductor must always be connected (TN-S system).

The mains connection must include a main switch that disconnects all poles.

- 1 Dismount the front cover of the air curtain by removing the three M4×9 screws from the top of the air curtain (1), tilt out the cover (2) and unhook it at the bottom from the openings in the air curtain body (3).



- 2 Lead the power cables in through the grommet to the terminal block.



- 1 Grommet for power cable
- 2 Grommet for accessories
- 3 Terminal block
- 4 Grommet for accessories (inside the air curtain)
- 5 Electronics module

Minimum power cable dimensions:

MODEL	CABLE [pcs × mm ²]
VCEN1A-100-E	5 x 2.5 mm ²
VCEN1A-100-V	3 x 1.5 mm ²
VCEN1A-100-S	3 x 1.5 mm ²
VCEN1A-150-E	5 x 4 mm ²
VCEN1A-150-V	3 x 1.5 mm ²
VCEN1A-150-S	3 x 1.5 mm ²
VCEN1A-200-E	5 x 4 mm ²
VCEN1A-200-V	3 x 1.5 mm ²
VCEN1A-200-S	3 x 1.5 mm ²



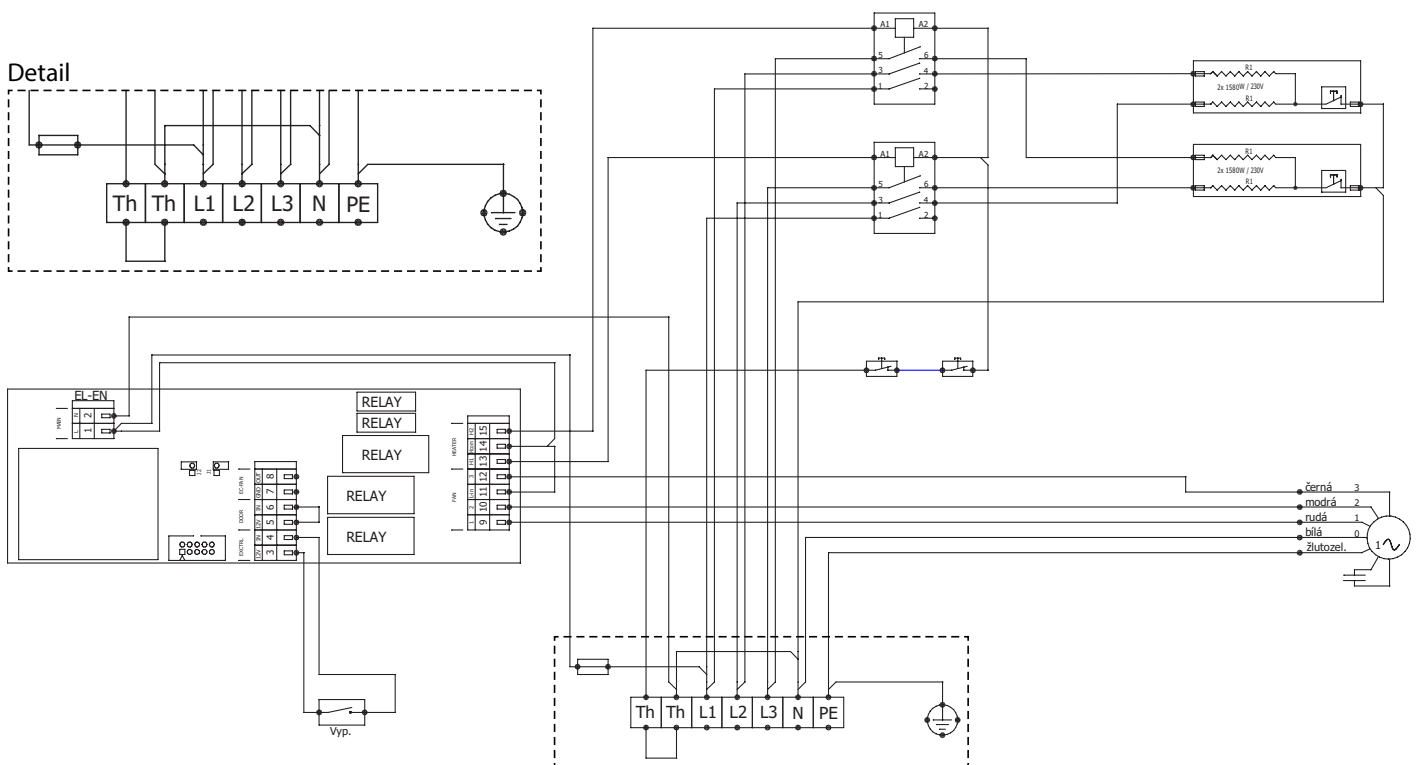
The conductor cross-sections are informative only. Proper cross-section must be determined during project planning based on cable length required for connection.

