



water heater



#### BASIC FEATURES

- Lengths: **1.65; 2.20** and **2.75** m
- **EC Version:** Air flow up to **17500 m<sup>3</sup>/h** (ISO 27 327-1)
- **Dual Airstream system** prevents heat losses from the airflow stream and significantly reduces demand for air curtain heating
- Horizontal and vertical installation with the adjustable exhaust available by air curtain holders
- Maintenance-free air curtain with a long service life
- Fast and easy connection of individual modules
- Standard version in RAL 9016 (any RAL – based colours may be upon the customer's request)

The INDESSE is a high-performance industrial curtain for vertical and horizontal installation for use in **manufacturing halls, warehouses and other industrial buildings** with a recommended installation height / width up to **8 m**. The air curtain with LPHW coil shall be installed indoors in a dry area with ambient temperatures ranging from +5 °C up to +40 °C and relative humidity of up to 80 %. It is designed for conveying air free of rough dust, grease, chemical fumes, and other impurities. The IP rating of air curtains with LPHW coil is IP44. The fans comply with requirements of IP 44. **The air curtain project shall always be developed by the HVAC designer.**

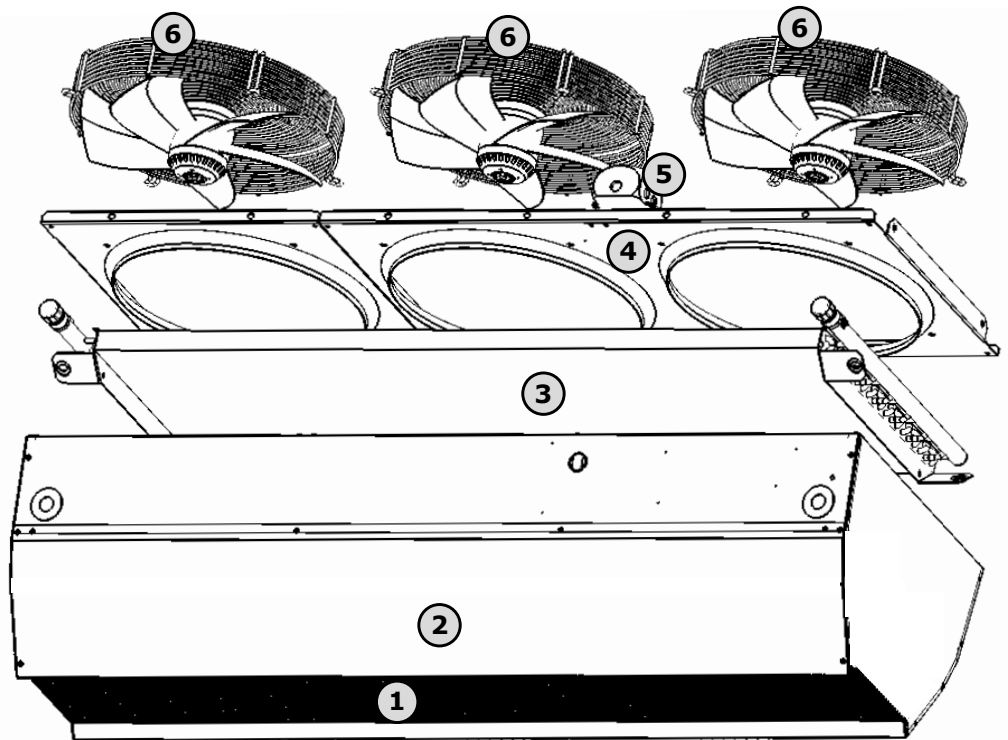


## PRIMARY PARAMETERS

Air curtain with LPHW coils are designed for maximum operating water temperature of +110°C and a maximum operation pressure of 1.6 MPa. Fan motors are equipped with thermal contacts, which can be used to turn off the air curtain in case of the overheating of the motor.

## MAIN PARTS

- ① Exhaust (Straw system)
- ② Main body
- ③ LPHW
- ④ Back side
- ⑤ Motor connection box
- ⑥ Motor



## PRIMARY PARAMETERS

Type	Recommended installation height [m]	Air output [m <sup>3</sup> /h] *1	Air output warm air [m <sup>3</sup> /h] *2	Air output ambient air [m <sup>3</sup> /h] *3	Acoustic pressure at 3m[dB(A)] *4	Sound power [dB(A)] *5
VCIN2G150-V2EC	7,5	10500	5775	4725	67	84
VCIN2G200-V2EC	7,5	14000	7700	6300	68	85
VCIN2G250-V2EC	7,5	17500	9625	7875	70	87

Type	Heater power *6 [kW]	Motors consumption		Weight [kg]
		[V]	[A]	
VCIN2G150-V2EC	46,6	230	4	60
VCIN2G200-V2EC	62,7		5,4	78
VCIN2G250-V2EC	80,3		6,8	98

\*1 Airflow volume according ISO27327-1

\*2 The flow of warm air output from the air curtain

\*3 The flow of ambient air output from the air curtain

\*4 Acoustic pressure values at 3 distance for maximum speed. Directional factor: Q=2.

\*5 Sound power (LWA) measurements according to ISO 27327-2.

\*6 Intake air temperature +15°C, water temperature gradient of 90/70°C and highest fan speed.

**LPHW coil parameters for water temperature gradient of 60/40 °C**

Type	Air flow [m³/h]	Air capacity warm air [m3/h]	Air capacity ambient air [m3/h] <sup>*3</sup>	Heat output* [kW]	Warm air outlet temperature [°C]	Pressure loss [kPa]	Water flow [m3/h]
VCIN2G150-V2EC	10500	5775	4725	23,5	27,5	6	1,04
VCIN2G200-V2EC	14000	7700	6300	31,4	27,5	5	1,37
VCIN2G250-V2EC	17500	9625	7875	40,9	28	9	1,76

\* Temperature of intake air: +15 °C

**LPHW coil parameters for water temperature gradient of 70/50 °C**

Type	Air flow [m³/h]	Air capacity warm air [m3/h]	Air capacity ambient air [m3/h] <sup>*3</sup>	Heat output* [kW]	Warm air outlet temperature [°C]	Pressure loss [kPa]	Water flow [m3/h]
VCIN2G150-V2EC	10500	5775	4725	31,4	31,9	10	1,37
VCIN2G200-V2EC	14000	7700	6300	42,1	32	8	1,84
VCIN2G250-V2EC	17500	9625	7875	54,4	32,6	14	2,38

