

Coso

FRICO



Round and tailored air curtain for large commercial premises

Coso has a stylish and smooth round look to fit exclusive entrances and is available in any colour of your choice. The air curtain is available for vertical and horizontal installation and with two different performances. This air curtain can be perfectly adapted to suit your needs.

Designed to fit

The air curtain is built based on your specific order and is available in lengths up to 3 meters. Several units can be mounted directly next to each other and two units can be mounted directly on top of each other. Extension hoods are available to ensure your air curtain fits your entrance perfectly.

Intelligent air curtain

Coso is supplemented with an intelligent control system that allows you to optimise your comfort with minimum effort. Smart and automatic features enable simple setup that easily adapts to your specific opening.

Energy efficient and sustainable

The air curtain is equipped with EC motors that are up to 50% more energy efficient than traditional AC motors, and have a lower weight which makes for easier installations and greener transports.

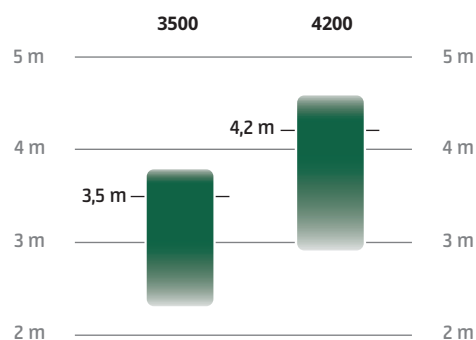
Coso



-  Ambient (without heat)
-  Electrical heating
-  Water heating



Installation height



The optimal air curtain, and its installation height, depends on the type of building, wind loads and differences in temperature and pressure. For more guidance, please use the Frico Product selection guide at www.frico.net.

Coso is manufactured according to your wishes. You select performance, length, connection positions, colour and more with the help of the product key. Other adaptations may be possible, please contact Frico.

Product key

Type* ¹	Performance* ¹	Length* ¹	Heat* ¹	Mounting* ²	Water connection	Electrical connection	Colour
COS	35	10	WL	H	A (H)	A	RAL Classic * ⁴
	42	15	WLL	VL	B	B (H)	B* ⁵
		20	E	VR	C (VR)	C (VL)	MP* ⁵
		25	A		D (VL)	D (VR)	
		30			X * ³		

Bold = standard. Included in standard cost.

*¹) See technical specifications on the following pages.

*²) H = Horizontal, VL = Vertical left, VR = Vertical right, seen from the inside

*³) State X for units with Electrical heating or Ambient (without heat).

*⁴) Other colours available on request.

*⁵) B = Brushed stainless steel, MP = Mirror polished stainless steel

Note: Water and electrical connections must be located on opposite sides of the unit.

Heat

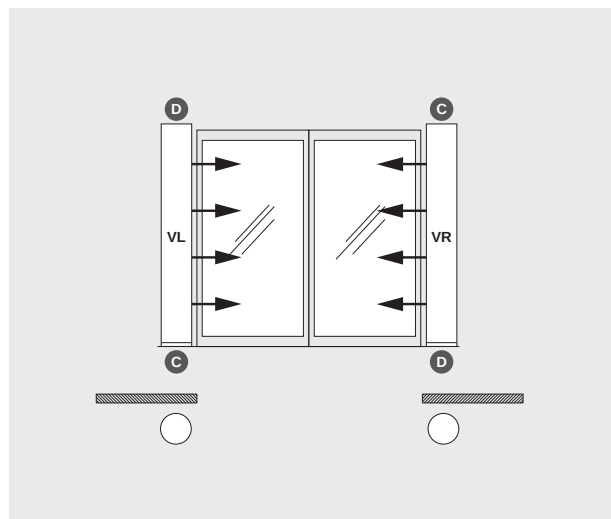


WL: Water heating, WL coil
WLL: Water heating, WLL coil
E: Electrical heating
A: Ambient (without heat)

Mounting

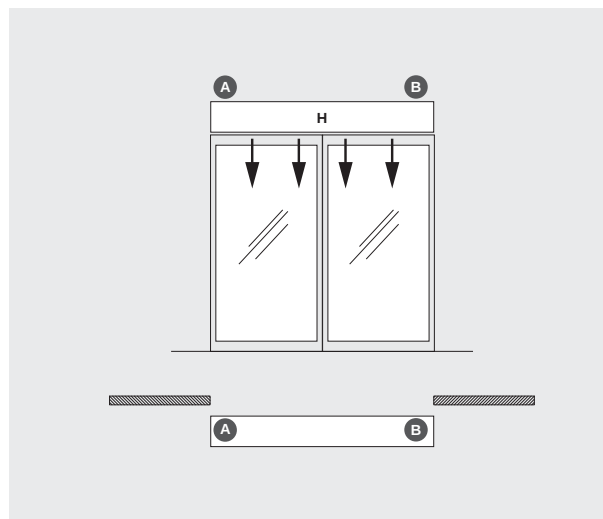
H: Horizontal
VL: Vertical left, seen from inside
VR: Vertical right, seen from inside

Connections - Vertical mounting



If two units are to be mounted on top of each other, please state this when ordering.

