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1. GENERAL INFORMATION

SOLANO INDUSTRY air curtain generating an air barrier which protects interior from external environment (its temperature, solids and smog).

SOLANO INDUSTRY TYPES:

INDUSTRY-W-150 - curtain with water heat exchanger max. range 7 m*;

INDUSTRY-N-150 - curtain without heat exchanger (ambient); max. range 7,5 m*

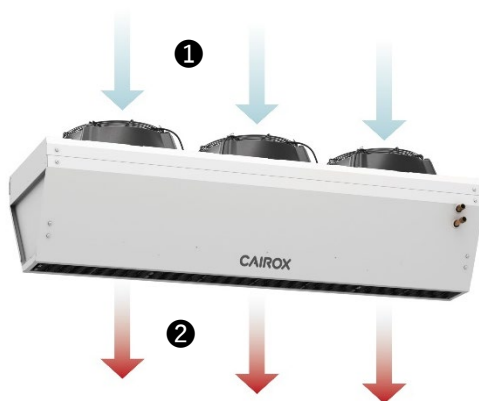
INDUSTRY-E-150 - curtain with electric heat exchanger max. range 7 m*;

INDUSTRY-W-200 - curtain with water heat exchanger max. range 7 m*;

INDUSTRY-N-200 - curtain without heat exchanger (ambient); max. range 7,5 m*.

INDUSTRY-E-200 - curtain with electric heat exchanger max. range 7 m*;

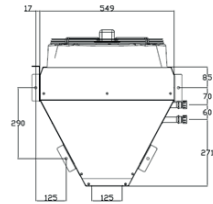
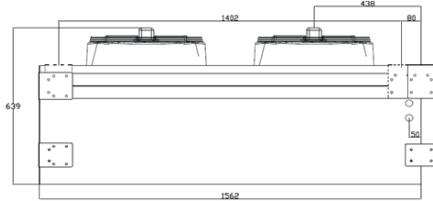
* Vertical range of nonisothermal stream (at velocity boundary equal above 3,0 m/s),



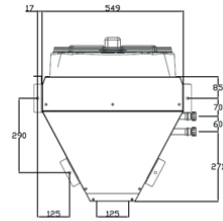
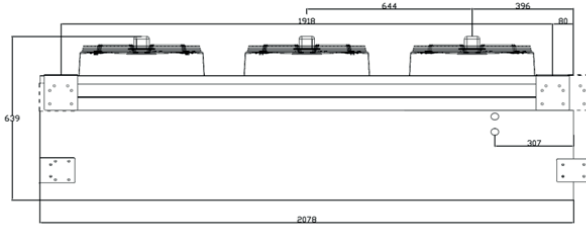
❶ air inlet; ❷ air outlet;

2. DIMENSIONS

SOLANO INDUSTRY: N-150; W-150; E-150



SOLANO INDUSTRY: N-200; W-200; E-200



3. TECHNICAL DATA

		W-150	N-150	E-150	W-200	N-200	E-200
Fan power supply [V/Hz]		230 / 50					
Fan power consumption [kW]	Step	1		0,34		0,36	
	2	0,42		0,44		0,44	
	3	0,68		1,05		1,05	
Fan current consumption [A]	Step	1		1,5		1,6	
	2	2,3		3,6		3,6	
	3	3,0		4,5		4,5	
Air flow [m ³ /h]	Step	1		4000		4300	
	2	5100		5400		5200	
	3	6200		6500		6300	
Max acoustic pressure level [dB(A)]**	Step	1		49		51	
	2	54		56		56	
	3	60		62		62	
IP-Insulation class		54					
Heating elements power supply [V/Hz]		-	-	3x400/50		-	3x400/50
Heating capacity [kW]	Step	1		9,0		16,5	
	2	10,5		18,5		18,5	
	3	12,0		20,0		20,0	
Current consumption [A]	Step	1		13		23	
	2	15		26		26	
	3	17		29		29	
Temperature rise ΔT* [°C]	Step	1		12		12	
	2	9		9		9	
	3	7		7		7	
Weight [kg]		47,4	43	49,8	62	58	58
Weight of unit filled with water [kg]		49,7	-	-	64,3	-	-
Max. water temperature [°C]		130	-	-	130	-	-
Max. water pressure [MPa]		1,6	-	-	1,6	-	-
Connection ["]		3/4	-	-	3/4	-	-

* INDUSTRY- W temperature increase at inlet air 10°C and heating agent temperature 90/70°C / INDUSTRY -E temperature increase at inlet air 10°C

** Acoustic pressure level has been measured 3 m from the unit in a 500 m³ space with a medium sound absorption coefficient.

