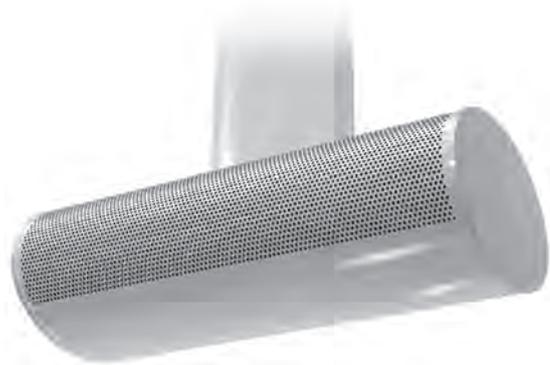


Comtesse

- [] Water heater
- [] Electric heater
- [] Without heater
- [] Opening heights of up to 3m



Features

- Single capacity line, for opening heights of up to 3m
- 1.0m, 1.5m and 2.0m lengths
- Water heater, electric wire heater or air-only version
- Attractive design
- Two types of electronic control
- Integrated PID heating control (with integrated antifreeze protection for water version)
- 24-month guarantee

Comtesse air curtains are designed for the barrier free separation of two areas with differing climatic conditions. These air curtains are particularly suitable for installation in shopping centres, banks, hotels, restaurants, administrative buildings and so on. The air curtain should be used in an environment free of rough dust, grease, chemical fumes and other impurities.

The Comtesse is available in three metallic colour options, Silver,

Champagne or Dark Grey with black edges to emphasize its design and shape. Alternative RAL colours are available at an extra charge.

Primary Parameters

- The air curtain should be installed indoors in a dry area with ambient temperatures ranging from 0°C up to +40°C with a relative humidity up to 80%.
- The IP rating of the air curtain is IP20.
- All air curtains with electric heaters are fitted with a safety thermostat with automatic reset and an emergency thermostat with a manual reset.
- The warm-water exchangers are designed for a maximum operating temperature of +100°C and a maximum operating pressure of 1.6MPa.

All air curtain projects should be calculated by a HVAC designer.

Air curtain type	Door height* [m]	Air capacity [m ³ /h]	Noise** [dB(A)]	Heater power [kW]	Heater voltage /current [V/A]	Fan voltage /current [V/A]	Weight [kg]
VCC-C-10S-1	3.0	2550	50.5	-	-	230/1.2	29
VCC-C-15S-1		3825	53.0	-	-	230/2.0	41
VCC-C-20S-1		5100	54.5	-	-	230/2.5	50
VCC-C-10E-2		2500	50.5	9.5	400/14.5	230/1.2	32
VCC-C-15E-2		3750	53.0	15.0	400/22.5	230/2.0	45
VCC-C-20E-2		5000	54.5	19.0	400/28.5	230/2.5	54
VCC-C-10W-2		2400	50.0	19.68***	-	230/1.2	37
VCC-C-15W-2		3600	52.5	30.85***	-	230/2.0	52
VCC-C-20W-2		4800	54.0	41.58***	-	230/2.5	62

* Limited distance when air flow speed decreases to 2m/s. Applies to the highest capacity type under optimum conditions.

** Sound pressure measured 3m from the air curtain intake.

*** At the temperature gradient of 82/71 and temperature of intake air equal to +18 °C.

Electric heater parameters

Air curtain type	Air capacity [m ³ /h]	Heater power [kW]	Temperature increase* Δt [°C]
VCC-C-10E-2	2500	9.50	10.6
VCC-C-15E-2	3750	15.00	11.1
VCC-C-20E-2	5000	19.00	11.2

- At the maximum air flow and maximum heater power

Water exchanger parameters for water temperature gradient of 80/60°C

Air curtain type	Air capacity [m ³ /h]	Heater power* [kW]	Outlet temperature [°C]	Water flow [l/s]	Water pressure loss [kPa]
VCC-C-10W-2	2400	16.35	38.1	0.2	2.06
VCC-C-15W-2	3600	25.83	39.2	0.31	2.45
VCC-C-20W-2	4800	35.10	39.6	0.42	2.30