Connections - Horizontal mounting



If several units are to be mounted directly next to each other, please state this when ordering.

Example

COS4225WL - VL - D - C - RAL9010 is a 2,5-meter, water heated Coso 4200 with WL coil for vertical mounting, placed to the left of the opening seen from inside. The water connections are on the top (D) and the electrical connection is in the bottom (C). It is painted white RAL9010.

Type	Performance	Length	Heat	Mounting	Water connection	Electrical connection	Colour
COS	42	2,5	WL	VL	D	C	RAL9010

🌀 Ambient, no heat - Coso 3500 A (IP20)

Voltage motor: 230V~

Type	Output [kW]	Airflow* ¹ [m³/h]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Length [mm]	Weight [kg]
COS3510A	0	1050/1700	77	49/61	2,3	1000	54
COS3515A	0	1550/2550	79	51/63	3,2	1500	63
COS3520A	0	2150/3400	79	51/63	4,1	2000	81
COS3525A	0	2650/4250	81	53/65	5,1	2500	90
COS3530A	0	3600/5800	81	53/65	6,9	3000	122

⚡ Electrical heat - Coso 3500 E (IP20)

Type	Output steps [kW]	Airflow* ¹ [m³/h]	Δt* ⁴ [°C]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Voltage [V] Amperage [A] (heat)	Length [mm]	Weight [kg]
COS3510E09	3/6/9	1000/1600	27/17	77	49/61	2,3	400V3~/13,0	1000	65
COS3515E12	4/8/12	1500/2450	24/15	79	51/63	3,2	400V3~/17,3	1500	73
COS3520E18	6/12/18	2000/3250	27/16	79	51/63	4,1	400V3~/26,0	2000	90
COS3525E18	6/12/18	2500/4050	21/13	81	53/65	5,1	400V3~/26,0	2500	100
COS3530E30	10/20/30	3500/5600	25/16	81	53/65	6,9	400V3~/43,3	3000	131

💧 Water heat - Coso 3500 WL, coil for low water temperature (≤80 °C) (IP20)

Type	Output* ⁵ [kW]	Airflow* ¹ [m³/h]	Δt* ^{4,5} [°C]	Water volume [l]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Length [mm]	Weight [kg]
COS3510WL	10	1000/1600	19/21	1,2	77	48/61	2,3	1000	69
COS3515WL	16	1500/2450	19/21	1,9	79	50/63	3,2	1500	77
COS3520WL	21	2000/3250	19/22	2,6	79	50/63	4,1	2000	95
COS3525WL	29	2500/4050	21/23	3,4	81	52/65	5,1	2500	104
COS3530WL	38	3500/5600	20/22	4,1	81	52/65	6,9	3000	138

💧 Water heat - Coso 3500 WLL, coil for very low temperature water (≤60 °C) (IP20)

Type	Output* ⁶ [kW]	Airflow* ¹ [m³/h]	Δt* ^{4,6} [°C]	Water volume [l]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Length [mm]	Weight [kg]
COS3510WLL	7	1000/1600	13/14	1,7	77	48/61	2,3	1000	77
COS3515WLL	11	1500/2450	13/18	2,8	79	50/63	3,2	1500	64
COS3520WLL	15	2000/3250	14/15	3,9	79	50/63	4,1	2000	82
COS3525WLL	20	2500/4050	14/16	5,0	81	52/65	5,1	2500	91
COS3530WLL	25	3500/5600	13/15	6,1	81	52/65	6,9	3000	123

*¹) Low/high airflow (2V/10V).

*²) Sound power (L_{WA}) measurements according to ISO 27327-2: 2014, Installation type E.

*³) Sound pressure (L_{pA}). Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200 m². At low/high airflow (2V/10V).

*⁴) Δt = temperature rise of passing air at maximum heat output and low/high airflow (2V/10V).

