

OPERATION INSTRUCTIONS

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Air curtains INDESSE

These Operating Instructions include important information and safety instructions. To ensure correct function and safety, read the following regulations thoroughly before the use of the product and comply with them!

Operation conditions

- the air curtain is designed for operation in inner dry environment within the temperature range from -15 to $+40^{\circ}\text{C}$ for transporting air without gross dust, grease, chemical vapours and other impurities
- the air curtain, as a whole, has coverage IP 44, ventilator fans IP 44 and electric terminal boxes IP 54

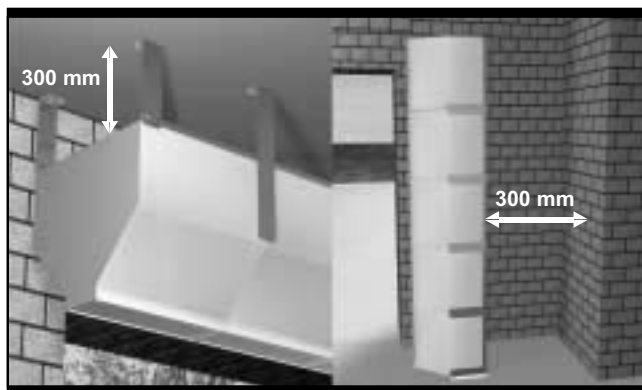
Inspection

The air curtain is packed in soft foam foil, located in wood crating and wound with stretch foil. After unpacking, inspect whether:

1. the marking on the palette complies with the type label on the air curtain
2. the casing or ventilator fans have not been damaged mechanically during the transport
3. the fixation of heating rods of water or electric exchanger is all right
4. all ordered accessories and controls have been delivered

Installation

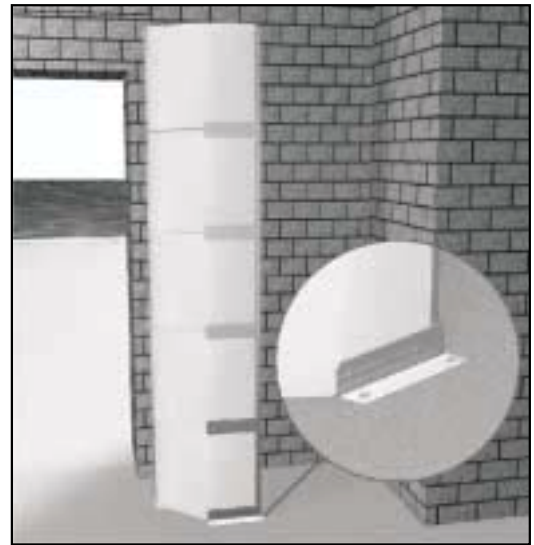
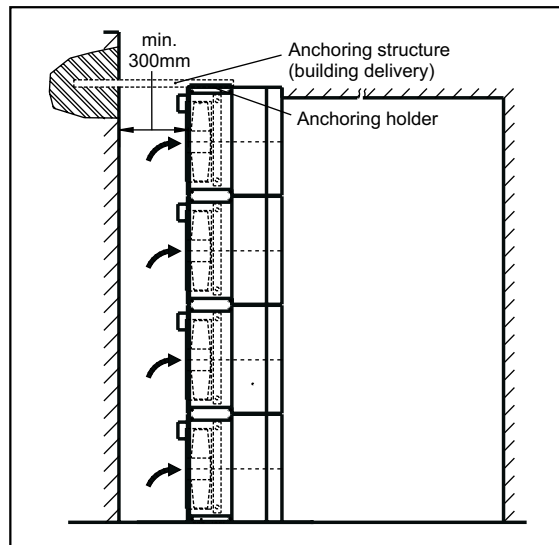
- the air curtain can be installed in a vertical or a horizontal position
- during any installation, it is necessary to comply with the minimum specified distances (refer to drawing)
- electrical connection of the air curtain shall be made by an expert person (refer to Electrical installation)
- the air curtain should be located as close to the curtained opening as possible
- we recommend the air curtain to be wider (horizontal position) or higher (vertical position) than the curtained opening
- if you wish to increase the curtaining effect, you can use two air curtains installed against each other
- we recommend the air curtain to be turned with the exhaust facing outwards by 10° from the vertical axis (refer to drawing)
- when using the "Active combination", which means the combination of cold and hot air curtains, the air curtains with the exchanger are installed in the bottom part of the set
- individual modules are screwed together with connecting elements, which form a part of the delivery. We recommend using moment wrench for their connection so that the connecting nuts are not broken away.