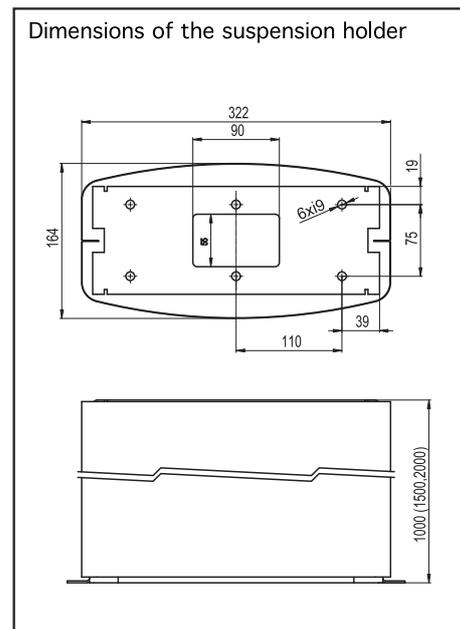
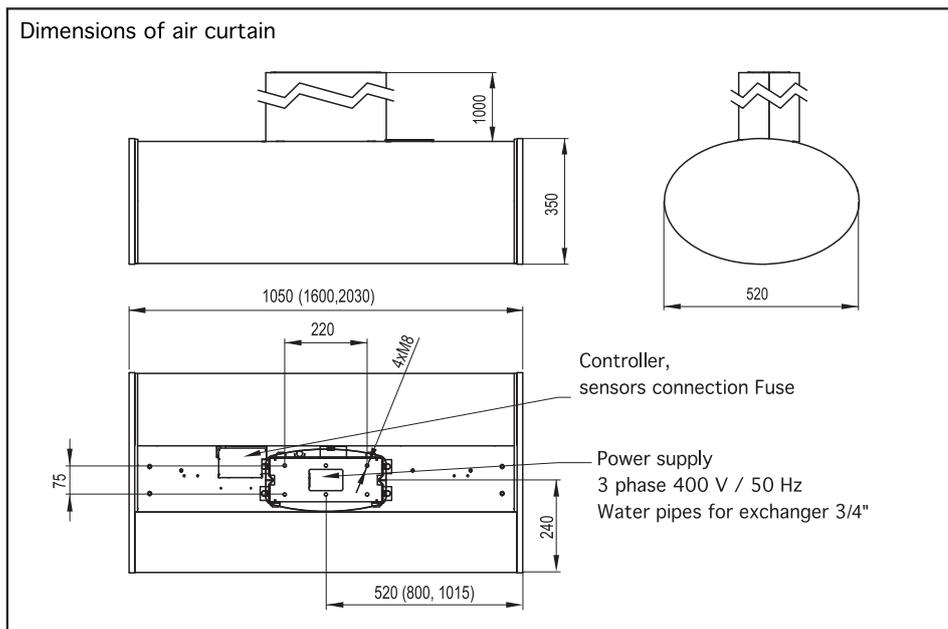
- Temperature of intake air: +18 °C

Water exchanger parameters for water temperature gradient of 82/71 °C

Air curtain type	Air capacity [m ³ /h]	Heater power* [kW]	Outlet temperature [°C]	Water flow [l/s]	Water pressure loss [kPa]
VCC-C-10W-2	2400	19.68	42.2	0.4111	10.61
VCC-C-15W-2	3600	30.85	43.3	0.6444	11.39
VCC-C-20W-2	4800	41.58	43.6	0.8638	9.13

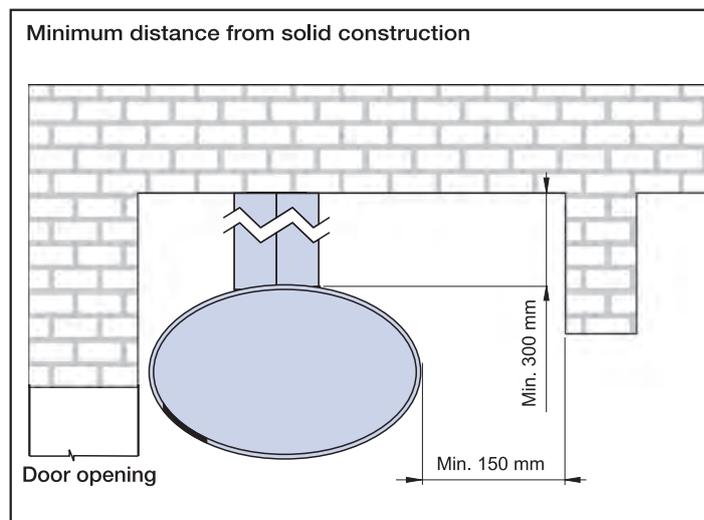
- Temperature of intake air: +18 °C





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, see figure.
- 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.
- The heating water supply line and power supply to the air curtain are routed through a design holder.
- Design suspension holder (see ACCESSORIES) is used for installing the air curtain. The holder is an optional item and has to be ordered separately.