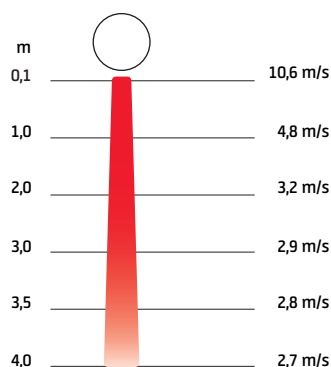
*⁵) Applicable at water temperature 60/40 °C, air temperature, in +18 °C.

*⁶) Applicable at water temperature 40/30 °C, air temperature, in +18 °C.

*^{5,6}) See www.frico.net for additional calculations.

Approved for 220V/1ph/60Hz and 380V/3ph/60Hz. Product performance for 220V/1ph/60Hz and 380V/3ph/60Hz will differ from stated data.

Air velocity profile



Measurements according to ISO 27327-1. Average values for products in the series.

Corrosion proof housing made of hot zinc-plate and powder coated steel panels. Colour housing, inlet grille and outlet grille according to your order, see the product key.

🌀 Ambient, no heat - Coso 4200 A (IP20)

Voltage motor: 230V~

Type	Output [kW]	Airflow* ¹ [m³/h]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Length [mm]	Weight [kg]
COS4210A	0	1500/2400	79	51/63	3,2	1000	61
COS4215A	0	2050/3250	81	53/65	4,1	1500	69
COS4220A	0	2950/4750	81	53/65	6,0	2000	95
COS4225A	0	3500/5600	83	55/67	6,9	2500	97
COS4230A	0	3950/6400	83	55/67	8,1	3000	129

⚡ Electrical heat - Coso 4200 E (IP20)

Type	Output steps [kW]	Airflow* ¹ [m³/h]	Δt* ⁴ [°C]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Voltage [V] Amperage [A] (heat)	Length [mm]	Weight [kg]
COS4210E15	5/10/15	1400/2300	32/20	79	51/63	3,2	400V3~/21,7	1000	72
COS4215E23	7,5/15/23	1850/3050	36/22	81	53/65	4,1	400V3~/32,5	1500	80
COS4220E30	10/20/30	2750/4500	32/20	81	53/65	6,0	400V3~/43,3	2000	97
COS4225E32	11/21/32	3500/5350	29/18	83	55/67	6,9	400V3~/46,2	2500	107
COS4230E32	11/21/32	3800/6100	25/16	83	55/67	8,1	400V3~/46,2	3000	138

💧 Water heat - Coso 4200 WL, coil for low water temperature (≤80 °C) (IP20)

Type	Output* ⁵ [kW]	Airflow* ¹ [m³/h]	Δt* ^{4,5} [°C]	Water volume [l]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Length [mm]	Weight [kg]
COS4210WL	16	1400/2300	21/24	1,7	79	50/63	3,2	1000	76
COS4215WL	20	1850/3050	19/22	1,9	81	52/65	4,1	1500	84
COS4220WL	28	2750/4500	18/21	2,6	81	52/65	6,0	2000	103
COS4225WL	35	3300/5350	19/21	3,4	83	54/67	6,9	2500	119
COS4230WL	41	3800/6100	19/22	4,1	83	54/67	8,1	3000	145

💧 Water heat - Coso 4200 WLL, coil for very low temperature water (≤60 °C) (IP20)

Type	Output* ⁶ [kW]	Airflow* ¹ [m³/h]	Δt* ^{4,6} [°C]	Water volume [l]	Sound power* ² [dB(A)]	Sound pressure* ³ [dB(A)]	Amparage motor [A]	Length [mm]	Weight [kg]
COS4210WLL	9	1400/2300	12/13	1,7	79	50/63	3,2	1000	84
COS4215WLL	13	1850/3050	12/14	2,8	81	52/65	4,1	1500	92
COS4220WLL	19	2750/4500	12/14	3,9	81	52/65	6,0	2000	96
COS4225WLL	23	3300/5350	13/14	5,0	83	54/67	6,9	2500	147
COS4230WLL	27	3800/6100	13/14	6,1	83	54/67	8,1	3000	165

*¹) Low/high airflow (2V/10V).

*²) Sound power (L_{WA}) measurements according to ISO 27327-2: 2014, Installation type E.

*³) Sound pressure (L_{pA}). Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200 m². At low/high airflow (2V/10V).

*⁴) Δt = temperature rise of passing air at maximum heat output and low/high airflow (2V/10V).

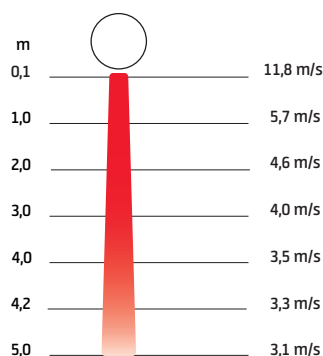
*⁵) Applicable at water temperature 60/40 °C, air temperature, in +18 °C.