3 Connect according to diagrams for your specific air curtain model.



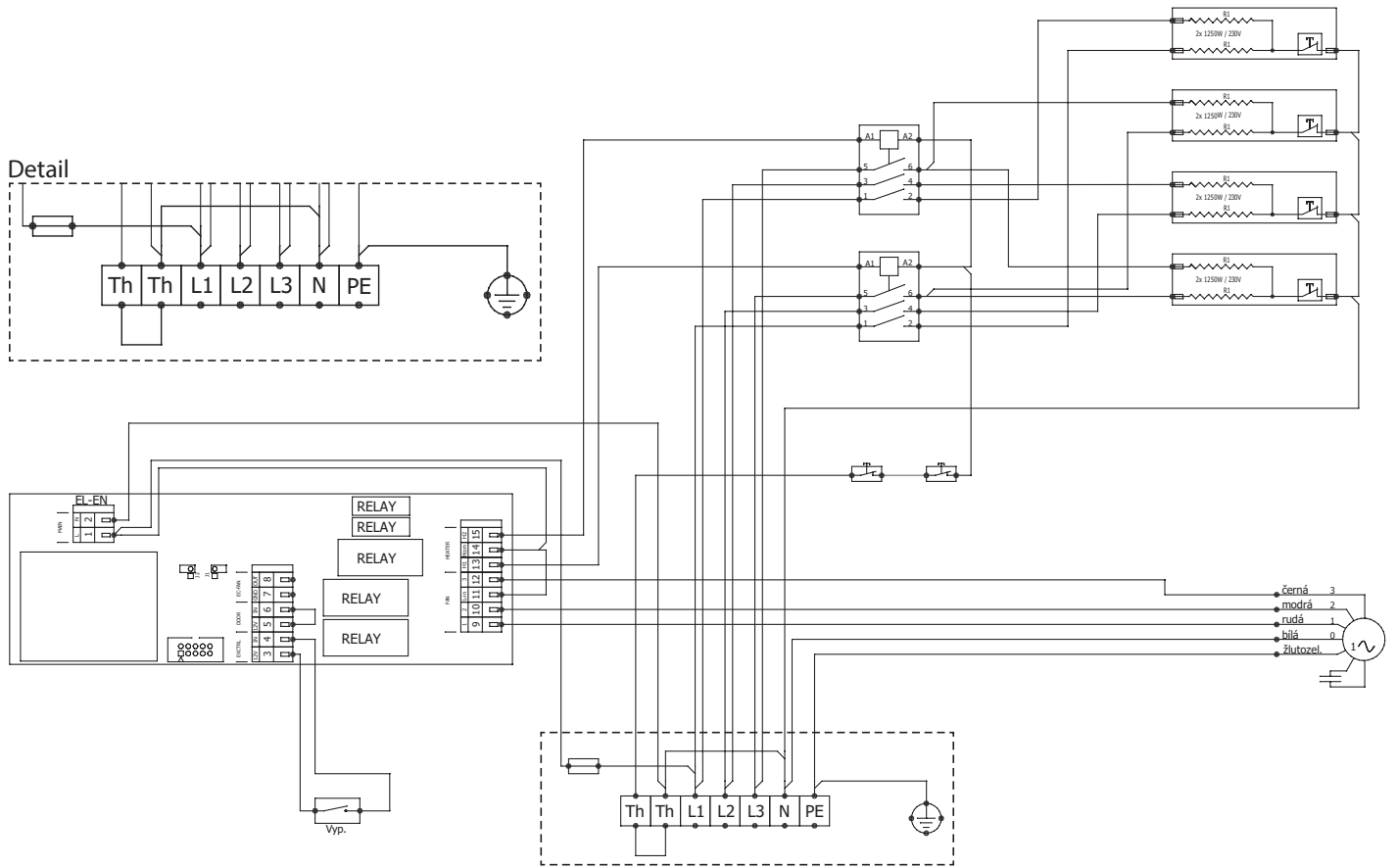
When in doubt, do not connect the air curtain yourself. Contact your supplier.

