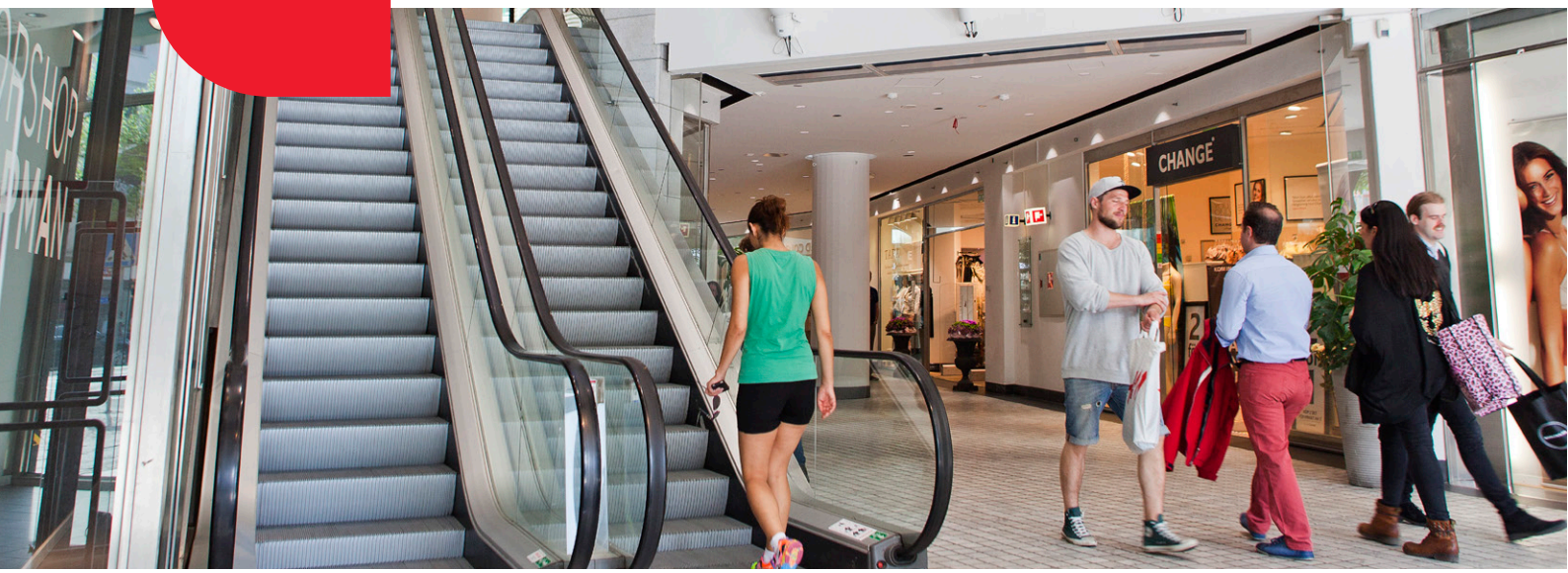
Ziller



Recessed and variable air curtain for large commercial premises

Ziller is particularly suitable for environments where you want great performance and energy efficiency without a visible air curtain. Recessed in the ceiling, the air curtain can be tailored to perfectly fit your entrance. The air curtain is available with two different performances.

Discreet and flexible

The air curtain is built based on your needs of size, connections and colour. Ziller is made to be installed into suspended ceilings for a solution where the function is in focus, almost without being noticed.

Intelligent air curtain

Ziller 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.

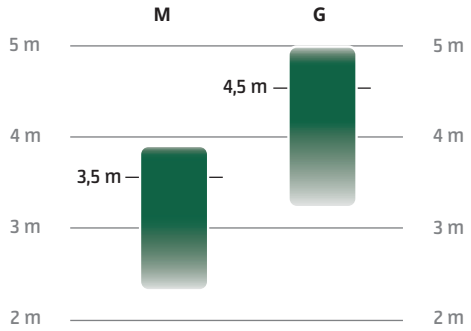
Energy efficient and sustainable

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.

Ziller

- 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.