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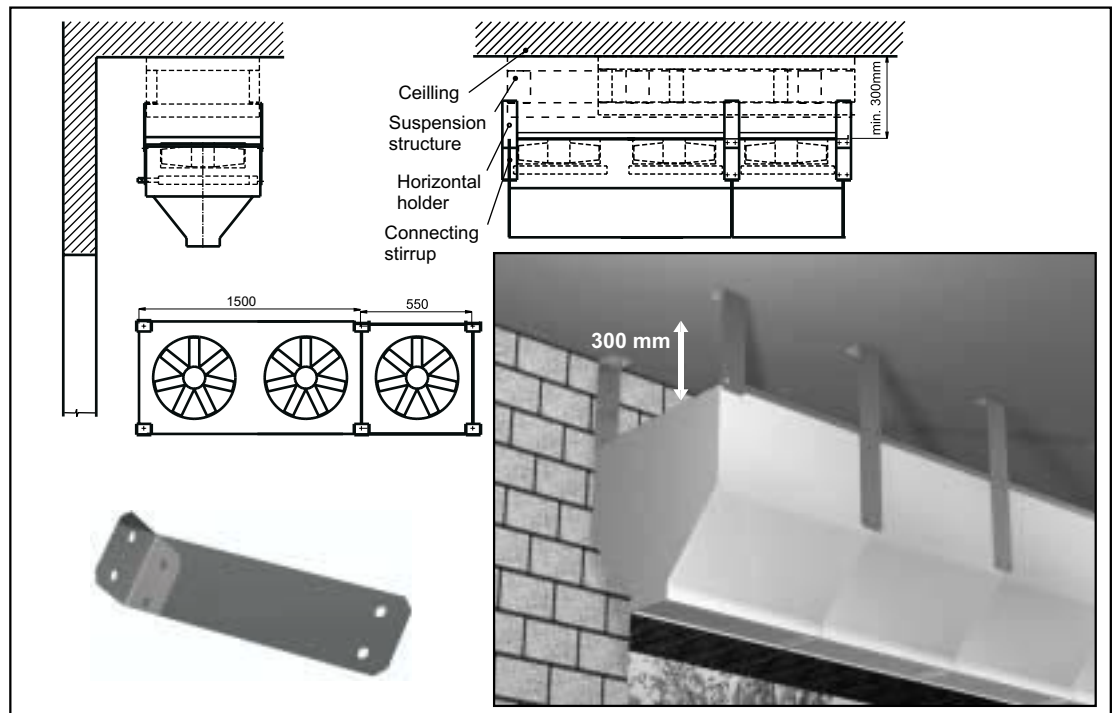
Vertical installation

- in the set with the height of 2.5 m or smaller, we recommend fixing the air curtain in the bottom part by means of 2 pcs of anchoring holders (VCP-DK-01); the upper part does not need to be anchored. If the height of the set is 2.5 m or more, the air curtain shall be always attached both in the top and bottom parts by means of anchoring holders (VCP-DK-01). Ensure the air curtain is secured so that it could not fall.
- the air curtain shall be located as close to the door opening as possible



Horizontal installation

- before the suspension, you need to check if the modules are properly screwed together with the connecting elements. The air curtain shall be always suspended by means of horizontal holders (VCP-DH-01). Ensure the air curtain is secured so that it could not fall.
- the air curtain shall be located as close to the door opening as possible



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Inspection before electric connection

Before the realization of the electrical connection of the air curtain, check:

1. If the interconnection of cables in the installation box on the body of the air curtain and the connection of the controller, if it is included in the delivery, are all right. If there is any free cable, connect it again according to the scheme provided on the air curtain or inside the controller. In case of any doubt, contact the closest seller.
2. If the electric scheme of the connection complies with the description of the terminal board inside the electric terminal box on the air curtain and in the controller. If it does not agree, contact the closest seller.