VCEN1A-100-E



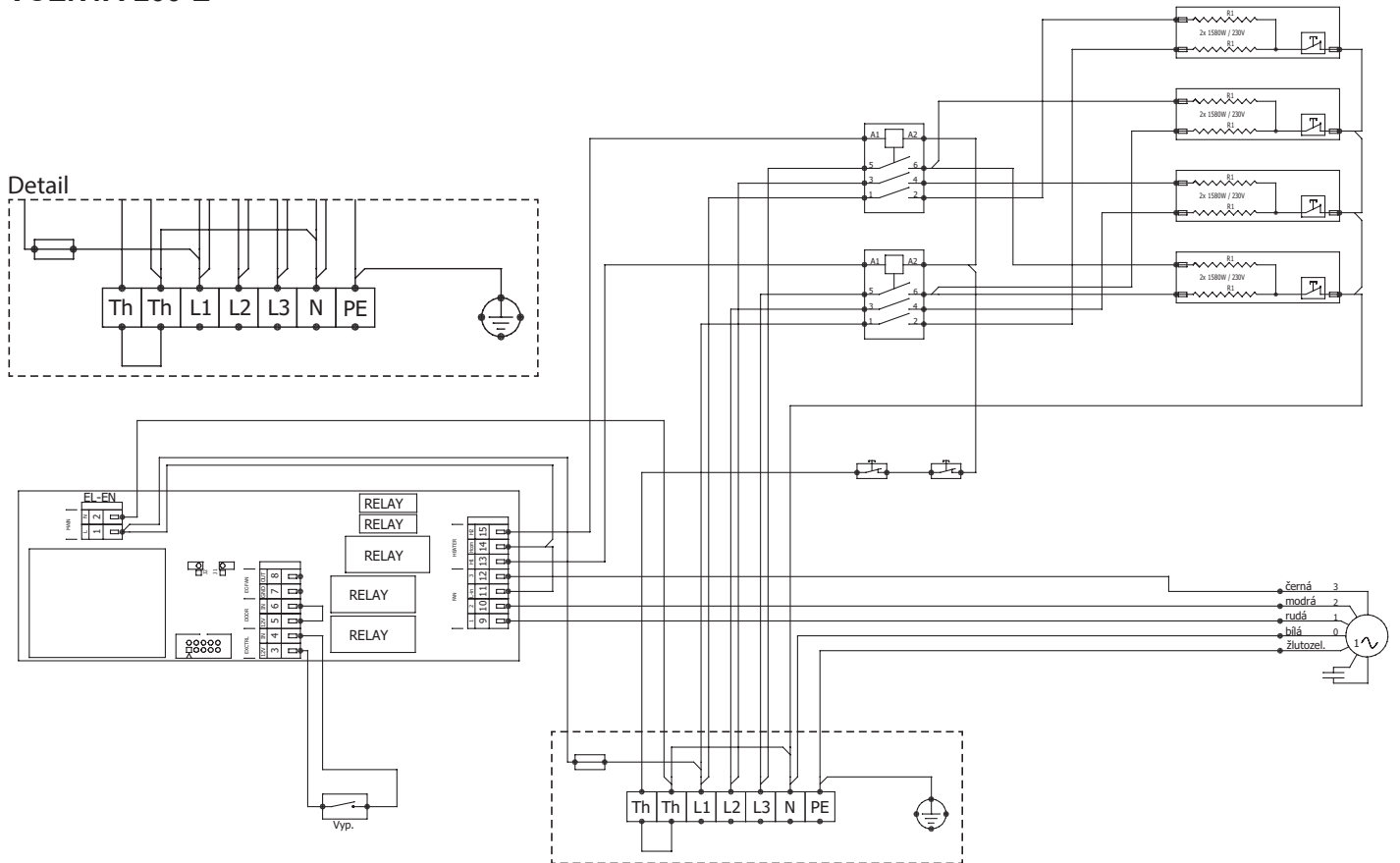
VCEN1A-150-E

Detail

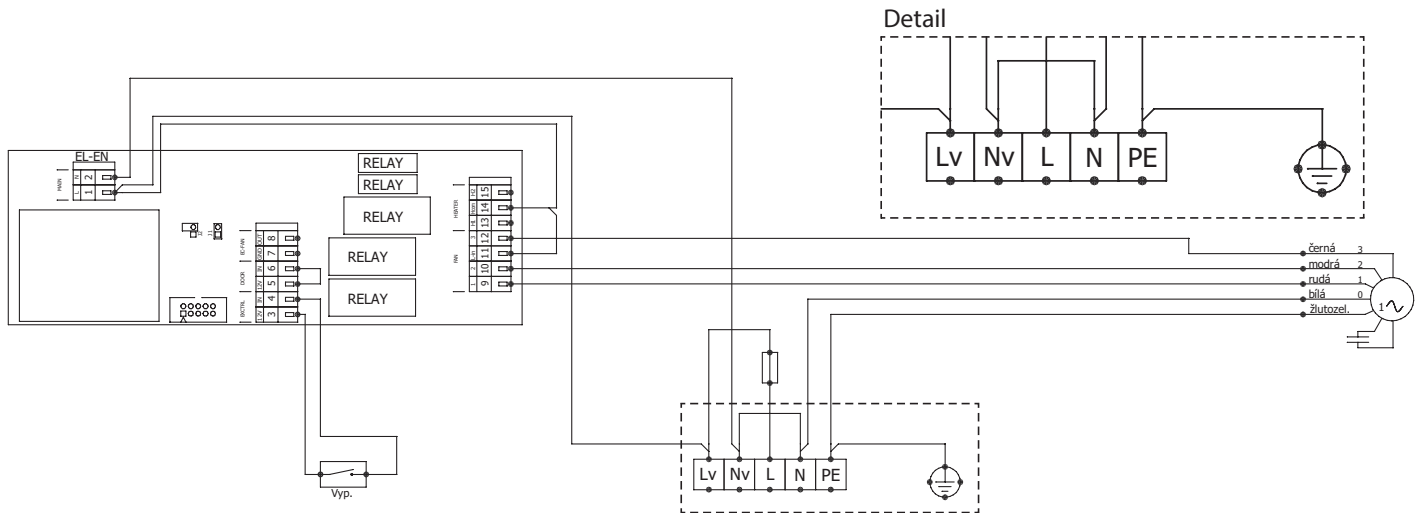


VCEN1A-200-E

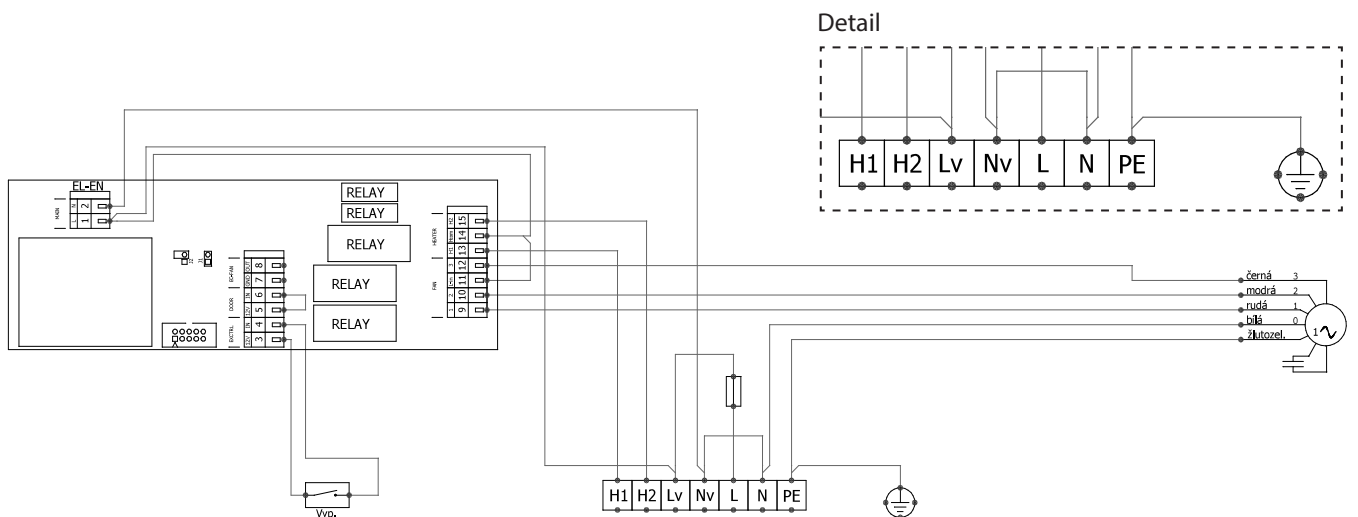
Detail



VCEN1A-100-S / VCEN1A-150-S / VCEN1A-200-S



VCEN1A-100-V / VCEN1A-150-V / VCEN1A-200-V



CONNECTING EXTERNAL ELEMENTS

The following external elements (accessories) can be connected to the Entresse air curtain:

- Mechanical door switch (DS) – used for turning the air curtain on/off based on door position
- Door contact (DK) – activates the air curtain depending on door position
- Indoor thermostat (TER-P) – activates the air curtain based on set indoor temperature
- Two-way valve (ZV2) / three-way valve (ZV3) – designed for controlling water-to-air heat exchanger output



