

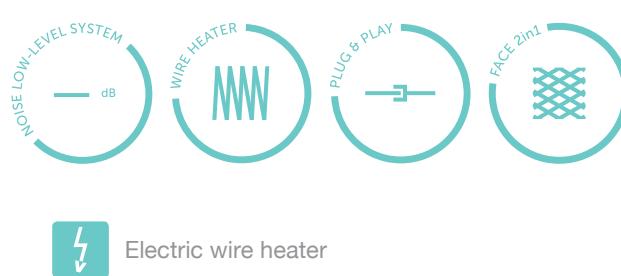
Air Curtains



 **EURO**Ventus®

Air Curtains

BASIC / ECB



Electric wire heater



BASIC FEATURES

- Lengths 60 and 90 cm available
- Air flow up to 475 m³/h
- FACE 2 in 1 – suction grille + filter = 2 in 1
- Silent operation
- Fast starting of heating output
- Simple and intuitive control
- Easy installation
- Standard colour RAL 9010 (any RAL – based colours may be provided on customer's request)

The air curtain for small openings where a narrow hot stream is required for use in premises such as **fast-food facilities, drive-in restaurants, petrol stations and receptions** with a recommended height up to 1.5 m*.

* Maximum recommended installation height suitable for the most application (may differ based on the existing conditions at the installation location)



PRIMARY PARAMETERS

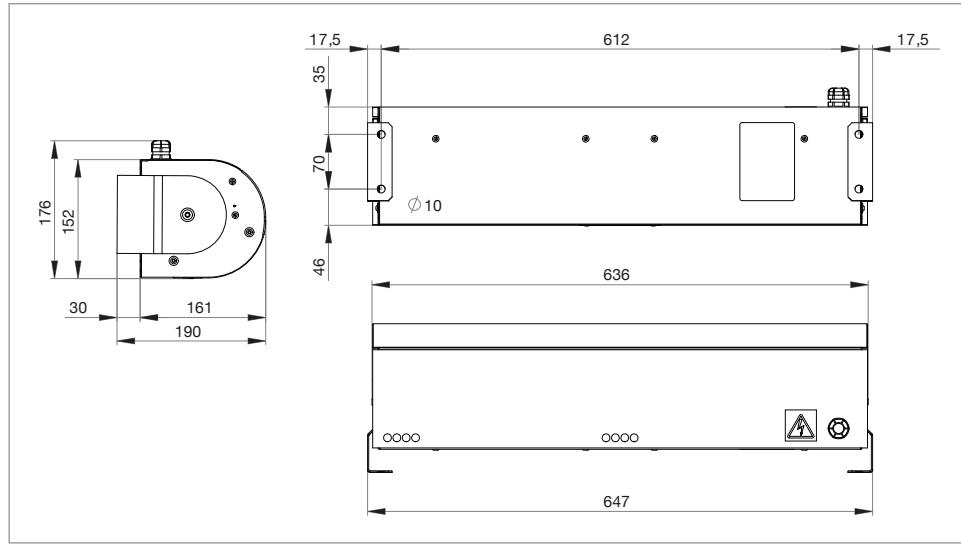
Air curtain is designed for performance in an inner dry environment with the outside temperature between +5 °C to +40 °C and relative humidity up to 80 %, for transferring air without gross dust, greasiness, chemical vapours and other kinds of pollution. Electrical protection of this product is IP 20. BASIC air curtains are equipped with electric wire heater with automatic thermostat on each element. Whole product is secured by emergency thermostat with manual reset.

Air curtain type	Air flow volume [m ³ /h]		Acoustic pressure [dB(A)]*		Voltage / Frequency [V/Hz]	Fan current [A]	Fan power input [W]	Heater power input [kW]	Total consumption [A]	Total power input [kW]	Air temperature increase At [°C]	Weight [kg]
	max speed	min speed	3m	5m								
ECB-A-060-E-RF-0-0	315	285	46,5	42,1	230 / 50	0,4	57,0	2,4	11	2,5	22,0	6
ECB-A-090-E-RF-0-0	475	410	48,5	44,0	230 / 50	0,7	87,0	3,1	14	3,2	19,0	8

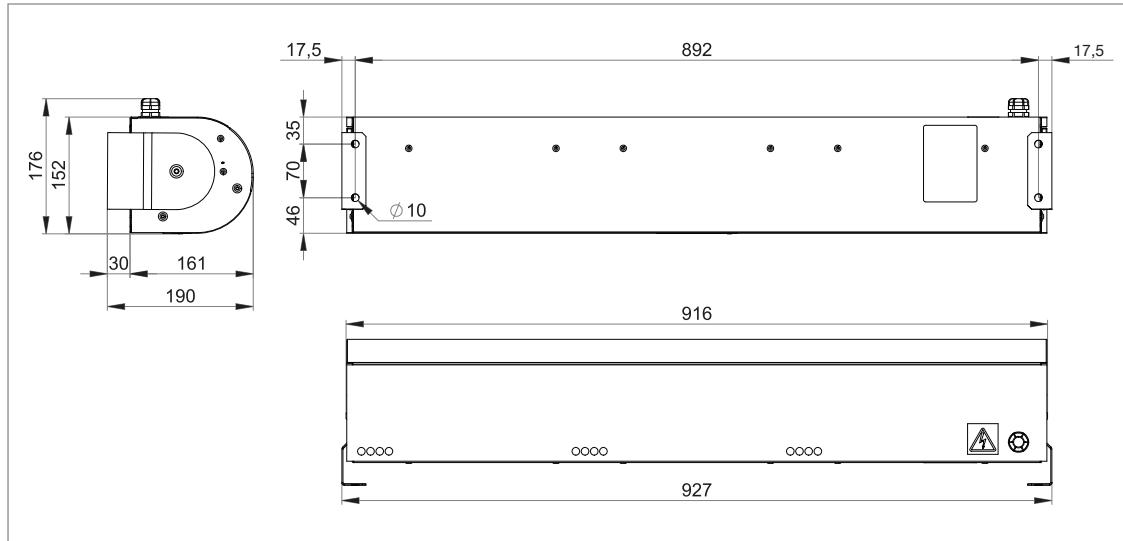
*Acoustic pressure values at 3 and 5 m distance for maximum speed.
Directional factor: 2 .



BASIC 600



BASIC 900





INSTALLATION AND ASSEMBLY

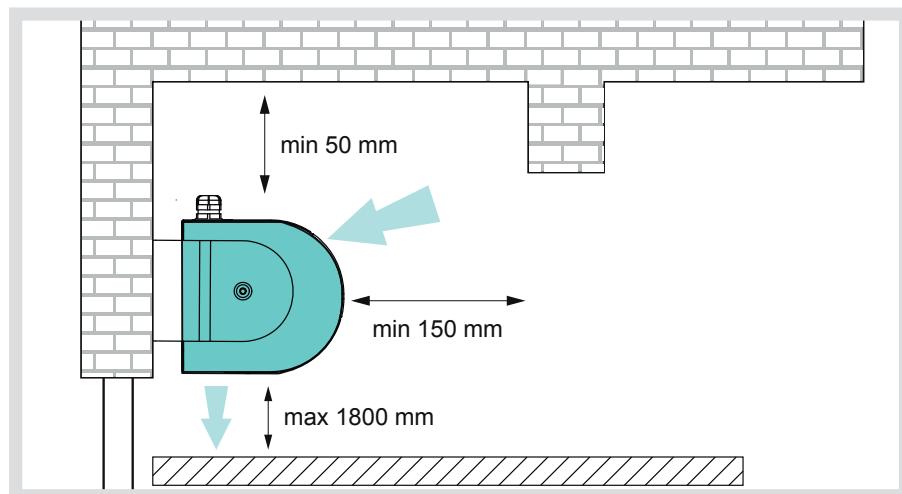
- Air curtain can be installed only in a horizontal position
- Air curtain must be placed as near the upper edge of a door opening as possible, see the picture
- To achieve a best function of BASIC air curtain is recommended to use model which is slightly wider than opening which should be covered
- Correct operation of the air curtain requires that specified distances from the surrounding objects are kept, see picture.
- When installing, it is necessary to consider the connection of air curtain to an electrical lead
- To hang curtains, holders included in the delivery are used



CONTROL

BASIC air curtains are controlled by a wireless remote control, which is included in the delivery. Basic characteristic of control is described below.

Project shall always be developed by the HVAC designer.



Overview of functions

	Type of controller	Manual
	Regulation of air output	2 speeds
	Regulation of electric heater	ON/OFF
	Possibility of connecting a door contact	NO
	Temperature measurement	NO
	External control	NO
	After cooling electric air curtain	YES
	Pairing controller with more curtains	YES
	Indication of selected function	YES



After turning air curtain off an automatic function for safe cooling of the air curtain is set on and ventilators run for another 30 seconds. This function is signalized by a blinking LED placed on the cover of the curtain.



ACCESSORIES

BASIC air curtains are controlled by a wireless remote control, which is included in the delivery. Basic characteristic of control is described below.

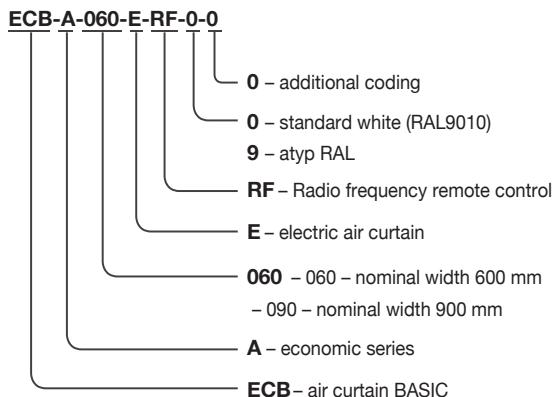


WIRING DIAGRAMS

BASIC air curtain is supplied with a power cord including a plug (3 m long).

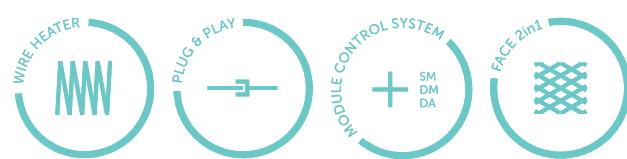


KEY TO CODING



Air Curtains

ESSENSSE / ECE



-  air-only
-  water heater
-  electric wire heater



BASIC FEATURES

- Lengths: 1; 1.5 and 2 m
 - Air flow up to 4700 m³/h
 - Straw System – maximized screening effect
 - FACE 2 in 1 – suction grille + filter = 2 in 1
 - Universal interface for control module connection (RF, SM, DM)
 - Low build-in height
 - Standard colour RAL 9010 (any RAL – based colours may be provided on customer's request)
- ESSENSSE A**

Basic air curtain for use in **small shops, restaurants and coffee bars** with a recommended installation height up to 2,2 m*.

ESSENSSE B

Basic air curtain for use in **shops, restaurants, hotels and offices** with a recommended installation height up to 3 m*.

ESSENSSE C

Basic high-performance air curtain for use in a **shopping**

centres, administrative buildings and manufacturing halls with a recommended installation height up to 4 m*.

* Maximum recommended installation height suitable for the most application (may differ based on the existing conditions at the installation location)

The air curtain shall be installed indoor in a dry area with ambient temperatures ranging from 0 °C up to +40 °C and relative humidity of up to 80 %. It is designed for conveying air free of fine dust, grease, chemical fumes, and other impurities. IP rating of the air curtain is IP 20. The air curtain project shall always be developed by the HVAC designer.