Electric installation

- the electric connection of the air curtain must be carried out on the basis of a professional project of a qualified designer of the electrical equipment. The installation may only be performed by an authorized worker. All applicable national regulations and directives shall be complied with.
 - the connection of the air curtain shall be realized exactly according to the electrical scheme of the connection, which is located in the electric box on the air curtain. Other components, e.g. control of the air curtain or the external sensor, shall be connected according to the schemes delivered with them. The interconnection of the whole system is solved schematically herein.
 - physical marking complies with delivered schemes
 - technical parameters of the air curtain are specified on the production label, which is located on the rear side of the air curtain
 - the type of the output regulation and air curtain control is displayed schematically below. Electrical schemes, which solve this interconnection, are provided at the end of this manual.
 - if the basic control ZOD-VCP is not a part of the delivery of the electric air curtain, the protection of the rods against overheating shall be ensured in a different way.
- The heating may not be switched on if the ventilator fans are not in operation!!!**
- when connecting the ventilator fans, check the direction of rotation. The fans must suck the air from the back part of the air curtain.

Overheating of electric exchanger

- if the air curtain stops heating, the most frequent cause is the overheating of the electric exchanger and switching on the emergency thermostat. In such a case, let the air curtain cool down. Find out the cause of overheating.

The most frequent reasons are:

- the ventilators do not work and the air curtain is heating;
 - the air curtain is poorly installed and its exhaust or suction is blocked;
 - while transporting the air curtain, the fixation of thermostats could have been loosened.
- eliminate the cause (if the elimination of the cause is too difficult, contact the supplier or an authorized service). Then unscrew the black cap on the thermostat (refer to drawing) and press the red push-button so that the thermostat clicks. Test the air curtain again and if it does not heat, contact your supplier.



Connection of air curtain with water heating

During the installation of the water exchanger, it is necessary to hold the connecting ends of the tubes with pliers so that the exchanger could not be damaged or destroyed!!!

Examples of connecting controllers and other components

AIR CURTAINS WITHOUT HEATING OR WITH WATER HEATING

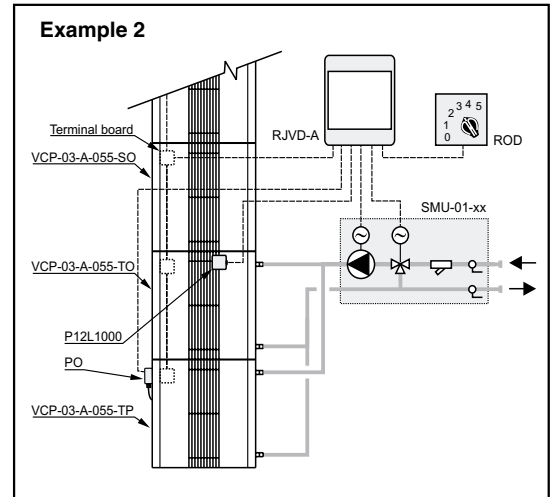
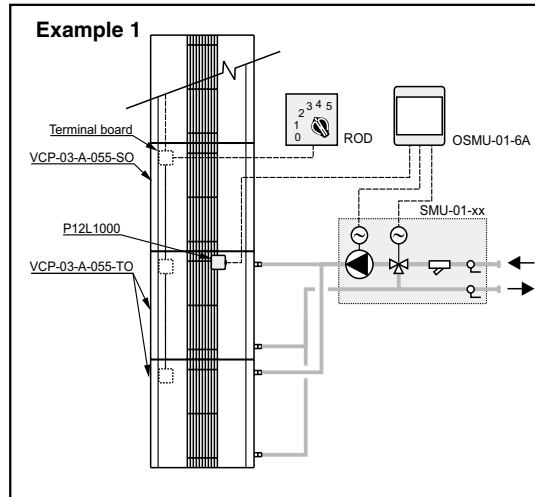
The mixing centre shall be controlled with a special equipment control OSMU in connection with channel temperature sensor. Refer to example 1.

Note: Applied hot water exchangers are designed for +100°C and maximum water pressure of 1.6 MPa.