Before connecting any external elements, the main power supply to the air curtain must be switched off.

All external control elements must be connected exactly in accordance with the electrical diagram.

Maximum length of communication cable is 50 meters. The communication cable should not run alongside power cables and should be placed at a sufficient distance from them (in accordance with relevant standards – however, no less than 150 mm).

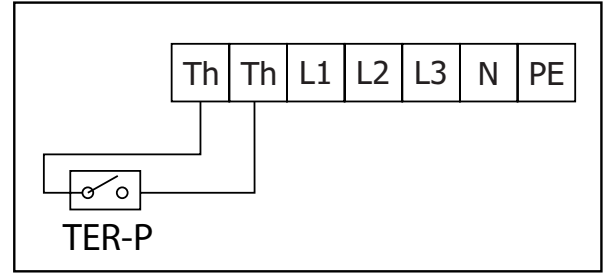
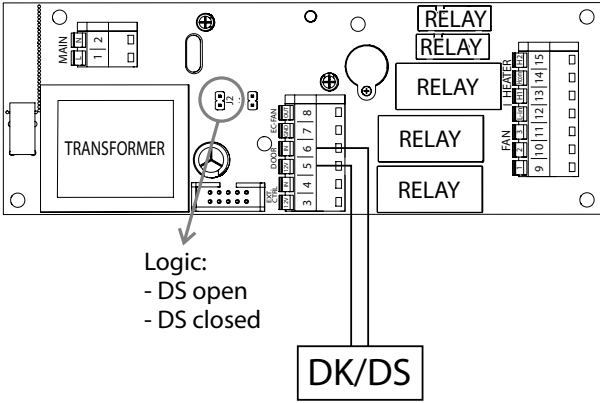
If you do not plan to connect the cable immediately after installing the remote control and the air curtain, it is best to immediately cover the connectors or cable ends with insulating tape to protect them against any mechanical damage or short circuit.

The cable connector must not come into contact with water or any liquid.

