

Pamir 5000



Stylish and energy efficient air curtain for industrial premises

Pamir 5000, with a recommended installation height of 5 m or width of 7 m, has a modern and sleek design developed to fit all entrances. The air curtain is available for horizontal, vertical and recessed installation. The Pamir series is equipped with energy-efficient EC motors which enable stepless control of the airflow. An easy to open front allows quick access to facilitate both installation and maintenance.

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

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 5000

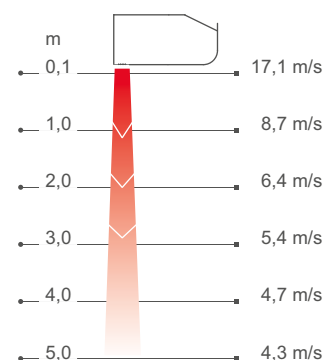


Available in 3 versions:

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



Air velocity profile



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

Pamir 5000

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.



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 drafts. 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 effective, 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, 2, or 2,5 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

Horizontal, recessed or vertical installation.



☁ Ambient, no heat - PAFEC5000 A (IP24**) Voltage motor: 230V~

| Item number | Type | Output | Airflow* ¹ | Sound power* ² | Sound pressure* ³ | Amperage motor [A] | Length [mm] | Weight [kg] |
|-------------|------------|--------|-----------------------|---------------------------|------------------------------|--------------------|-------------|-------------|
| | | [kW] | [m ³ /h] | [dB(A)] | [dB(A)] | | | |
| 230375 | PAFEC5010A | 0 | 900/2950 | 80 | 34/66 | 4,4 | 1039 | 39 |
| 230379 | PAFEC5015A | 0 | 1350/4200 | 84 | 35/68 | 5,6 | 1549 | 51 |
| 230383 | PAFEC5020A | 0 | 1700/5900 | 86 | 39/70 | 8,1 | 2039 | 67 |
| 230387 | PAFEC5025A | 0 | 2150/7200 | 87 | 41/71 | 9,2 | 2549 | 82 |

⚡ Electrical heat - PAFEC5000 E (IP20)

| Item number | Type | Output steps | Airflow* ¹ | Δt* ⁴ | Sound power* ² | Sound pressure* ³ | Amperage motor [A] | Voltage [V] Amperage [A] (heat) | Length [mm] | Weight [kg] |
|-------------|--------------|--------------|-----------------------|------------------|---------------------------|------------------------------|--------------------|---------------------------------------|-------------|-------------|
| | | [kW] | [m ³ /h] | [°C] | [dB(A)] | [dB(A)] | | | | |
| 230376 | PAFEC5010E12 | 3,9/7,8/12 | 900/2950 | 40/12 | 80 | 34/66 | 4,4 | 400V3~/16,9 | 1039 | 46 |
| 230380 | PAFEC5015E18 | 6,0/12/18 | 1350/4200 | 40/13 | 84 | 35/68 | 5,6 | 400V3~/26 | 1549 | 66 |
| 230384 | PAFEC5020E24 | 7,8/16/24 | 1700/5900 | 40/12 | 86 | 39/70 | 8,1 | 400V3~/33,8 | 2039 | 86 |
| 230388 | PAFEC5025E30 | 9,9/20/30 | 2150/7200 | 42/12 | 87 | 41/71 | 9,2 | 400V3~/42,9 | 2549 | 104 |

💧 Water heat - PAFEC5000 WL, coil for low water temperature (≤80 °C) (IP24**) Voltage motor: 230V~

| Item number | Type | Output* ⁵ | Airflow* ¹ | Δt* ^{4,5} | Water volume | Sound power* ² | Sound pressure* ³ | Amperage motor [A] | Length [mm] | Weight [kg] |
|-------------|-------------|----------------------|-----------------------|--------------------|--------------|---------------------------|------------------------------|--------------------|-------------|-------------|
| | | [kW] | [m ³ /h] | [°C] | [l] | [dB(A)] | [dB(A)] | | | |
| 230378 | PAFEC5010WL | 17 | 650/2700 | 28/18 | 1,9 | 82 | 32/66 | 4,3 | 1039 | 46 |
| 230382 | PAFEC5015WL | 26 | 1150/3950 | 27/19 | 3,0 | 82 | 33/66 | 5,5 | 1549 | 62 |
| 230386 | PAFEC5020WL | 35 | 1550/5400 | 27/19 | 4,1 | 83 | 35/67 | 8,0 | 2039 | 82 |
| 230390 | PAFEC5025WL | 46 | 1850/6900 | 28/20 | 5,2 | 85 | 37/69 | 9,1 | 2549 | 100 |

