

air-only



water heater



electric wire heater



BASIC FEATURES

- **Airflow up to 2.600m³/h** (ISO 27 327-1)
- Efficient **Straw-System** outlet – maximizing screening effect
- Recommended installation height up to 2,5m
- Length: 1,0; 1,5; 2,0m
- Electric, water and ambient version
- Simple and intuitive **infra-red control**
- Standard colour RAL 9016 (any RAL – based colours may be provided on customer's request)

ENTRESSE is a compact and practical air curtain combining the benefits of good quality, excellent performance and economical solution. Clear and neat design together with effective technologies such as Straw-System outlet for maximizing the screening effect or wire-heating elements for instant start-up of heating, make the air curtain a perfect fit for installations in **small shops, restaurants, cafes and such premises**, with recommended installation height up to 2,5m*.

**Maximum recommended installation height – may vary according the particular conditions at the installation site.*

The air curtain shall be installed indoor in a dry area with ambient temperatures ranging from 0 °C up to +35 °C and relative humidity of up to 80 %. It is designed for conveying air free of rough dust, grease, chemical fumes, and other impurities. IP rating of the air curtain is IP 20. The air curtain project shall **always be designed by the HVAC engineer**.


PRIMARY PARAMETERS

Air curtains with electric heater are fitted with automatic heat thermostat and emergency thermostat with manual reset. Air curtains with LPHW coil are designed for the maximum operating water temperature of +100 °C and maximum operating pressure of 1.6 MPa.

VCEN1A 50Hz

Type	Recommended installation height [m]	Air output [m ³ /h] *1			Acoustic pressure at 3m[dB(A)] *2			Sound power [dB(A)]*3
		Speed 3	Speed 2	Speed 1	Speed 3	Speed 2	Speed 1	
VCEN1A-100-E1	2,5	1330	1220	1050	49	48	45	71
VCEN1A-100-V		1250	1180	1040	50	48	45	71
VCEN1A-100-S		1330	1220	1050	51	48	44	72
VCEN1A-150-E1		2100	1550	1150	54	49	39	76
VCEN1A-150-E0		2100	1550	1150	54	49	39	76
VCEN1A-150-V		2000	1660	1210	53	49	41	75
VCEN1A-150-S		2100	1550	1150	55	47	38	76
VCEN1A-200-E1		2420	1950	1450	54	49	40	76
VCEN1A-200-E0		2420	1950	1450	54	49	40	76
VCEN1A-200-V		2640	1940	1420	54	47	39	75
VCEN1A-200-S		2450	1850	1360	54	44	36	75

Type	Heater power output [kW]		Total power input [kW]	Total voltage/current [V/A]	Motor voltage/current [V/A]	Temperature increase Δt [°C]*5	Frequency [Hz]	Weight [kg]
	1st level	2nd level						
VCEN1A-100-E	3,4	6,6	6,75	400/14,8	230/0,6	14,6	50	16
VCEN1A-100-V	10,03*4		0,15	230/0,6	230/0,6	23,6		17
VCEN1A-100-S	-		0,16	230/0,7	230/0,7	-		15
VCEN1A-150-E1	5,1	9,8	10,00	400/22,5	230/0,9	13,7		22
VCEN1A-150-E0	2,3	7,7	9	400/11,6	230/0,9	10,4		22
VCEN1A-150-V	16,93*4		0,18	230/0,7	230/0,9	24,9		23
VCEN1A-150-S	-		0,20	230/0,9	230/0,9	-		21
VCEN1A-200-E1	6,6	12,9	13,10	400/28,7	230/0,8	15,7		27
VCEN1A-200-E0	3,1	9,7	10,6	400/14,6	230/0,8	13		27
VCEN1A-200-V	23,24*4		0,20	230/0,9	230/0,8	25,9		28
VCEN1A-200-S	-		0,18	230/0,8	230/0,8	-		26

*1 Airflow volume according ISO27327-1

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

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

*4 Applicable for water temperature 90/70°C, inlet air temperature +18°C

*5 Intake air temperature +18°C, at maximum heating level and highest fan speed.