PRIMARY PARAMETERS

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

ECE-A

Type	Recom-mended installation height [m]*	Air output [m ³ /h]			Acoustic pressure [dB(A)]**		Heater power out-put [kW]		Total con-sumption [V/A]	Motor con-sumption [V/A]	Temper-ature increase Δt [°C]***	Frequency [Hz]	Weight [kg]****
		Speed 3	Speed 2	Speed 1	3m	5m	1st level	2nd level					
ECE-A-100-E...		1000	880	760	48,5	44,0	2,4	4,7	400/7,1	230/0,3	14	50	15
ECE-A-150-E...	2,2	1450	1330	1170	50,3	45,9	3,8	7,6	400/11,4	230/0,4	15	50	20
ECE-A-200-E...		2000	1730	1460	50,9	46,5	4,8	9,5	400/14,1	230/0,5	14	50	25
ECE-A-100-S...		1000	890	770	48,5	44,0	-	-	230/0,3	230/0,3	-	50	14
ECE-A-150-S...		1500	1360	1190	50,3	45,9	-	-	230/0,4	230/0,4	-	50	18
ECE-A-200-S...		2050	1770	1500	50,9	46,5	-	-	230/0,5	230/0,5	-	50	23
ECE-A-100-G...		1000	880	760	48,5	44,0	2,4	4,8	400/6,1	230/0,3	7	50	15
ECE-A-150-G...		1450	1330	1170	50,3	45,9	2,0	4,8	400/8,4	230/0,4	10	50	20
ECE-A-200-G...		2000	1730	1460	50,9	46,5	2,4	5,9	400/10,3	230/0,5	9	50	25

* Maximum recommended installation height suitable for most applications (may differ based on the existing conditions at the installation location)

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

** Acoustic pressure measured at 3 and 5 m away from the device at maximum motor speed. Direction coefficient Q: 2.

**** Weight without regulation.

ECE-B

Type	Recommen-ded install-ation height [m]*	Air output [m ³ /h]			Acoustic pressure [dB(A)]**		Heater power out-put [kW]		Total con-sumption [V/A]	Motor con-sumption [V/A]	Tempera-ture increase At [°C]***	Frequency [Hz]	Weight [kg]****
		Speed 3	Speed 2	Speed 1	3m	5m	1st level	2nd level					
ECE-B-100-E-..	3	1450	1320	1120	55,9	51,5	2,4	5,9	400/10,2	230/0,6	12	50	16
ECE-B-150-E-..		2150	1860	1500	57,0	52,6	4,9	10,0	400/15,9	230/0,7	15	50	22
ECE-B-200-E-..		2800	2260	1770	57,5	53,0	6,0	12,5	400/19,6	230/0,8	14	50	27
ECE-B-100-V-..		1300	1190	1010	55,8	51,3		9,6	230/0,6	230/0,6	24	50	17
ECE-B-150-V-..		1900	1720	1410	54,4	49,9		15,7	230/0,7	230/0,7	26	50	23
ECE-B-200-V-..		2550	2160	1730	54,1	49,7		22,4	230/0,8	230/0,8	27	50	28
ECE-B-100-S-..		1500	1340	1140	56,5	52,0	-	-	230/0,6	230/0,6	-	50	15
ECE-B-150-S-..		2200	1880	1530	58,6	54,2	-	-	230/0,7	230/0,7	-	50	20
ECE-B-200-S-..		2900	2290	1800	57,7	53,2	-	-	230/0,8	230/0,8	-	50	24
ECE-B-100-F-..		1450	1320	1120	55,9	51,5	4,7	9,4	400/14,0	230/0,6	21	50	16
ECE-B-150-F-..		2150	1860	1500	57,0	52,6	7,6	15,1	400/22,8	230/0,7	22	50	22
ECE-B-200-F-..		2800	2260	1770	57,5	53,0	9,6	19,1	400/28,3	230/0,8	20	50	27
ECE-B-100-G-..		1450	1320	1120	55,9	51,5	2,4	4,7	400/7,4	230/0,6	10	50	16
ECE-B-150-G-..		2150	1860	1500	57,0	52,6	3,8	7,6	400/11,6	230/0,7	11	50	22
ECE-B-200-G-..		2800	2260	1770	57,5	53,0	4,9	9,6	400/14,6	230/0,8	10	50	27

* Maximum recommended installation height suitable for most applications (may differ based on the existing conditions at the installation location).

** Acoustic pressure measured at 3 and 5 m away from the device at maximum motor speed. Direction coefficient Q: 2.

*** Suction air temperature +18°C, at maximum heating level (90/70) and highest fan speed.

**** Weight without regulation.

ECE-C

Type	Recommen-ded install-ation height [m]*	Air output [m ³ /h]			Acoustic pressure [dB(A)]**		Heater power out-put [kW]		Total con-sumption [V/A]	Motor con-sumption [V/A]	Tempera-ture increase At [°C]***	Frequency [Hz]	Weight [kg]****
		Speed 3	Speed 2	Speed 1	3m	5m	1st level	2nd level					
ECE-C-100-E-..	4	2500	2250	1700	65,5	61,1	5,0	9,9	400/15,7	230/1,3	12	50	23
ECE-C-150-E-..		3600	3250	2700	66,2	61,7	7,9	15,2	400/23,8	230/1,7	13	50	32
ECE-C-200-E-..		4550	4000	3400	65,0	60,6	10,2	19,1	400/30,5	230/2,8	13	50	39
ECE-C-100-V-..		2150	1850	1500	65,1	60,6		17,2	230/1,0	230/1,0	24	50	25
ECE-C-150-V-..		3000	2700	2300	62,4	58,0		25,6	230/1,4	230/1,4	25	50	33
ECE-C-200-V-..		4250	3800	3050	64,4	59,9		37,0	230/2,8	230/2,8	24	50	42
ECE-C-100-S-..		2500	2250	1700	65,5	61,1	-	-	230/1,3	230/1,3	-	50	22
ECE-C-150-S-..		3800	3400	2750	66,2	61,7	-	-	230/1,7	230/1,7	-	50	30
ECE-C-200-S-..		4700	4050	3400	65,0	60,6	-	-	230/2,8	230/2,8	-	50	37
ECE-C-100-G-..		2500	2250	1700	65,5	61,1	2,5	6,1	400/10,9	230/1,3	7	50	23
ECE-C-150-G-..		3600	3250	2700	66,2	61,7	4,8	9,8	400/15,6	230/1,7	8	50	32
ECE-C-200-G-..		4550	4000	3400	65,0	60,6	6,7	13,0	400/21,8	230/2,8	9	50	39

* Maximum recommended installation height suitable for most applications (may differ based on the existing conditions at the installation location).

** Acoustic pressure measured at 3 and 5 m away from the device at maximum motor speed. Direction coefficient Q: 2.

*** Suction air temperature +18°C, at maximum heating level (90/70) and highest fan speed.

**** Weight without regulation.

Water exchanger parameters for water temperature gradient of 90/70 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Pressure loss [kPa]
ECE-B-100-V-..	1300	9,6	42,3	0,5
ECE-B-150-V-..	1900	15,7	44,9	2,6
ECE-B-200-V-..	2550	22,4	46,6	3,2
ECE-C-100-V-..	2150	17,2	42,0	2,5
ECE-C-150-V-..	3000	25,6	43,6	19,2
ECE-C-200-V-..	4250	37,0	44,1	13,8

* Temperature of intake air: +18 °C

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

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Pressure loss [kPa]
ECE-B-100-V-..	1300	8,0	37,9	0,4
ECE-B-150-V-..	1900	13,0	40,0	2,0
ECE-B-200-V-..	2550	18,6	41,4	2,2
ECE-C-100-V-..	2150	14,1	37,7	1,8
ECE-C-150-V-..	3000	21,0	39,0	13,7
ECE-C-200-V-..	4250	30,4	39,4	9,9

* Temperature of intake air: +18 °C

Water exchanger parameters for water temperature gradient of 70/50 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Pressure loss [kPa]
ECE-B-100-V-...	1300	6,3	33,6	0,2
ECE-B-150-V-...	1900	10,3	35,2	1,5
ECE-B-200-V-...	2550	14,8	36,4	1,4
ECE-C-100-V-...	2150	11,2	33,6	1,2
ECE-C-150-V-...	3000	16,7	34,7	9,2
ECE-C-200-V-...	4250	24,0	35,0	6,7

* Temperature of intake air: +18 °C

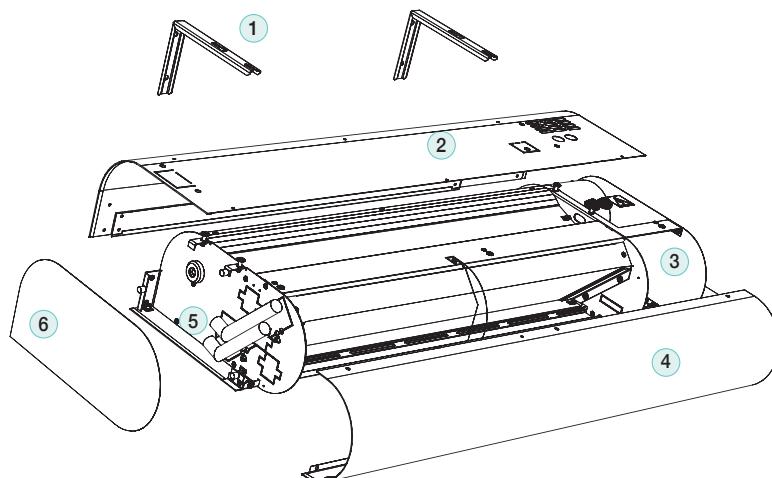
Water exchanger parameters for water temperature gradient of 60/40 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Pressure loss [kPa]
ECE-B-100-V-...	1300	4,7	29,5	0,2
ECE-B-150-V-...	1900	7,7	30,7	1,0
ECE-B-200-V-...	2550	12,2	31,5	0,8
ECE-C-100-V-...	2150	8,3	29,6	0,7
ECE-C-150-V-...	3000	12,4	30,4	5,6
ECE-C-200-V-...	4250	17,8	30,6	4,2

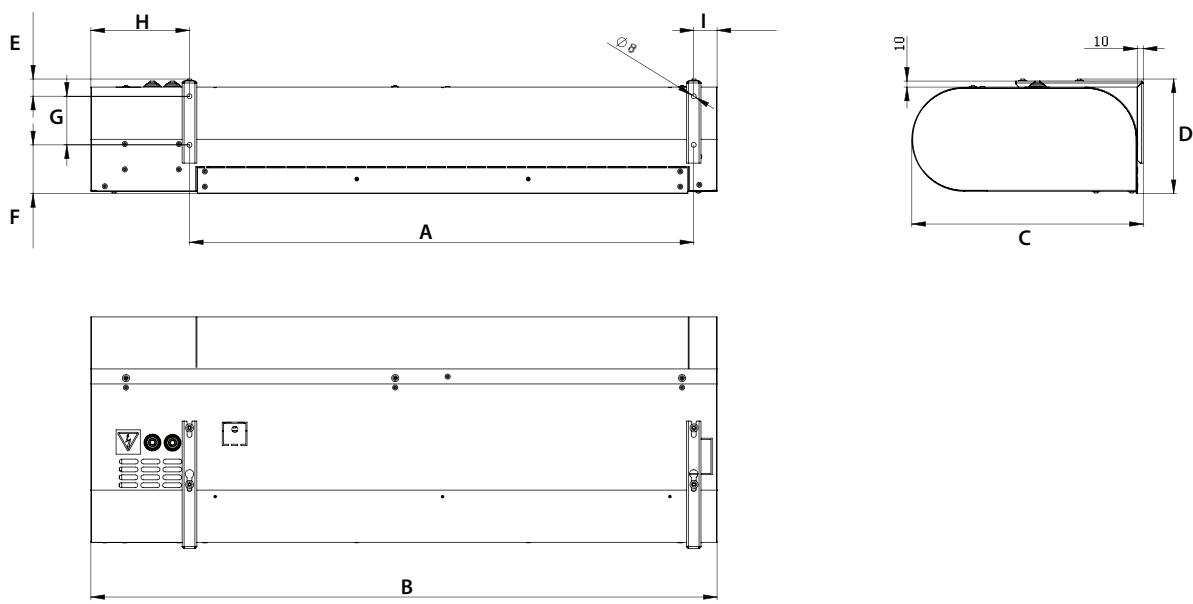
* Temperature of intake air: +18 °C

Main Parts

- 1 Mounting brackets
- 2 Top cover
- 3 Area for connecting the regulation module
- 4 Suction cover
- 5 Connection for water heat exchanger (only on water versions)
- 6 Side cover (attached magnetically)



Dimensions



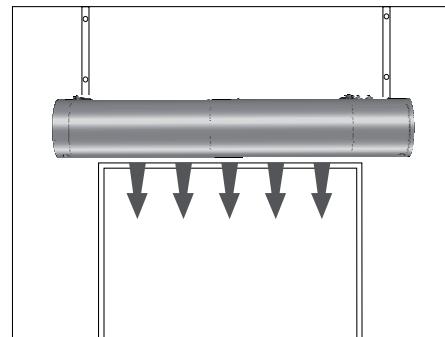
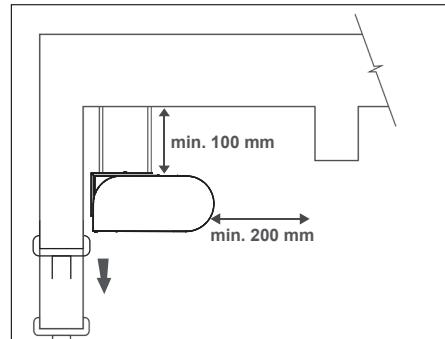
Type	A	B	C	D	E	F	G	H	I
ECE-A-100-X-...	834	1035	347	179	24	60	80	169	32
ECE-A-150-X-...	1334	1535	347	179	24	60	80	169	32
ECE-A-200-X-...	1834	2035	347	179	24	60	80	169	32
ECE-B-100-X-...	829	1030	381	189	29	80	80	163	38
ECE-B-150-X-...	1330	1530	381	189	29	80	80	163	38
ECE-B-200-X-...	1830	2030	381	189	29	80	80	163	38
ECE-C-100-X-...	835	1075	441	250	50	110	90	203	38
ECE-C-150-X-...	1337	1577	441	250	50	110	90	203	38
ECE-C-200-X-...	1837	2077	441	250	50	110	90	203	38

The tube diameters for connecting the water heat exchanger are G1/2" (VCE-C... G3/4").