Control

* The Comfort version allows a stepless regulation of both electric and water heat output.



Basic model
(air curtains without heater only)



Comfort model
(air curtains with heater only)

	Type of controller	Manual	Manual/Automatic
	Regulation of air output	3 speeds	3 speeds
	Regulation of electric heater	NO	3 levels
	Regulation of water heater	NO	3 levels
	Possibility of connecting a door contact	YES	YES
	Connection of a special thermostat	NO	NO
	Connection of a timer	YES	YES
	External temperature sensor	NO	YES
	Air curtain cleaning interval indication based on operating hours	YES	YES
	Door switch state indication	YES	YES
	Electric heater overheating indication	NO	YES
	Water heater freezing indication	NO	YES
	Aftercooling electric heater	NO	30s
	Chaining air curtains	Up to 6	Up to 6
	Light indication of selected function	YES	YES
	Controller connection to air curtain	Low-voltage cable (12V) with max. length of 50m	Low-voltage cable (12V) with max. length of 50m

Controller

When in manual mode the controller will control the fan speeds and electric/water heating options. In automatic mode the air curtain uses its external temperature sensor and integrated air intake sensor to automatically control both heat and fans depending on external/internal conditions.

PID regulation is used for both electric and water heaters to ensure maximum comfort.

All water options come complete with integral anti-freeze protection which activates once the temperature of the air curtain outlet falls below +5°C. This remains active even when the air curtain is switched off.

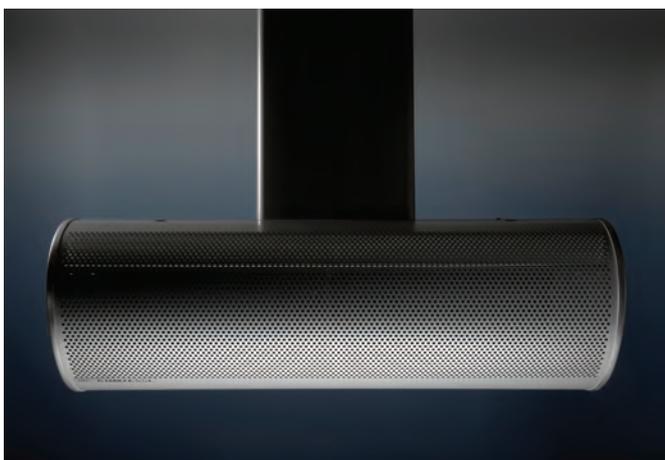
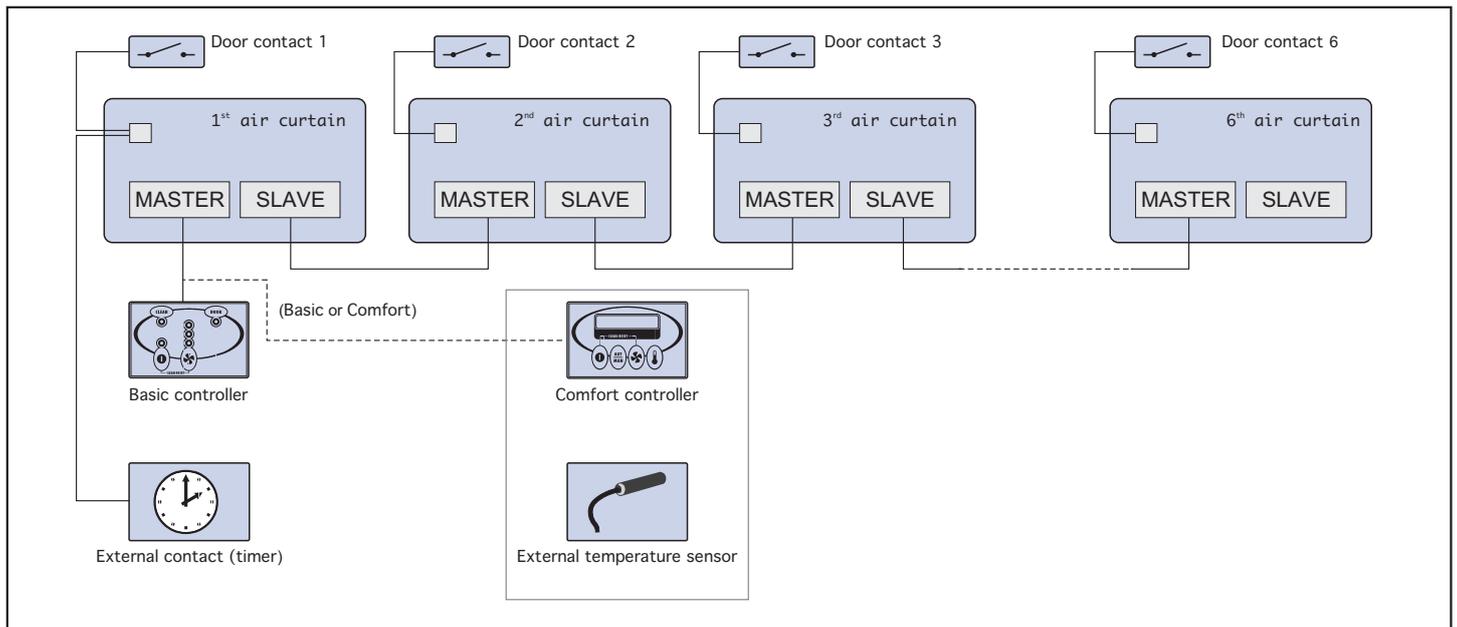
The control allows for air curtain chaining. This means that a single controller may be used for controlling up to six air curtains