*⁶) Applicable at water temperature 40/30 °C, air temperature, in +18 °C.

*^{5,6}) See www.frico.net for additional calculations.

Approved for 220V/1ph/60Hz and 380V/3ph/60Hz. Product performance for 220V/1ph/60Hz and 380V/3ph/60Hz will differ from stated data.

Air velocity profile



Measurements according to ISO 27327-1. Average values for products in the series.

Corrosion proof housing made of hot zinc-plate and powder coated steel panels. Colour housing, inlet grille and outlet grille according to your order, see the product key.

Vertical mounting

The recommended installation width of Coso 3500 is 5 m and the recommended installation width of Coso 4200 is 6 m, with air curtains on both sides of the opening. The air curtain is mounted vertically as close as possible to the door. For the best effect air curtains should be placed on both sides of the opening.

For vertical mounting, the unit must be supplemented with a floor frame COSFF, ordered separately. The floor frame is painted in the same colour as the air curtain.

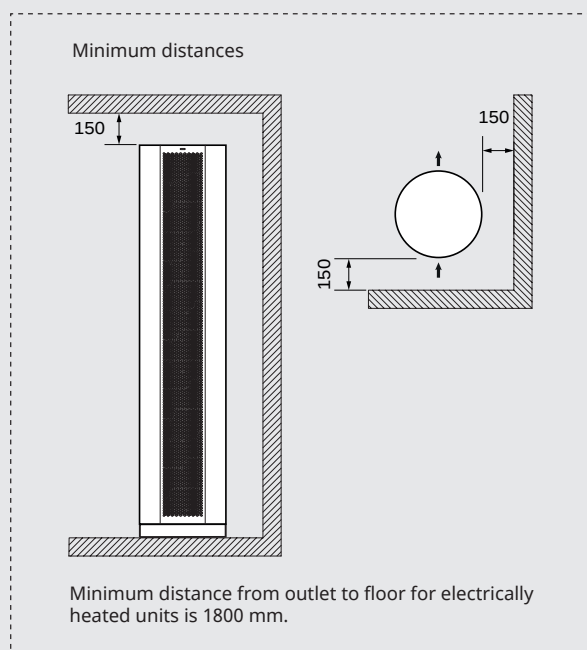
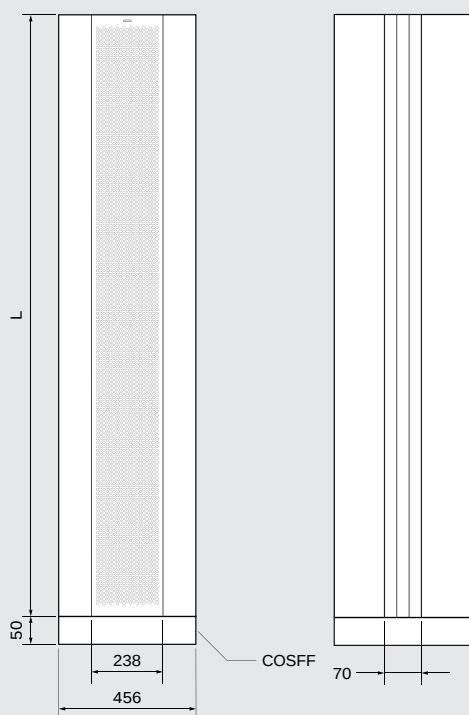
The position of the air curtain (to the left or to the right of the opening) must be specified when ordering, see the product key. Two units can be mounted directly on top of each other. This must be specified when ordering, as the air curtains' end gables will be prepared with holes to enable to join the air curtains together. The air curtain must always be secured at the top. The extension hood (accessory) fills the space between the unit and the ceiling and provides a neater installation. Design covers are available for special order.

Connection

The air curtain has an integrated PC board which is connected to the selected external control system FC. The PC board is mounted on a hatch inside the unit and is accessible by opening the hatch. Communication and sensor cables are connected to the PC board. The connections are placed on the air curtain according to your order, see the product key.

Water heated units must always be supplemented with a valve kit, see Valves and Accessories. For an easy connection of valve systems, there are three different connection kits to choose from (accessories). The valve and actuator may preferably be placed concealed behind the side panel. Flexible hoses are available as accessories. See Valves and Accessories.

Connections for electricity and water are located on the unit according to your order, see the product key. Connections made from below the unit must be prepared in the floor according to the drawing.