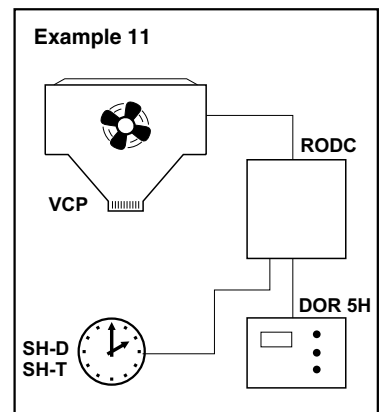
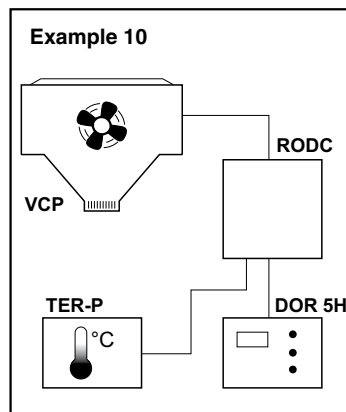
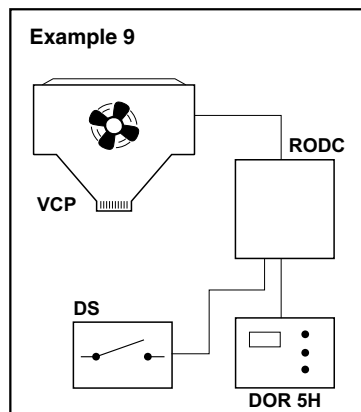
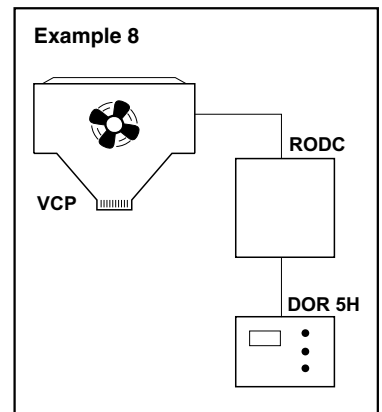
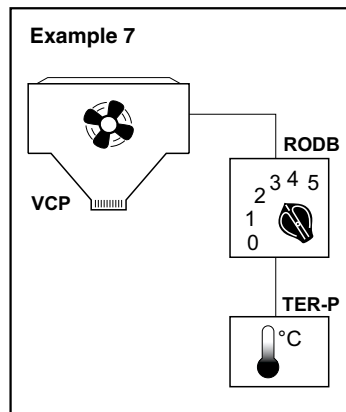
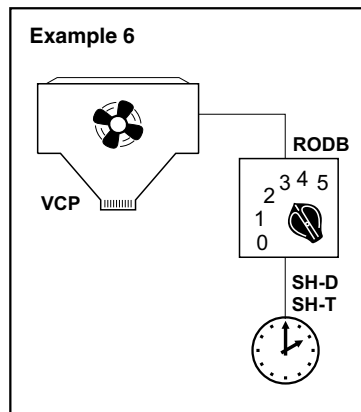
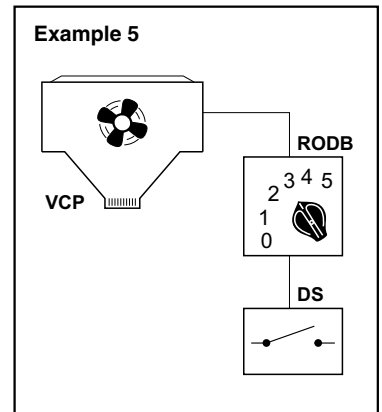
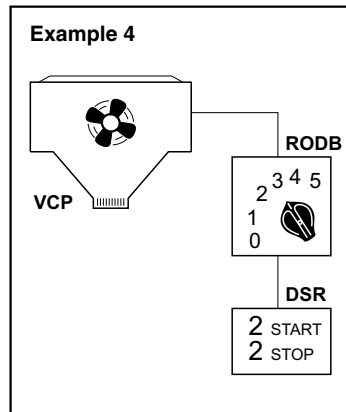
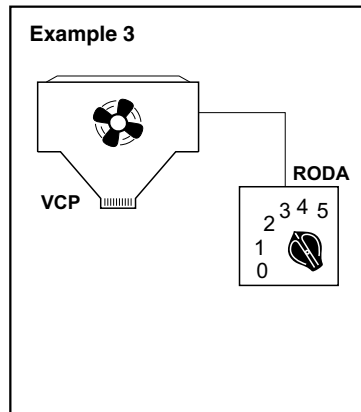
Anti-freeze protection of exchangers