💧 Water heat - PAFEC5000 WH, coil for high temperature water (≥80 °C) (IP24**) Voltage motor: 230V~

| Item number | Type | Output* ⁶ | Airflow* ¹ | Δt* ^{4,6} | Water volume | Sound power* ² | Sound pressure* ³ | Amperage motor [A] | Length [mm] | Weight [kg] |
|-------------|-------------|----------------------|-----------------------|--------------------|--------------|---------------------------|------------------------------|--------------------|-------------|-------------|
| | | [kW] | [m ³ /h] | [°C] | [l] | [dB(A)] | [dB(A)] | | | |
| 230377 | PAFEC5010WH | 14 | 650/2700 | 26/16 | 1,3 | 82 | 32/66 | 4,3 | 1039 | 45 |
| 230381 | PAFEC5015WH | 21 | 1150/3950 | 25/16 | 2,0 | 82 | 33/66 | 5,5 | 1549 | 60 |
| 230385 | PAFEC5020WH | 30 | 1550/5400 | 26/16 | 2,7 | 83 | 35/67 | 8,0 | 2039 | 79 |
| 230389 | PAFEC5025WH | 37 | 1850/6900 | 26/16 | 3,8 | 85 | 37/69 | 9,1 | 2549 | 96 |

*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 80/60 °C, air temperature, in +18 °C.

*⁷) Applicable at water temperature 40/30 °C, air temperature, in +18 °C.

*^{5,6,7}) See www.frico.net for additional calculations.

***) Horizontal mounting and vertical mounting to the right (seen from the inside): IP24.

Vertical mounting to the left (seen from the inside): IP21.

Manufactured in Sweden with a corrosion proof housing made of hot zinc-plate and powder coated steel panels. Front and service hatch are made of powder coated aluminium. Colour front and service hatch: white, RAL 9016, NCS S 0500-N. Colour grille, rear section and ends: grey, RAL 7046.



Horizontal mounting

The recommended installation height of Pamir 5000 is 5 m. The air curtain can be installed on a wall or suspended from a ceiling. It can also be installed recessed into suspended ceilings.

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 next to each other using a joining kit. Design kits which conceals cables, pipes and mountings are available for both wall and ceiling installations.

