

**Pamir
2500**

FRICO



Slim air curtain for entrances, with energy efficient control

Pamir 2500, with a recommended installation height of 2,5 m, has a modern and sleek design developed to fit all entrances and door ways in shops, offices and public premises. The air curtain is available for horizontal installation with wall brackets included. The front is easy to remove, which facilitates installation and allows easy maintenance.

Optimized door protection

In order to generate the best possible door protection in any given condition, the air curtain automatically adjusts the airflow based on outdoor temperature and room temperature.

Intelligent control options

The Pamir series 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.

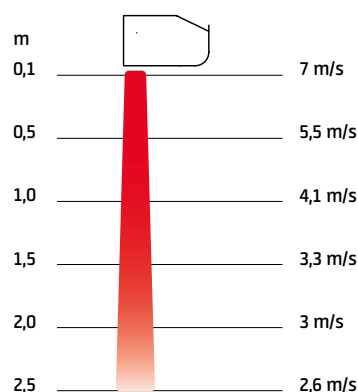
Pamir 2500



Available in 3 versions:

- ❄ Ambient (without heat)
- ⚡ Electrical heating
- 💧 Water heating

Air velocity profile



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

Pamir 2500

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 selected the air curtain to suit your specific needs (ambient, electrical heating, water heating) and length 1, 1.5, or 2 m 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

Add mounting accessories if needed.



🌬 Ambient, no heat - PAF2500 A (IP21)

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]
246826	PAF2510A	0	900/1300	70	43/53	0,5	1050	16
246830	PAF2515A	0	1250/2100	71	44/54	0,7	1560	24
246834	PAF2520A	0	1800/2600	72	44/55	1,0	2050	32

⚡ Electrical heat - PAF2500 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]
246823	PAF2510E05	1,7/3,3/5,0	900/1450	17/11	68	42/51	0,5	400V3N~/7,2	1050	19
246824	PAF2510E08	3,0/5,0/8,0	900/1450	27/17	68	42/51	0,5	400V3N~/11,5	1050	20
246827	PAF2515E08	2,7/5,3/8,0	1400/2200	18/11	69	40/52	0,7	400V3N~/11,5	1560	30
246828	PAF2515E12	4,0/8,0/12	1400/2200	26/17	69	40/52	0,7	400V3N~/17,3	1560	32
246831	PAF2520E10	3,4/6,6/10	1800/2900	17/11	70	43/53	1,0	400V3N~/14,4	2050	36
246832	PAF2520E16	6,0/10/16	1800/2900	27/17	70	43/53	1,0	400V3N~/23,1	2050	40

💧 Water heat - PAF2500 W (IP21)

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]
246825	PAF2510W	4,7	900/1300	12/11	0,7	69	42/53	0,45	1050	18
246829	PAF2515W	9,2	1250/2100	16/13	1,1	70	41/54	0,6	1560	26
246833	PAF2520W	11	1800/2600	15/13	1,4	71	43/55	0,9	2050	35

*¹) Lowest/highest airflow of totally 3 fan steps.

*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 lowest/highest airflow.

*⁴) Δt = temperature rise of passing air at maximum heat output and lowest/highest airflow.

*⁵) Applicable at water temperature 60/40 °C, air temperature, in +18 °C. See www.frico.net for additional calculations.

Pamir 2500 A and W are approved for 220V/1ph/60Hz. Product performance for 220V/1ph/60Hz will differ from stated data.

Manufactured in Sweden with a corrosion proof housing made of hot zinc-plate and powder coated steel panels. Front is made of powder coated steel. Colour front: white, RAL 9016. Colour grille, rear section and ends: grey, RAL 7046.



Mounting

The recommended installation height of Pamir 2500 is 2,5 m. The air curtain is installed horizontally with the outlet air grille facing downwards as close to the door as possible. For the protection of wider doorways, several units can be mounted in series alongside each other.

The unit can be mounted with included wall brackets or be supplemented with accessories for mounting from the ceiling.

Connection

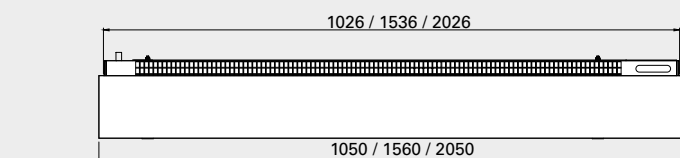
The front is easy to remove, which facilitates installation and allows easy maintenance.