of one type (all Basic or Comfort) at the same time in the same mode. A door contact can be connected to each air curtain.

One of these air curtains is fitted with a controller and acts as a master unit. Other air curtains are connected to the master unit through a communication cable and operate as slave units. The same cable type is used both for connecting the air curtain with a controller and for interconnecting the individual air curtains. Optional external switching element (timer, outdoor temperature sensor) can be connected to the master air curtain in addition to the door contact.

For Comfort version, the antifreeze protection acts upon the air curtain having reported a failure only.

The principle of chained air curtains is illustrated by the following figure.

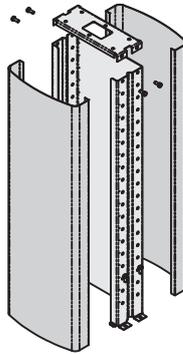


Accessories

These accessories should be ordered to make the air curtain operational.

Suspension holder

Support columns available in 3 colour options and 3 lengths (1000mm, 1500mm and 2000mm)



VCC-DR - 10 - 0

0 - silver metallic
1 - champagne metallic
2 - dark grey metallic
9 - other colours according to RAL (state specific colour number extra to the code)

10 - length 1000mm
15 - length 1500mm
20 - length 2000mm

VCC-DR - suspension holder for the INTENSSE Design, STYLESSE Design and COMTESSE Design air curtains

Optional accessories

Connection cable

The communication cable is designed for connecting the DM controller to the air curtain or for interconnecting chained air curtains.

The standard length of the cable delivered with the air curtain is 5m. Other lengths are available based on the coding key provided below.



KABEL-05M

03, 05, 08, 10, 15, 20, 30, 40 - cable length in m (unless otherwise stated in the order, the cable is a standard 5m) Maximum cable length is 50m.