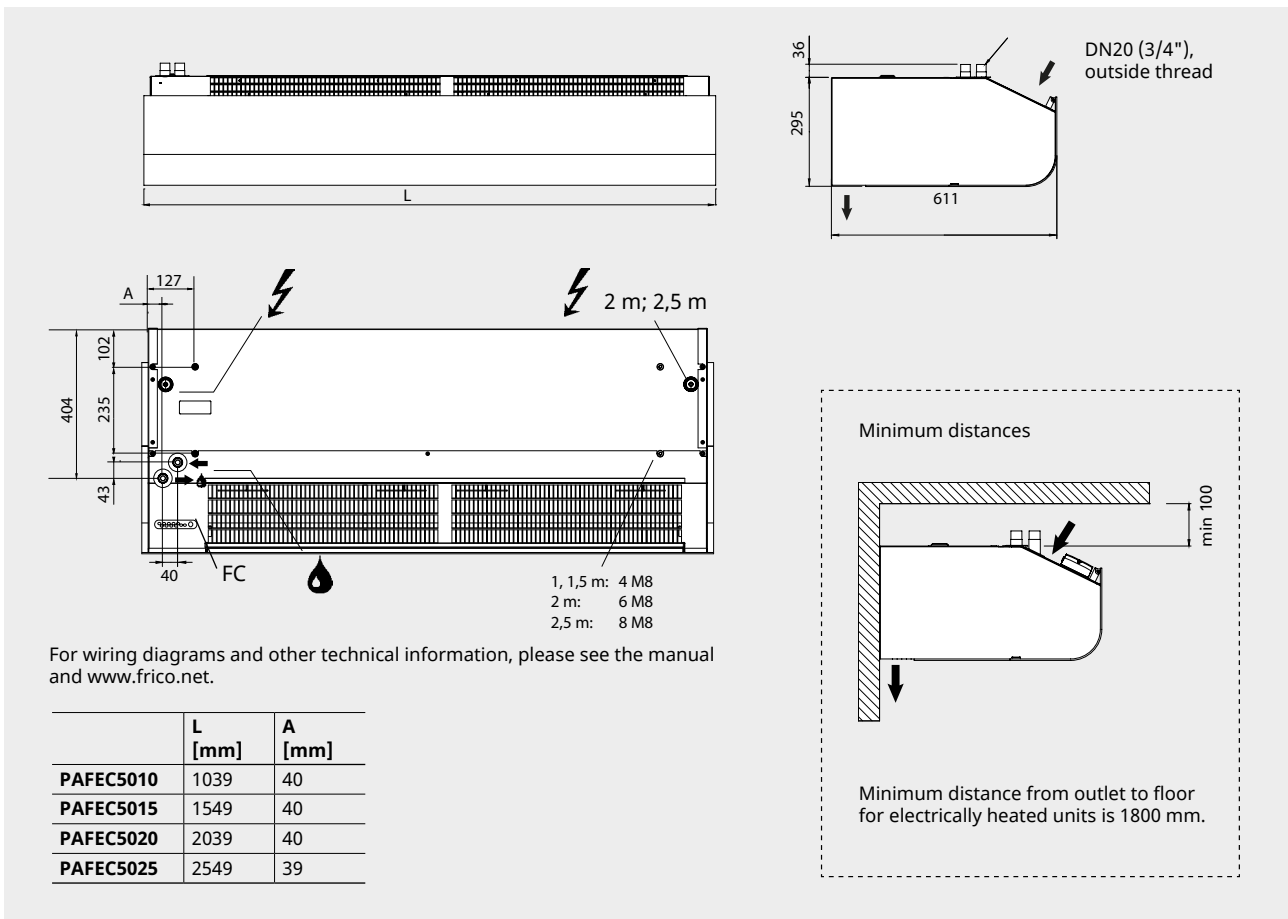
Connection

An easy to open front allows quick access to facilitate both installation and maintenance.

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 is made on the top of the unit. Power supply for electrical heated air curtains (400V3~) is routed via the motor compartment.

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. See Valves and Accessories.





Vertical mounting

The recommended installation width of Pamir 5000 is 7 m with air curtains on both sides of the opening. Units from 1,5 metres and longer may be used vertically. They can be reversed and placed on either side of the door.

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. Each unit must be supplemented with a vertical kit (accessory) to mount it on the floor and also to mount two units on top of each other for higher entrances. The air curtain must always be secured at the top. The design kit (accessory) is used to hide pipes and cables.