PRIMARY PARAMETERS

Air curtains with electric heater are fitted with automatic heat thermostat and emergency thermostat with manual reset. Air curtains with LPHW coil are designed for the maximum operating water temperature of +100 °C and maximum operating pressure of 1.6 MPa.

VCEN1A 60Hz

Type	Recommended installation height [m]	Air output [m³/h] *1			Acoustic pressure at 3m[dB(A)] *2			Sound power [dB(A)]*3
		Speed 3	Speed 2	Speed 1	Speed 3	Speed 2	Speed 1	
VCEN1A-100-E1	2,5	1550	1300	920	48	46	43	69
VCEN1A-100-E0		1550	1300	920	48	46	43	69
VCEN1A-100-V		1500	1280	1000	48	46	43	69
VCEN1A-100-S		1550	1240	920	51	47	43	72
VCEN1A-150-E1		2100	1400	1050	55	45	37	73
VCEN1A-150-E0		2100	1400	1050	55	45	37	73
VCEN1A-150-V		2100	1450	1060	55	46	39	77
VCEN1A-150-S		2100	1400	1050	54	43	35	75
VCEN1A-200-E1		2420	1650	1250	54	67	36	76
VCEN1A-200-E0		2580	1750	1250	53	43	35	75
VCEN1A-200-V		2580	1750	1250	53	43	35	75
VCEN1A-200-S		2450	1600	1170	54	44	36	75

Type	Heater power output [kW]		Total power input [kW]	Total voltage/ current [V/A]	Motor voltage/ current [V/A]	Temperature increase Δt [°C]*5	Frequency [Hz]	Weight [kg]
	1st level	2nd level						
VCEN1A-100-E1	3,4	6,6	6,81	400/15,1	230/0,9	12,5	60	16
VCEN1A-100-V	10,03*4		0,20	230/0,9	230/0,9	23,6		17
VCEN1A-100-S	-		0,22	230/0,9	230/0,9	-		15
VCEN1A-150-E1	5,1	9,8	10,06	400/22,7	230/1,1	13,7		22
VCEN1A-150-E0	2,3	7,7	9	400/11,6	230/0,9	10,4		22
VCEN1A-150-V	16,93*4		0,23	230/1,0	230/1,0	24,9		23
VCEN1A-150-S	-		0,27	230/1,1	230/1,1	-		21
VCEN1A-200-E1	6,6	12,9	13,14	400/28,9	230/1,0	15,7		27
VCEN1A-200-E0	3,1	9,7	10,6	400/14,6	230/08	13		27
VCEN1A-200-V	23,24*4		0,26	230/1,1	230/1,1	25,9		28
VCEN1A-200-S	-		0,24	230/1,0	230/1,0	-		26

*1 Airflow volume according ISO27327-1

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

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

*4 Applicable for water temperature 90/70°C, inlet air temperature +18°C

*5 Intake air temperature +18°C, at maximum heating level and highest fan speed.

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

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2	1250	10,03	41,63	3,37	0,12
VCEN1A-150-V2	2000	16,93	42,92	11,64	0,21
VCEN1A-200-V2	2640	23,24	43,92	25,85	0,28

* Temperature of intake air: +18 °C

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

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2	1250	8,15	37,2	2,37	0,09
VCEN1A-150-V2	2000	13,9	38,46	8,33	0,17
VCEN1A-200-V2	2640	19,17	39,38	18,63	0,23

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

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2	1250	6,23	32,69	1,51	0,076
VCEN1A-150-V2	2000	10,85	33,98	5,49	0,13
VCEN1A-200-V2	2640	15,07	34,81	12,41	0,18