\* Temperature of intake air: +15 °C

**LPHW coil parameters for water temperature gradient of 80/60 °C**

Type	Air flow [m³/h]	Air capacity warm air [m3/h]	Air capacity ambient air [m3/h] <sup>*3</sup>	Heat output* [kW]	Warm air outlet temperature [°C]	Pressure loss [kPa]	Water flow [m3/h]
VCIN2G150-V2EC	10500	5775	4725	39,1	36,3	15	1,73
VCIN2G200-V2EC	14000	7700	6300	52,6	36,5	11	2,30
VCIN2G250-V2EC	17500	9625	7875	67,5	37,1	21	2,99

\* Temperature of intake air: +15 °C

**LPHW coil parameters for water temperature gradient of 90/70 °C**

Type	Air flow [m³/h]	Air capacity warm air [m3/h]	Air capacity ambient air [m3/h] <sup>*3</sup>	Heat output* [kW]	Warm air outlet temperature [°C]	Pressure loss [kPa]	Water flow [m3/h]
VCIN2G150-V2EC	10500	5775	4725	46,6	40,8	20	2,05
VCIN2G200-V2EC	14000	7700	6300	62,7	41	15	2,77
VCIN2G250-V2EC	17500	9625	7875	80,3	41,7	27	3,52

\* Temperature of intake air: +15 °C

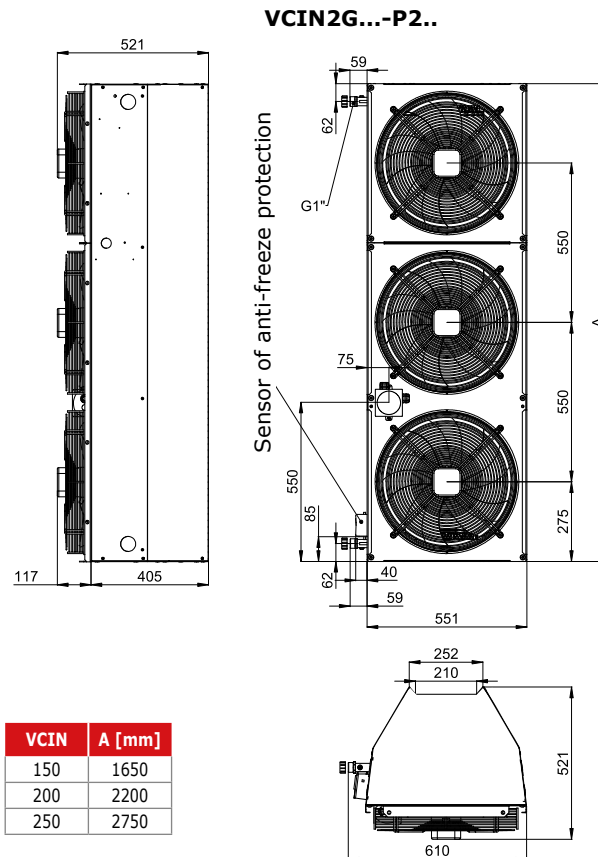
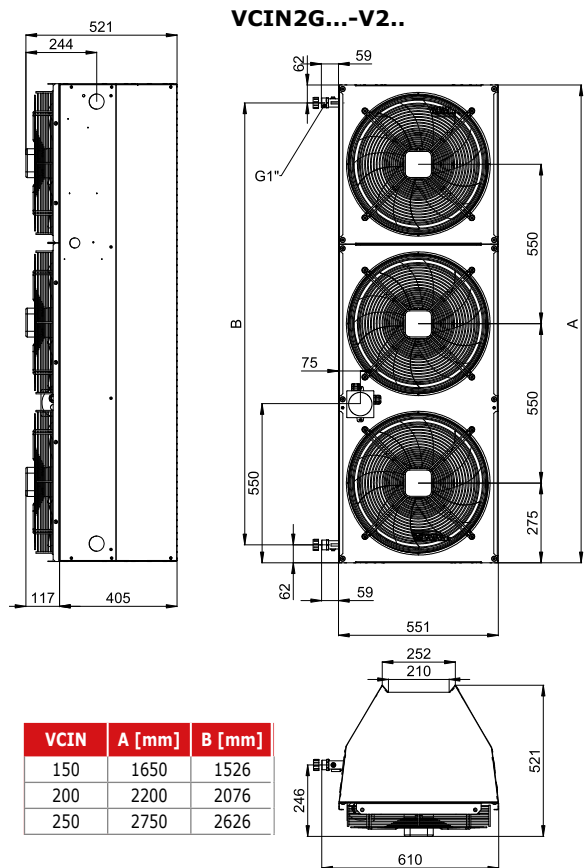
**LPHW coil parameters for water temperature gradient of 110/80 °C**

Type	Air flow [m³/h]	Air capacity warm air [m3/h]	Air capacity ambient air [m3/h] <sup>*3</sup>	Heat output* [kW]	Warm air outlet temperature [°C]	Pressure loss [kPa]	Water flow [m3/h]
VCIN2G150-V2EC	10500	5775	4725	56,6	46,9	13	1,66
VCIN2G200-V2EC	14000	7700	6300	76,1	47,2	10	2,23
VCIN2G250-V2EC	17500	9625	7875	97,4	48,1	18	2,89