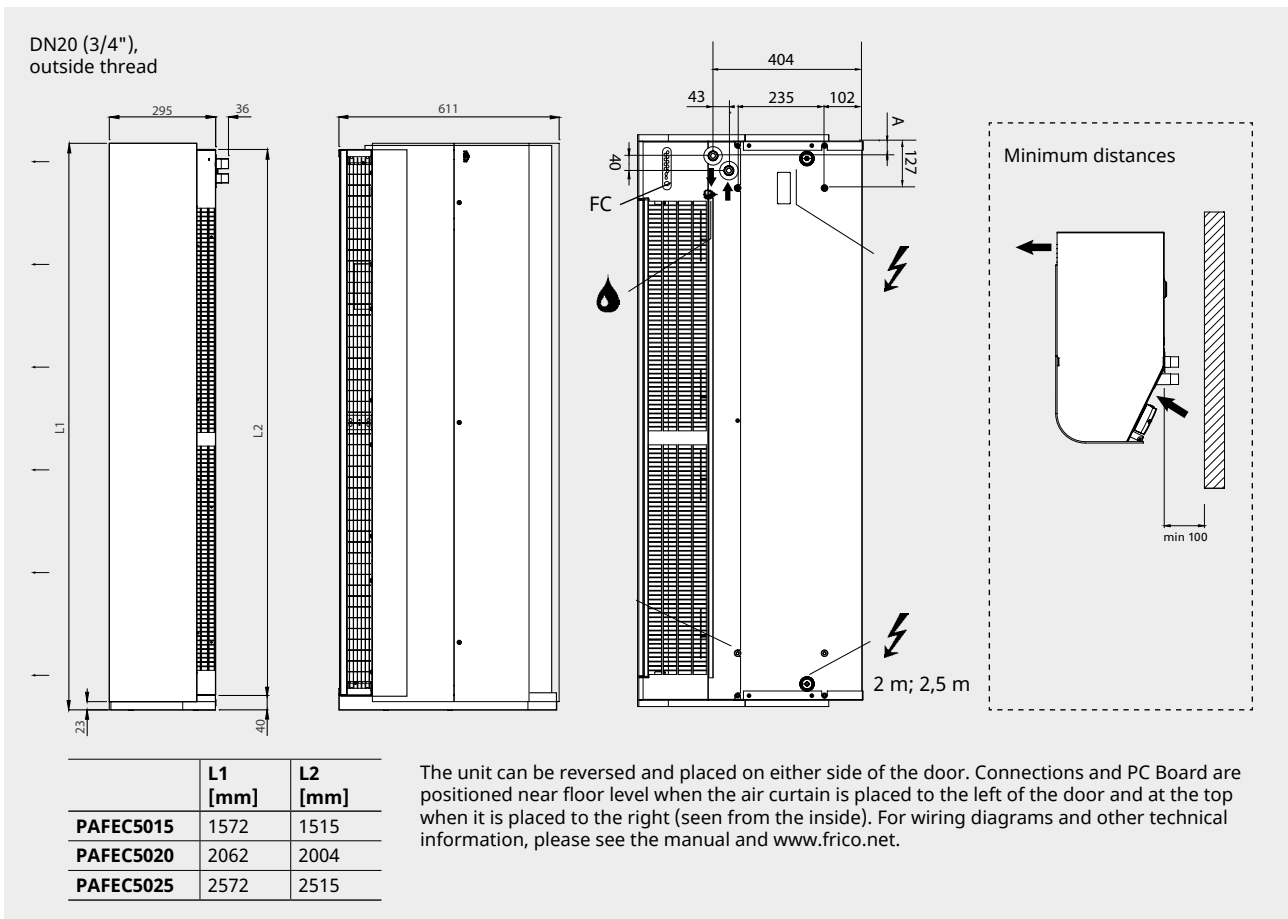
Connection

An easy to open front allows quick access to facilitate both installation and maintenance.

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 back of the unit. Communication- and sensor cables are connected to the PC board.

The electrical connection is made on the back of the unit. Power supply for electrical heated air curtains (400V3~) is routed via the motor compartment.

Water heated units are connected to the water system on the back of the unit. 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.



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.

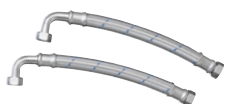


FCWTA, return water temperature sensor

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



FHDN20, flexible hoses

Flexible hoses for easy and practical installation of water heated unit. FHDN20: length 350 mm. FHDN2010: length 1 m. DN20, inside thread, 90° bend.



PA34EF, 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.



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 |
|-------------|----------|---------------------------|-------------|
| 18055 | FHDN20 | PAFECW5010/5015/5020/5025 | 2 |
| 88906 | FHDN2010 | PAFECW5010/5015/5020/5025 | 2 |
| 19064 | PA34EF10 | PAFECW5010 | 1 |
| 19065 | PA34EF15 | PAFECW5015 | 1 |
| 19066 | PA34EF20 | PAFECW5020 | 1 |
| 19067 | PA34EF25 | PAFECW5025 | 1 |
| 17597 | DTV200S | PAFECW5010/5015/5020/5025 | 1 |



PA34WB/PAWBL, wall brackets

Brackets for installing unit horizontally on a wall. PAWBL is used when the unit must be mounted further out from the wall. PA34WB: length 400 mm, PAWBL: length 560 mm.



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.



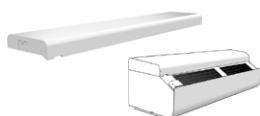
PA4JK, joining kit

Used to join horizontal units together for a sleek and unified installation. Consists of joint bracket and mounting parts.