The air curtain has an integrated PC board which is connected to the selected external control system FC. The PC board is accessed via cable glands on the top of the unit. Communication and sensor cables are connected to the PC board.

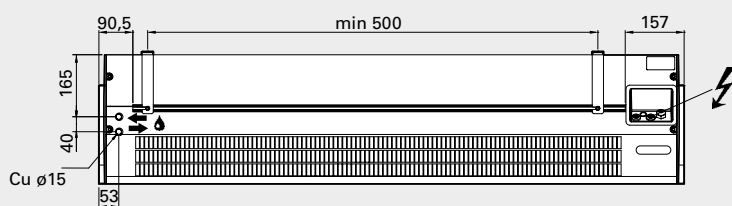
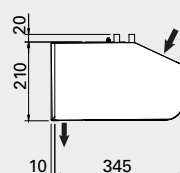
Units without heat and with water heat are connected with 1,5 m cord and plug. For electrical heated units the electrical connection is made on the top of the unit. Control (230V~) and power supply for heat (400V3N~) should be connected to a terminal block in the terminal box.

Water heated units are connected to the water system on top of the unit. Flexible hoses are available as accessories. 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). See Valves and Accessories.

All models

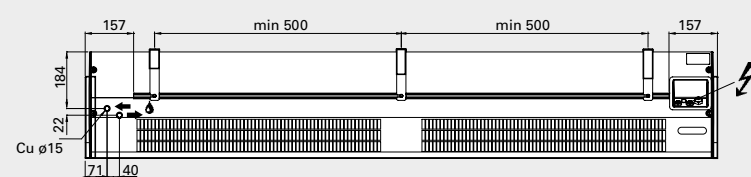


ø15 mm smooth copper pipe

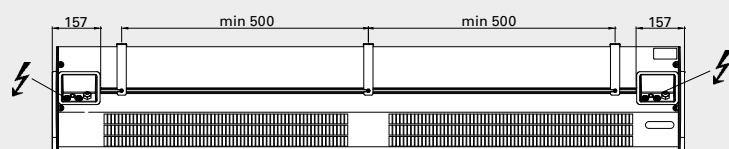


2 metre units

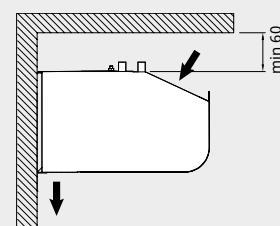
Unit without heating or with water heating



Unit with electrical heating



Minimum distances



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

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 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	Length
459327	WCK5	Water connection kit	1000
459328	WCK6	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 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

**PA2EF, external intake filter**

Fine mesh filter that prevents ingress of dirt and deposits to water heated units. The filter is easy to attach and remove thanks to the integrated magnetic strips. Makes maintenance easier since the unit does not need to be opened.

Item number	Type	Used for	Consists of
14875	PA2EF10	PAF2510W	1
14876	PA2EF15	PAF2515W	1
14877	PA2EF20	PAF2520W	1

Accessories - mounting

**PA2PF, ceiling mounting brackets**

Mountings for installing the unit in the ceiling using hanging brackets or threaded bars (not included).

PA34TR, threaded bars

Threaded bars for installing unit on to a ceiling. Length 1 m. Used together with ceiling mounting brackets PA2PF.

**PA2P, hanging brackets**

Hanging brackets for installing the unit suspended from the ceiling. Length 1 m. The hanging brackets are covered by a white plastic trim to cover the cables. The brackets may be cut to shorter length, if required. Used together with ceiling mounting brackets PA2PF.



Item number	Type	Used for	Consists of
19415	PA2PF15	PAF2510, PAF2515	4
19417	PA2PF20	PAF2520	6
14875	PA2EF10	PAF2510W	
14876	PA2EF15	PAF2515W	
14877	PA2EF20	PAF2520W	
18056	PA34TR15	PAF2510, PAF2515	4
18057	PA34TR20	PAF2520	6
19568	PA2P15	PAF2510, PAF2515	2
19569	PA2P20	PAF2520	3