\* Temperature of intake air: +15 °C



AIR CURTAIN DIMENSIONS

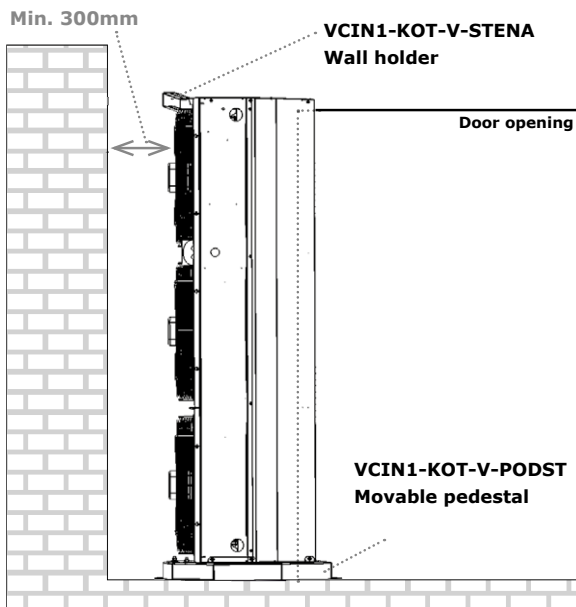




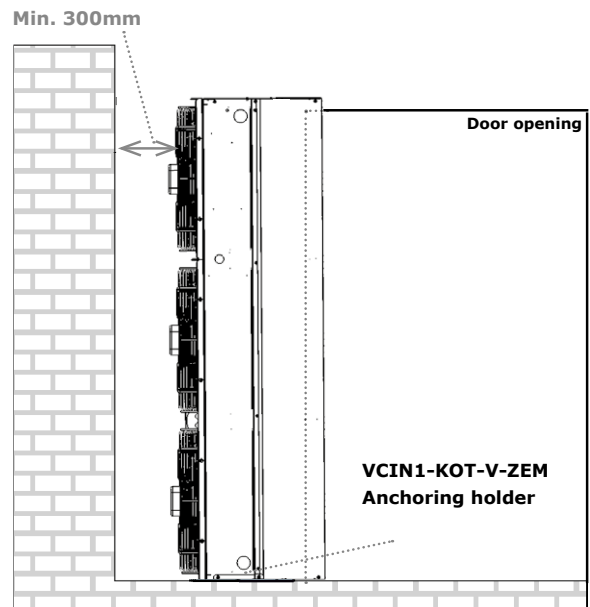
**INSTALLATION AND ASSEMBLY**

- The air curtain can be installed both in vertical and horizontal positions.
- The air curtain shall be located as close to the top (side) edge of the doorway as possible.
- To ensure correct function it is recommended that the air curtain is located 100 mm above the doorway or overlaps the doorway by 100 mm on both sides.
- Correct operation of the air curtain requires that specified distances from the surrounding objects are observed, see figure.
- Suspension holders are used for installing (hanging) the air curtain see ACCESSORIES.

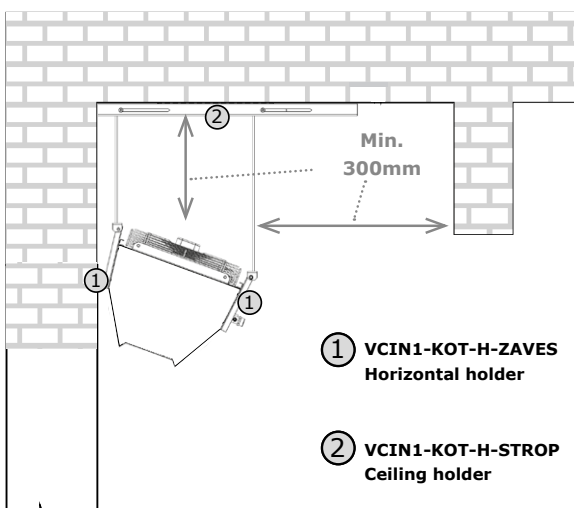
**Vertical installation, side view, movable pedestal**



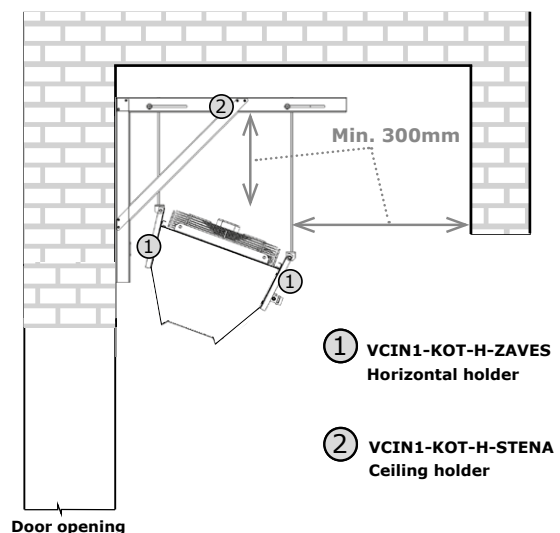
**Vertical installation, side view, fixed**



**Horizontal installation, side view**



**Horizontal installation, side view**





**CONTROL**

The **INDESSE** air curtains are shipped without an integrated control system. The following accessory is recommended to allow their control.

**AirGENIO BASIC EC control**  
**AGBA1-M-ECX-XX-xx-0A0**



AirGENIO BASIC EC control is designed primarily for manual control of industrial air curtains and air heaters with water or electric heating.

**Description of AirGENIO BASIC EC control**



Manual control



Possibility of connecting a door contact and external switch



Stepless control of airflow



Possibility of connecting a room thermostat (turn OFF the heater after contact opening)



ON/OFF control of valve actuator for LPHW coil

**AirGENIO IC-C control unit**



The AirGENIO IC-CONTROL unit is designed primarily for controlling industrial air curtains. In addition, the unit may also be used for controlling devices comprising a voltage controlled EC fan and heating units.

**Description of AirGENIO IC-C control unit**



Touch screen display



Temperature measurement (All temperature NTC sensors included, temperature shown on display)



Manual / Auto control mode



Chaining air curtains 1+10 (Master-Slave air curtains )



Stepless control of airflow



Self learning mode



0-10V or ON/OFF control of valve actuator for LPHW coil



BMS connection - Modbus RTU,TCP, BACnet



Integrated antifreeze protection of LPHW coil



Error contact



Possibility of connecting a door contact and external switch



2<sup>nd</sup> control panel ready



Integrated timer



**Overview of the AirGENIO IC3-C smart functions**

**Modes:**

**Heating boost**

- immediate start of heating at max output when doors are open to keep comfortable heat inside

**Self-Learning function**

- self learning mode ensuring smooth air curtain running without useless start-ups at frequent door openings. Saves energy and prolongs the air curtain 's working life.