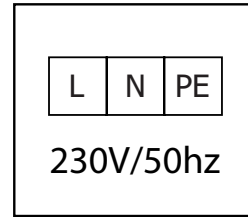
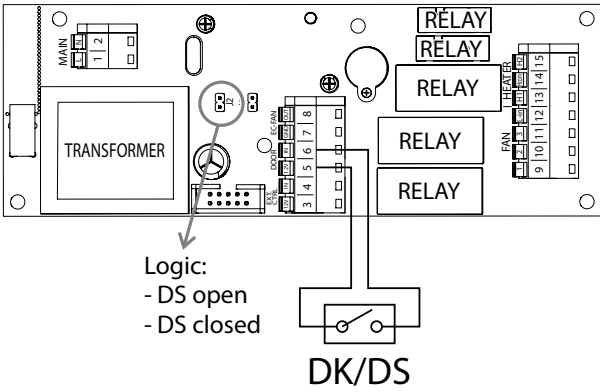


We recommend only using external elements we supply. When in doubt about whether using a non-original accessory is safe and correct, contact your supplier.

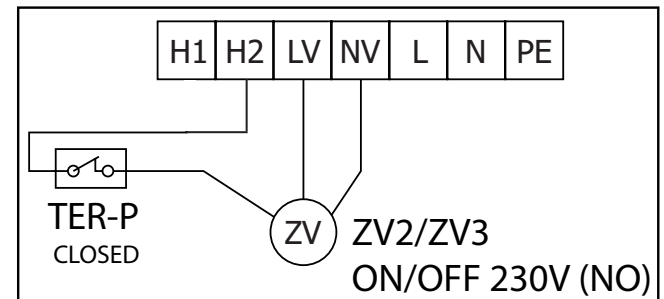
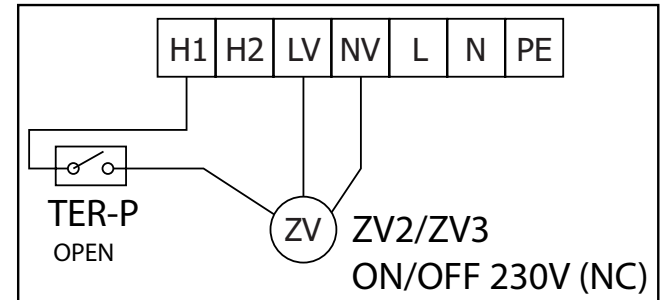
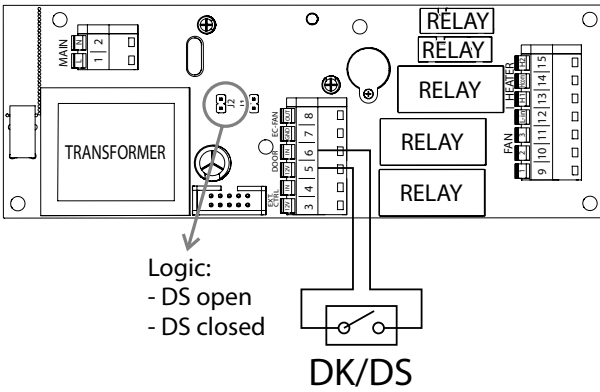
VCEN1A-100-E / VCEN1A-150-E / VCEN1A-200-E



VCEN1A-100-S / VCEN1A-150-S / VCEN1A-200-S



VCEN1A-100-V / VCEN1A-150-V / VCEN1A-200-V



HEATING WATER CONNECTION



Connection and pressure testing of the heater must be done by a professional with expert knowledge in the field of plumbing and must abide by all applicable standards and regulations of the given country.

Water connection must be done in accordance with markings on the air curtain. Make sure not to interchange the water inlet and outlet.

Do not utilise used hoses and hose assemblies to connect heating water. Always use new ones.

To connect the heat exchanger to the heating system, prepare flexible hoses with thermal insulation with inside diameter of **DN18** which terminate with a **G3/4"** screw joint.

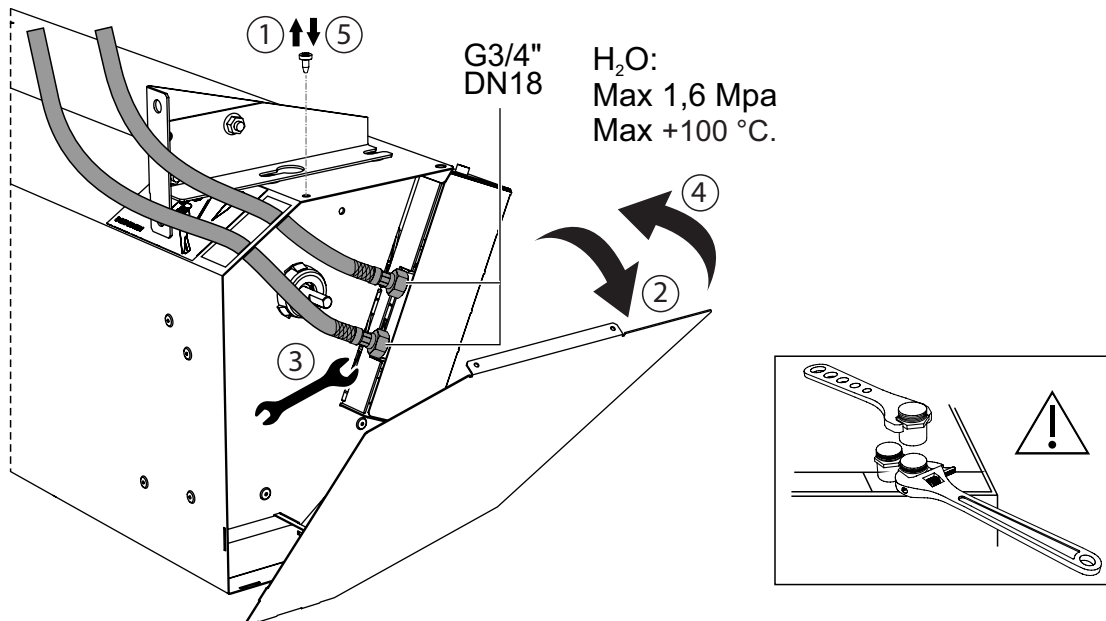
The heater is designed for using water with maximum pressure of **1.6 MPa** and maximum temperature of **100 °C**.