KABEL - connection cable

Door switch for air curtains fitted with the DM and DA controls

DK1



Timer with a weekly program

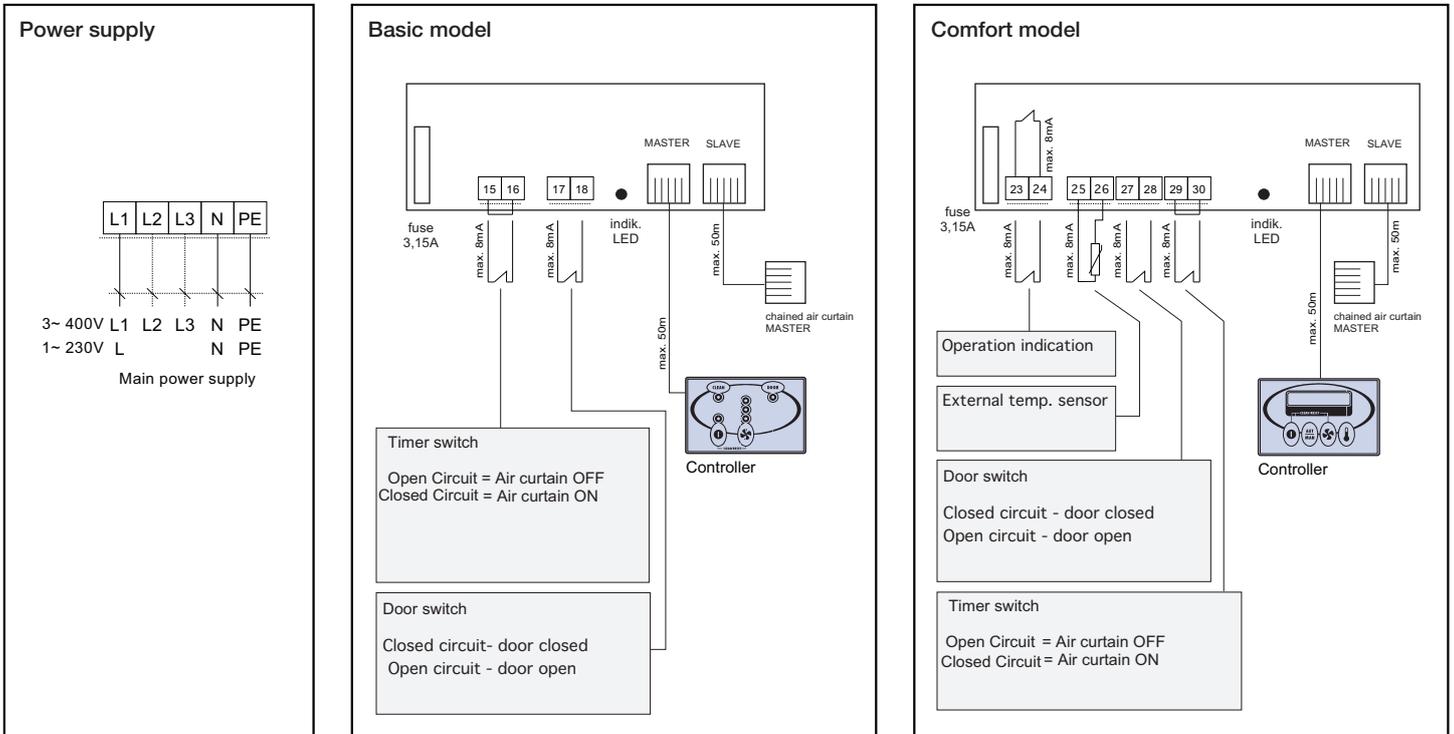
SH-TM-848



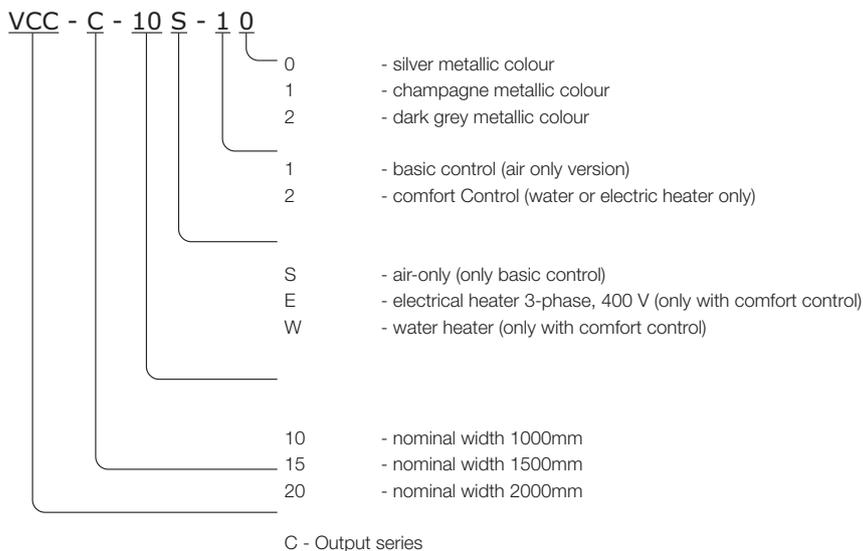
Wiring diagrams

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

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



Key to coding



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