**Night mode**

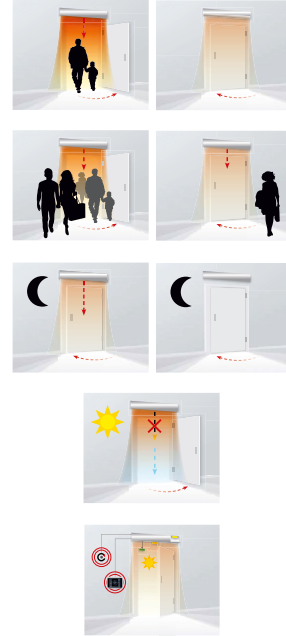
- during the pre-set night period air curtain can be switched off completely, or used to heat up the room. Possibility to set lower requested temperature for the night regime.

**Summer mode**

- to avoid waste of energy for heating, within a pre-set „summer season“, the heating is allowed only if the difference between the outside and inner temperature is higher than pre-set scale.

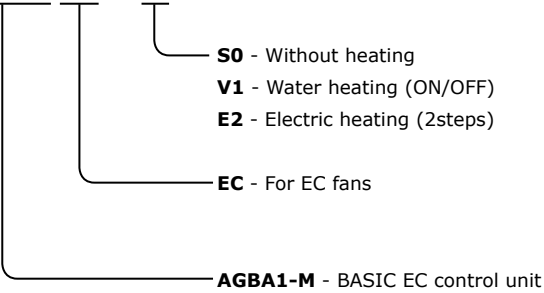
**Auto-stop control**

- air curtain evaluates its own temperature on outlet and the temperature outside and inside the room. The air speed and heating output is modified according to the required temperature, time programme and open/closed door. All parameters are evaluated in order to get the maximal output at the lowest possible operating costs.

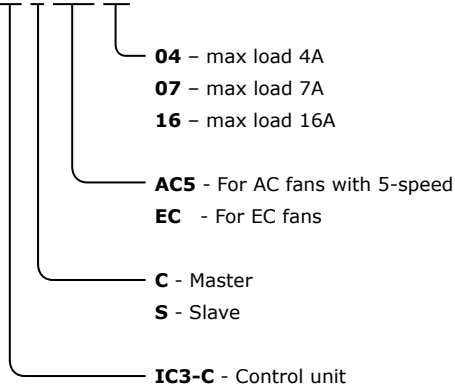


**KEY TO CODING**

**AGBA1-M-ECx-xx-V1-0A0**



**IC3-C-AC5-16**



The following table states the number of fans in the individual modules of the **INDESSE** air curtain.

Module type	VCIN2G150	VCIN2G200	VCIN2AG250
Number of fans in module	3	4	5

The following table indicates the maximum number of fans for the **INDESSE** air curtains that can be connected to the individual types of the AirGENIO control.

Control type	AGBA1-M	IC3-C-EC	IC3-S-EC
Maximum number of fans connected	10	10	5

**Water heater output control**

**Precise by mixing**

The following table indicates the number of modules of the **INDESSE** air curtains that should be connected to the individual types of the mixing point.

Type	Number of modules of VCIN					
	1			2		
	$K_{vs}$	Water flow (l/s)	Min. pump pressure (kPa)	$K_{vs}$	Water flow (m <sup>3</sup> /h)	Min. pump pressure (kPa)
VCIN2G150-V2EC	10	0,48	15	22	0,96	15
VCIN2G200-V2EC	10	0,64	11	22	1,28	11
VCIN2G250-V2EC	10	0,83	21	22	1,66	21

Suitable combinations of the **INDESSE** modules and the mixing nodes apply at a water temperature gradient of 80/60, and an inlet air temperature of 15 °C and pressure difference at connection point 5 kPa.

**Recommended 3-way valve with actuator for LPHW coil**



Type	Control type	90/70 °C	80/60 °C	70/50 °C	60/40 °C
VCIN2G150-V2EC	AGBA1-M (ON-OFF)	RT-3-11	RT-3-11	RT-3-11	RT-3-11
	IC3-C (ON-OFF)	RT-3-11	RT-3-11	RT-3-11	RT-3-11
	IC3-C (0-10V)	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25
VCIN2G200-V2EC	AGBA1-M (ON-OFF)	RT-3-11	RT-3-11	RT-3-11	RT-3-11
	IC3-C (ON-OFF)	RT-3-11	RT-3-11	RT-3-11	RT-3-11
	IC3-C (0-10V)	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25
VCIN2G250-V2EC	AGBA1-M (ON-OFF)	RT-3-11	RT-3-11	RT-3-11	RT-3-11
	IC3-C (ON-OFF)	RT-3-11	RT-3-11	RT-3-11	RT-3-11
	IC3-C (0-10V)	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25	ZV3-024-10,0-25

**Recommended 2-way valve with actuator for LPHW coil**



Type	Control type	90/70 °C	80/60 °C	70/50 °C	60/40 °C
VCIN2G150-V2EC	AGBA1-M (ON-OFF)	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	IC3-C (ON-OFF)	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
	IC3-C (0-10V)	ZV2-024-10,0-25	ZV2-024-10,0-25	ZV2-024-10,0-25	ZV2-024-10,0-25
VCIN2G200-V2EC	AGBA1-M (ON-OFF)	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20
	IC3-C (ON-OFF)	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20
	IC3-C (0-10V)	ZV2-024-10,0-25	ZV2-024-10,0-25	ZV2-024-10,0-25	ZV2-024-10,0-25
VCIN2G250-V2EC	AGBA1-M (ON-OFF)	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20
	IC3-C (ON-OFF)	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20	ZV2-230-21,0-20
	IC3-C (0-10V)	ZV2-024-10,0-25	ZV2-024-10,0-25	ZV2-024-10,0-25	ZV2-024-10,0-25





**ACCESSORIES**

**REQUIRED ACCESSORIES**

No special accessories are needed to ensure a proper function of the stand-alone air curtain. If the air curtain is fitted with the control system, the control system is connected using common wiring cables, see the "Wiring diagrams" chapter. A suitable cross-section of the cables, protection of the unit, and utilization of other wiring materials shall be determined based on the particular installation conditions.