* Temperature of intake air: +18 °C

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

Type	Air output	Heating output	Temperature at exhaust	Pressure loss	Water flow
	[m³/h]	[kW]	[°C]	[kPa]	[l/s]
VCEN1A-100-V2	1250	4,23	27,97	0,79	0,05
VCEN1A-150-V2	2000	7,75	29,41	3,12	0,09
VCEN1A-200-V2	2640	10,93	30,2	7,22	0,13

Recommended mixing points for LPHW coil 2-way valve (ZV2)

Type	90/70 °C	80/60 °C	70/50 °C	60/40 °C
	2-way valve			
VCEN1A-100-V2...	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
VCEN1A-150-V2...	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20
VCEN1A-200-V2...	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20	ZV2-230-08,0-20

Recommended mixing points for LPHW coil 3-way valve (ZV3)

Type	90/70 °C	80/60 °C	70/50 °C	60/40 °C
	3-way valve			
VCEN1A-100-V2...	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
VCEN1A-150-V2...	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20	ZV3-230-04,0-20
VCEN1A-200-V2...	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20	ZV3-230-21,0-20

Recommended mixing points for LPHW coil 3-way valve (RT-3)

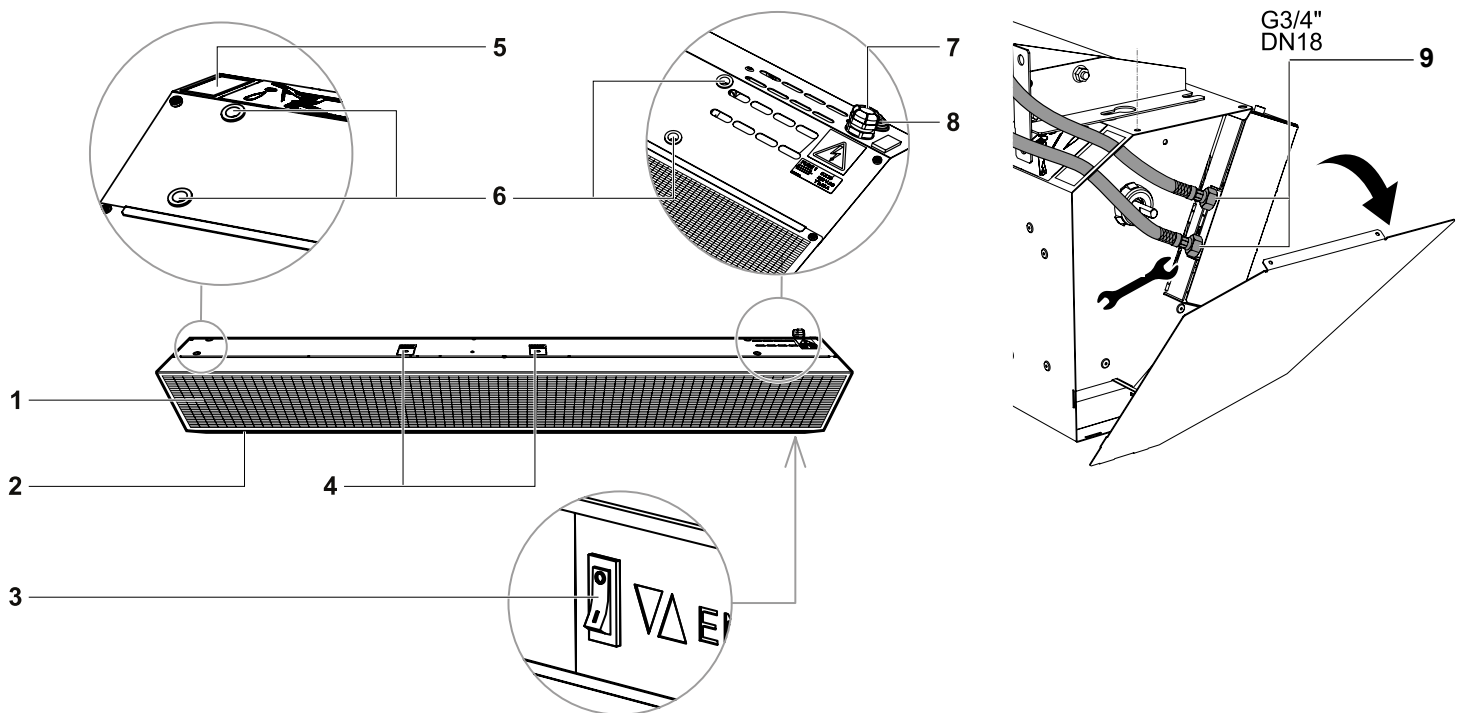
Type	90/70 °C	80/60 °C	70/50 °C	60/40 °C
	3-way valve			
VCEN1A-100-V2...	RT-3-07	RT-3-07	RT-3-07	RT-3-07
VCEN1A-150-V2...	RT-3-07	RT-3-07	RT-3-07	RT-3-07
VCEN1A-200-V2...	RT-3-07	RT-3-07	RT-3-07	RT-3-07