4. INSTALATION

SOLANO INDUSTRY air curtains are delivered with set of hangers which allow install them horizontally as well as vertically. Installation pins and screws required for fix unit to the wall/floor/post are not included.

Max size of covered doorway:

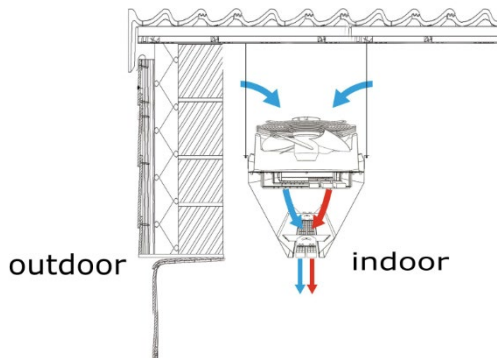
- vertical single side installation: max width 7,5 m,
- vertical double side installation: max width 13 m,
- horizontal installation: max height level 7,5 m,.

Attention:

Screw air curtain to the wall/floor/post before first start up.

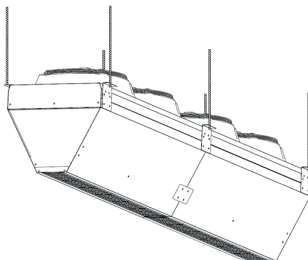
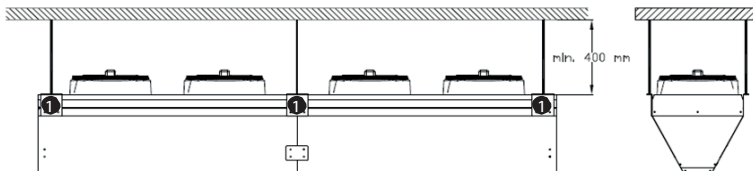
4.1. INSTALATION SOLANO INDUSTRY-E

For air curatins equipped with electrical heaters is recomended to mounting electric heaters on interior side.