**These components shall be delivered by a company performing the air curtain electrical wiring.**

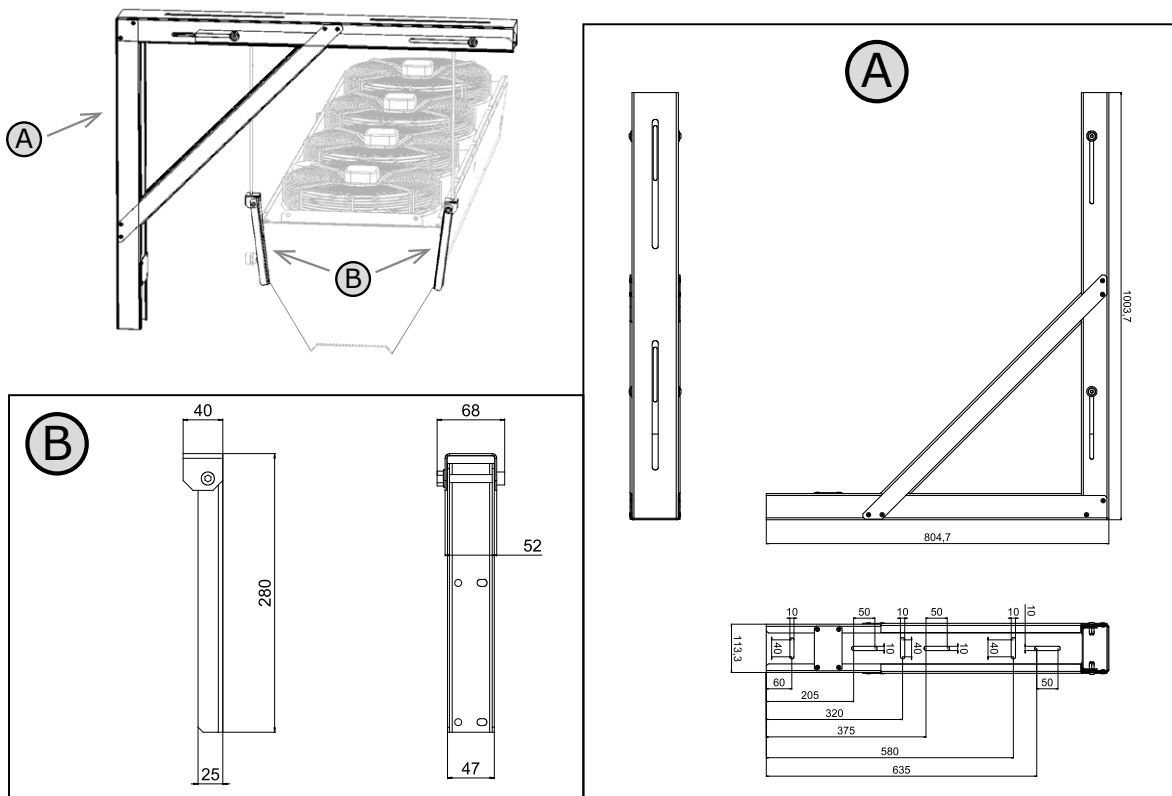
**Optional accessories**

**WALL holder set - HORIZONTAL**

This set includes:

A part - Wall holder (1 pcs)

B part - Air curtain holder (2 pcs)



**VCIN1-KOT-H-STENA-0**

- Color**
- 0** Standard (RAL9016)
- 1** Galvanized steel
- 9** Atyp RAL

**Wall holder set (1 set)**

	Number of INDESSE air curtain modules connected									
	1	2	3	4	5	6	7	...	n	
<b>No. of holders</b>	2	3	4	5	6	7	8	...	n + 1	



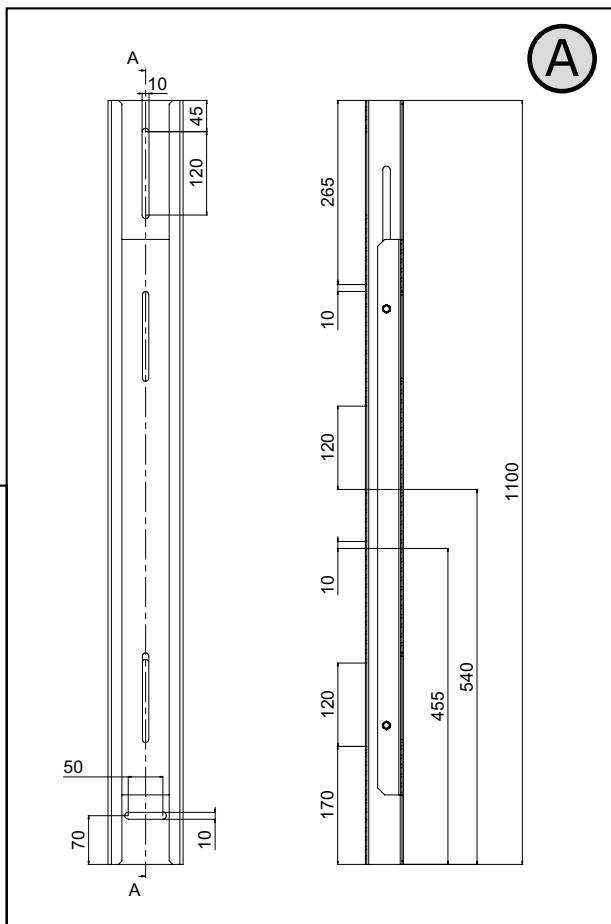
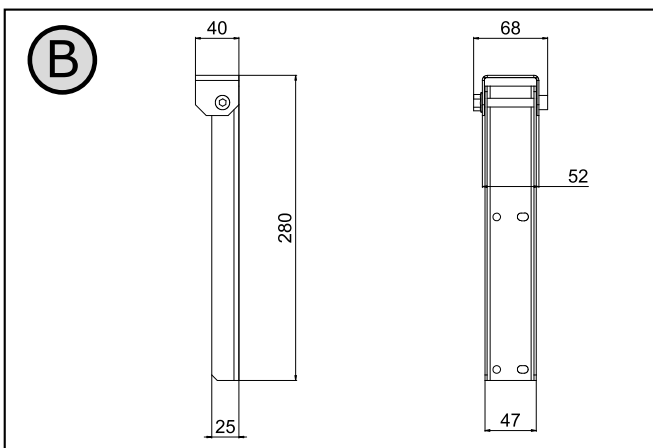
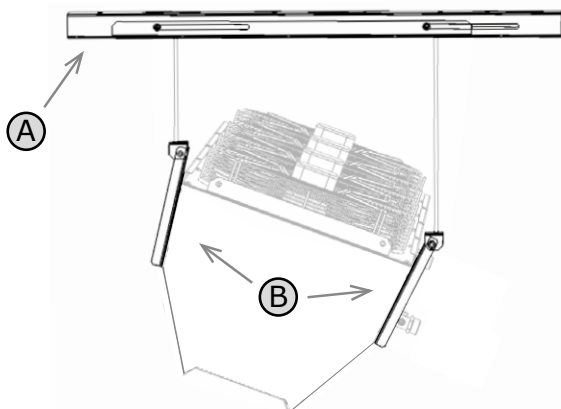
### Optional accessories