INSTALLATION AND ASSEMBLY

- The air curtain shall be installed in a horizontal position only.
- The air curtain shall be located as close as possible to the top edge of the doorway, minimal distance from the walls depending on fire safety and standards in the country, our recommendation 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.
- Position of the heating water and power supply connections shall be taken into consideration during installation.
- The air curtain shall be installed using supplied brackets.



CONTROL

The Essensse air curtains are controlled by the remote control panel or touch panel. The basic parameters of the controller are given in table below.

WATER HEATER CONTROL

We recommend the following control methods:

1) Basic by throttling

TV1/1 thermostatic valve. The valve controls smoothly the warm water supply into the air curtain depending on the temperature of air leaving the air curtain. One valve is required for each air curtain.

2) Economical by splitting (open/closed)

ZV-3 three-way zone valve with a servo drive and TER-P room thermostat. The valve switches the warm water supply into the air curtain and back towards the heat source depending on the temperature of air leaving the air curtain or depending on the room temperature. One valve is required for each air curtain.

3) Precise by mixing

SMU mixing point, OSMU-01-6A mixing point controller, P12L1000 channel sensor or P10L1000 room sensor. The mixing system controls smoothly the ratio of supply and return heating water flowing into the air curtain depending on the temperature of air leaving the air curtain and/or depending on the room temperature. One mixing point may be used for multiple air curtains provided that they have identical length and that the exchangers are connected in a parallel arrangement.

OVERVIEW OF FUNCTIONS AND SENSOR CONNECTION



	RGJ-ECE-RF-S RGJ-ECE-RF-V	RGJ-ECE-RF-E	RGJ-ECE-DM-S	RGJ-ECE-DM-V RGJ-ECE-DM-E	RGJ-ECE-SM-E	RGJ-ECE-SM-VS
	Type of controller	Manual	Manual	Manual	Manual	Manual
	Regulation of air output	2 speeds	2 speeds	3 speeds	3 speeds	3 speeds
	Regulation of electric heater	NO	YES (ON/OFF)	NO	2 levels	2 levels
	Regulation of water heater	NO	NO	NO	YES	NO
	Possibility of connecting a door contact	YES	YES	YES	YES	YES
	Aftercooling of the electric heater	NO	YES	NO	YES	NO
	Chaining air curtains	YES	YES	YES – max 6 pcs	NO	NO
	Light indication of selected function	YES (on air curtain housing)	YES	YES	NO	NO
	Controller connection to air curtain	RF signal	RF signal	Communication cable	Communication cable	Power cable (230 V) with max. length of 100 m
						Power cable (230 V) with max. length of 100 m

* – One control panel can be paired (via radio frequency) with up to 60 curtains.



ACCESSORIES

Required accessories

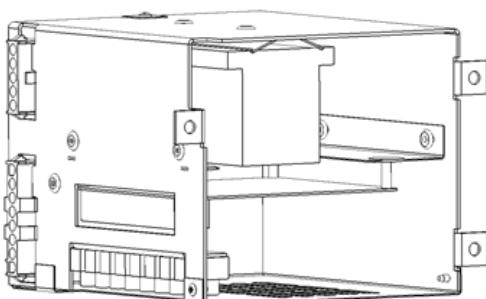
These accessories shall be ordered to make the air curtain functional.

Control module

A control module is an required accessory for **ESSENSSE** air curtain and shall be ordered for each air curtain. Control panel is included in delivery of control module. The ordering key for control modules is provided below.

Control panels of RF control modules use RF signal communication. DM module uses communication cable with RJ12 and PTPM connector.

Control panel of SM control module is connected using common wiring cable (230 V control voltage). A suitable cross-section of the cable shall be determined based on the particular installation conditions. This cable should be delivered by a company performing the air curtain electrical wiring.



OPTIONAL ACCESSORIES

Thermostatic valve TV1/1

TV1/1 (detailed description on the page 305)



Zone valve with servo drive ZV-3

ZV-3 (detailed description on the page 308)



Door switch

DS (detailed description on the page 351)



Door switch for air curtains fitted with DM control

DK-1 (detailed description on the page 353)



RGJ-ECE-DM-E

- S** – without heating regulation
(only for DM)
- E** – with electric heater regulation
- V** – with water heater regulation
(only for DM)
- VS** – without heating/water heater
(only for RF, SM)
- RF** – simple remote control
- DM** – digital manual control
- SM** – simple manual control
- ECE** – air curtain Essensse
- RGJ** – regulation

Room thermostat

TER-P (for more details see page 348)



Timer with a weekly program

SH-TM-848 (for more details see page 350)



OPTIONAL ACCESSORIES

Communication cable for controller

The communication cable is designed for connecting the DM module with controller using RJ12 and PTPM connector. The lengths of communication cable are available according the ordering key provided below.

KP-ECE-10

- 05, 10, 20, 30 – cable length in m
Maximum cable length is 30m.
- KP – Communication cable



OPTIONAL ACCESSORIES

Communication cable for chaining

The communication cable is designed for chaining of other air curtains controlled by DM regulation. The lengths of communication cable are available according the ordering key provided below.



KABEL-05M

- 03, 05, 08, 10, 15, 20, 30, 40
– cable length in m
Maximum cable length is 40 m.
- KABEL – Communication cable

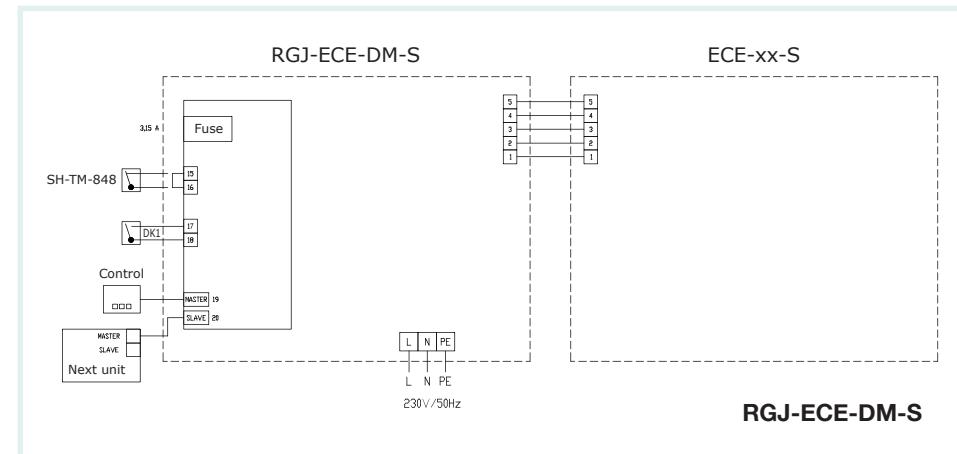
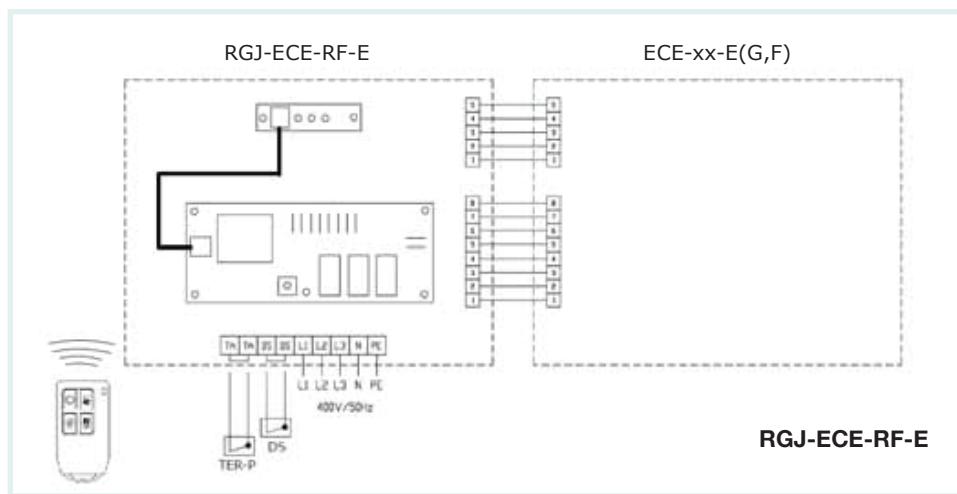
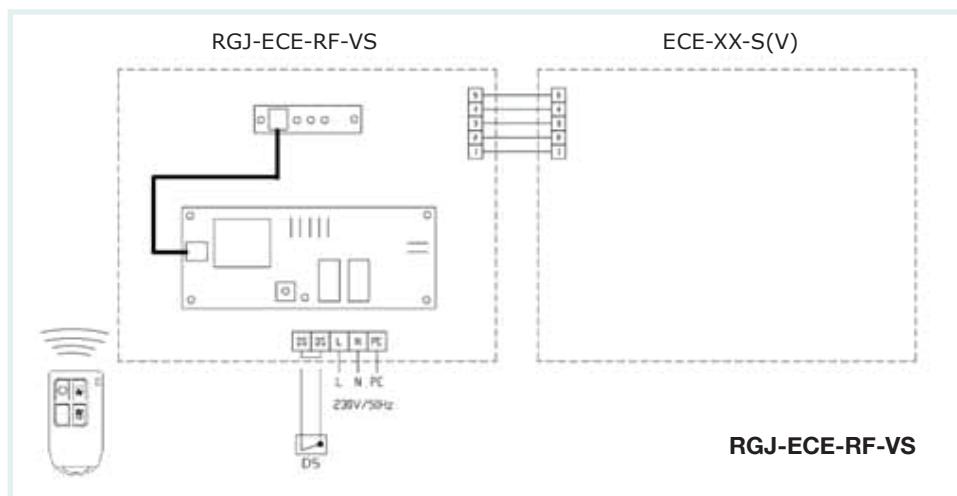