- emergency switching off of the fans operation of the ventilator fans with ensuring the maximum flow of the heating medium through the air curtain requires the installation of one or several modules provided with the special sensor PO (VCP-03-A-xxx-TP, HP) in the set and concurrent connection of the exchangers of the air curtain to the mixing centre SMU. In case of a vertical installation of the air curtain, the module with the PO sensor is usually placed in the bottom part of the set. In case of a horizontal installation, it is placed in its centre. The air curtain shall be controlled with the control unit RJV in connection with the channel temperature sensor. Therefore, this set is used both for the protection of exchangers against freezing and the regulation of thermal output at the same time, refer to example 2.
- emergency switching off of the fans operation of the ventilator fans on the basis of an impulse from the sensor of anti-freeze protection PO located on the module VCP-03-xxx-TP, HP. The PO sensor shall be used to control the contactor of ventilator fans in the distributor of the electrical installation. The connection shall be solved individually according to the specific conditions in the place of installation. This type of connection does not solve the regulation of thermal output of the air curtain.

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Examples of connecting the air curtain with five-speed transformer controller RODA, RODB or RODC
 In addition to the regulation of air output, the speed controller RO are also used to switch the air curtain ON / OFF. The type RODB also enables the control with external switching elements. The air curtain set shall be connected to a controller, the nominal current of which is always higher that the sum of nominal currents of all modules in the air curtain set.

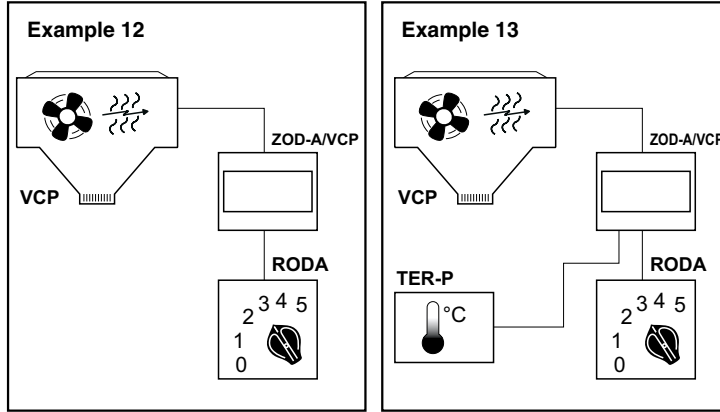


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AIR CURTAINS WITH ELECTRIC HEATER

The regulation of thermal and air outputs is solved by controllers of the type RODA in connection with the basic control ZOD-A/VCP. RODA is the basic controller with the control element for manual selection of revolutions, including the "STOP" position (positions: 0, 1, 2, 3, 4, 5).

The controller is only provided with clamps for the connection of main supply and motor of the ventilator fan. The controls are designed for inner use in dry, dust free environment without chemicals.



Ensuring correct function of air curtain

Before putting the air curtain into operation, check if the installation complies with the following conditions:

- mechanical installation complies with the conditions specified in the Article 3
- electrical installation complies with the conditions specified in the Articles 4 and 5
- it is ensured that the fans start running when the heating in the air curtain is switched on. The air curtain may never heat if the fans are not in operation. When the regulation and controls are connected correctly, it should never happen.

Maintenance

The operation of the air curtain does not require any maintenance.

Inspection

Before performing any inspection, the air curtain must be disconnected from power supply!!!

- it is recommended to check tightness of all connections and the contacts inside the electric terminal box with respect to possible oxidation
- check the coverage of the ventilator fans with dust. No solvents may be used for cleaning to avoid damage to the air curtain.