2024-06-13

Ziller

Frico's Thermozone technology optimizes the air curtain

Frico air curtains create an invisible barrier at openings and doors which separates different temperature zones without limiting access for people and vehicles. Thermozone technology creates a highly uniform air barrier with a perfect balance between air volume and air velocity, regardless of whether it is the heat or the cold that you want to keep inside. The adjustable outlet grille makes it possible to direct the air for an optimal air curtain effect.

Great energy savings

In many premises doors remain open for a significant part of the day, this results in huge losses of expensively heated or cooled air, especially when the temperature difference between outdoor and indoor air is great. With correctly installed air curtains great energy savings can be obtained.

Comfortable indoor climate

Air curtains with Thermozone technology have optimized performance to provide a comfortable indoor climate free from draughts. The air curtain also keeps out emissions and insects.

Low sound level

With Thermozone technology Frico manufactures air curtains with very high airflow performance. This does not just make the air curtain more efficient, but also has other advantages such as extremely low sound levels and reduced turbulence.

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

Mounting accessories for recessed installation.

Ziller

Product key

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

Product key

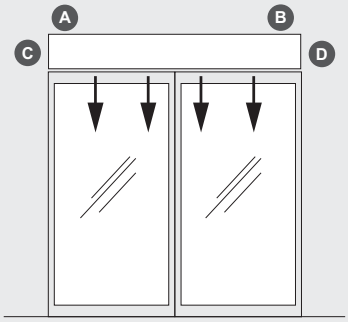
Type*[1]	Performance*[1]	Length*[1]	Heat*[1]	Water connection *[2]	Electrical connection *[2]	Colour
ZIL	M	10	WL	A	A	RAL Classic (standard)
	G	15	WLL	B	B	
		20	E	C (standard)	C (standard)	
		25	A	D	D	
		30		X (standard)		

*[1]) See technical specifications on the following pages.
*[2]) State X for units with Electrical heating or Ambient (without heat).

Heat

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

Connection



Example

ZILM15WL - B - A - RAL9016 is a 1,5-meter, water heated Ziller M with WL coil. The water connections are on the top to the right (B) and the electrical connection is on the top to the left (A). It is painted white RAL9016.

Type	Performance	Length	Heat	Water connection	Electrical connection	Colour
ZIL	M	15	WL	B	A	RAL9016

Ziller

Technical specifications
Ziller M

Ambient, no heat - Ziller M A (IP20)

Voltage motor: 230V~

Item number	Type	Output [kW]	Airflow*1 [m³/h]	Sound power*2 [dB(A)]	Sound pressure*3 [dB(A)]	Amperage motor [A]	Length [mm]	Weight [kg]
FE10352	**ZILM10A**	0	1150/1800	77	49/61	2,3	1000	60
FE10357	**ZILM15A**	0	1700/2700	79	51/63	3,2	1500	80
FE10362	**ZILM20A**	0	2300/3600	79	51/63	4,1	2000	100
FE10367	**ZILM25A**	0	2800/4550	81	53/65	5,1	2500	120
FE10372	**ZILM30A**	0	3800/6150	81	53/65	6,9	3000	140

Electrical heat - Ziller M E (IP20)

Item number	Type	Output steps [kW]	Airflow*1 [m³/h]	Δt*4 [°C]	Sound power*2 [dB(A)]	Sound pressure*3 [dB(A)]	Amperage motor [A]	Voltage [V] Amperage [A] (heat)	Length [mm]	Weight [kg]
FE10351	**ZILM10E09**	3/6/9	1100/1750	24/15	77	49/61	2,3	400V3~/13,0	1000	60
FE10356	**ZILM15E12**	4/8/12	1600/2600	22/14	79	51/63	3,2	400V3~/17,3	1500	80
FE10361	**ZILM20E18**	6/12/18	2150/3500	25/15	79	51/63	4,1	400V3~/26,0	2000	100
FE10366	**ZILM25E18**	6/12/18	2700/4400	20/12	81	53/65	5,1	400V3~/26,0	2500	120
FE10371	**ZILM30E30**	10/20/30	3750/6100	24/15	81	53/65	6,9	400V3~/43,3	3000	140

Water heat - Ziller M WL, coil for low water temperature (≤80 °C) (IP20)