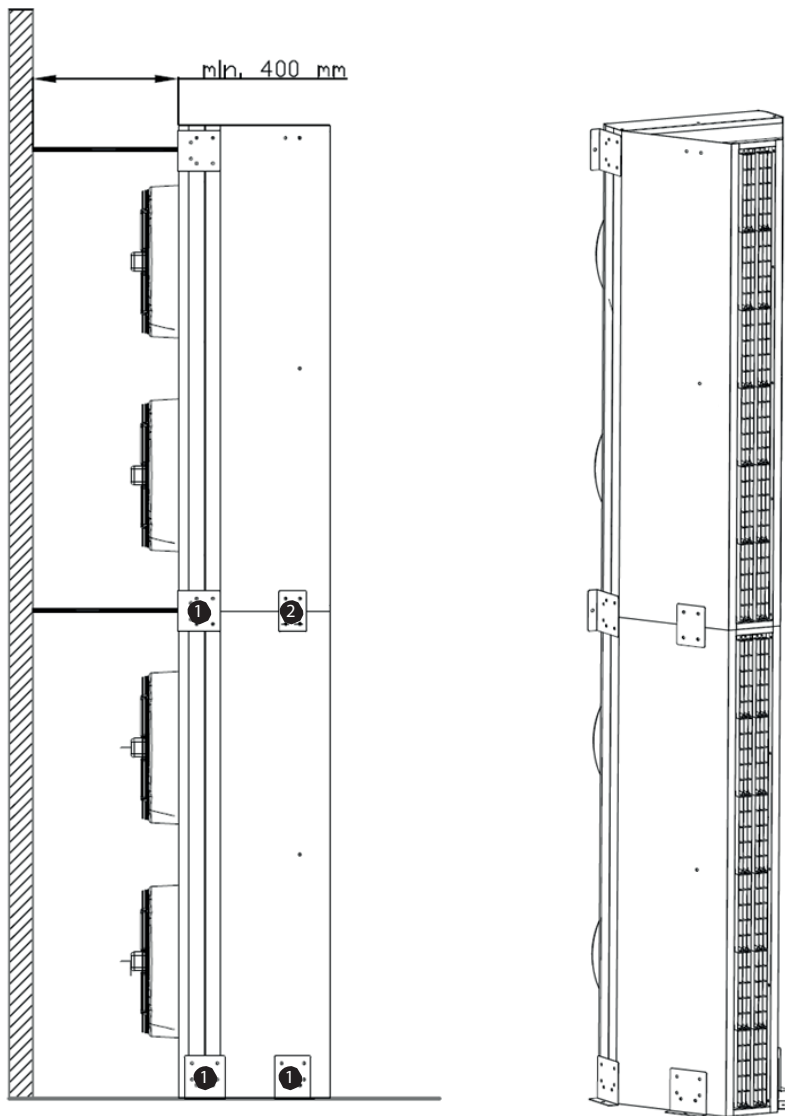
4.2. HORIZONTAL INSTALATION

In case of horizontal installation use installation plate ❶ and mount unit via threaded pins M10 (no included). Single unit is mounted on 4 installation plates, two units on 6 pcs. Installation plates are used to screw units among themselves as show on drawing.



4.3. VERTICAL INSTALLATION

Vertical installation is executed via included in set installation plates **1**, which should mount unit to the floor. Next air curtain should be putted on the first one and screwed with it via installation plate **1** and **2**, those installation plates must be anchored to the wall/post (drawing).



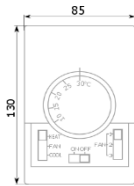
5. CONTROL SYSTEMS

S-SPLIT – splitter allow:

- Supply and protect up to three 3-steps air curtain;
- Room thermostat connection*;
- Valve actuator connection*;
- Door switch connection*

* optional equipment

5.1. CONTROL ELEMENTS



S-C - 3-speed fan switch with room thermostat

Temperature range::

+10 ... +30°C

Operating temperature range:

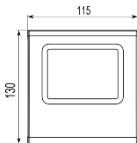
0 ... +40°C

IP/Insulation class:: IP30

Max current:

inductive 5A, resistive 6A

Power supply: 230V/50Hz



S-TOUCH

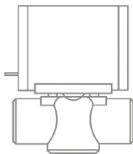
Temperature range:

+5 ... +35°C

Operating temperature range: -10 ... +60°C

IP/Insulation class: IP30

Power supply: 24VDC



S-V-2-1/2" – two-way 1/2 valve with actuator

IP/Insulation class:

IP20 Power supply:

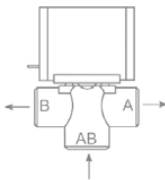
200 – 240V 50/60Hz

Max water temperature: +93°C

Max water pressure: 2,1MPa

Kvs: 3,0 m3/h

Opening time: 18 s



S-V-3-1/2" – three-way 1/2 valve with actuator

IP/Insulation class: IP20

Power supply:

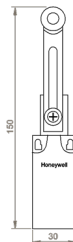
200 – 240V 50/60Hz

Max water temperature: +93°C

Max water pressure: 2,1MPa

Kvs: 3,4 m3/h

Opening time: 18 s



S-DS-MEC – mechanical door switch

Operating temperature range: -10 –+80°C

IP/Insulation class:

IP 65 Connectors: 1xNC i 1xNO

Max current: resistive 10A – inductive 3A

Max Power load: 300VAC or 250VDC

5.2. CONNECTING DIAGRAM

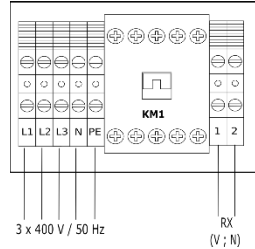
N-150; W-150; N-200; W-200

To supply curtain with power connect it by connection box closest to unit side. Protract cable by glands and connect wires according to scheme from box cover.

