

AC

Air curtains



AC Air curtains

The air curtains from VEAB create an effective, separating air trap between two temperature zones, for the entrances of department stores, public spaces, offices, etc. During the winter time, the air curtain prevents the inside heat from "leaking" out. During the summer time, warm outside air is prevented from entering air-conditioned spaces. Thus, a good level of comfort and an efficient use of energy is ensured.

VEAB air curtains are available with electric or water heating, as well as two types with regard to the regulation of the functions: with integrated control panel or with integrated control board and add-on control unit enabling, among other things, DUC communication.



Air curtains with integrated control panel and remote control

AC22-A and AC32-A without heating (only fan operation)

AC22-E and AC32-E electric heating

AC22-W and AC32-W water heating

All have an integrated control panel at the short end and a remote control



Air curtains without heating, with electric heating or water heating						
Type	AC22-A	AC22-E	AC22-W	AC32-A	AC32-E	AC32-W
Heating	Without heating	Electric	Water	Without heating	Electric	Water
Power range kW	-	3.3-10	6.9-14.4	-	5-16	8-18
Max. operating water temp. °C	-	-	110	-	-	110
Max. operating pressure (water), bar	-	-	16	-	-	16
Lengths m	1 / 1.5 / 2			1 / 1.5 / 2		
Max. installation height m*	2.2			3.2		
For more info, see page	4-5	4-5	4-5, 8-9	10-11, 14	10-11, 14	10-11, 14-15

* The recommended installation height may depend on the space in question.

Powerful air curtains with control units with basic functions, or optionally with energy and labour-saving functions



AC25 and AC35 have an integrated control board with add-on control unit PLS Basic or PLS Competent.

AC35 air curtain with lengths over 1.5 m may also be mounted upright. Everything needed for installation is included.



ACR35 is recess mounted in false ceilings or free hanging from the ceiling with the exhaust directed downward. The air curtain has an integrated control board with add-on control unit PLS Basic or PLS Competent.

Control unit for AC25, AC35 and ACR35

Installs with a simple operation onto the air curtain integrated control board.



PLS Basic

The control unit has two modes of operation:

Manual operation: The fan runs continuously at the set speed and the heat is regulated against the selected set point.

Automatic operation: The fan runs as needed when the heating is activated. The heating is regulated against the selected set point.



PLS Competent

The control unit contains several smart features such as automatic regulation during open door, calendar-driven operation, filter alarms, summer/winter mode, and communication with DUC.

Air curtains without heating, with electric heating or water heating							
Type	AC25-E	AC25-W	AC35-A	AC35-E	AC35-W	ACR35-E	ACR35-W
Heating	Electric	Water	Without heating	Electric	Water	Electric	Water
Power range kW	3-16	4.7-11.5	-	2.7-19.8	11.7-32.6	0.4-18	16-33
Max. operating water temp. °C	-	110	-	-	110	-	110
Max. operating pressure (water), bar	-	16	-	-	16	-	16
Lengths m	1 / 1.5 / 2		1 / 1.5 / 2 / 2.5			1 / 1.5 / 2	
Max. installation height m*	2.5		3.5			3.5	
For more info, see page	16-17	16-17, 22-23	24-25, 30	24-25, 30	24-25, 30-31	32-33, 37	32-33, 37-39

* The recommended installation height may depend on the space in question.

AC22

Air curtain with integrated control panel and remote control. For smaller entrances to shops, offices, stairwells ...

AC22 is a compact air curtain, easy to manage and maintain, meeting the requirements of smaller entrances. The air curtain functions are controlled using the integrated control panel or remote control.

- Integrated control panel with remote control
- 3 fan stages
- Horizontal installation (wall brackets included)
- Lengths: 1, 1.5, and 2 m
- Recommended installation height up to 2.2 meters *
- The front panel is easily removable, which facilitates installation and maintenance work.
- CE marked



The air curtain control panel is discretely integrated into the side panel. Regulated using the control panel and/or remote control.

Type/capacity

AC22-A (without heating), see page 5.

AC22-E (electric heating), see page 5.

AC22-W (water heating), see pages 5, 8, and 9.

Regulation

The air curtain is regulated using the control panel integrated into the side panel, or using the remote control (included). See pages 6 and 7.

Design

Corrosion proof housing made from hot galvanized and powder coated steel. AC22-W has a built-in filter for protection of the coil. The filter is accessible for cleaning.

Colour front: white, RAL 9016, NCS S 0500-N.

Colour grille, rear panel, side panels, and brackets: grey, RAL 7046.

Electrical installation

Unit without heating

The units are supplied fully connected internally with a 1.5 m long cable and a 230 VAC electric plug for control voltage and fan operation.