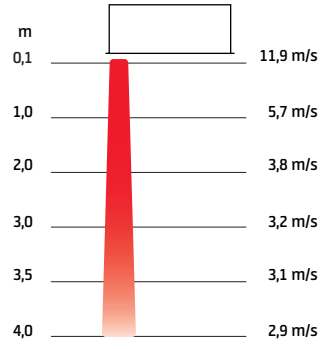
Item number	Type	Output*5 [kW]	Airflow*1 [m³/h]	Δt*4,5 [°C]	Water volume [l]	Sound power*2 [dB(A)]	Sound pressure*3 [dB(A)]	Amperage motor [A]	Length [mm]	Weight [kg]
FE10349	**ZILM10WL**	11	1100/1750	21/18	1,4	77	48/61	2,3	1000	60
FE10354	**ZILM15WL**	13	1600/2600	17/15	2,1	79	50/63	3,2	1500	80
FE10359	**ZILM20WL**	19	2150/3500	19/16	4,2	79	50/63	4,1	2000	100
FE10364	**ZILM25WL**	25	2700/4400	20/17	5,3	81	52/65	5,1	2500	120
FE10369	**ZILM30WL**	36	3750/6100	20/17	4,3	81	52/65	6,9	3000	140

Water heat - Ziller M WLL, coil for very low temperature water (≤60 °C) (IP20)

Item number	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)]	Amperage motor [A]	Length [mm]	Weight [kg]
FE10350	**ZILM10WLL**	8	1100/1750	20/13	2,6	77	48/61	2,3	1000	60
FE10355	**ZILM15WLL**	14	1600/2600	19/15	4,0	79	50/63	3,2	1500	80
FE10360	**ZILM20WLL**	19	2150/3500	19/16	5,5	79	50/63	4,1	2000	100
FE10365	**ZILM25WLL**	23	2700/4400	19/15	7,0	81	52/65	5,1	2500	120
FE10370	**ZILM30WLL**	31	3750/6100	19/15	8,4	81	52/65	6,9	3000	140

*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 according to your order, see the product key. Colour inlet grille: grey. Colour outlet grille: black.

CE UKCA

Ziller

Technical specifications
Ziller G

Ambient, no heat - Ziller G A (IP20)

Voltage motor: 230V~

Item number	Type	Output [kW]	Airflow*1 [m³/h]	Sound power*2 [dB(A)]	Sound pressure*3 [dB(A)]	Amperage motor [A]	Length [mm]	Weight [kg]
FE10377	**ZILG10A**	0	1750/2800	79	51/63	2,3	1000	65
FE10382	**ZILG15A**	0	2400/3800	81	53/65	3,2	1500	85
FE10387	**ZILG20A**	0	3450/5600	81	53/65	4,1	2000	110
FE10392	**ZILG25A**	0	4100/6600	83	55/67	5,1	2500	140
FE10397	**ZILG30A**	0	4650/7500	83	55/67	6,9	3000	160

Electrical heat - Ziller G E (IP20)

Item number	Type	Output steps [kW]	Airflow*1 [m³/h]	Δt*4 [°C]	Sound power*2 [dB(A)]	Sound pressure*3 [dB(A)]	Amperage motor [A]	Voltage [V] Amperage [A] (heat)	Length [mm]	Weight [kg]
FE10376	**ZILG10E15**	5/10/15	1650/2700	30/18	79	51/63	2,3	400V3~/21,7	1000	65
FE10381	**ZILG15E23**	7,5/15/23	2200/3600	34/21	81	53/65	3,2	400V3~/32,5	1500	85
FE10386	**ZILG20E30**	10/20/30	3250/5300	30/18	81	53/65	4,1	400V3~/43,3	2000	110
FE10391	**ZILG25E32**	11/21/32	3900/6300	27/16	83	55/67	5,1	400V3~/46,2	2500	140
FE10396	**ZILG30E32**	11/21/32	4450/7200	23/14	83	55/67	6,9	400V3~/46,2	3000	160

Water heat - Ziller G WL, coil for low water temperature (≤80 °C) (IP20)