PRIMARY PARAMETERS

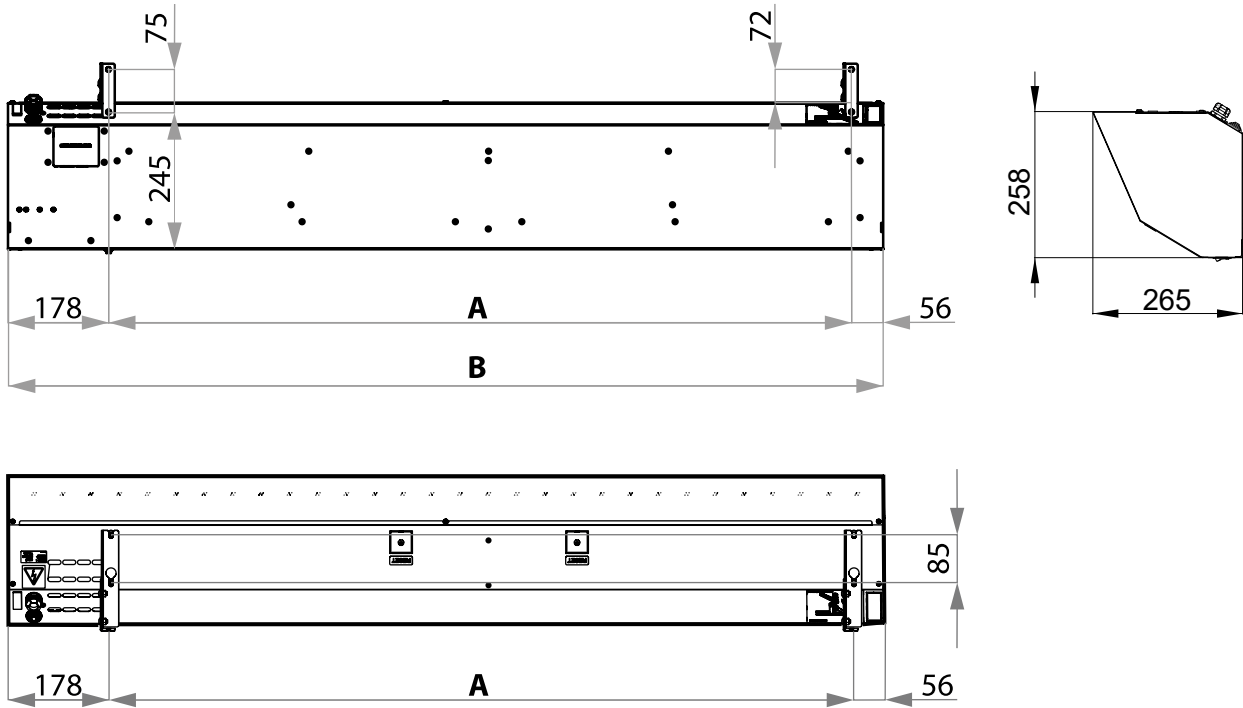
MAIN PARTS

- ① Front cover with inlet grill
- ② Air outlet grill (underside)
- ③ Main switch (underside)
- ④ Electric heat exchanger reset
- ⑤ Opening for connecting water hoses
- ⑥ Openings for mounting brackets
- ⑦ Grommet for power cable
- ⑧ Grommet for accessories
- ⑨ Water heater connection G 3/4"