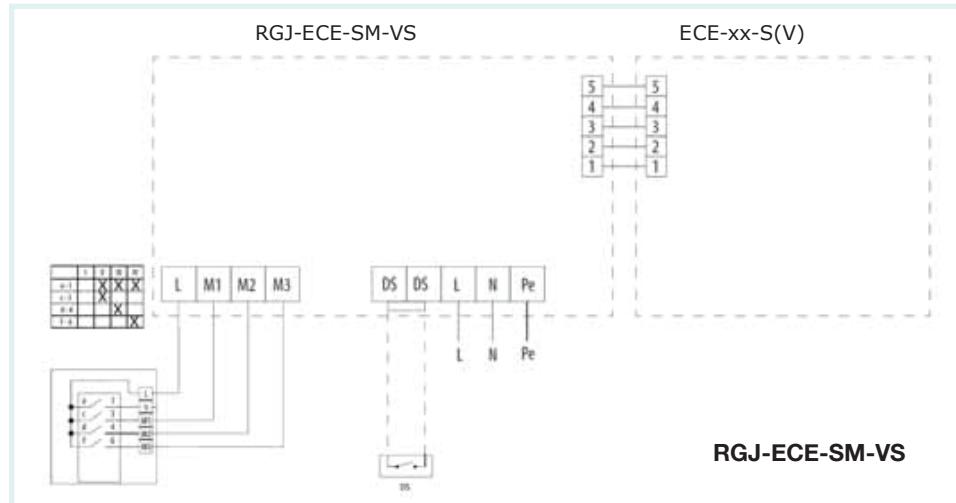
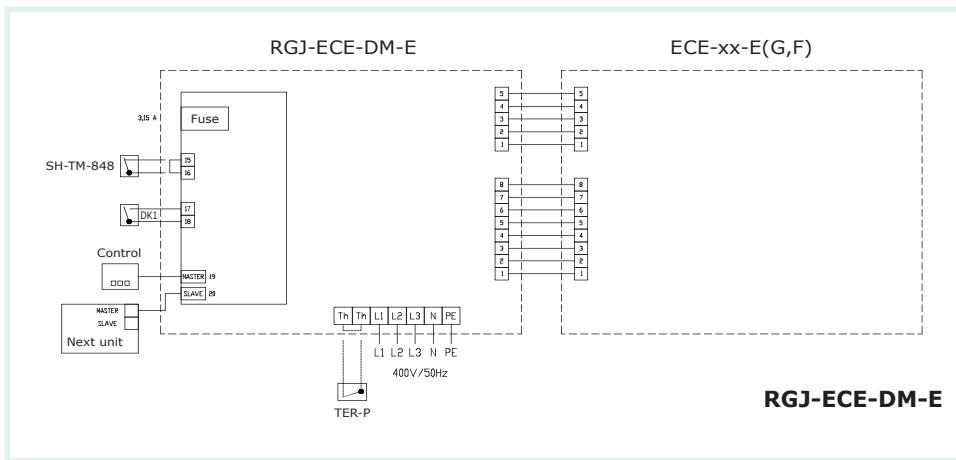
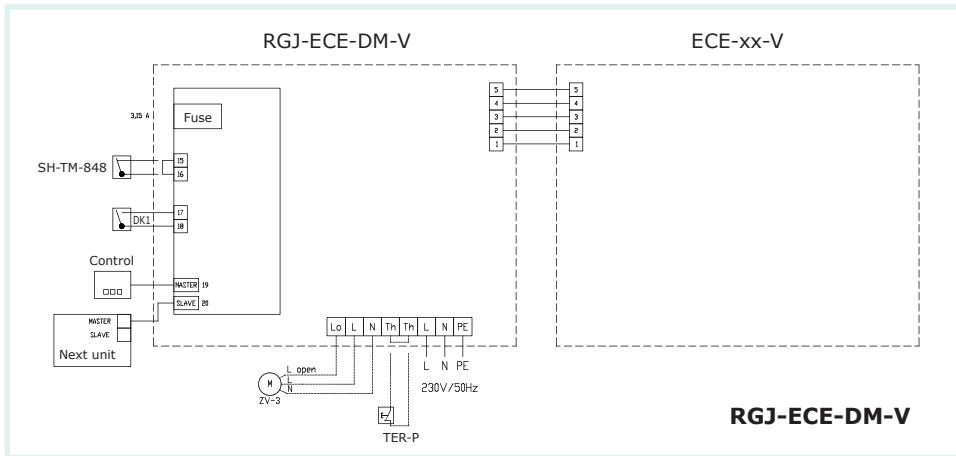


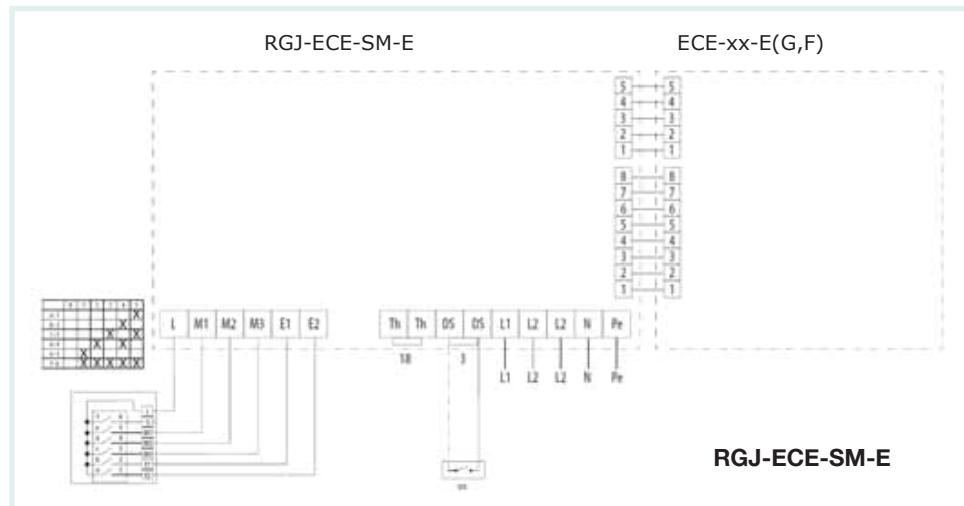
WIRING DIAGRAMS

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, observe strictly the nameplate ratings as well as directions and diagrams affixed directly to the product or enclosed to the product.







1

KEY TO CODING

ECE-B-100-E-ZP-0-0

0 – 2VV version

9 – Atyp. RAI

5 – Atyp RAI
0 – Standard RAI

PP - Population

ZP - Regulation Int

E – Electric heat

- V** - Water heater
- S** - Air - only

F - Electric

power

G - Electric heat

100 – Nominal width 1000 mm

150 – Nominal width

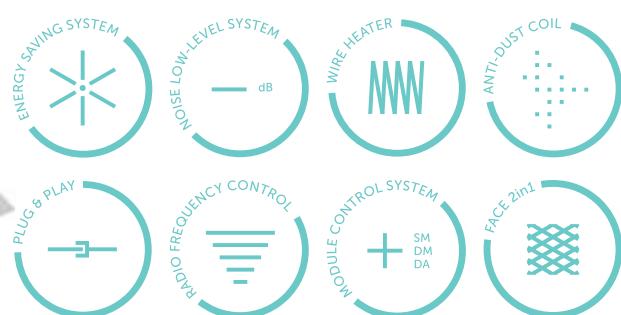
200 – Nominal width

4 Output series

A – Output series
B – Output series

Air Curtains

FINESSE / ECF



 air-only

 water heater

 electric wire heater



BASIC FEATURES

- Lengths: 1; 1.5; 2; 2.5 m
- Air flow up to 6100 m³/h
- Universal interface for control module connection (SM, DM, DA)
- FACE 2 in 1 – suction grille + filter = 2 in 1
- Low noise
- Easy installation and service
- Wireless control option
- Standard colour RAL 9010 (any RAL – based colours may be provided on customer's request)

FINESSE

Discrete and high-performance recessed air curtain for use in **entrance areas of banks, administrative centres, luxury boutiques, shopping centres and airport halls** with a recommended installation height up to 5 m*.

* Maximum recommended installation height suitable for the most application (may differ based on the existing conditions at the installation location)

The air curtain shall be installed indoor 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 fine dust, grease, chemical fumes, and other impurities. IP rating of the air curtain is IP 20. The air curtain project shall always be developed by the HVAC designer.



PRIMARY PARAMETERS

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

ECF-B

Type	Recommended installation height [m]*	Air output [m³/h]			Acoustic pressure [dB(A)]**			Heater power output [kW]	Total consumption [V/A]	Motor consumption [V/A]	Temperature increase At [°C]***	Frequency [Hz]	Weight [kg]****
		Speed 3	Speed 2	Speed 1	Speed 3	Speed 2	Speed 1						
ECF-B-100-E...	4	2250	1540	1030	57,9	49,6	41,5	9,4	400/15,5	230/2,2	12,1	50	39,5
ECF-B-150-E...		3230	2200	1430	60,2	52,1	42,6	15,0	400/25,2	230/3,3	13,5	50	54,5
ECF-B-200-E...		4360	2920	1880	61,2	53,3	44,3	19,0	400/31,3	230/4,4	13,1	50	71,0
ECF-B-250-E...		5300	3600	2380	62,8	54,5	45,3	24,5	400/41,1	230/5,4	13,8	50	85,0
ECF-B-100-V...		2140	1450	960	57,5	49,6	41,2	24,77***	-	230/2,2	36,4	50	41,0
ECF-B-150-V...		3100	2080	1370	59,6	51,6	42,3	38,77***	-	230/3,3	39,3	50	56,0
ECF-B-200-V...		4280	2870	1800	61	53,3	44,1	52,61***	-	230/4,3	38,7	50	73,0
ECF-B-250-V...		5140	3500	2310	62,5	54,4	45,3	62,29***	-	230/5,4	38,1	50	87,0
ECF-B-100-S...		2270	1550	1040	58,3	50,3	42,3	-	-	230/2,2	-	50	37,5
ECF-B-150-S...		3280	2240	1510	60,2	52,1	42,8	-	-	230/3,4	-	50	51,0
ECF-B-200-S...		4400	3040	2100	61,5	53,7	44,6	-	-	230/4,2	-	50	66,0
ECF-B-250-S...		5460	3670	2480	62,7	54,4	45,3	-	-	230/5,4	-	50	80,0

* Maximum recommended installation height suitable for most applications (may differ based on the existing conditions at the installation location).

** Acoustic pressure measured at 3 m away from the device at maximum motor speed. Direction coefficient Q: 2.

*** Suction air temperature +18°C, at maximum heating level (90/70) and highest fan speed.

**** Weight without regulation.

Suction air temperature +18°C, at water heating level 40/30 and highest fan speed.

ECF-C

Type	Recommended installation height [m]*	Air output [m³/h]			Acoustic pressure [dB(A)]**			Heater power output [kW]	Total consumption [V/A]	Motor consumption [V/A]	Temperature increase At [°C]***	Frequency [Hz]	Weight [kg]****
		Speed 3	Speed 2	Speed 1	Speed 3	Speed 2	Speed 1						
ECF-C-100-E...	5	2960	2090	1410	61,2	53,5	44,6	9,4	400/17,9	230/4,0	9,7	50	44,0
ECF-C-150-E...		4080	2810	1880	62,7	55,2	46,0	15,0	400/27,2	230/5,2	10,7	50	60,0
ECF-C-200-E...		5180	3660	2450	64,0	56,3	47,3	19,0	400/34,3	230/6,8	10,9	50	75,5
ECF-C-250-E...		6020	4350	2910	65,8	58,2	49,1	24,5	400/42,8	230/7,9	11,7	50	90,0
ECF-C-100-V...		2800	2020	1360	61,2	54,0	45,3	29,13***	-	230/3,8	32,7	50	45,5
ECF-C-150-V...		3900	2810	1880	62,5	55,4	46,4	44,57***	-	230/5,2	36,0	50	61,0
ECF-C-200-V...		5070	3700	2440	63,7	56,4	47,5	56,99***	-	230/6,5	35,4	50	77,0
ECF-C-250-V...		5860	4230	2800	65,6	58,7	49,6	67,3***	-	230/7,6	36,1	50	91,5
ECF-C-100-W...		2530	1900	1250	61,6	55,6	47,1	13,47#	-	230/3,6	15,87#	50	51,5
ECF-C-150-W...		3500	2630	1770	62,6	56,8	48,0	19,03#	-	230/4,8	16,20#	50	70,5
ECF-C-200-W...		4670	3400	2670	63,7	57,4	48,7	25,71#	-	230/6,0	16,41#	50	89,0
ECF-C-250-W...		5260	3930	2580	65,2	59,4	50,8	29,81#	-	230/7,1	16,89#	50	106
ECF-C-100-S...		3020	2120	1460	61,9	54,2	45,2	-	-	230/3,9	-	50	42,0
ECF-C-150-S...		4160	2830	1950	63,0	55,4	46,2	-	-	230/5,2	-	50	56,5
ECF-C-200-S...		5270	3780	2500	64,2	56,5	47,4	-	-	230/6,7	-	50	71,0
ECF-C-250-S...		6100	4440	3000	65,7	58,3	49,2	-	-	230/7,9	-	50	84,0

* Maximum recommended installation height suitable for most applications (may differ based on the existing conditions at the installation location).

** Acoustic pressure measured at 3 m away from the device at maximum motor speed. Direction coefficient Q: 2.

*** Suction air temperature +18°C, at maximum heating level (90/70) and highest fan speed.

**** Weight without regulation.

Suction air temperature +18°C, at water heating level 40/30 and highest fan speed.

