



## Curved and energy-efficient air curtain for revolving doors

Scand is a vertical air curtain specially designed for revolving doors, with a curved design that integrates neatly with the door. The air curtain is adapted to customer needs and equipped with energy-efficient EC motors which enable stepless control of the airflow.

### 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.

### Intelligent control options

Scand is supplemented with an intelligent control system that allows you to optimize your comfort with minimum effort. Smart and automatic features enable simple set-up and operation for different Frico products groups.

### High performance

Frico air curtains are developed and manufactured in Sweden. The air curtains are tested in one of the most modern and advanced air and sound laboratories in Europe which means that we can guarantee a high performance product.

### Scand



#### Available in 2 versions:

- ⚡ Electrical heating
- 💧 Water heating

A revolving door prevents continuous drafts but, still lets in a certain amount of cold air at every rotation. With correctly installed air curtains great energy savings can be obtained.



### Product key

#### Type - Connection position - Total height - Material / colour

Example: SFFEC4WL - A - 2800 - P

<b>Type</b>	See Technical specifications.
<b>Connection position</b>	A = from above B = from below
<b>Total height</b>	Min. height 2200 mm. Max height 3000 mm. Extension without fans.
<b>Material/Colour</b>	<i>P = Polished stainless steel</i> <i>B = Brushed stainless steel</i> <i>MP = Mirror polished stainless steel</i> <i>State RAL code = Powder coating RAL</i> <i>State NCS code = Powder coating NCS</i>

## ⚡ Electrical heat - SFEC E (IP20)

Voltage motor: 230V~

Type	Output steps [kW]	Airflow* <sup>1</sup> [m <sup>3</sup> /h]	$\Delta t$ * <sup>4</sup> [°C]	Sound power* <sup>2</sup> [dB(A)]	Sound pressure* <sup>3</sup> [dB(A)]	Amperage motor [A]	Voltage [V] Amperage [A] (heat)	Length* <sup>7</sup> [mm]	Weight [kg]
<b>SFEC4E16</b>	5,4/11/16	1850/3600	26/13	82	48/66	4,1	400V3~/24	2200	70
<b>SFEC6E24</b>	7,8/16/24	2300/4700	30/15	83	50/67	6	400V3~/34	2200	75

## 💧 Water heat - SFEC WH (IP20)

Type	Output* <sup>5</sup> [kW]	Output* <sup>6</sup> [kW]	Airflow* <sup>1</sup> [m <sup>3</sup> /h]	$\Delta t$ * <sup>4,5</sup> [°C]	$\Delta t$ * <sup>4,6</sup> [°C]	Water volume [l]	Sound power* <sup>2</sup> [dB(A)]	Sound pressure* <sup>3</sup> [dB(A)]	Amperage motor [A]	Length* <sup>7</sup> [mm]	Weight [kg]
<b>SFEC4WL</b>	21	36	1650/3300	24/19	40/32	4,4	80	47/64	4,1	2200	70
<b>SFEC6WL</b>	26	44	2200/4600	22/17	37/28	4,4	81	47/65	6	2200	75

\*<sup>1</sup>) Low/high airflow (2V/10V).\*<sup>2</sup>) Sound power ( $L_{WA}$ ) measurements according to ISO 27327-2: 2014, Installation type E.\*<sup>3</sup>) Sound pressure ( $L_{pA}$ ). Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200 m<sup>2</sup>. At low/high airflow (2V/10V).\*<sup>4</sup>)  $\Delta t$  = temperature rise of passing air at maximum heat output and low/high airflow (2V/10V).\*<sup>5</sup>) Applicable at water temperature 60/40 °C, air temperature, in +18 °C.\*<sup>6</sup>) Applicable at water temperature 80/60 °C, air temperature, in +18 °C.\*<sup>7</sup>) Standard height. Max. height 3000 mm (extension without fans). \*<sup>5,6</sup>) See [www.frico.net](http://www.frico.net) for additional calculations.

Air curtains for installation to the right can be specially ordered.

Manufactured in Sweden with a corrosion proof housing made of polished, brushed or mirror polished stainless steel or powder coated steel, any RAL/NCS colour. Aluminium louvres. Colour intake grille: grey, RAL 7046. See product key on previous page.





### Mounting

The air curtain is vertically mounted to the left of the door seen from inside. The unit has a curved design which makes it an integrated part of the door. Standard length is 2200 mm. Lengths up to 3 m can be ordered according to the product key (extension without fans). Extension hoods, for heights up to 4 m, are available as an accessory. The air curtain must always be secured at the top. Air curtains for installation to the right can be specially ordered.