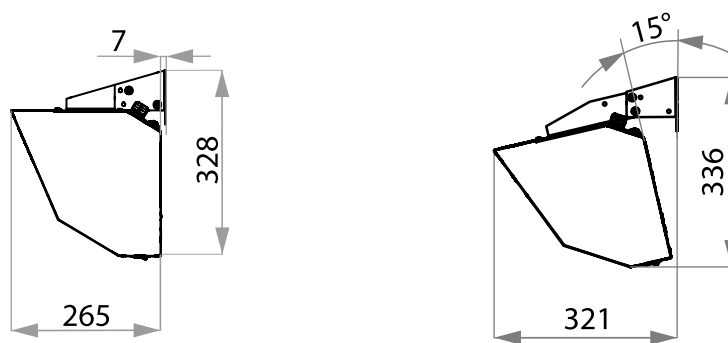




DIMENSIONS



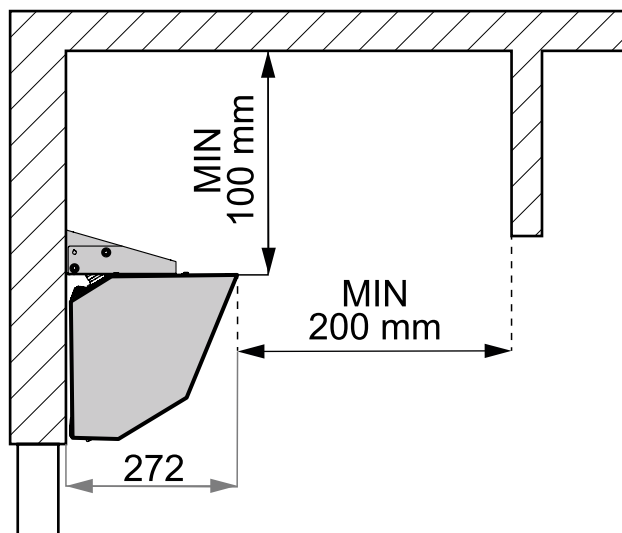
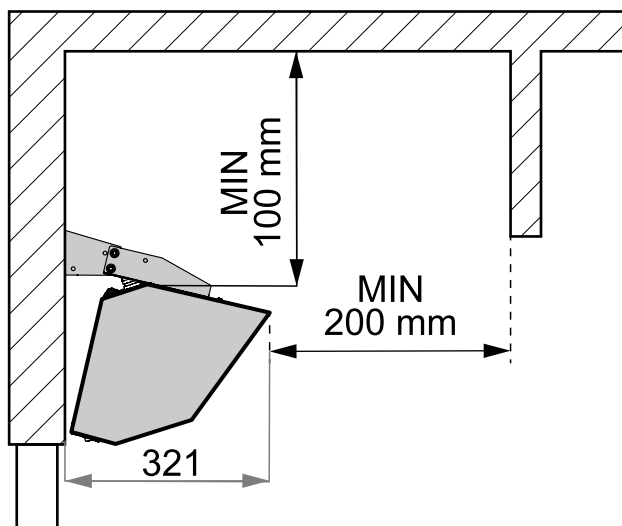
Type	A	B
VCEN1A-100...	809 mm	1042 mm
VCEN1A-150...	1309 mm	1542 mm
VCEN1A-200...	1809 mm	2042 mm



Mounting brackets are included in delivery enabling air curtain installation with blowing angle 0° or blowing angle 15°.