Item number	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)]	Amperage motor [A]	Length [mm]	Weight [kg]
FE10374	**ZILG10WL**	13	1650/2700	18/16	2,0	79	50/63	2,3	1000	65
FE10379	**ZILG15WL**	20	2200/3600	20/18	2,1	81	52/65	3,2	1500	85
FE10384	**ZILG20WL**	30	3250/5300	21/18	2,8	81	52/65	4,1	2000	110
FE10389	**ZILG25WL**	37	3900/6300	21/19	3,6	83	54/67	5,1	2500	140
FE10394	**ZILG30WL**	44	4450/7200	22/20	4,3	83	54/67	6,9	3000	160

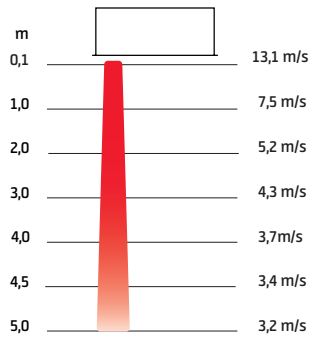
Water heat - Ziller G WLL, coil for very low temperature water (≤60 °C) (IP20)

Item number	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)]	Amperage motor [A]	Length [mm]	Weight [kg]
FE10375	**ZILG10WLL**	8,0	1650/2700	12/14	2,6	79	50/63	2,3	1000	65
FE10380	**ZILG15WLL**	14	2200/3600	19/15	4,0	81	52/65	3,2	1500	85
FE10385	**ZILG20WLL**	20	3250/5300	17/18	5,5	81	52/65	4,1	2000	110
FE10390	**ZILG25WLL**	24	3900/6300	19/15	7,0	83	54/67	5,1	2500	140
FE10395	**ZILG30WLL**	29	4450/7200	19/15	8,4	83	54/67	6,9	3000	160

*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.

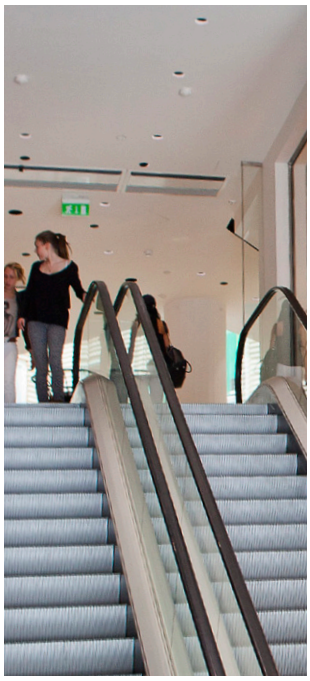
Air velocity profile



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 according to your order, see the product key. Colour inlet grille: grey. Colour outlet grille: black.

CE UKCA



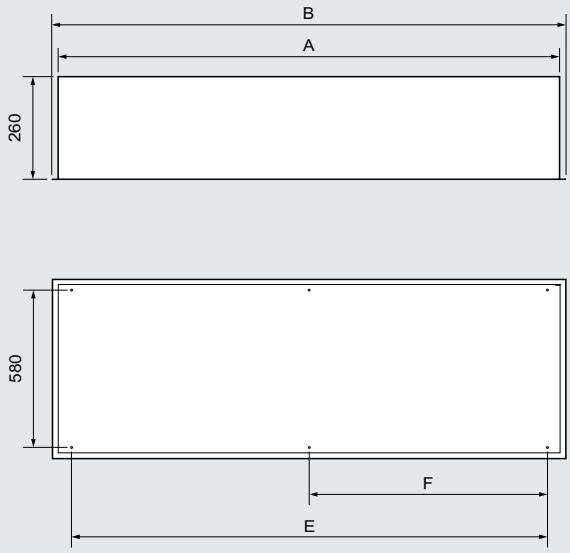
Mounting

The recommended installation height of Ziller M is 3,5 m and the recommended installation height of Ziller G is 4,5 m. The air curtain is designed to be installed into suspended ceilings. The unit is ready for suspension with threaded bars (accessory) on its outside. Wire suspension kits are available as accessory.
The air curtain is installed horizontally with the outlet air grille facing downwards as close to the door as possible, concealed in the false ceiling. For the protection of wider doorways, several units can be mounted in series alongside each other.