- 1** To connect water supply properly, first remove the side cover of the air curtain by removing the M4×9 screw at the top (1) and take off the cover (2).
- 2** Connect the hoses to the screw joints in the air curtain (3).



It is necessary to hold the heater outlets with pliers during connection to make sure the outlets do not get damaged!

- 3** Replace the cover (4) and screw it back to the top cover (5).

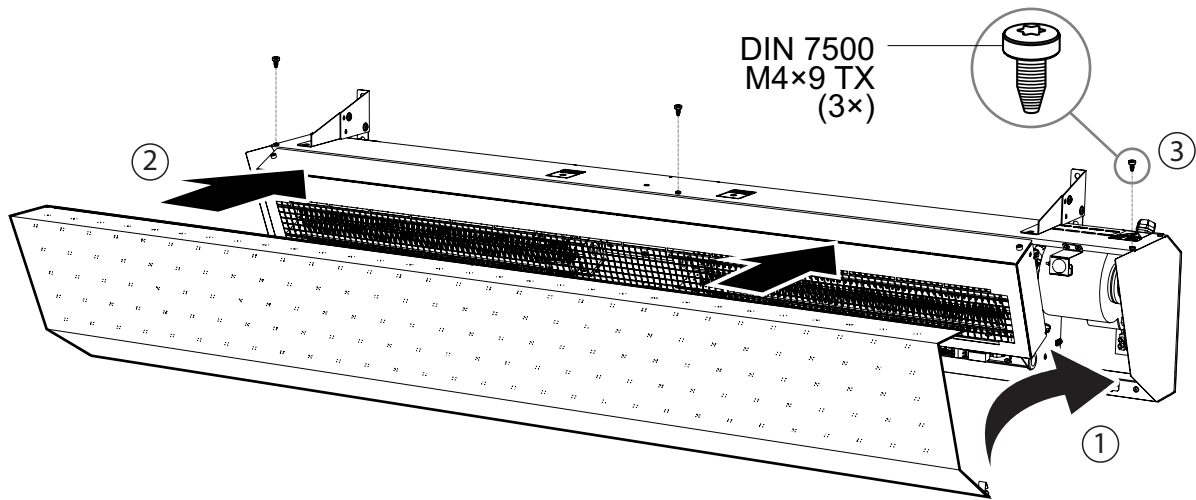


We recommend equipping the inlet and outlet hoses of the heater with shut-offs to be able to cut off water supply when needed.

FINISHING INSTALLATION

Replace the Front Cover of the Air Curtain

- 1 Hook the bottom portion of the cover back into the holes inside the air curtain body (1).
- 2 Close the cover (2) and fasten it from the top with three M4×9 screws (3).



Once installation is complete but before putting the air curtain into operation, check:

- that all installation conditions stated in this manual were observed (safe distances and installation dimensions)
- that power supply and water supply are properly routed and connected
- that no tools or other objects that could damage the air curtain have been left inside the air curtain
- that the covers of the air curtain are in place
- that the operator has been trained and has received the instruction manual



After installing the curtain but before first turning it on, read the instructions for operation and maintenance and instructions for safe use of air curtains.