#### CEILING holder set - HORIZONTAL

This set includes:

A part - Ceiling holder (1 pcs)

B part - Air curtain holder (2 pcs)



#### VCIN1-KOT-H-STROP-0

##### Color

**0** Standard (RAL9016)

**1** Galvanized steel

**9** Atyp RAL

**Ceiling holder set (1 set (A+2xB))**

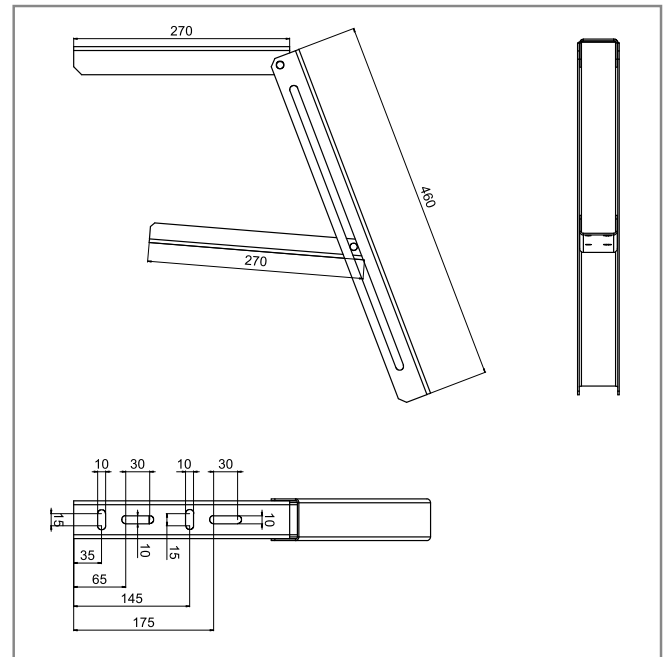
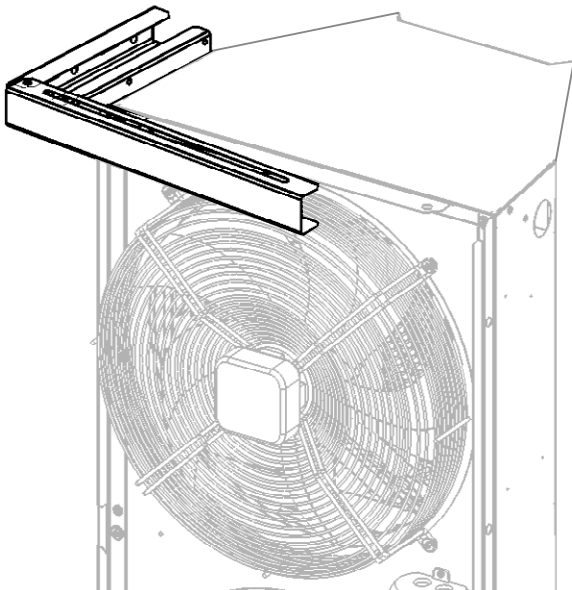
	Number of INDESSE air curtain modules connected									
	1	2	3	4	5	6	7	...	n	
No. of holders	2	3	4	5	6	7	8	...	n + 1	



**Optional accessories**

**Wall holder - VERTICAL**

For anchoring the air curtain to the wall



**VCIN1-KOT-V-STENA-0**

- Color**
- 0** Standard (RAL9016)
  - 1** Galvanized steel
  - 9** Atyp RAL

**Wall holder (1 pcs)**

	Number of INDESSE air curtain modules connected			
	1	2	3**	4**
No. of holders	1*	1*	2	3

\* - This holder is not needed up to a height of 4 m, but we recommend to using it.

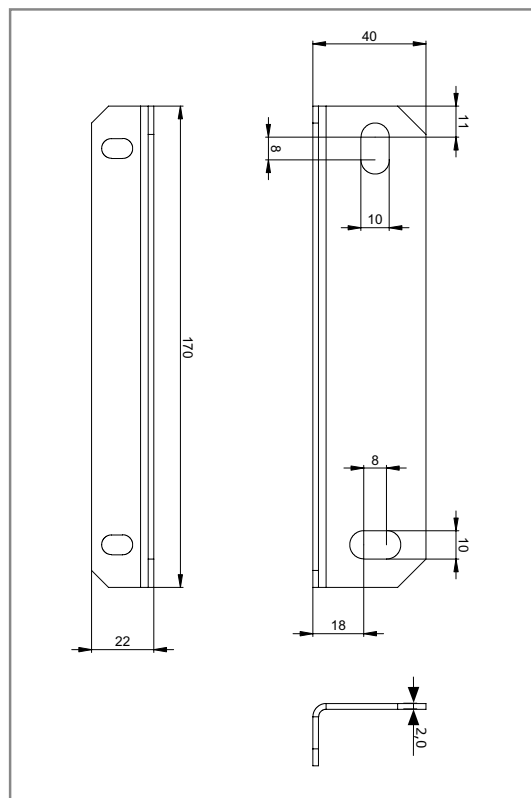
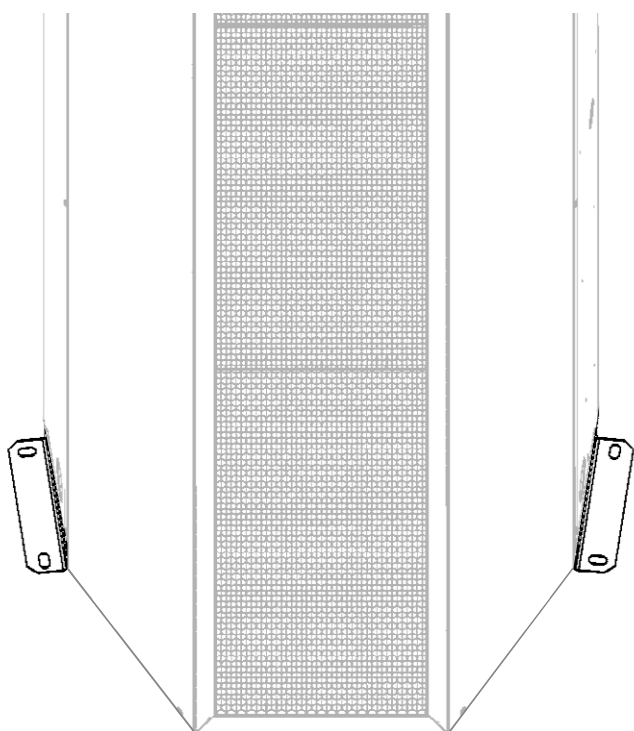
\*\* - The maximum height of air curtains, which can be installed in the vertical position (air curtain on air curtain) is 6,6 m. If you need a higher distance, then an additional supporting system must be made (not available in 2VV accessories).