Water exchanger parameters for water temperature gradient of 90/70 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Water flow [l/s]	Pressure loss [kPa]
ECF-B-100-V-...	2140	24,7	52,7	0,2	12,0
ECF-B-150-V-...	3100	38,7	55,5	0,4	29,1
ECF-B-200-V-...	4280	52,6	54,9	0,6	24,1
ECF-B-250-V-...	5140	62,2	54,4	0,7	17,8
ECF-C-100-V-...	2800	29,1	49,2	0,3	14,5
ECF-C-150-V-...	3900	44,5	52,3	0,5	35,1
ECF-C-200-V-...	5070	56,9	51,7	0,6	27,0
ECF-C-250-V-...	5860	62,2	54,4	0,7	17,8

* Temperature of intake air: +18 °C

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

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Water flow [l/s]	Pressure loss [kPa]
ECF-B-100-V-...	2140	20,2	46,4	0,2	8,8
ECF-B-150-V-...	3100	31,7	48,8	0,3	20,8
ECF-B-200-V-...	4280	43,1	48,3	0,5	17,7
ECF-B-250-V-...	5140	51,0	47,8	0,6	13,4
ECF-C-100-V-...	2800	23,8	43,6	0,2	10,9
ECF-C-150-V-...	3900	36,5	46,1	0,4	25,3
ECF-C-200-V-...	5070	46,7	45,6	0,5	19,8
ECF-C-250-V-...	5860	51,0	47,8	0,6	13,4

* Temperature of intake air: +18 °C

Water exchanger parameters for water temperature gradient of 70/50 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Water flow [l/s]	Pressure loss [kPa]
ECF-B-100-V-...	2140	15,9	40,4	0,1	6,2
ECF-B-150-V-...	3100	25,0	42,3	0,3	14,2
ECF-B-200-V-...	4280	34,0	41,9	0,4	12,4
ECF-B-250-V-...	5140	40,2	41,5	0,4	9,7
ECF-C-100-V-...	2800	18,8	38,2	0,2	7,9
ECF-C-150-V-...	3900	28,8	40,2	0,3	17,2
ECF-C-200-V-...	5070	36,8	39,8	0,4	13,8
ECF-C-250-V-...	5860	40,2	41,5	0,4	9,7

* Temperature of intake air: +18 °C

Water exchanger parameters for water temperature gradient of 60/40 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Water flow [l/s]	Pressure loss [kPa]
ECF-B-100-V-...	2140	11,8	34,6	0,1	4,1
ECF-B-150-V-...	3100	18,5	36,0	0,2	8,8
ECF-B-200-V-...	4280	25,2	35,7	0,3	8,1
ECF-B-250-V-...	5140	29,8	35,4	0,3	6,6
ECF-C-100-V-...	2800	13,9	32,9	0,1	5,4
ECF-C-150-V-...	3900	21,4	34,5	0,2	10,8
ECF-C-200-V-...	5070	27,2	34,1	0,3	8,9
ECF-C-250-V-...	5860	29,8	35,4	0,3	6,6

* Temperature of intake air: +18 °C

Water exchanger parameters for water temperature gradient of 40/30 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Water flow [l/s]	Pressure loss [kPa]
ECF-C-100-W-...	2530	13,47	34,0	0,2	13,2
ECF-C-150-W-...	3500	19,03	34,3	0,4	14,1
ECF-C-200-W-...	4670	25,71	34,5	0,5	13,3
ECF-C-250-W-...	5260	29,81	35,0	0,6	16,3

* Temperature of intake air: +18 °C

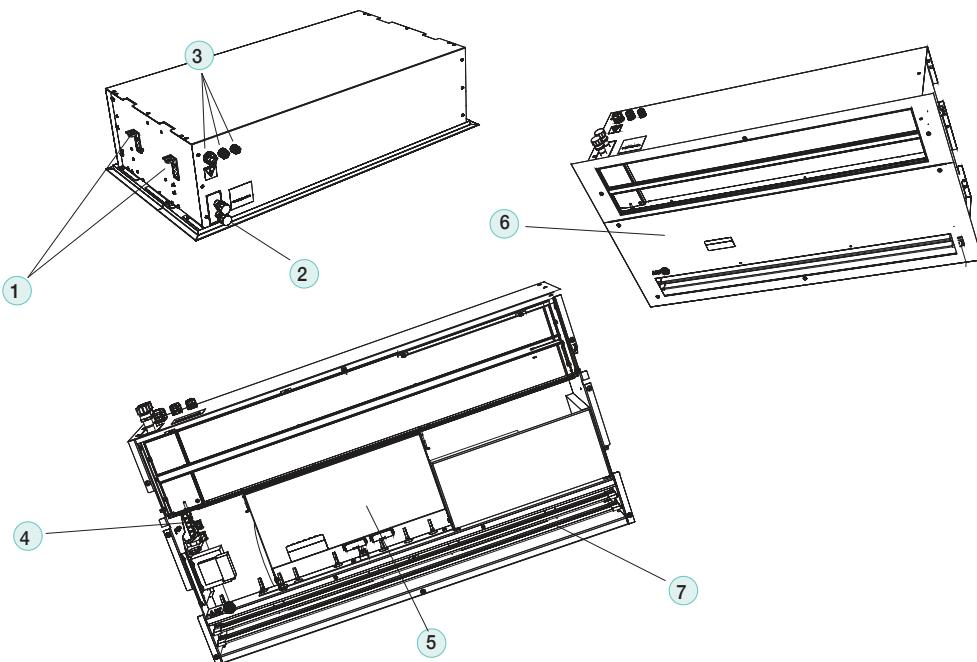
Water exchanger parameters for water temperature gradient of 35/25 °C

Type	Air output [m ³ /h]	Heating output [kW]	Temperature at exhaust [°C]	Water flow [l/s]	Pressure loss [kPa]
ECF-C-100-W-...	2530	9,4	29,2	0,2	8,6
ECF-C-150-W-...	3500	13,3	29,4	0,3	8,2
ECF-C-200-W-...	4670	18,0	29,6	0,3	8,4
ECF-C-250-W-...	5260	21,0	30,0	0,4	9,4

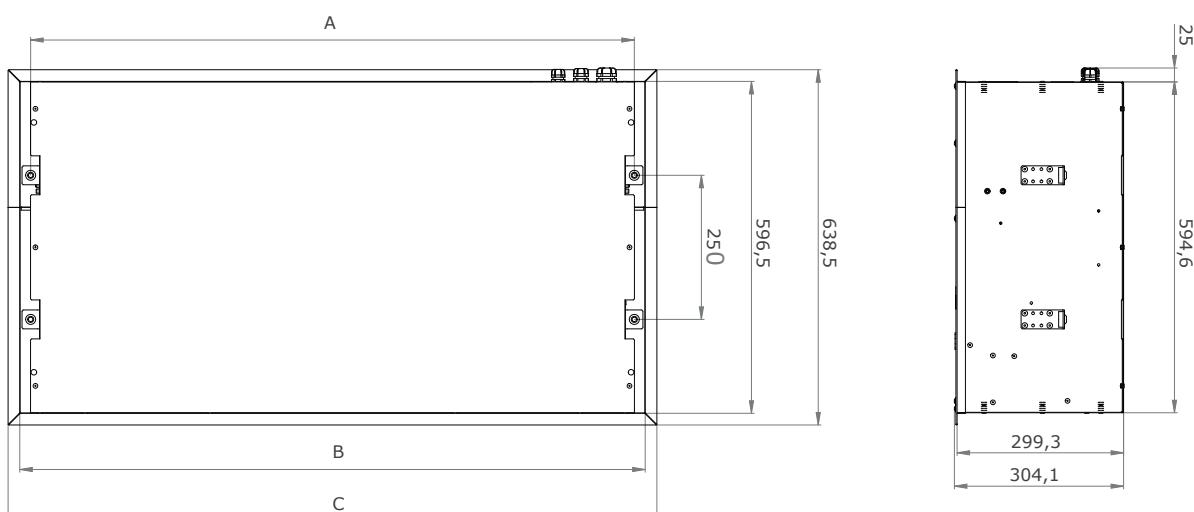
* Temperature of intake air: +18 °C

Main Parts

- (1) Suspension holders (2) Water coil connection ¾" (3) Power supply cable plug (4) Power supply connectors and fusse location
- (5) Control modul socket (6) Inlet face cover (7) Outlet grid



Dimensions



Type	A	B	C
ECF-x-100-x-...	1085	1124,1	1166,1
ECF-x-150-x-...	1585	1624,1	1666,1
ECF-x-200-x-...	2085	2124,1	2166,1
ECF-x-250-x-...	2465	2504,1	2546,1

The tube diameters for connecting the water heat exchanger are G3/4".



INSTALLATION AND ASSEMBLY

The air curtain must be installed only in a horizontal position!

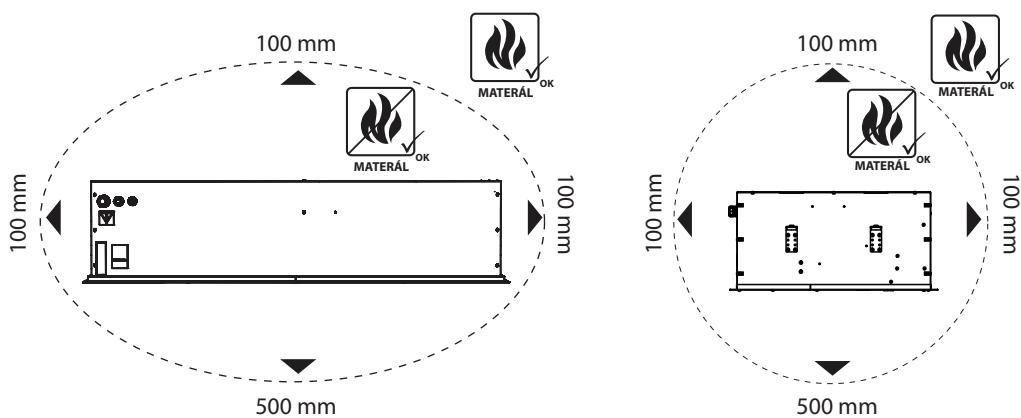
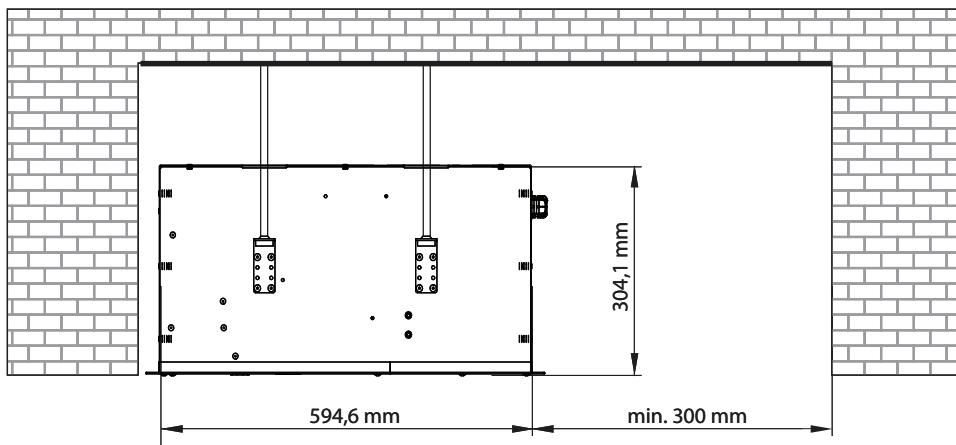
- The curtain can be installed over the door opening. All separation distances for flammable materials and safe use of air curtain has to be kept.
- The installed position of the air curtain can be chosen to accommodate the service hood.
- It must be operated in dry, coverot indoor spaces with an ambient temperature between +5° C and +40° C and relative humidity up to 80%
- The air curtain is not intended for moving air that contains combustible or explosive mixtures, chemical fumes, coarse dust, soot, grease, poisons, infectious germs, etc.



CONTROL

The FINESSE air curtains are produced with universal interface for control module connection. There are three types of control modules available (SM, DM and DA). Control module is a required accessory for each air curtain.

Additional change of control system is available. Control module is connected with air curtain by quick connection sockets. The SM control module is controlled by the wired control panel. The DM and DA control modules use radio signal control. The basic differences among individual control module types are given in table underneath. DM and DA control modules allow radio chaining, i.e. a single control panel can be used for controlling air curtains at the same time in the same mode. Number of chained air curtains is unlimited (in range of radio signal). DA control modules allows in standard BMS control (Modbus RTU). Contact your supplier for more detailed information and data necessary for integration into such system.