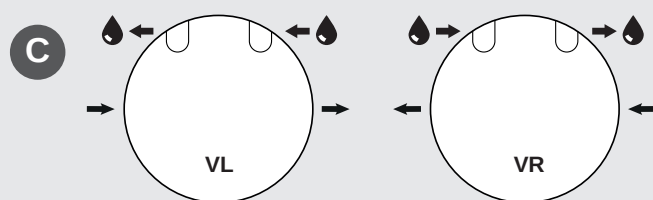
	COSFFx10	COSFFx15	COSFFx20	COSFFx25	COSFFx30
L [mm]	1000	1500	2000	2500	3000

For wiring diagrams and other technical information, please see the manual and www.frico.net.

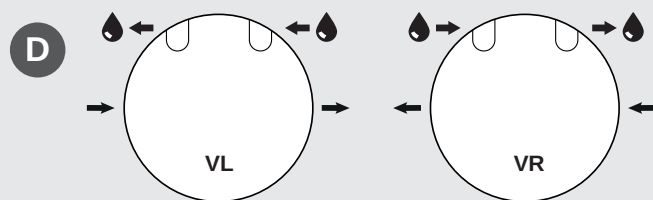
Recommended installation height varies depending on the relevant premises. See www.frico.net for further information.

Connection positions according to product key

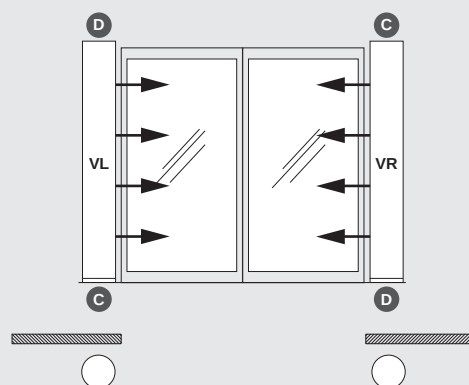
Water connections



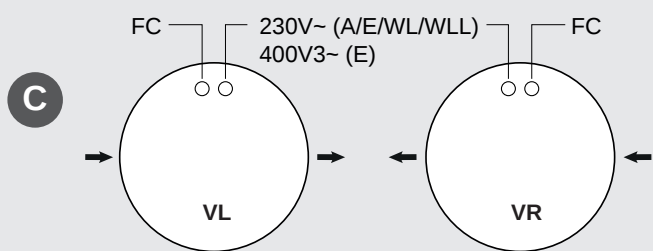
Top view of the top



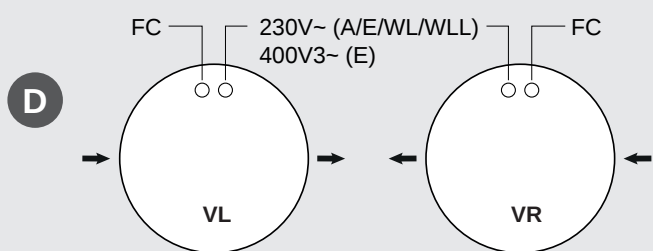
Top view of the bottom



Electrical connections



Top view of the top



Top view of the bottom



Horizontal mounting

The recommended installation height of Coso 3500 is 3,5 m and the recommended installation height of Coso 4200 is 4,2 m.

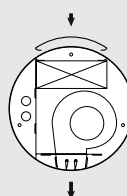
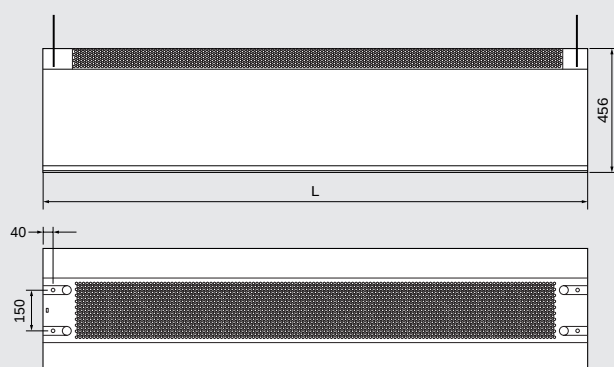
When the air curtain is mounted horizontally the outlet air grille must be facing downwards as close to the door as possible. For the protection of wider openings, several units can be mounted directly next to each other. This must be specified when ordering, as the air curtains' end gables will be prepared with holes to enable to join the air curtains together. Design covers are available for special order.

Connection

The air curtain has an integrated PC board which is connected to the selected external control system FC. The PC board is mounted on a hatch inside the unit and is accessible by opening the hatch. Communication and sensor cables are connected to the PC board. The connections are placed on the air curtain according to your order, see the product key.