**INSTALLATION AND ASSEMBLY**

- The air curtain shall be installed in a horizontal position only.
- The air curtain shall be located as close to the top edge of the doorway as possible and a distance from walls that is in accordance with fire safety and building codes of the country where unit is installed. For manufacturer recommended distance see figures below.
- To ensure a correct function it is recommended that the air curtain 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.
- Position of the heating water and power supply connections shall be taken into consideration during installation.

Standard air curtain installation**Installation of curtain with 15° blowing angle**



CONTROL

Overview of functions and sensor connections



Manual IR



Control of airflow in 3 steps



Control of electric heater OFF / Level1 / Level2



On/Off control of valve actuator for LPHW coil



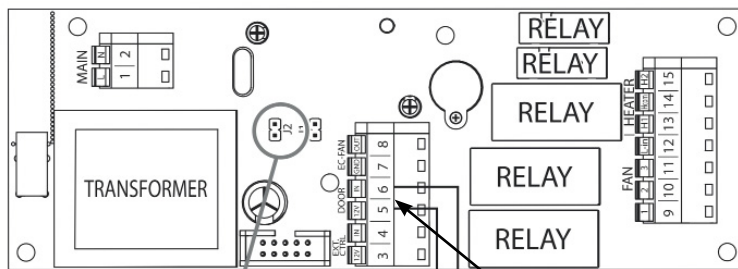
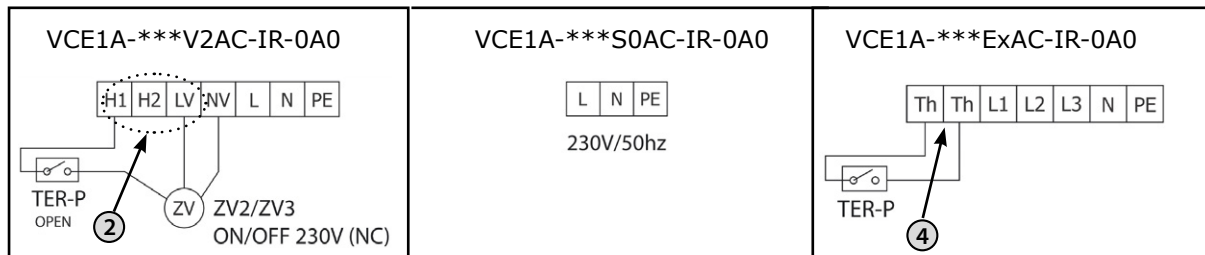
Possibility of connecting a door contact and external control switch



Possibility of connecting a room thermostat

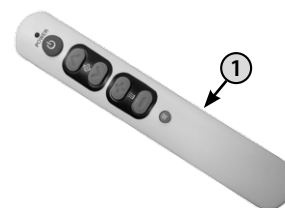


WIRING DIAGRAMS



Logic:
- DS open
- DS closed

DK/DS



EN	
1	Control panel
2	Water heater (relay contact)
3	DOOR contact (input, NO/NC)
4	Room thermostat (input, NC)

**ACCESSORIES****OPTIONAL ACCESSORIES**

More details can be found on the relevant page in this catalogue

2-way or 3-way valve with servo drive

ZV2-230-xx,x-xx

ZV3-230-xx,x-xx

RT-3-07



Room thermostat

TER-P



**Magnetic door contact (12V) in a metal housing
with higher protection against mechanical damage**

DK-B-3



Flexible connection hoses

OH-02-3-4-500





KEY TO CODING

VCEN1 A-100 E1 AC-IR-0 A0

- A0** - 2V version
- 0** - Standard RAL 9016
- 9** - Atyp RAL
- IR** - IR control
- AC** - Motor type
- S0** - Ambient
- E0** - Elektric heater with reduced power
- E1** - Elektric heater standard
- V2** - LPHW coil 2-row
- 100** - Nominal width 1000 mm
- 150** - Nominal width 1500 mm
- 200** - Nominal width 2000 mm
- A** - A Output series
- VCEN1** - ENTRESSE air curtain