PA4XT, outlet extension

Outlet extension with telescopic function. Used for recessed installation of units in suspended ceilings. 130-200 mm.



PA4DW, design kit for wall mounting

Used to conceal mountings, cables and pipes. Used together with ceiling brackets PA34WB.



PA4DC, design kit for ceiling mounting

Used to conceal mountings, cables and pipes. The design kit has a telescope function that can be adapted for the installation. It can also be extended with one or more extension parts. Two design kits are required for 1 and 1.5 metre units, while 2 metre units need three kits and 2.5 metre units need four kits. Available in: small 200-300 mm, medium 300-500 mm, large 500-900 mm, extension 420 mm.

| Item number | Type | Used for | Consists of |
|-------------|----------|----------------|-------------|
| 18044 | PA34WB15 | PAFEC5010/5015 | 2 |
| 18045 | PA34WB20 | PAFEC5020 | 3 |
| 18046 | PA34WB30 | PAFEC5025 | 4 |
| 214951 | PAWBL15 | PAFEC5010/5015 | 2 |
| 214952 | PAWBL20 | PAFEC5020 | 3 |
| 214953 | PAWBL30 | PAFEC5025 | 4 |
| 18059 | PA34CB15 | PAFEC5010/5015 | 4 |
| 18060 | PA34CB20 | PAFEC5020 | 6 |
| 18061 | PA34CB30 | PAFEC5025 | 8 |
| 18062 | PA34WS15 | PAFEC5010/5015 | 4 |
| 18063 | PA34WS20 | PAFEC5020 | 6 |
| 18064 | PA34WS30 | PAFEC5025 | 8 |
| 18056 | PA34TR15 | PAFEC5010/5015 | 4 |
| 18057 | PA34TR20 | PAFEC5020 | 6 |
| 18058 | PA34TR30 | PAFEC5025 | 8 |
| 18065 | PA34VD15 | PAFEC5010/5015 | 4 |

| Item number | Type | Used for | Consists of |
|-------------|----------|-----------|-------------|
| 18066 | PA34VD20 | PAFEC5020 | 6 |
| 18067 | PA34VD30 | PAFEC5025 | 8 |
| 110760 | PA4JK | PAFEC5000 | 1 |
| 19090 | PA4XT10 | PAFEC5010 | 1 |
| 19091 | PA4XT15 | PAFEC5015 | 1 |
| 19092 | PA4XT20 | PAFEC5020 | 1 |
| 19093 | PA4XT25 | PAFEC5025 | 1 |
| 110838 | PA4DW10 | PAFEC5010 | 1 |
| 110839 | PA4DW15 | PAFEC5015 | 1 |
| 110840 | PA4DW20 | PAFEC5020 | 1 |
| 110841 | PA4DW25 | PAFEC5025 | 1 |
| 13557 | PA4DCS | PAFEC5000 | 1 |
| 13559 | PA4DCM | PAFEC5000 | 1 |
| 13560 | PA4DCL | PAFEC5000 | 1 |
| 13561 | PA4DXT | PAFEC5000 | 1 |



PA4JK, vertical kit

Used to adapt a horizontal unit for vertical installation. Includes floor frame and mounting parts to support the top. Vertical kit allows two units to be installed on top of each other. One vertical kit is needed per unit.



AXP300, collision protection

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



PA4VDW, design kit for vertical mounting

Used to conceal cables and pipes.

PA4HE, extension hood

Fills the space between the unit and the ceiling for vertical mounting and provides a neater installation. PA3HEVDW: extension hood for units with design kit.

| Item number | Type | Used for | Consists of |
|-------------|----------|--------------------------|-------------|
| 110760 | PA4JK | PAFEC5010/5015/5020/5025 | 1 |
| 10028 | AXP300 | PAFEC5010/5015/5020/5025 | 1 |
| 110754 | PA4VDW15 | PAFEC5015 | 1 |
| 110755 | PA4VDW20 | PAFEC5020 | 1 |
| 110756 | PA4VDW25 | PAFEC5025 | 1 |
| | PA4HE | PAFEC5010/5015/5020/5025 | 1 |
| | PA4HEVDW | PAFEC5010/5015/5020/5025 | 1 |



Vertical mounted Pamir 5000 with a vertical kit to allow two units to be installed on top of each other.