Water heated units must always be supplemented with a valve kit, see Valves and Accessories. For an easy connection of valve systems, there are three different connection kits to choose from (accessories). The valve and actuator may preferably be placed concealed behind the side panel. Flexible hoses are available as accessories. See Valves and Accessories.

Connections for electricity and water are located on the unit according to your order, see the product key.

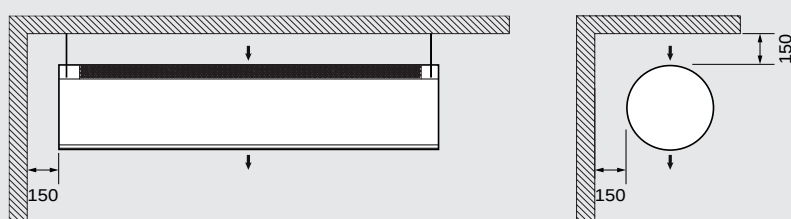


	L [mm]
COSx10	1000
COSx15	1500
COSx20	2000
COSx25	2500
COSx30	3000

For wiring diagrams and other technical information, please see the manual and www.frico.net.

Recommended installation height varies depending on the relevant premises. See www.frico.net for further information.

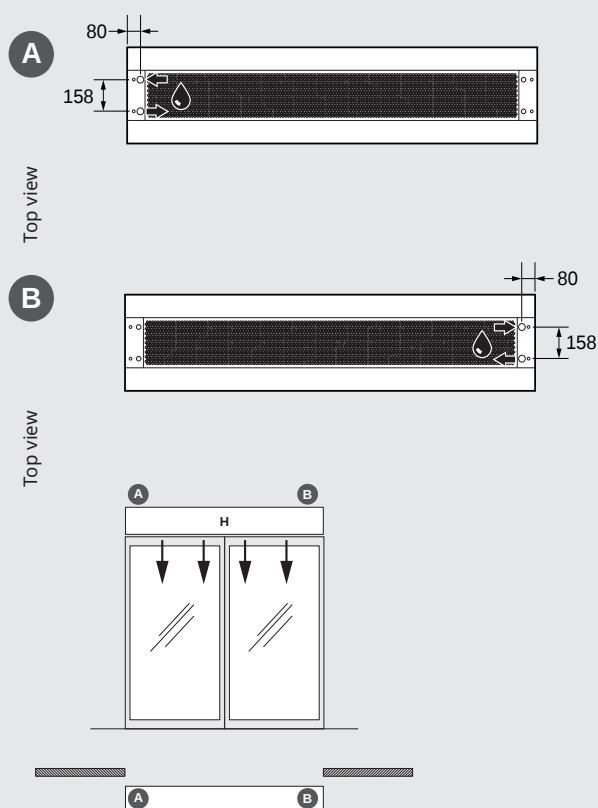
Minimum distances



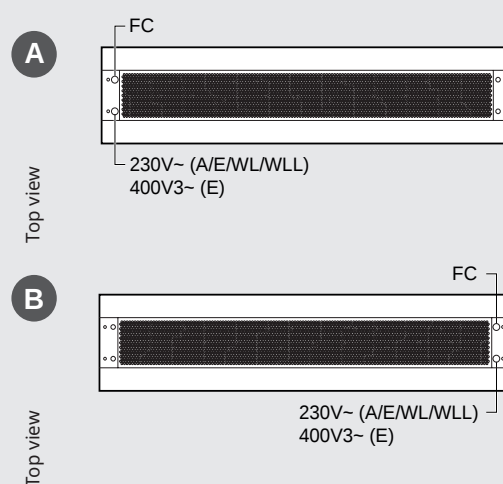
Minimum distance from outlet to floor for electrically heated units is 1800 mm.

Connection positions according to product key

Water connections



Electrical connections



Create the optimal solution to suit your specific needs

After you have selected the air curtain to suit your specific needs with the help of the product key, you assemble your control and accessory options:

Select control system

Choose one of our FC Control systems.



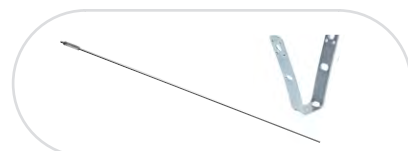
Add valve system

Water heated units must be supplemented with a valve system.



Select mounting options

The air curtain range can be adapted for vertical or horizontal installation.



Frico air curtains come with an integrated PC-board and are supplemented with the intelligent control system FC of your choice, working together to create many smart and energy saving features. There are four different packages to choose from, depending on your requirements.