### Optional accessories

#### Anchoring holder - VERTICAL

For anchoring the air curtain to the floor



#### VCIN1-KOT-V-ZEM-0

##### Color

- 0** Standard (RAL9016)
- 1** Galvanized only
- 9** Atyp RAL

**Floor holder set (2 pcs)**

	Number of INDESSE air curtain modules connected			
	1	2	3*	4*
No. of sets of holders	1	1	1	1

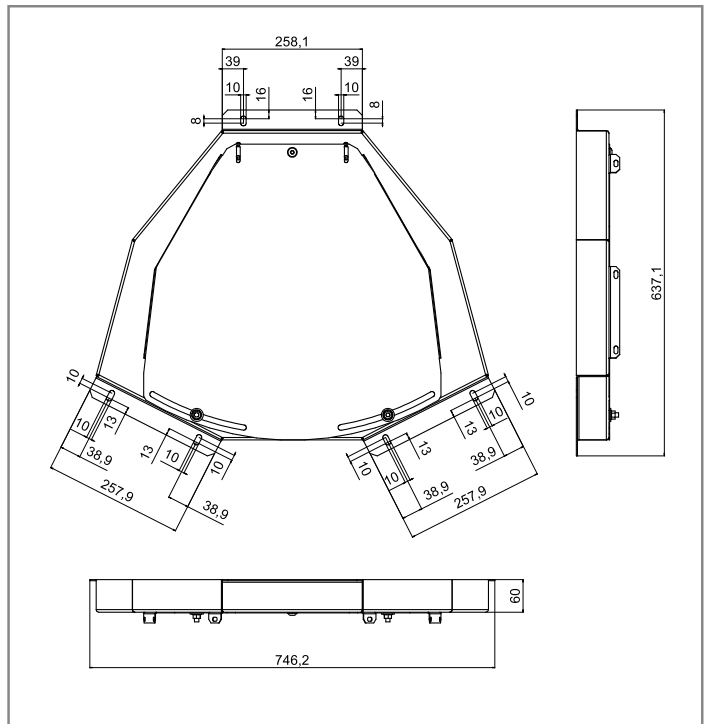
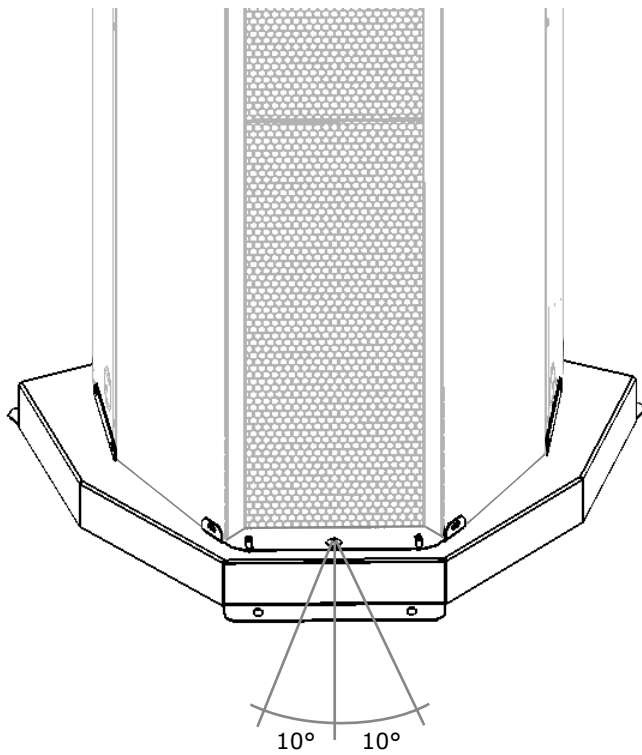
\* - The maximum height of air curtains, which can be installed in the vertical position (air curtain on air curtain) is 6,6 m. If you need a higher distance, then an additional supporting system must be made (not available in 2VV accessories).



**Optional accessories**

**Adjustable anchoring holder - VERTICAL**

For anchoring the air curtain to the floor with the possibility of moving (20° max)



**VCIN1-KOT-V-PODST-0**

- Color**
- 0** Standard (RAL9016)
  - 1** Grey colour (RAL9006)  
(optimal for Galvanized air curtain)
  - 9** Atyp RAL

**Movable pedestal (1 pcs)**

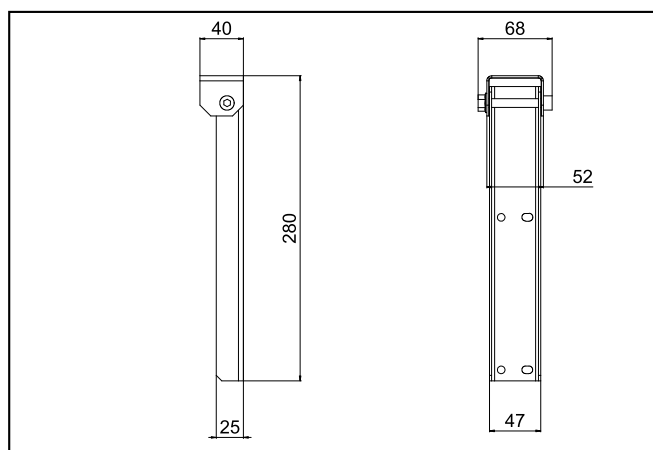
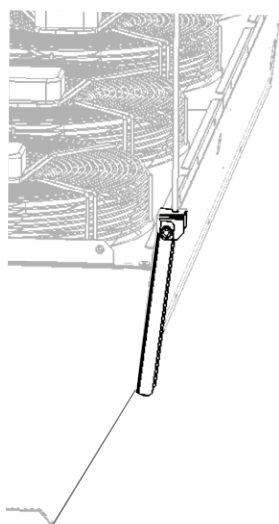
	Number of INDESSE air curtain modules connected			
	1	2	3*	4*
No. of holders	1	1	1	1

\* - The maximum height of air curtains, which can be installed in the vertical position (air curtain on air curtain) is 6,6 m. If you need a higher distance, then an additional supporting system must be made (not available in 2VV accessories).