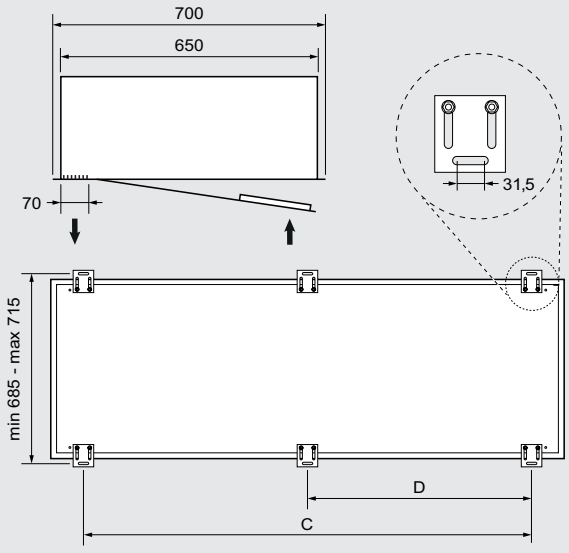
Connection

The air curtain has an integrated PC board which is connected to the selected external control system FC. Communication and sensor cables are connected to the PC board.

Water heated units must always be supplemented with a valve kit mounted outside the unit. For an easy connection of valve systems, there are three different connection kits to choose from (accessories). 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. Service and maintenance are easily made through the service hatch at the bottom of the unit.



Mounting on threaded bars using blind rivet nuts

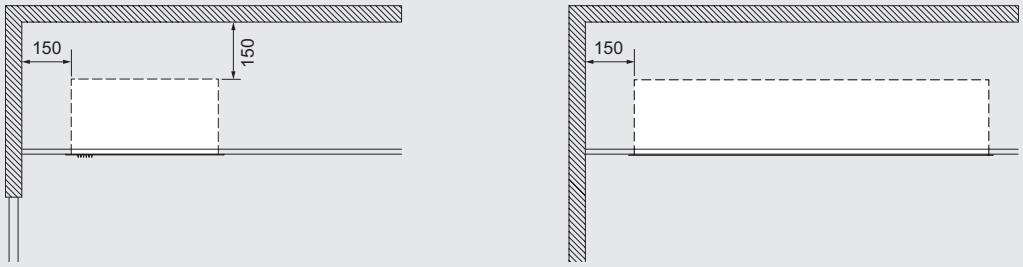


Mounting on threaded bars using brackets

	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
ZILx10	950	1000	756	-	856	-
ZILx15	1450	1500	1256	-	1356	-
ZILx20	1950	2000	1756	878	1856	928
ZILx25	2450	2500	2256	1128	2356	1178
ZILx30	2950	3000	2756	1378	2856	1428

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

Minimum distances



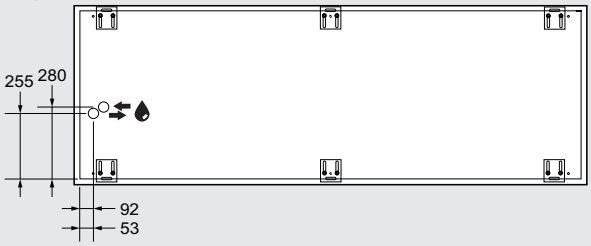
Minimum distance from outlet to floor for electrically heated units is 1800 mm.

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

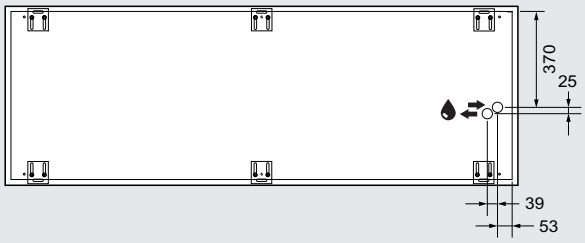
Connection positions according to product key