FC Direct

Entry level

- Door contact
- Calendar function
- Filter timer
- Built-in temperature sensor

FC Smart

FC Direct +

- Control via app (Bluetooth)
- Wireless sensors possible
- Adjustable calendar function
- Away and Boost function
- Adjustable filter timer
- Vestibule function
- Zone possibility
- Enhanced water control possible

FC Pro

FC Direct + FC Smart +

- Automatic air flow control
- Automatic heat blocking

FC Building - BMS

FC Direct +

- 0-10V, potential free contact or Modbus
 - Automatic air flow control*
 - Automatic heat blocking*
 - Heat and fan settings
 - Alarm indication
 - Read values
 - Enhanced water control possible
- * Requires outdoor temp signal



FC Direct

Entry level control system for a great start. The door contact provides an automatic energy-saving function, as the air curtain becomes active only when the door is open. When the door is closed, it remains on stand-by or runs on a lower fan speed if extra heat is needed. With the calendar function, you can choose periods of comfort and reduced mode. The control panel has a built-in temperature sensor, which is used for control when external sensors are not used.



FC Smart

Second level control system for full freedom. FC Smart comes with all features from FC Direct plus additional energy saving features and the possibility of app control (Bluetooth). The app gives you access to all functions in the system, allowing you to set it up exactly the way you want it. It also enables you to create different zones with different settings in a larger system. The app FRICO CONTROL is available for both iOS and Android.



FC Pro

Third level control system for maximum savings. FC Pro comes with all features from FC Direct and FC Smart plus additional automatic energy saving features. By receiving and reacting to information about indoor and outdoor temperatures, the right amount of heat and air flow is added to avoid overshoots and thus reducing energy consumption.



FC Building - BMS system

Comprehensive control system for buildings, with the option to control via 0-10V, potential free contact (e.g. a relay) and/or Modbus RTU (RS485). FC Building enables you to receive product information status and alarms. Modbus allows for full use of all the energy saving features within the control system.

Item number	Type	Description
74684	FCDA	FC Direct, first level control system
74685	FCSA	FC Smart, second level control system
74686	FCPA	FC Pro, third level control system
74687	FCBA	FC Building, BMS system

FC Control system helps to create many smart and energy saving features. In addition to our four packages, components can be added to expand and customize the system. With the app levels (FC Smart and FC Pro) it is also possible to create and control different zones. Each added zone needs to be equipped with one FC Direct and can be designed to fit its specific needs by adding different accessories. Air curtains and fan heaters with FC can be installed in separate zones in the same system.



FC Direct, control kit

Control panel for fan and heat, door contact and 5 m communication cable. Used for additional zones with FC Smart and FC Pro. IP44.



FCRTX, external room temperature sensor

For reading of the room temperature on another location than that of the control panel, incl. 10 m sensor cable. IP20.



FCOTX, outdoor temperature sensor

Reading the outdoor temperature, incl. 10 m sensor cable. Enables automatic air curtain control and heat blocking. IP44.



FCLAP, local access point

Local access point for extra wireless sensors (when operating more than 8 sensors) and extended range for wireless sensors or app control (Bluetooth), incl. 10 m communication cable. IP44.



FCSC/FCBC, cable

FCSC Sensor cable available in 10 or 25 m for extra length. FCBC Communication cable for additional products within the same zone, available in 5, 10 or 25 m.



FCDC, door contact

The door contact regulates the airflow on/off. Allows you to control air curtains at different doorways individually within the same zone.



FCTXRF, indoor/outdoor wireless sensor

Indoor/outdoor wireless sensor with same features as FCRTX and FCOTX. The set up as outdoor or indoor sensor is made by a switch inside the sensor. Range up to 50 m. Battery life: 3-5 years (2xAAA). IP44.

FC Direct

Content

- FCCF control panel
- FCBC05
- FCDC

FC Smart

Content

- FCCF control panel
- FCBC10
- FCDC
- FCLAP

FC Pro

Content

- FCCF control panel
- FCBC10
- FCDC
- FCLAP
- FCTXRF

FC Building - BMS

Content

- FCCF control panel
- FCBC10
- FCDC
- FCBAP building access point

Item number	Type	Description	Dimensions
74684	FCDA	FC Direct, first level control system	89x89x26 mm (FCCF)
74694	FCRTX	External room temperature sensor	39x39x23 mm
74695	FCOTX	Outdoor temperature sensor	39x39x23 mm
74699	FCLAP	Local access point for extra wireless sensors and extended range	89x89x26 mm
74718	FCBC05	Extra communication cable, 5 m	5 m
74719	FCBC10	Extra communication cable, 10 m	10 m
74720	FCBC25	Extra communication cable, 25 m	25 m
74721	FCSC10	Extra sensor cable, 10 m	10 m
74722	FCSC25	Extra sensor cable, 25 m	25 m
17495	FCDC	Door contact	
74703	FCTXRF	Indoor/outdoor wireless sensor (for FC Smart, FC Pro)	89x89x26 mm

Water heated units must be supplemented with valves. The valve system controls the water flow and activates maximum heat only when needed. By activating the built-in bypass feature, a small leakage flow is let through to make sure there is always hot water in the heating coil, providing frost protection and faster heating. The return water temperature sensor is making sure that as much energy as possible from the water in the coil is used, thus reducing energy consumption.