POSSIBILITIES OF INDIVIDUAL TYPES OF CONTROLLER



		SM	DM	DA
	Type of controller	Manual	Manual	Manual / Automatic
	Regulation of air output	3 speeds	3 speeds	3 speeds
	Regulation of electric heater	2 levels (ECS-R-SM-E)	2 levels (ECS-R-DM-E)	3 levels / Fluently (ECS-R-DA-E)
	Regulation of water heater	Thermostatic valve (Throttling)	Zone valve (ON/OFF – redirection)	Mixing valve (Fluently – mixing)
	Possibility of connecting a door contact	YES (DS)	YES (DK-1)	YES (DK-1)
	Temperature measurement	NO	YES (ECS-R-DM-V – spatial thermostat)	YES (2 internal sensors, 1 external sensor)
	External control	NO	NO	YES (Internal – Day/Week)
	External temperature sensor	NO	NO	YES
	Air curtain cleaning interval indication based on operating hours	NO	NO	YES
	Fan behavior with door switch	NO	NO	YES
	Aftercooling electric heater	NO	30 s.	30 s.
	Chaining air curtains	NO	Unlimited in radio signal range	Unlimited in radio signal range
	Light indication of selected function	NO	YES (LED)	YES (LCD)
	Controller connection to air curtain	Power cable (230 V) with max. length of 100 m	Radio signal (range in open space 100 m)	Radio signal (range in open space 100 m)
	Radio signal indication	NO	LED/ BEEP sound	BEEP sound

One external switching element can be connected to air curtains with the SM and DM control module (door contact). Such external switching element activates and deactivates complete air curtain.

Air curtains fitted with the DA control module has outdoor temperature sensor connected and allows to connect two external switching elements (door switch, external switch). Air curtain with the DA control regulates the fan speed and output of heater depending on the outdoor temperature and room temperature. DA control module has integrated timer controlled from control panel.

Detailed description of the air curtain with DA control module and its function in the automatic mode is available in the instruction manual for DA control module.

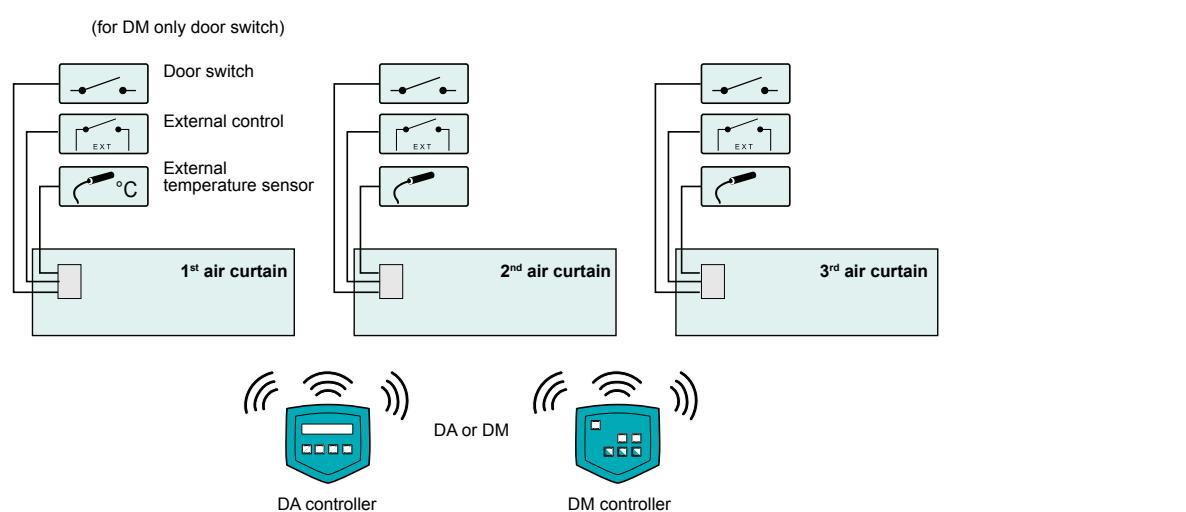
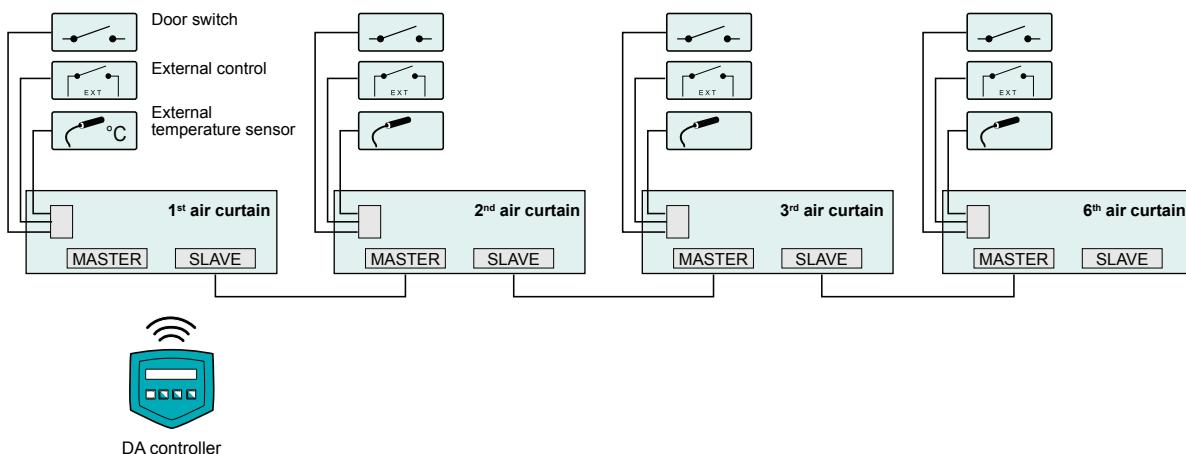
Water heater control

Each control module for the air curtain with water heater has its own system of water regulation.

Following control methods are available:

1) SM control module ECS-R-SM-V – Basic by throttling

TV1-1/1 thermostatic valve is an required accessories for SM



control module. The valve controls smoothly the warm water supply into the air curtain depending on the temperature of air leaving the air curtain. One valve is required for each air curtain. Pit for the capillary of thermostatic valve is located behind the water coil of each water heater air curtain.

2) DM control module ECS-R-DM-V – Economical by splitting (open/closed)

ZV-3 zone valve with a servo drive is an required accessories for DM control module. Room thermostat TER-P can be connected to air curtain with DM control module ECS-R-DM-V. The valve switches the warm water supply into the air curtain and back towards the heat source depending on the temperature of room temperature. One valve is required for each air curtain.

3) DA control module ECS-R-DA-V – Precise by mixing

MV-3 mixing valve with a servo drive is an required accessories for DA control module. The mixing system controls smoothly the ratio of supply and return heating water flowing into the air curtain depending on the temperature of air leaving the air curtain and on the room temperature. One mixing valve is required for each air curtain.



ACCESSORIES

Required accessories

These accessories shall be ordered to make the air curtain functional.

Control module

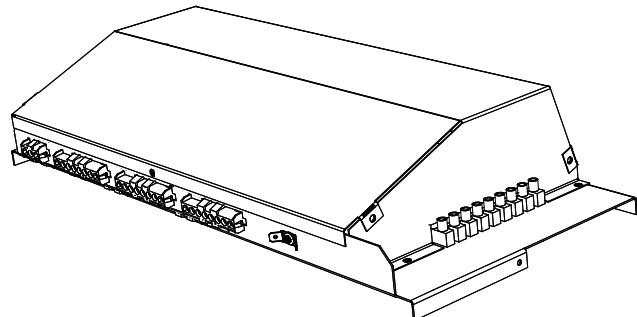
A control module is an required accessorie for FINESSE air curtain and shall be ordered for each air curtain. Control panel is included in delivery of control module. External temperature sensor is included in delivery with DA control module. The ordering key for control modules is provided below.

Control panels of DM and DA control modules use radio signal communication. If Modbus RTU is used the connection of DA control module with BMS is made by straight communication cable with RJ12 connector. Communication cable has to be ordered separately as an optional accessorie.

Control panel of SM control module is connected using common wiring cable (230 V control voltage). A suitable cross-section of the cable shall be determined based on the particular installation conditions. This cable should be delivered by a company performing the air curtain electrical wiring.

ECS-R-SM-E

- S** – without heating regulation
(only SM and DM)
- E** – with electric heater regulation
- V** – with water heater regulation
- SM** – simple manual control
- DM** – digital manual control
- DA** – digital automatic control
- R** – regulation
- ECS** – air curtain STANDESSE / FINESSE



Thermostatic valve TV-1-1/1

Thermostatic valve is an required accessorie for ECS-R-SM-V control module.



Zone valve with servo drive ZV-3

Zone valve is an required accessorie for ECS-R-DM-V control module.



OPTIONAL ACCESSORIES

Communication cable for for chaining
The communication cable is designed
connecting the DA control module to
BMS (Modbus RTU).
The lengths of communication cable
are available according the ordering
key provided below.



Mixing valve with servo drive MV-3

Mixing valve is an required accessorie
for ECS-R-DA-V control module.



KABEL-05M

03, 05, 08, 10, 15, 20, 30, 40

- cable length in m

Maximum cable length is 40 m.

KABEL – Communication cable

Threaded bar

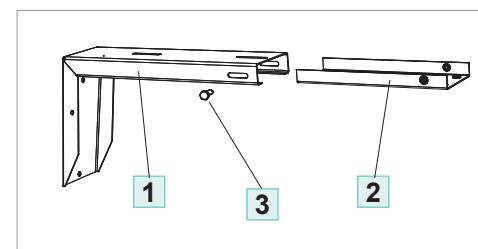
The air curtain is suspended using four threaded bars.

\TZ-M8/1,0 – threaded bar, M8 thread, 1 m length, suitable for all types of air curtains

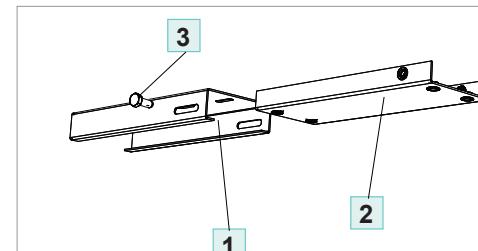
Wall mounting bracket

Bracket designed for mounting the air curtain to the wall.

- 1 Bracket
- 2 Hanging strip
- 3 Securing screw


ECS4-KONZ-STE

- for A, B and C air curtains (2 pcs.)
- wall mounting bracket


ECS4-KONZ-STR

- for A, B and C air curtains (2 pcs.)
- ceiling holder


Flexible connection hoses

OH-02-3/4-xxx (detailed description on the page 358) 3/4"

Door switch for air curtains fitted with the SMcontrol module

DS (detailed description on the page 351)

Door contact for air curtains fitted with the DM and DA control modules

DK-1 (detailed description on the page 353)

Room thermostat

TER-P (detailed description on the page 348)

Exit sign for marking of emergency exits.

Suitable for all types of air curtains.