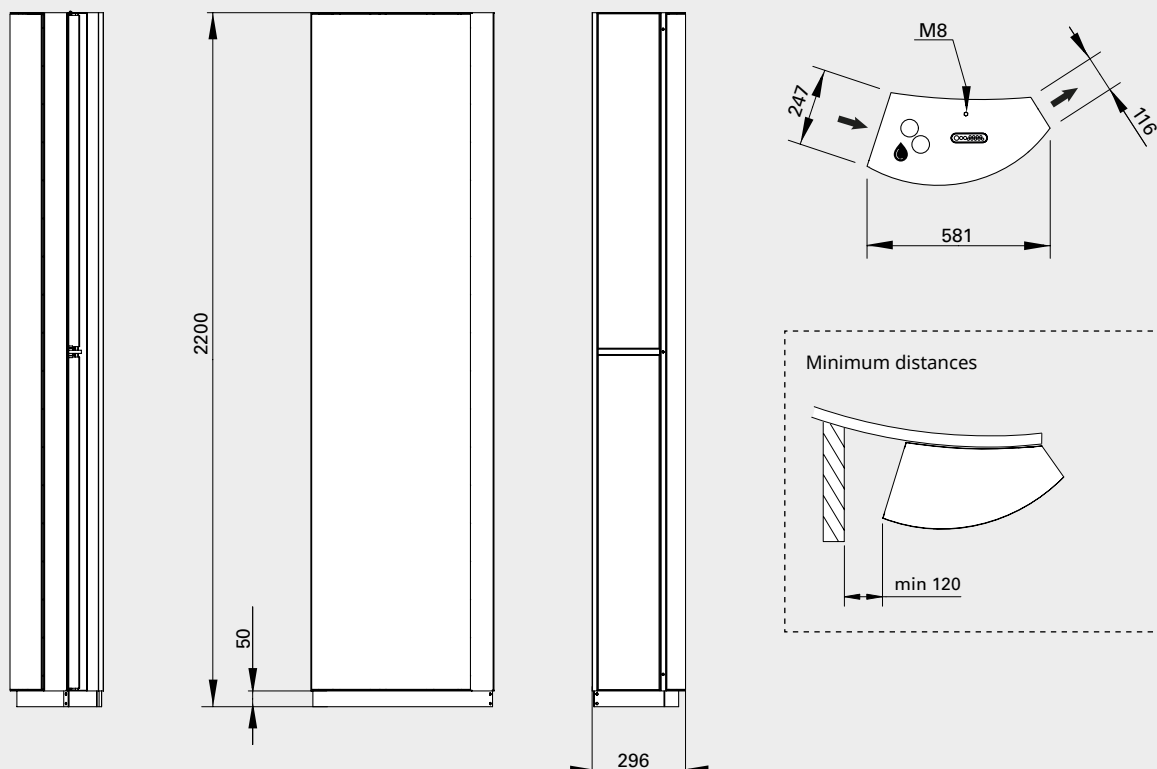
### Connection

Service and maintenance are easily made through the service hatch on the side of the unit. The air curtain has an integrated PC board which is connected to the selected external control system FC.

Control is supplied by 230V~ to the PC board. The PC board is accessed via cable glands on the top of the unit. Communication and sensor cables are connected to the PC board. The electrical connection may be done from above or below, according to ordering key.

Water heated units are connected to the water system from above or below, according to ordering key. Flexible hoses are available as accessories. Water heated units must always be supplemented with a valve kit mounted outside the unit. See Valves and Accessories.

Inside thread : 1", DN25



For wiring diagrams and other technical information, please see the manual and [www.frico.net](http://www.frico.net).

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

### 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

### FC Pro

#### FC Direct + FC Smart +

- Automatic air flow control
- Automatic heat blocking

### FC Building - BMS

#### FC Direct +

- 0-10V or Modbus
- Automatic air flow control\*
- Automatic heat blocking\*
- Heat and fan settings
- Alarm indication
- Read values

\* 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 schedule when the system should be active.



### 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.



### 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 or Modbus. 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.



#### 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 sensors (when operating more than 8 sensors) and extended range for 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. Range up to 50 m. Battery life: 3-5 years. 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 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.

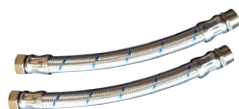


#### FCWTA, return water temperature sensor

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

Item number	Type	Dimension valves	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
74702	FCWTA	Return water temperature sensor	

## Accessories - water heated units

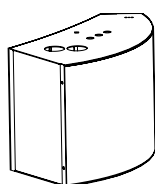


#### FH1025, flexible hose

Flexible hose (DN25, 1" inside/outside thread) for easy connection to the pipe system.

Item number	Type	Used for	Consists of
330955	FH1025	SFFEC4/6	2

## Accessories - mounting



#### SFSEH, extension hood

Extends the unit, adapting it to the installation. Height 100-1000 mm. Special order to required dimension.

Item number	Type	Used for	Consists of
FE10129	SFSEH	SFFEC4/6	1