Recessed and energy efficient air curtain for large commercial premises

Arden 4200, with a recommended installation height of 4,2 m, is very unobtrusive and with that particularly suitable for environments where the design is important. The air curtain is equipped with energy-efficient EC motors which enable stepless control of the airflow. Arden is intended for recessed installation, the frame and hatch can be painted in colours that blend well with the premises.

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 Arden 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.
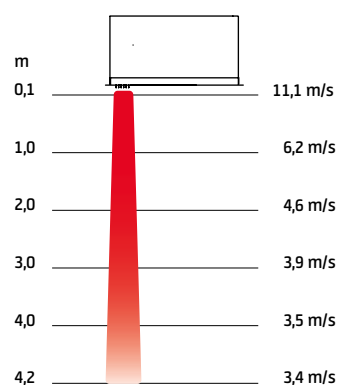

Arden 4200

THERMOZONE TECHNOLOGY   EC motor   made in SWEDEN

Available in 3 versions:

✿ Ambient (without heat)

⚡ Electrical heating

💧 Water heating

Air velocity profile

m	
0,1	11,1 m/s
1,0	6,2 m/s
2,0	4,6 m/s
3,0	3,9 m/s
4,0	3,5 m/s
4,2	3,4 m/s

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

Design and specifications are subject to change without notice.

Frico's Thermozone technology optimizes the air curtain

THERMOZONE® TECHNOLOGY

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 or 2,5 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

Mounting accessories for recessed installation.

Technical specifications

✿ Ambient, no heat - ARFEC4200 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]
230283	**ARFEC4210A**	0	1300/2500	74	41/58	3,2	1067	52
230287	**ARFEC4215A**	0	1950/3650	76	43/60	4,1	1577	71
230291	**ARFEC4220A**	0	2500/4900	78	44/62	6,0	2067	94
230295	**ARFEC4225A**	0	3200/6350	81	46/65	6,9	2579	120

⚡ Electrical heat - ARFEC4200 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]
230284	**ARFEC4210E12**	3,9/7,8/12	1300/2500	27/10	74	41/58	3,2	400V3~/16,9	1067	53
230288	**ARFEC4215E18**	6,0/12/18	1950/3650	28/15	76	43/60	4,1	400V3~/26	1577	74
230292	**ARFEC4220E24**	7,8/16/24	2500/4900	28/14	78	44/62	6,0	400V3~/33,8	2067	96
230296	**ARFEC4225E30**	9,9/20/30	3200/6350	28/14	81	46/65	6,9	400V3~/42,9	2579	124

💧 Water heat - ARFEC4200 W (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]
230285	**ARFEC4210W**	15	1200/2400	24/19	1,9	73	40/57	3,2	1067	58
230289	**ARFEC4215W**	23	1700/3400	25/20	3,0	75	42/59	4,1	1577	79
230293	**ARFEC4220W**	32	2300/4700	25/20	4,0	76	44/60	6,0	2067	106
230297	**ARFEC4225W**	41	2800/5750	26/21	5,1	79	46/63	6,9	2579	135

💧 Water heat - ARFEC4200 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]
230286	**ARFEC4210WLL**	9,6	1100/2300	15/12	3,1	72	40/56	3,2	1067	59
230290	**ARFEC4215WLL**	14	1600/3300	15/13	4,7	74	42/58	4,1	1577	81
230294	**ARFEC4220WLL**	19	2200/4600	15/13	7,5	75	43/59	6,0	2067	109
230298	**ARFEC4225WLL**	24	2700/5600	15/13	9,6	78	45/62	6,9	2579	138

*[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.

Manufactured in Sweden with a frame and hatch made of hot zinc-plate and powder coated steel panels. Colour frame and hatch: white, RAL 9016. Colour grille: grey, RAL 7046. The frame and hatch can be painted in an optional colour.