Water connection

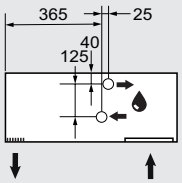
A Top view



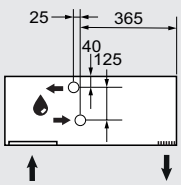
B Top view



C Side view

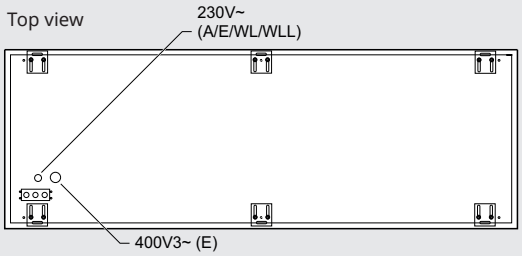


D Side view

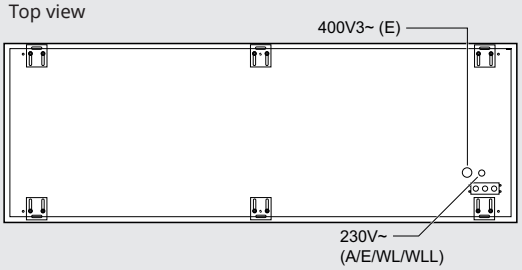


Electrical connection

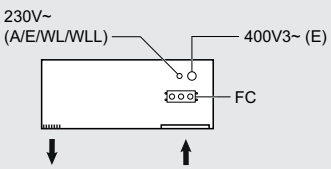
A Top view



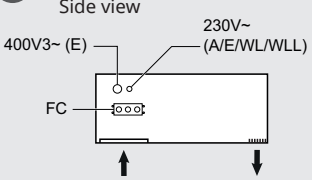
B Top view

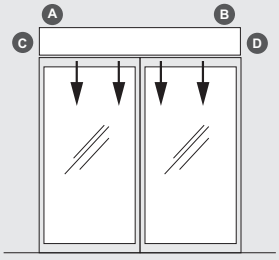


C Side view



D Side view





FC Control system

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 calender 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

Control system content and accessories

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

Ziller

Water control

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, UNSG, ANS, connection kits for valve system
UNSG-R: union set with swiveling nut and female thread.
UNSG: union set with swiveling nut and press end.
ANS: adapter nippel 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

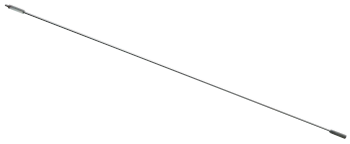
Item number	Type	Description	Consists of
333340	**UNSG20R15**	Union set G20 x R15	2
333341	**UNSG25R20**	Union set G25 x R20	2
333342	**UNSG32R25**	Union set G32 x R25	2
333343	**UNSG40R32**	Union set G40 x R32	2
333344	**UNSG2015**	Union set G20 x 15mm	2
333345	**UNSG2518**	Union set G25 x 18mm	2
333346	**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 nippel set R15	2
333350	**ANS2018**	Adapter nippel set R20	2
333351	**ANS2022**	Adapter nippel set R20	2
333352	**ANS2528**	Adapter nippel set R25	2
333353	**ANS3235**	Adapter nippel set R32	2
74702	**FCWTA**	Return water temperature sensor	1

Ziller

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
18059	**PA34CB15**	ZILx10	4	
18060	**PA34CB20**	ZILx15 / ZILx20 / ZILx25 / ZILx30	6	
18062	**PA34WS15**	ZILx10	4	3 m
18063	**PA34WS20**	ZILx15 / ZILx20 / ZILx25 / ZILx30	6	3 m
18056	**PA34TR15**	ZILx10	4	1 m
18057	**PA34TR20**	ZILx15 / ZILx20 / ZILx25 / ZILx30	6	1 m
18065	**PA34VD15**	ZILx10	4	
18066	**PA34VD20**	ZILx15 / ZILx20 / ZILx25 / ZILx30	6	

Accessories - water heated units

FH1020, flexible hoses
Flexible hoses for easy and practical installation of water heated unit. Length 1 m. DN20, 3/4" inside/outside thread.

DTV200S, filter pressure guard
Measures the differential pressure, which indicates how dirty the filter is in water heated units. The metering hose is connected to the suction side of the unit (after the filter). Adjustment is performed on site depending on the unit and the environment. Adjustable range 20-300 Pa. Potential free, changeover alarm contact.

Item number	Type	Used for	Consists of
237568	**FH1020**	ZIL WL/WLL	2
17597	**DTV200S**	ZIL WL/WLL	1