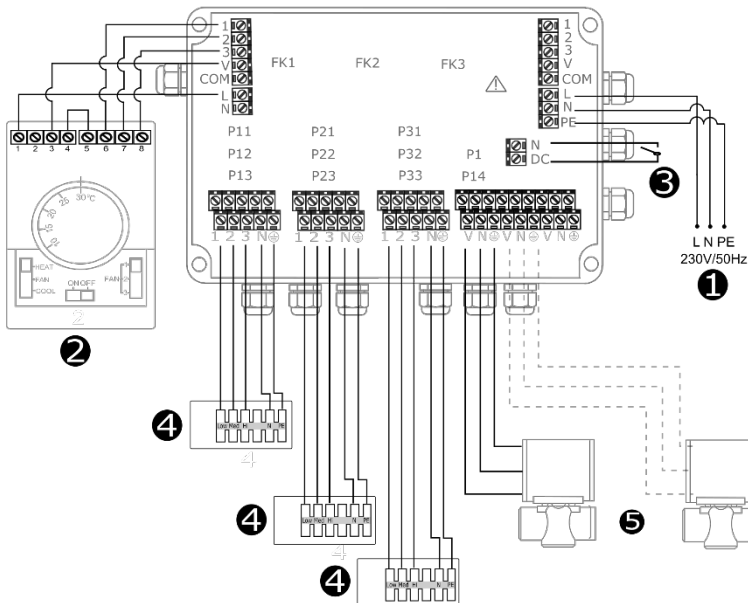


E-150; E-200

To start up curtain connect 3 x 400 V / 50 Hz current to junction box placed between fan's nozzles. Next connect terminals 1; 2 with S-SPLIT.



5.2.1 WIRING SCHEME SOLANO INDUSTRY W/N (S-C)



❶ Power supply: 230 V / 50 Hz (OMY 3x1,5 mm²)

❷ Air curtain step switch with thermostat S-C (OMY 5x0,5 mm²)

HEAT – heating mode

FAN – room thermostat deactivated

COOL – cooling mode

1;2;3 – step of fan

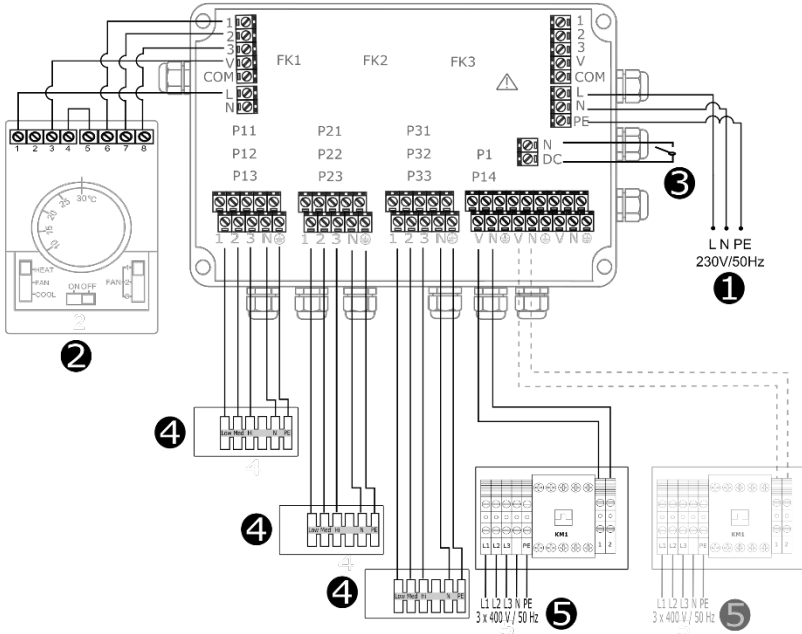
❸ Door contact S-DS-MEC (door closed – closed contacts; door opened – opened contacts) (OMY 2x0,5mm²)

❹ Air curtain power supply (OMY 5x1,0 mm²)

❺ Valve S-V-2-1/2" (OMY 3x0,75mm²) or S-V-3-1/2" (OMY 3x0,75mm²)

FK1; FK2; FK3 - overload protector (6,3 A);

5.2.2 WIRING SCHEME SOLANO INDUSTRY E (S-C)



- ❶ Power supply: 230 V / 50 Hz
(OMY 3x1,5 mm²)
- ❷ Air curtain step switch with thermostat S-C
(OMY 5x0,5 mm²)
HEAT – heating mode
FAN – room thermostat deactivated
COOL – cooling mode
1;2;3 – step of fan
- ❸ Door contact S-DS-MEC (door closed – closed contacts; door opened – opened contacts) (OMY 2x0,5 mm²)
- ❹ Air curtain power supply (OMY 5x1,0 mm²)
- ❺ Power supply junction box 3x400 V / 50Hz:
 - SOLANO INDUSTRY-E-150
(min. 5x4,0 mm²)(overcurrent B25)
 - SOLANO INDUSTRY-E-200
(min. 5x6,0 mm²)(overcurrent B40)
 - Control signal to junction box
(OMY min. 2x0,5 mm²)