OPERATION

RULES FOR SAFE OPERATION

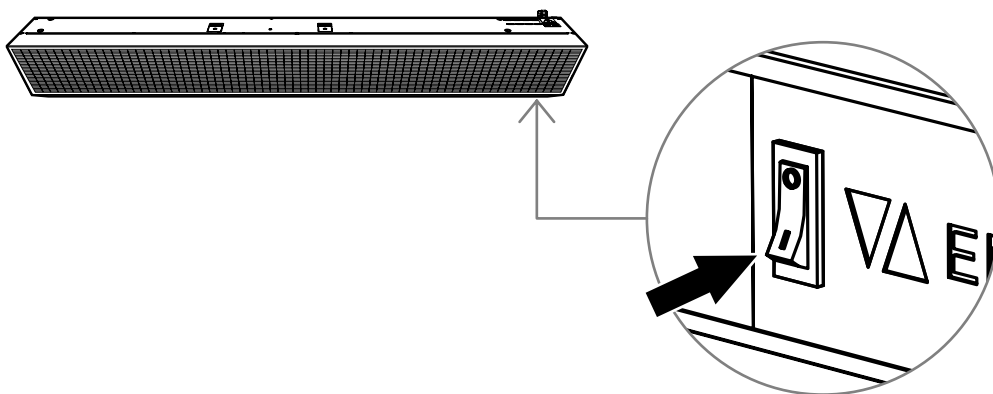
- Control and operate the curtain only in accordance with this manual.
- Only use original accessories.
- Never insert foreign objects into the air curtain.
- Always abide by the air curtain's operating temperatures.
- Never cover the air inlet and outlet portions of the air curtain.
- Never put your hands into the air inlet or outlet portion of the air curtain while the fan is spinning and the air curtain is running.
- Do not overstress the structure of the air curtain.



In the event of fire, the air curtain must be extinguished with a CO₂ or powder fire extinguisher. Never extinguish it with water!

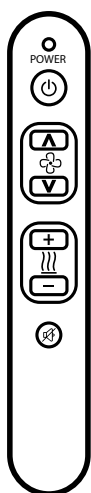
SWITCHING ON

Use the on/off button (I/O) to switch on the power to the air curtain.



CONTROL VIA REMOTE

Once the air curtain is switched on, it can be controlled using the remote. The function of some buttons is identical for all air curtain models, other buttons' functions depend on the model; see the table below.



Symbol	Function	Applies to air curtain model
	Turn the last selected air curtain mode on or off	All models
	Fan speed control	All curtain models: Level 1/ level 2/ level 3
	Heating control	VCEN1A-xxx-E: Level 1/level 2 VCEN1A-xxx-V: On/off
	Turn off IR signal sound (beep)	All models

SWITCHING OFF

The air curtain can be switched off either by using the button on the remote or using the on/off switch on the bottom of the air curtain.



If the air curtain is switched off using the main switch (I/O), it will not respond to the remote.

TROUBLESHOOTING

Below are listed the most common issues that can arise after installing the air curtain or during its operation.

ISSUE	WHAT TO CHECK	WHAT TO DO
THE AIR CURTAIN WON'T TURN ON	Is the air curtain connected to power? Is there a power outage and/or is the main circuit breaker off?	Check the power supply.
	Do the supply current and voltage values correspond to the values on the air curtain's machine plate?	Compare the supply power values with the values on the machine plate.
	Does the electrical connection of the air curtain correspond to the connection diagram in the manual?	Check the connection of the air curtain.
	Is the neutral conductor connected?	Check the neutral conductor.
	Are all conductors connected to their terminal?	Check that none of the conductors came loose from their terminal during air curtain connection.
	Is the on/off switch (I/O) in the on position?	Check the position of the switch
	Are the batteries in the remote working?	Check the batteries and replace if needed.
THE AIR CURTAIN IS CONNECTED TO POWER BUT DOES NOT FUNCTION PROPERLY	Are the power cable and the cables of external elements connected correctly?	Check the connection of the cables.
	Is the air curtain's fuse intact?	Check that the fuse isn't burnt out.
THE AIR CURTAIN DOES NOT HEAT	Is there sufficient space in front of the inlet grill?	Check the space in front of the air curtain.
	Is the air inlet unobstructed?	Check that the grill isn't clogged by dust and dirt and that it isn't covered by anything.
	Is the air inlet clean?	Check the cleanliness of the air curtain.
	Do all the fans inside the air curtain function properly?	Check the fans. If some of them do not work, contact a service centre and have the faulty fan replaced.
THE AIR CURTAIN HAS OVERHEATED AND STOPPED WORKING (the safety thermostat cut out power supply to the electrical heat exchanger)	Is the inlet or outlet grill unobstructed? Are the internal parts of the air curtain free of dirt?	Check that the outer grills and the internal parts of the air curtain aren't clogged or covered up. Disconnect the air curtain from power and let it cool. Check the emergency thermostats of the heater.
	Is the incoming air cool enough?	Check air temperature. Make sure the air curtain only takes in air up to a maximum temperature of +40 °C. Then, disconnect the air curtain from power and let it cool. Check the emergency thermostats of the heater.

WHEN YOU CANNOT REMOVE THE MALFUNCTION YOURSELF

If you were unsuccessful in resolving the issue, contact the supplier or exclusive representatives of 2VV. Warranty and post-warranty service is done by the supplier or any of the authorised service centres. The supplier has access to a list of these authorised service centres.

Provide the supplier or service centre the following information:

- Type designation of the air curtain
- Accessories used
- Place of installation
- Serial number
- Installation conditions (including electrical)
- Runtime
- Detailed description of the malfunction

MAINTENANCE

The air curtain must be kept clean and operable. Regular and correct maintenance of the air curtain is an important prerequisite for its safe and faultless operation and long service life.