Service

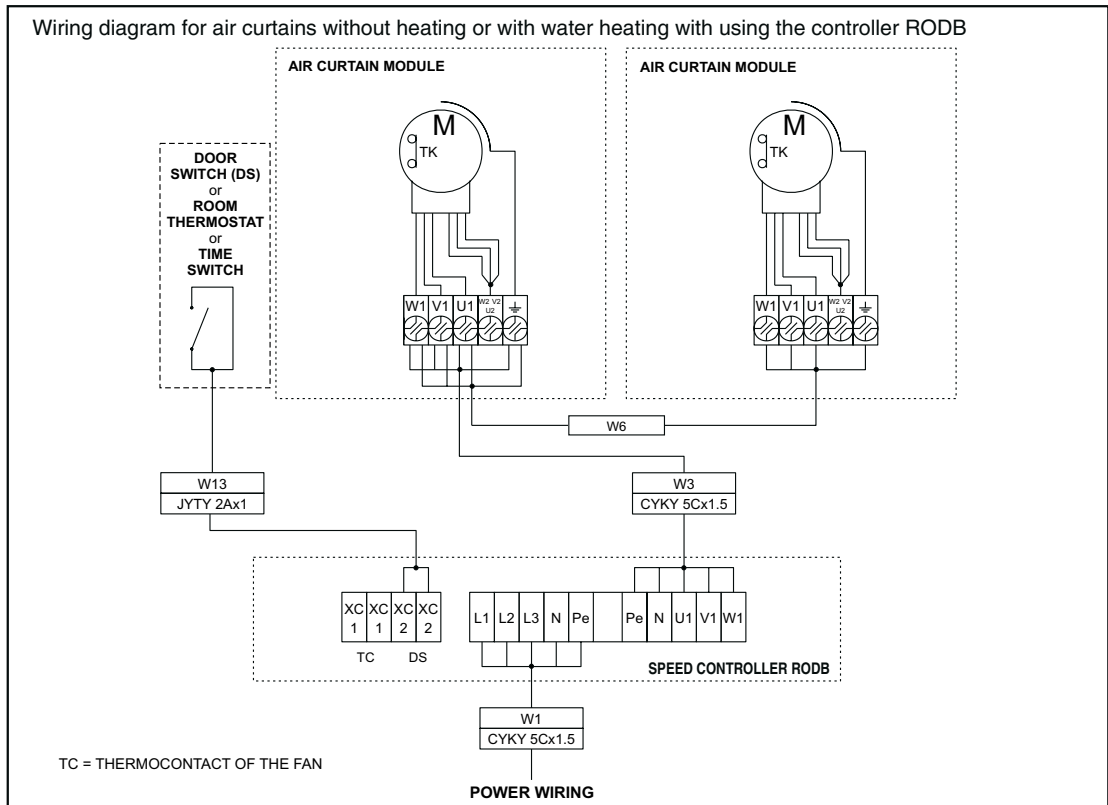
Both warranty and post-warranty service shall be carried out by the supplier or any of the authorized service organizations, the list of which is available at the supplier.

When ordering a service intervention, you need to describe the failure and specify the marking of the air curtain stated on the production label.

Warranty

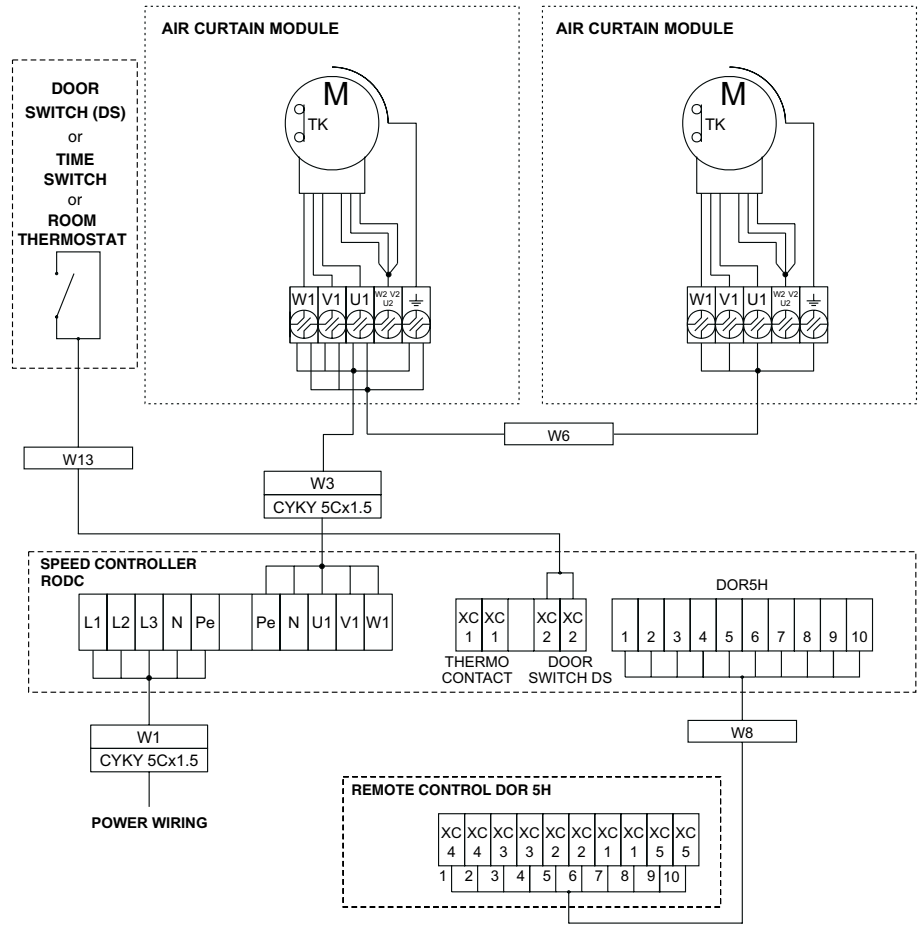
The air curtain is subjected to standard 24-month warranty.