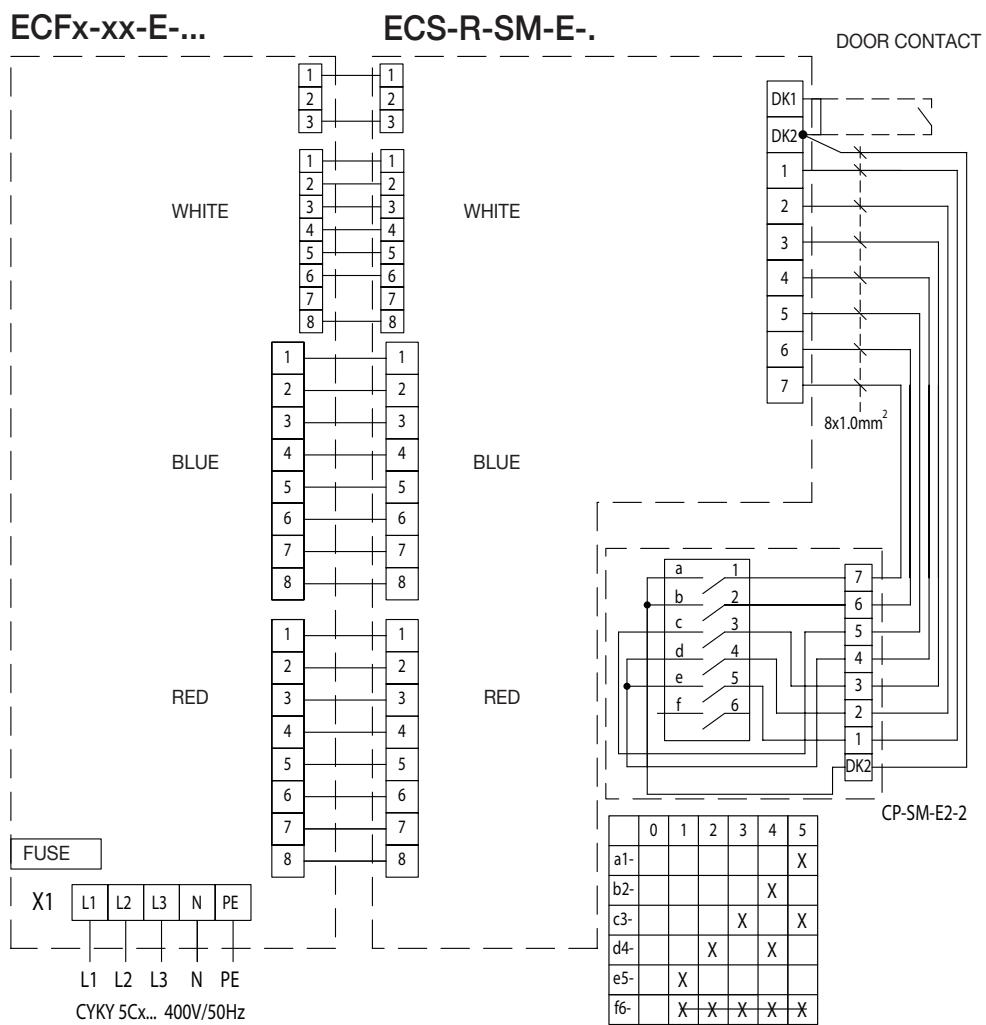
ECS4-EXIT

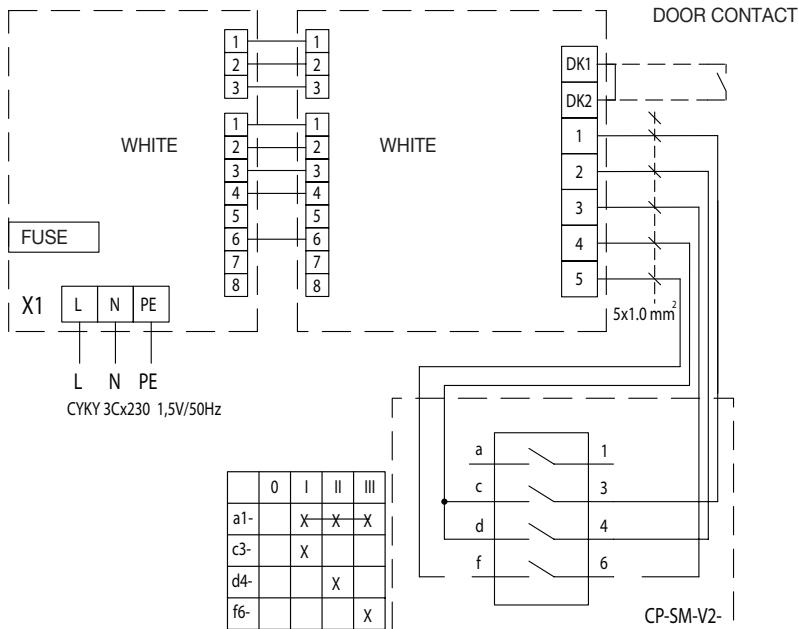
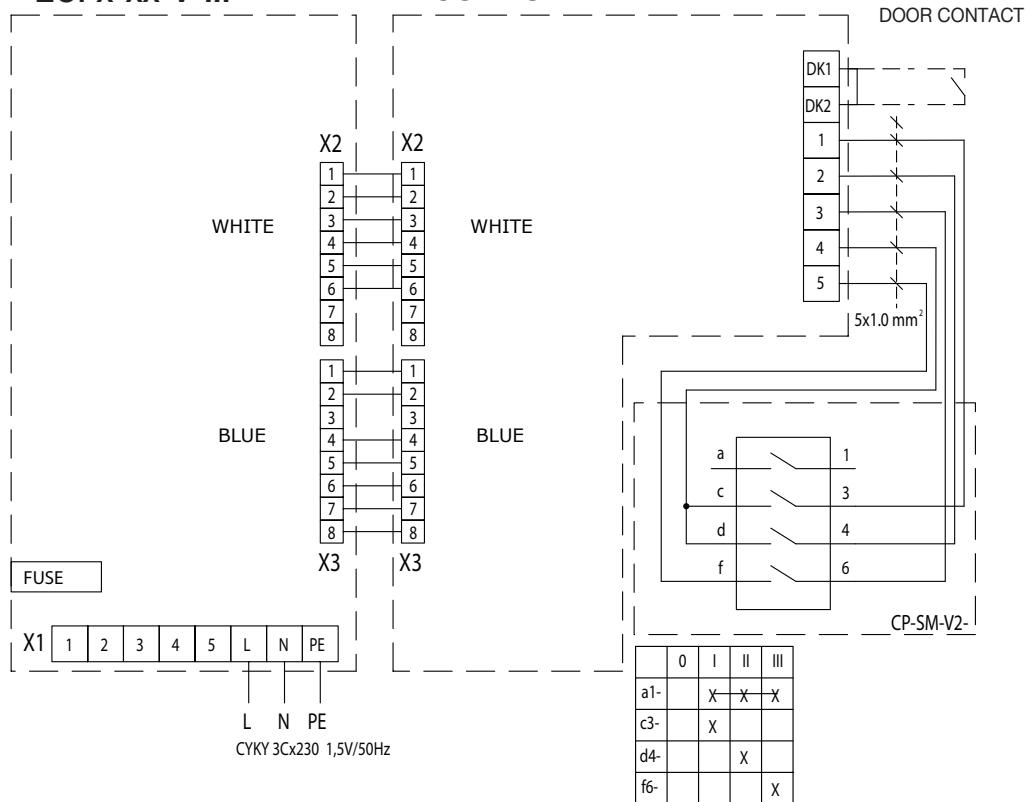


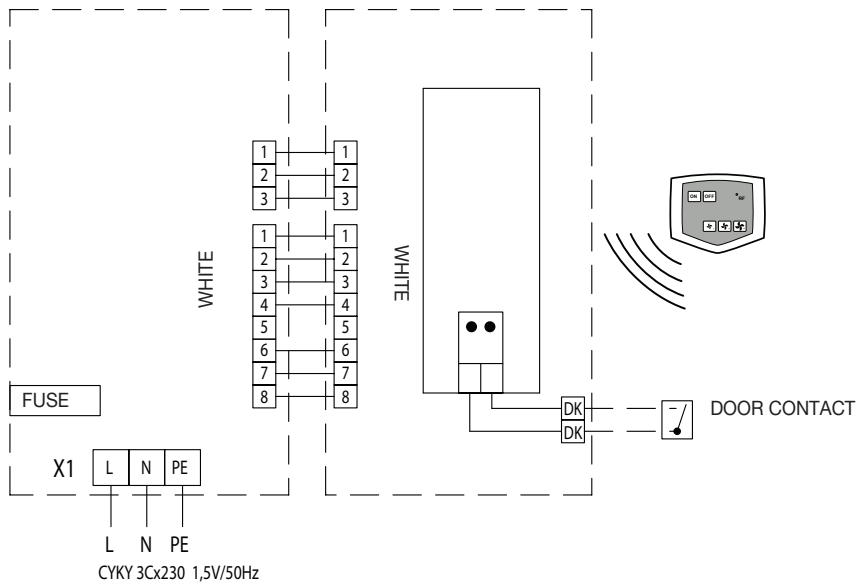
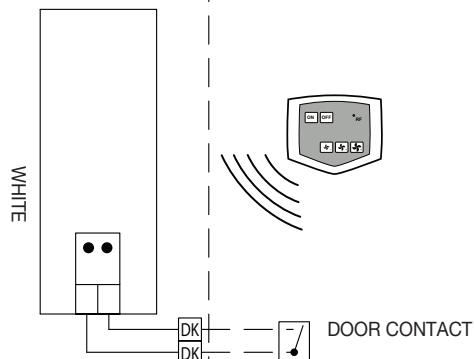
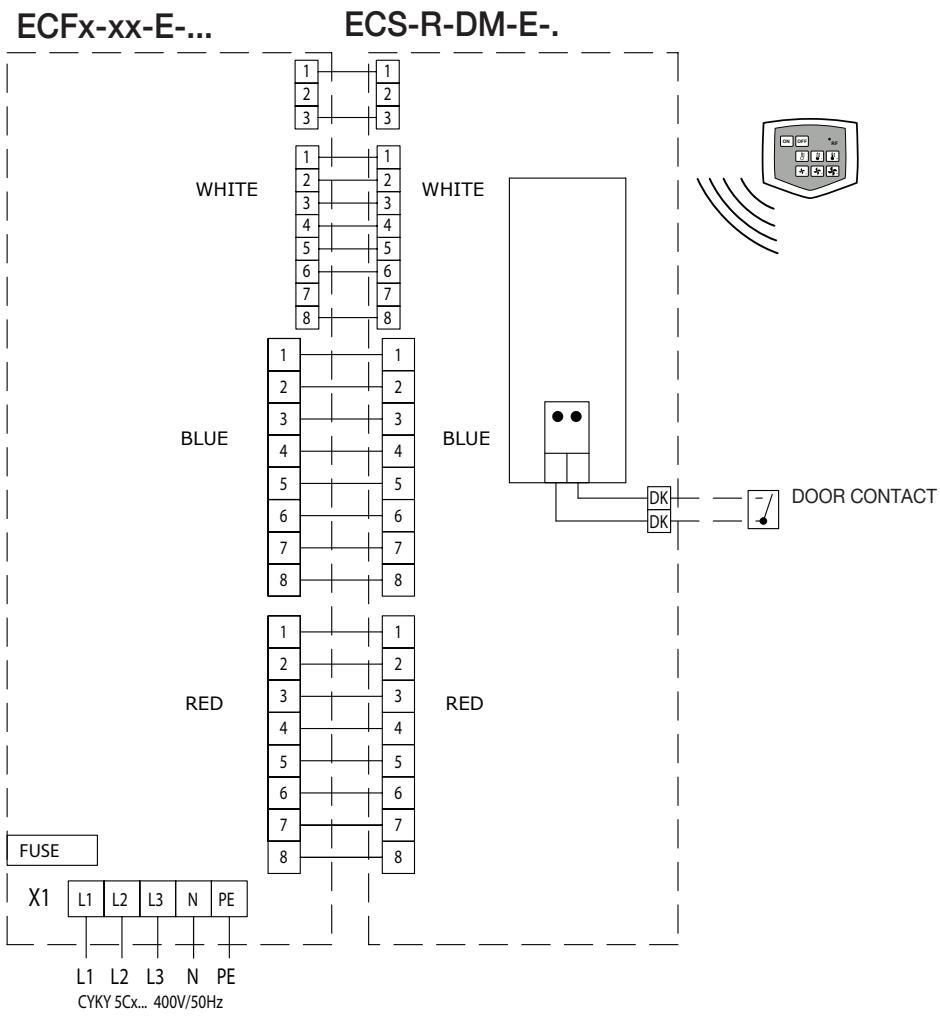
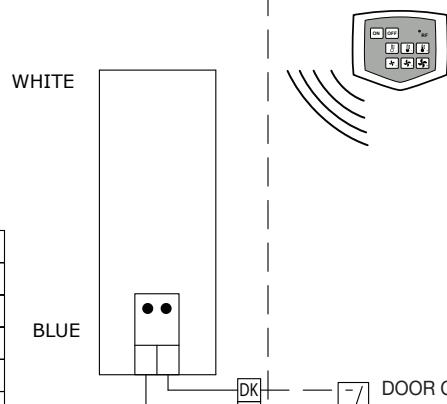
WIRING DIAGRAMS