The main power supply must be switched off before any intervention into the internal parts of the air curtain. Never open the air curtain while the fan is spinning and the air curtain is running.



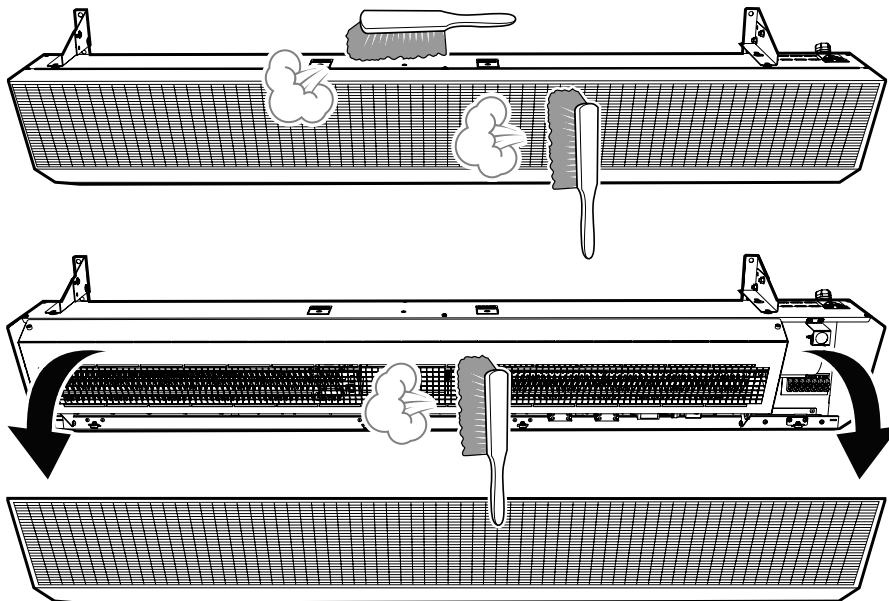
Some parts of the air curtain can get very hot during operation and could cause burns. Always let the air curtain cool down completely before beginning maintenance!

The air curtain may only be cleaned using a vacuum cleaner, brush or dry cloth. It is strictly forbidden to clean the air curtain with water, aggressive chemicals or solvents.

Follow the principles of occupational safety and use protective equipment.

CLEANING

- Clean the external parts of the air curtain of dirt and dust regularly or as needed.
- Use a brush to clean the front cover with the inlet grill as well as the outlet grill on the underside of the air curtain.
- Remove the front cover (see chapter POWER CONNECTION, step 1) and clean the interior of the air curtain as well.



REGULAR CHECKS

Regularly check:

- That all connectors are plugged in and the screws on terminals and electrical connections are tightened.
- The condition of the earthing and of the insulation of all cables. If you discover any damage, stop using the air curtain and have it repaired as soon as possible.
- The leak-tightness and overall condition of heating water hoses.

REMOVAL, STORAGE AND DISPOSAL

REMOVAL

In the event you need to remove the air curtain in order to store it or transport it and install it elsewhere, proceed as follows:

- 1 Turn off the air curtain using the main switch and also switch off its main power supply. For air curtains with water heating, turn off heating water supply to the air curtain.
- 2 Clean the exterior of the air curtain.
- 3 Remove the front cover (see chapter POWER CONNECTION, step 1) and disconnect the power cable from the air curtain's terminal block. If external elements were used, disconnect their power cables as well.
- 4 If your air curtain includes a water-to-air heat exchanger, first remove the left cover (see chapter HEATING WATER CONNECTION, step 1), then disconnect both water hoses (G3/4" screw joint). Replace the side cover.
- 5 Replace the front cover.
- 6 Use suitable lifting equipment or the assistance of two people to support the air curtain so that it does not fall. The weight of the air curtain by model is stated in chapter TECHNICAL PARAMETERS. Then, unscrew the mounting brackets or threaded rods (depends on how the air curtain is mounted) and carefully remove the air curtain.
- 7 Load the air curtain onto suitable transport equipment and transport it to the new installation spot or storage space.



If you intend to install the air curtain onto a new spot afterwards, transport it in horizontal position only!

STORAGE

Store the air curtain as follows:

- 1 Wrap the air curtain in suitable material, such as plastic film, canvas etc. or place it in a suitable box or crate.
- 2 Transport the air curtain into a dry space that is protected from weather conditions that could damage the packaging and negatively affect the air curtain. The ambient temperature must be between +5 °C and +40 °C.
- 3 Only store the air curtain in horizontal position. Never place it vertically or turn it with the side with electrical grommets facing downwards.
- 4 Do not place any other objects or material on top of the stored air curtain.

DISPOSAL ONCE THE AIR CURTAIN IS OUT OF OPERATION



Before you dispose of the air curtain and its parts, make sure none of them are reusable. Even old products contain resources that can be reused. Bring these to a salvage collection point.

When disposing of the air curtain, follow relevant regulations on waste disposal. It is best to dispose of components at a specialised collection point to ensure recyclable materials are reused. Take any non-reusable parts of the air curtain to a controlled waste dump.

2VW

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