FK1; FK2; FK3 - overload protector (6,3 A);

6. GUIDELINES FOR CONNECTION WITH POWER SUPPLY

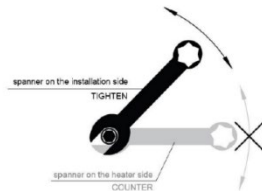
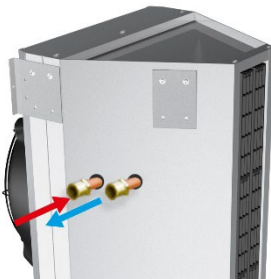
- Before connecting the power, supply check the correctness of connection of the fan motor and the controllers.

These connections should be executed in accordance with their technical documentation.

- Before connecting the power supply check whether the mains voltage is in accordance with the voltage on the device data shield.
- Starting the device without connecting the ground conductor is forbidden.

7. GUIDELINES FOR CONNECTION WITH PIPELINE

- Before connecting the power, supply check the correctness of connection of the fan motor and the controllers. These connections should be executed in accordance with their technical documentation.
- Before connecting the power supply check whether the mains voltage is in accordance with the voltage on the device data shield.
- The connection should be executed in a way which does not induce stresses.
- It is recommended to install vent valves at the highest point of the system.
- The system should be executed so that, in the case of a failure, it is possible to disassemble the device. For this purpose it is best to use shut-off valves just by the device.
- The system with the heating medium must be protected against an increase of the heating medium pressure above the permissible value (1.6 MPa).
- While screwing exchanger to pipeline - connecting stubs has to be hold by wrench.



8. OPERATION

- The device is designed for operation inside buildings, at temperatures above 0°C. In low temperatures (below 0°C) there is a danger of freezing of the medium

The manufacturer bears no responsibility for damage of the heat exchanger resulting from freezing of the medium in the exchanger.

It is forbidden to place any objects on the heater or to hang any objects on the connecting stubs.

- The device must be inspected periodically. In the case of incorrect operation of the device it should be switched off immediately.

It is forbidden to use a damaged device. The manufacturer bears no responsibility for damage resulting from the use of a damaged device.

- For the time of performing inspection or cleaning the device, the electrical power supply should be disconnected.

- In case water is drained from the device for a longer period of time, the exchanger tubes should be emptied with compressed air.

9. CLEANING AND CONSERVATION

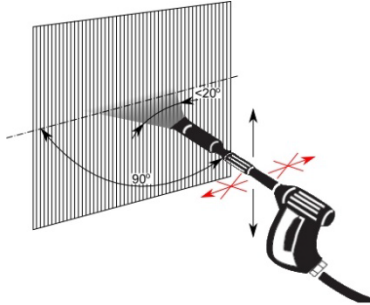
Periodically need to be checked exchanger condition. Exchanger filled with dirt causes in heat output and air flow drop.

If cleaning of heat exchanger is needed use listed guidelines.

- Disconnect power supply of unit.
- Dismount inlet grill guard
- It is recommended to use pressured air to clean the exchanger, air stream need to be directed perpendicular to exchanger and moved along lamellas.

Cleaning heating elements with water is prohibited

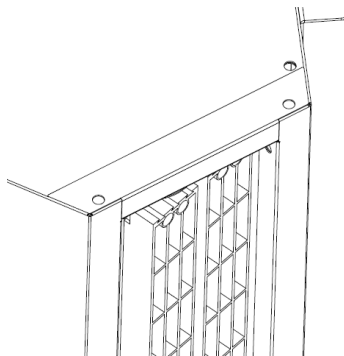
- It is prohibited to use water or sharp items to clean exchanger.



- Other installed equipment do not need be cleaned.

10. AIR BLADES REGULATION

Air blades can be regulated in range $\pm 10^\circ$. To change an angle of air stream is needed to put stress at the same time for both ends of blades



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