VPFC, pressure independent and modulating valve system

Two way pressure independent control and adjustment valve with modulating actuator and shut-off valve. UNSG-R: union set with swiveling nut and female thread.



WCK, Water connection kit

Water connection kit containing all necessary couplings and hoses to connect from product to valve system. The water connection kits are intended for valve systems containing a pressure independent control and adjustment valve.



UNSG and ANS, connection kits for valve system

UNSG: union set with swiveling nut and press end.

ANS: adapter nipple set with male thread and press end.



FCWTA, return water temperature sensor

Enables control of return water temperature and automatic bypass function, which provides extended frost protection and reduced energy consumption.

Item number	Type	DN	Flow range l/s
238293	VPFC15LF	DN15	0,012-0,068
238294	VPFC15NF	DN15	0,024-0,13
238295	VPFC20	DN20	0,058-0,32
238296	VPFC25	DN25	0,10-0,60
238297	VPFC32	DN32	0,22-1,03

Item number	Type	Description	Length
459330	WCK8	Water connection kit	1000
459331	WCK9	Water connection kit	350

Item number	Type	Description	Consists of
333344	UNSG2015	Union set G20 x 15mm	2
333345	UNSG2518	Union set G25 x 18mm	2
333346	UNSG2522	Union set G25 x 22mm	2
333347	UNSG3228	Union set G32 x 28mm	2
333348	UNSG4035	Union set G40 x 35mm	2
333349	ANS1515	Adapter nipple set R15	2
333350	ANS2018	Adapter nipple set R20	2
333351	ANS2022	Adapter nipple set R20	2
333352	ANS2528	Adapter nipple set R25	2
333353	ANS3235	Adapter nipple set R32	2
74702	FCWTA	Return water temperature sensor	1

Accessories - horizontal mounting



PA34CB, ceiling brackets

Ceiling brackets for installing the unit from the ceiling using wires or threaded bars (not included). Best combined with vibration dampers (PA34VD) when using threaded bars.



PA34WS, wire suspension kit

Galvanized wires with wire locks to secure the unit from the ceiling. Length 3 m. Used together with ceiling brackets (PA34CB).



PA34TR, threaded bars

Threaded bars for installing unit on to a ceiling. Length 1 m. Used together with ceiling brackets (PA34CB). Supplemented with vibration dampers (PA34VD) for reduced vibration.



PA34VD, vibration dampers

Reduces vibrations for ceiling installations with threaded bars.

Item number	Type	Used for	Consists of	Length
214951	PAWBL15	COSx10	2	560 mm
214952	PAWBL20	COSx15 / COSx20 / COSx25 / COSx30	3	560 mm
18059	PA34CB15	COSx10	4	
18060	PA34CB20	COSx15 / COSx20 / COSx25 / COSx30	6	
18062	PA34WS15	COSx10	4	3 m
18063	PA34WS20	COSx15 / COSx20 / COSx25 / COSx30	6	3 m
18056	PA34TR15	COSx10	4	1 m
18057	PA34TR20	COSx15 / COSx20 / COSx25 / COSx30	6	1 m
18065	PA34VD15	COSx10 /	4	
18066	PA34VD20	COSx15 / COSx20 / COSx25 / COSx30	6	

Accessories - vertical mounting



COSFF, floor frame

For vertical mounting, the unit must be supplemented with a floor frame COSFF, ordered separately. Attach the frame horizontally to the floor using fasteners appropriate for the surface. The floor frame is painted in the same colour as the air curtain.



AXP300, collision protection

Floor placed protection against impact from e.g. shopping trolleys.



COSEH, extension hood

Fills the space between the unit and the ceiling for vertical mounting and provides a neater installation. COSEH05: height ≤500 mm, COSEH10: height 501-1000 mm.

Item number	Type	Used for	Consists of
FE10399	COSFF	COS-V	1
10028	AXP300	COS-V	1
FE10400	COSEH05	COS-V, ≤ 500 mm	1
FE10401	COSEH10	COS-V, 501-1000 mm	1