**Optional accessories**

**Threaded bar holder - HORIZONTAL**



**VCIN1-KOT-H-ZAVES-0**

**Color**

- 0** Standard (RAL9016)
- 1** Galvanized steel
- 9** Atyp RAL

**Air curtain holder (1 pc only)**

	Number of INDESSE air curtain modules connected				
	1	2	3	...	n
No. of holders	4	6	8	...	$n*2 + 2$



**AirGENIO BASIC EC controller**

**AGBA1-M-ECX-XX-V1-0A0**

AirGENIO BASIC EC controller is designed primarily for manual control of industrial air curtains and air heaters with water or electric heating. In addition, the unit may be used for manual control of devices comprising a voltage controlled EC fans.



**Control unit**

**IC3-C-EC**

The AirGENIO IC-CONTROL unit is designed primarily for controlling industrial air curtains. In addition, the unit may also be used for controlling devices comprising a voltage controlled EC fan and heating units.



**2-way or 3-way valve with servo drive**

**ZV2-230-xx,x-xx (230V, ON/OFF)**

**ZV3-230-xx,x-xx (230V, ON/OFF)**

**ZV2-24V-xx,x-xx (24V, 0-10V)**

**ZV3-24V-xx,x-xx (24V, 0-10V)**



**Zone valve**

**RT-3-11**

Three-way zone valve powered by servo drive to control the flow of hot and cold water.



**Mixing node**

**SMU2-xx-xx**

Mixing node without pump for continuous regulation of the heat power of exchanger.





**Room thermostat**  
**TER-P**  
Spatial thermostat



**Room temperature sensor**  
**CT-ROOM**



**Flexible connection hoses**  
**OH-01-1/1-300**  
**OH-01-1/1-500**



**Door switch – industrial**  
**DS**



**Magnetic door contact in a metal housing with higher protection against mechanical damage**  
**DK-B-3**



**Motor filter (1 pcs) - class Coarse 40% (G2)**  
**FI-PYTEL-KRUH-G2-SAV-4**





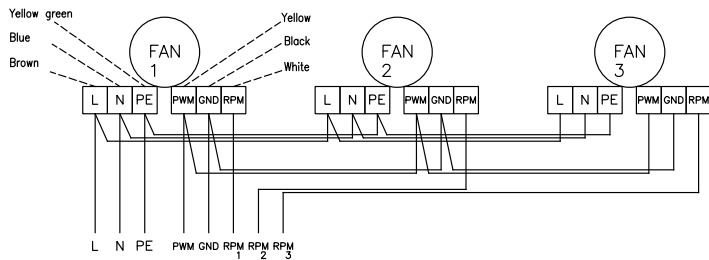


**WIRING DIAGRAMS**

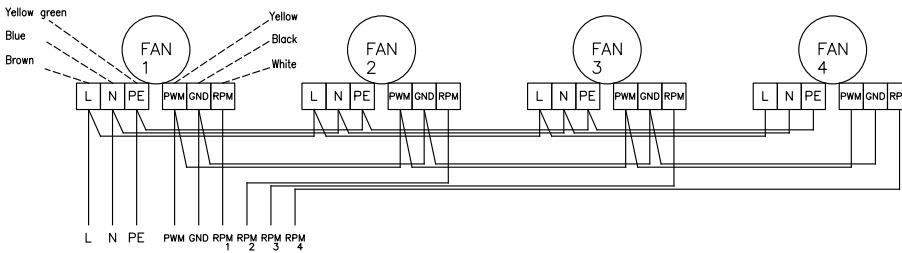
The recommended cross-section of the main power supply cables is stated in the Instruction Manual.

**All wiring diagrams provided in the technical catalog are indicative only. When assembling the product, strictly observe the nameplate ratings as well as the directions and diagrams affixed directly to the product or enclosed with the product.**

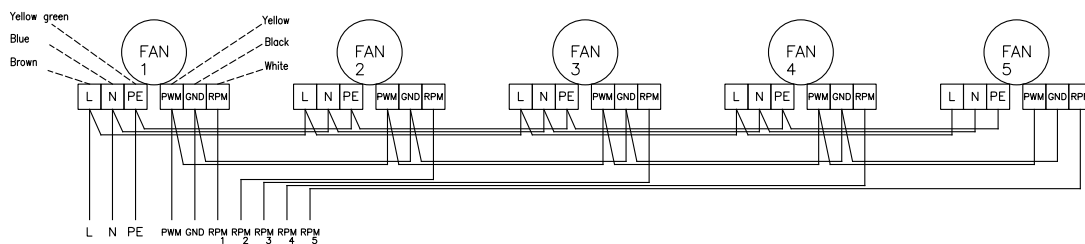
**VCIN2G150-xx-EC**



**VCIN2G200-xx-EC**



**VCIN2G250-xx-EC**





**KEY TO CODING**

**VCIN2G 150-V2 EC-XX-0 B 0**

- 0** - Reserve
- A** - Packed horizontally (*standard for VCIN2A250*)  
(*non standard for VCIN2A150,200*)
- B** - Packed vertically (*standard for VCIN2A150,200*)
- 0** - Standard (RAL9016)
- 9** - Atyp RAL
- XX** - No control
- EC** - EC motors
- V2** - water heat coil (2row; 110°C)
- P2** - water heat coil with antifreeze protection
- 150** - length **1650mm**
- 200** - length **2200mm**
- 250** - length **2750mm**
- VCIN2G** - Industrial air curtain **INDESSE GP**