CE

Mounting

The recommended installation height of Arden 4200 is 4,2 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. The threaded bars can also be fixed on the inside of the unit e.g. when mounted on a solid suspended ceiling.
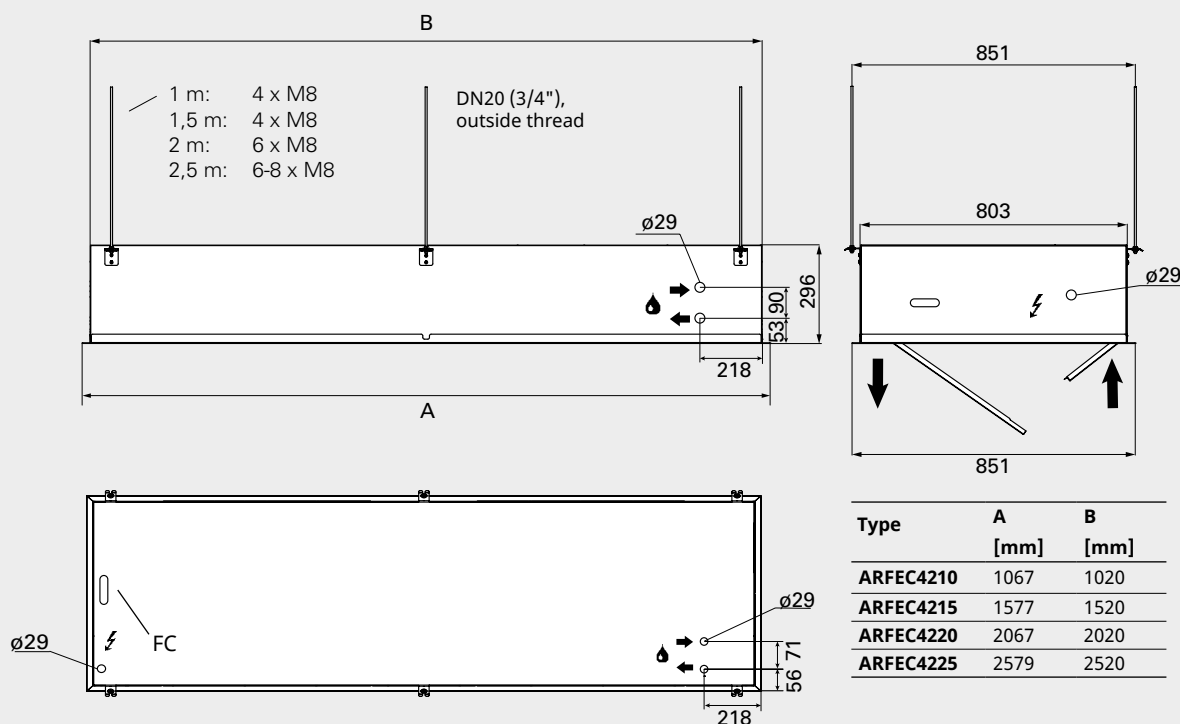
The air curtain is installed horizontally with the outlet air grille facing downwards as close to the door as possible, concealed in the false ceiling. For the protection of wider doorways, several units can be mounted in series alongside each other. For a discreet installation with only the outlet and inlet visible in the ceiling the unit can be supplemented with a outlet/inlet extension.

Connection

Service and maintenance are easily made through the service hatch at the bottom of the unit. 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 side or the top of the unit. Communication and sensor cables are connected to the PC board.

The electrical connection can be made either on the side or the top of the unit and routed via the motor compartment.

Water heated units are connected to the water system inside the unit, through holes made during installation on the top or the side 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.

B

1 m:	4 x M8
1,5 m:	4 x M8
2 m:	6 x M8
2,5 m:	6-8 x M8

DN20 (3/4"), outside thread

ø29

296 53 90

218

A

851

803

ø29

851

ø29

FC

ø29

56 71

218

Type	A [mm]	B [mm]
ARFEC4210	1067	1020
ARFEC4215	1577	1520
ARFEC4220	2067	2020
ARFEC4225	2579	2520

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

For wiring diagrams and other technical information, please see the manual. Recommended installation height varies depending on the relevant premises. See www.frico.net for further information.

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	FC Smart	FC Pro	FC Building - BMS
Content	*Content*	*Content*	*Content*
• FCCF control panel	• FCCF control panel	• FCCF control panel	• FCCF control panel
• FCBC05	• FCBC10	• FCBC10	• FCBC10
• FCDC	• FCDC	• FCDC	• FCDC
	• FCLAP	• FCLAP	• FCBAP building access point
		• FCTXRF	

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 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: 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 [mm]
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 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

Accessories - water heated units

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. There is no separate filter in Arden 3500 as the design of the coil and the grille makes it unnecessary.

Item number	Type	Used for	Consists of
17597	**DTV200S**	ARFEC4200W	1

Accessories - mounting

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.
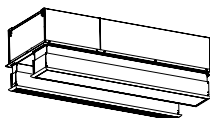
PA34CB, ceiling brackets
Ceiling brackets for installing the unit from the ceiling using wires or threaded bars (not included). Best combined with vibration dampers (PA34VD) when using threaded bars.

PA34VD, vibration dampers
Reduces vibrations for ceiling installations with threaded bars.

AR42XTT, extension
Outlet/inlet extension for a discreet installation with only the outlet and inlet visible in the ceiling. Height 130-210 mm.

Item number	Type	Used for	Consists of
18056	**PA34TR15**	ARFEC4210/4215	4
18057	**PA34TR20**	ARFEC4220	6
18058	**PA34TR30**	ARFEC4225	8
18059	**PA34CB15**	ARFEC4210/4215	4
18060	**PA34CB20**	ARFEC4220	6
18061	**PA34CB30**	ARFEC4225	8
18065	**PA34VD15**	ARFEC4210/4215	4
18066	**PA34VD20**	ARFEC4220	6
18067	**PA34VD30**	ARFEC4225	8
88060	**AR42XTT10**	ARFEC4210	
88061	**AR42XTT15**	ARFEC4215	
88062	**AR42XTT20**	ARFEC4220	
88063	**AR42XTT25**	ARFEC4225	