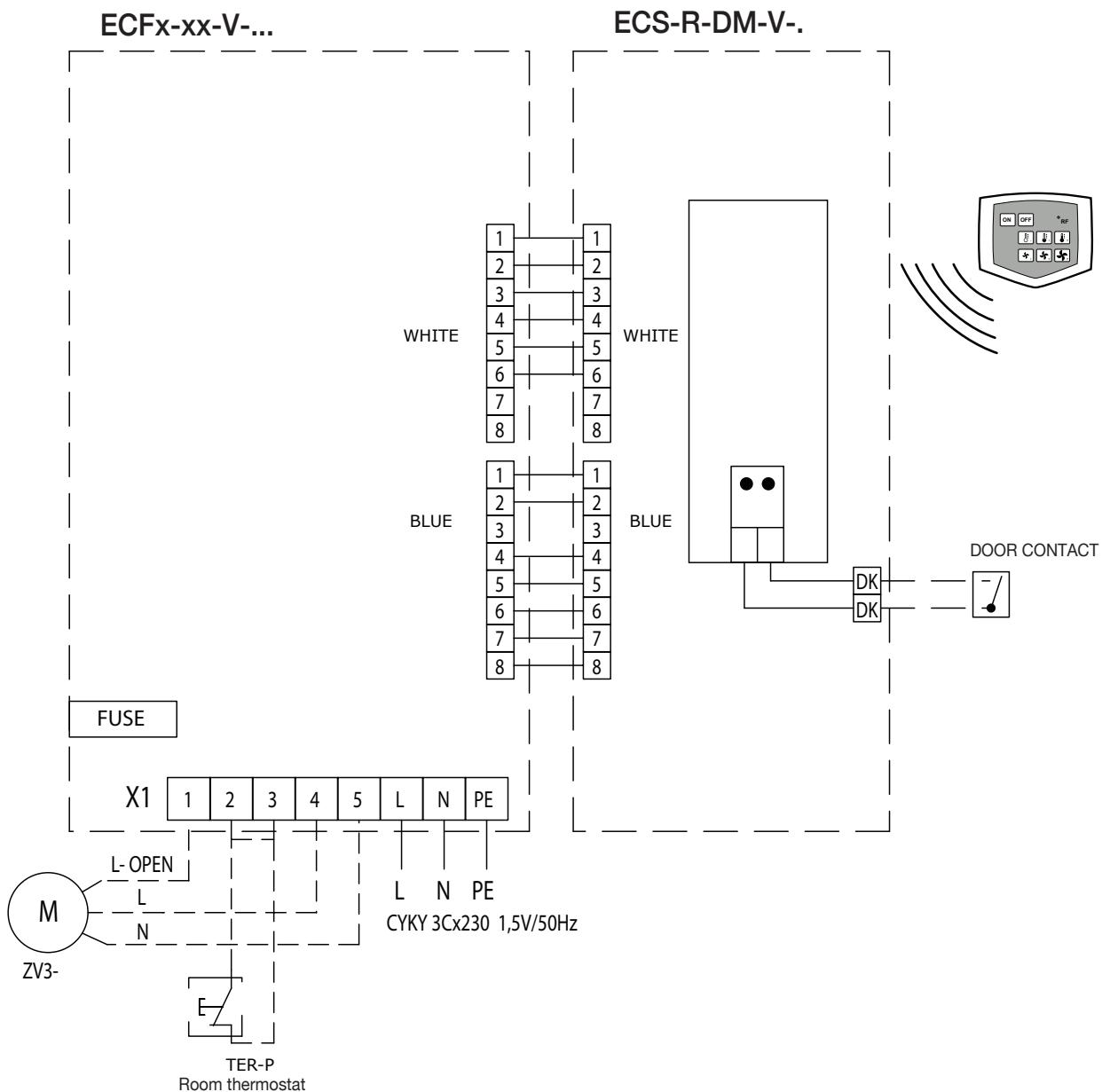
The recommended cross-section of the main power supply cables is stated in the Instruction Manual.

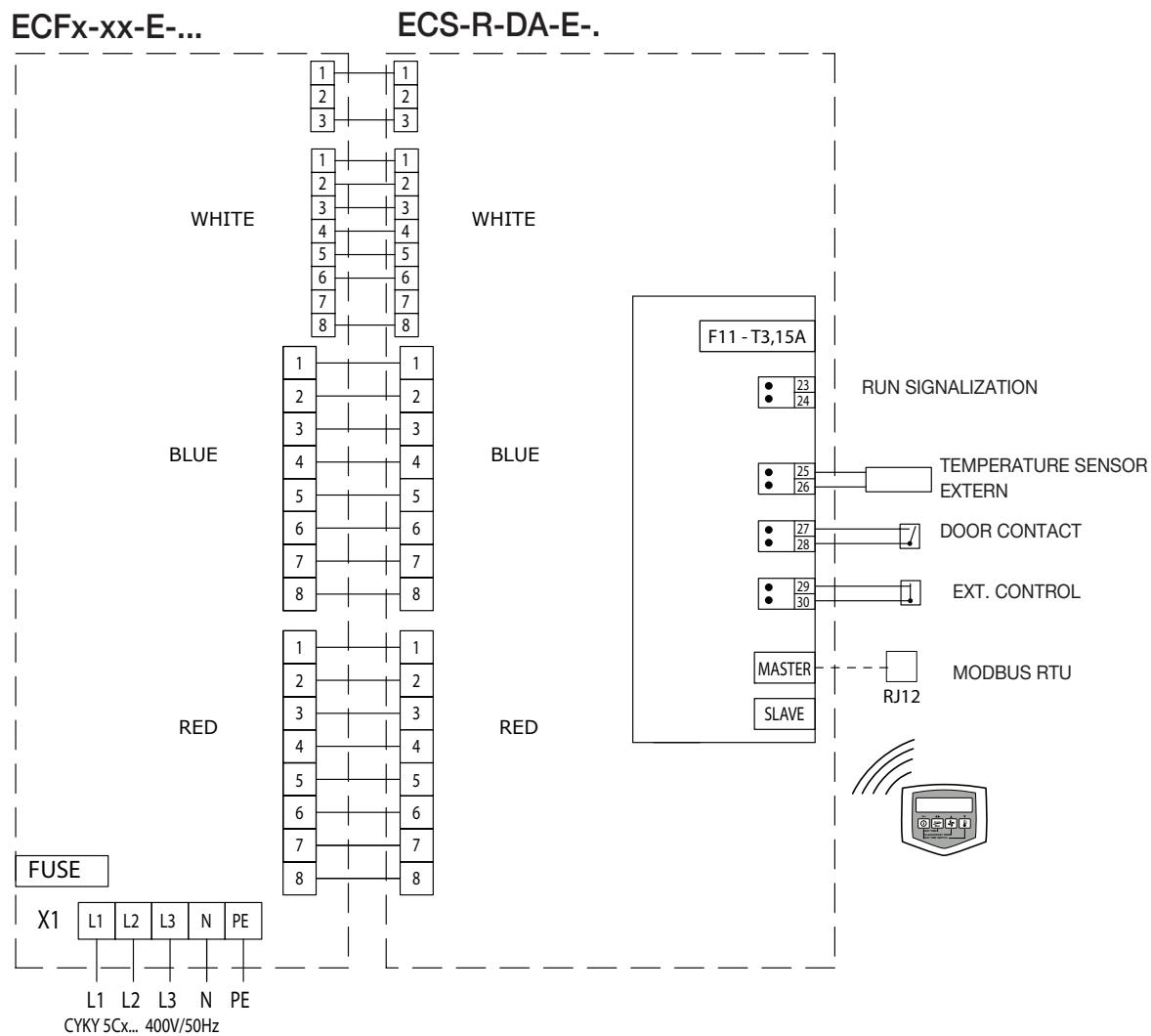
All wiring diagrams provided in the technical catalog are indicative only. When assembling the product, observe strictly the nameplate ratings as well as directions and diagrams affixed directly to the product or enclosed to the product.

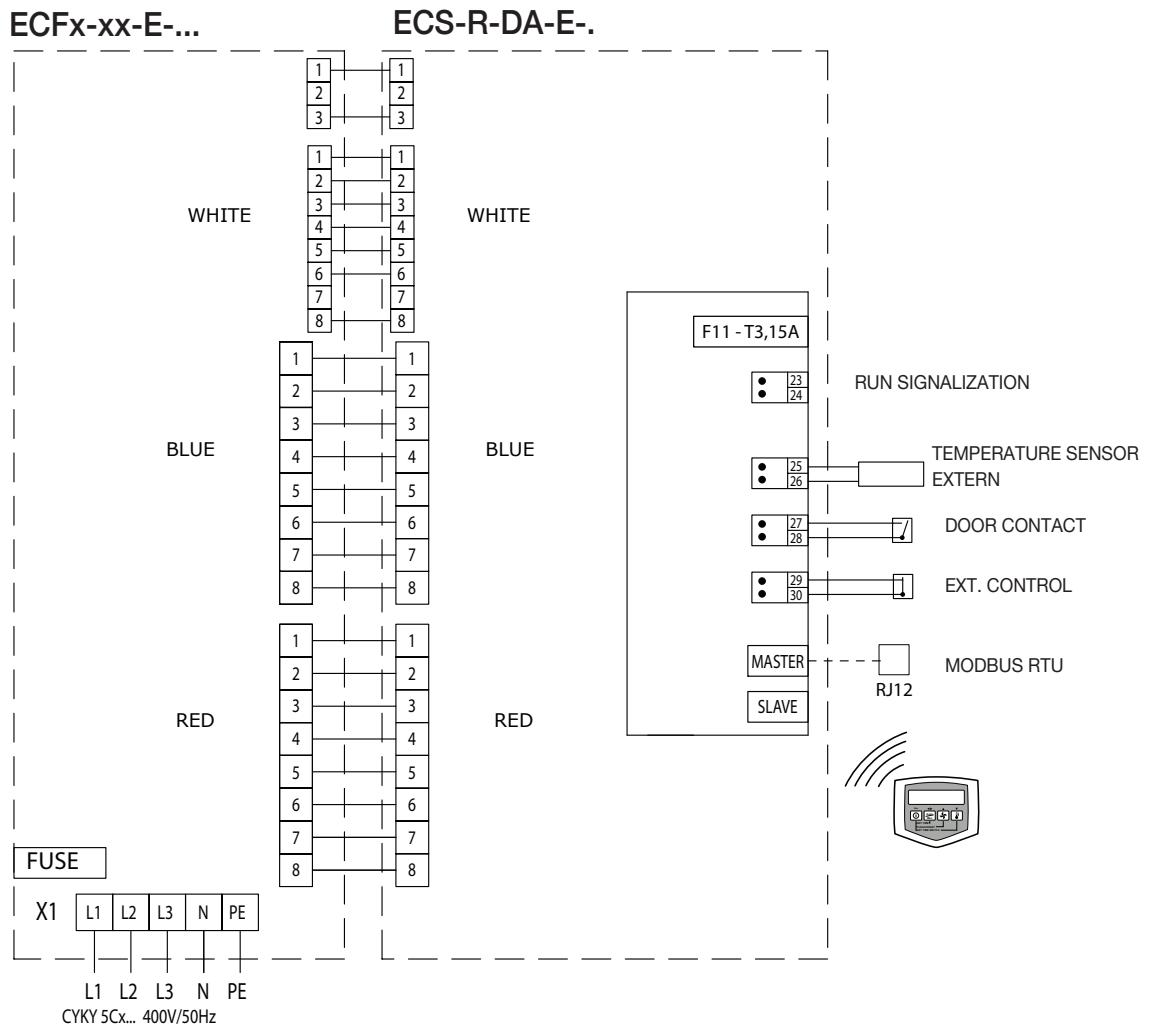


ECFx-xx-S-...**ECFx-xx-V-...**

ECFx-xx-S-...

ECF-R-DM-S-...

ECFx-xx-E-...

ECS-R-DM-E-...








KEY TO CODING

ECF-B-100-E-ZP-0-0

0 – 2VV version

9 – Atyp RAL

0 – Standard RAL

ZP – Regulation ready

E – Electric heater

V – Water heater

W – 6-row water heater

S – Air (only SM, DM control module compatible)

100 – Nominal width 1000 mm

150 – Nominal width 1500 mm

200 – Nominal width 2000 mm

250 – Nominal width 2500 mm

B – Output series

C – Output series

ECF – Air Curtain FINESSE



EuroVentus worldwide Contacts

Germany: EuroVentus EU

Max-Planck-Str. 5, D-97944 Boxberg, Germany
Tel: +49 (0)7930 9211-300
Email: germany@eurovent.us

Middle East & North Africa:

EuroVentus General Trading Company. MENA Branch
Al Rai Industrial Area, Block-3
Building-1510, Ground Floor, Kuwait.
Tel : +965 22091474
P.O.Box: 352 Yarmouk 72654 Kuwait
Email: mena@eurovent.us
www.euroventus.com

Global Support:

info@euroventus.com