Wiring diagrams

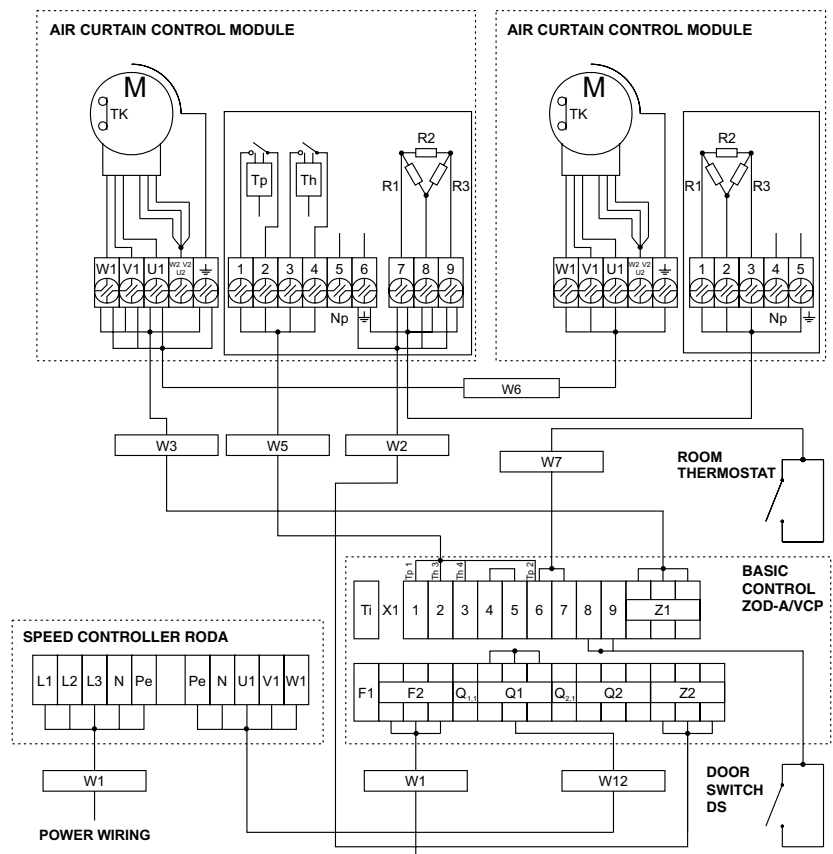


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Wiring diagram for air curtains without heating or with water heating with using the transformer controller ROEC with remote control DOR5H.



Wiring diagram for air curtains with electric exchanger



EXPLANATION

Tp - operation thermostat W 1, 2, 3, 6, 7, 12 - CYKY 5Cx... diameter of wiring depends on load and length of the wire
 Th - emergency thermostat W 5 - CYKY 5Dx1.5

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Line scheme for ZOD-AVCP