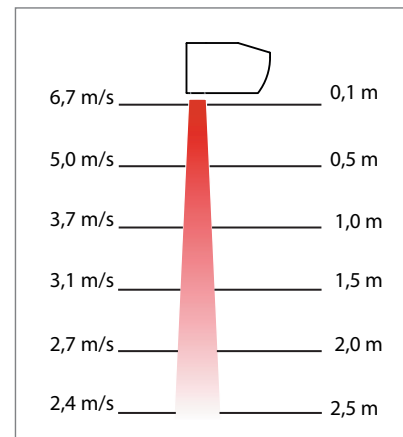
Units with electric heating

The units are intended for permanent installation. The power supply (400 V 3N~) is connected to the terminal block inside the connection space. The 2 meter unit requires dual power supplies.

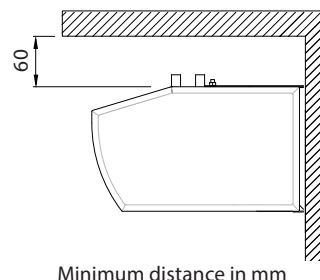
Units with water heating

The units are supplied fully connected internally with a 1.5 m long cable and a 230 VAC electric plug for control voltage and fan operation. The integrated circuit board has an output for connection of a 230 VAC motorised valve. The warm water heater has 2 x Ø15 mm connections (smooth copper pipes) at the top.

Air velocity profile



Measurements according to ISO 27327-1.
Average values for products within the family.



Minimum distance in mm

Mounting

The air curtain is mounted horizontally with the exhaust port pointing down, as close as possible to the door. Wall mounting is done using the included brackets. For mounting on the ceiling, use hangers or threaded rods (accessories).

** The recommended installation height may depend on the space in question.*

Product range overview

Without heating - AC22-A

Type	Power kW	Air flow ¹ m³/h	Sound level ² dB(A)	Voltage motor V	Current motor A	Length mm	Weight kg	Protection class
AC22-10-A	0	900/1200	42/51	230V~	0.45	1026	16	IP21
AC22-15-A	0	1150/1800	40/52	230V~	0.5	1536	24	IP21
AC22-20-A	0	1800/2400	43/53	230V~	0.9	2026	32	IP21

Electric heating - AC22-E

Type	Power-step kW	Air flow ¹ m³/h	Δt ³ °C	Sound level ² dB(A)	Voltage motor V	Current motor A	Voltage V Current A (heat)	Length mm	Weight kg	Protection class
AC22-10-E05	3.3/5	900/1200	17/12.5	42/51	230V~	0.45	400V3N~/7.2	1026	17	IP20
AC22-15-E08	4/8	1150/1800	21/13	40/52	230V~	0.5	400V3N~/11.5	1536	26	IP20
AC22-20-E10	5/10	1800/2400	17/12.5	43/53	230V~	0.9	400V3N~/14.4	2026	34	IP20

Water heating - AC22-W

Type	Power ⁴ kW	Air flow ¹ m³/h	Δt ^{3,4} °C	Sound level ² dB(A)	Voltage motor V	Current motor A	Water volume l	Length mm	Weight kg	Protection class
AC22-10-W	6.9	700/1200	21/17	39/52	230V~	0.4	0.38	1026	17	IP21
AC22-15-W	11.1	1000/1750	23/18	37/53	230V~	0.5	0.81	1536	26	IP21
AC22-20-W	14.4	1400/2400	22/18	40/53	230V~	0.8	0.74	2026	35	IP21

¹ Lowest/highest air flow of a total of 3 fan stages.

² Conditions: Distance to the unit 5 meters. Directional factor: 2. Equivalent absorption area 200 m². At the lowest/highest air flow.

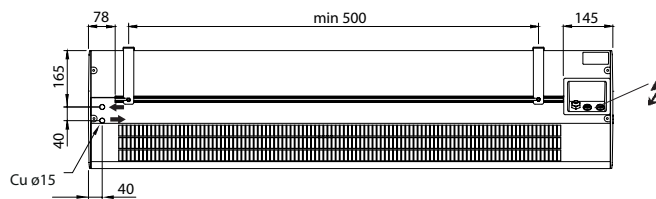
³ Δt = temperature rise of passing air at maximum heat output and lowest and highest air flow.

⁴ Applicable at water temperature of 80/60 °C, air intake temperature of +18 °C.

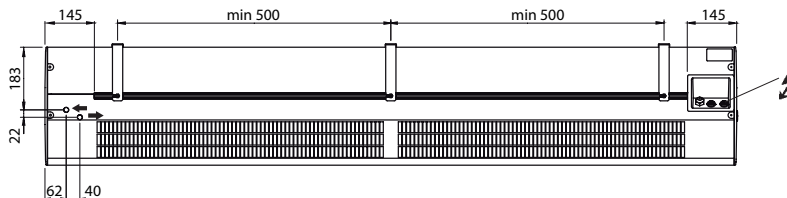
Dimensions



AC22-10 and AC22-15



AC22-20



Project design/orders

Descriptive text - AC22

Air curtain, VEAB type AC22 with corrosion proof housing made from hot galvanized and powder coated steel. Integrated control and included remote control.

Type designation **AC 22 - 10 - E**
(example)

Installation height, dm

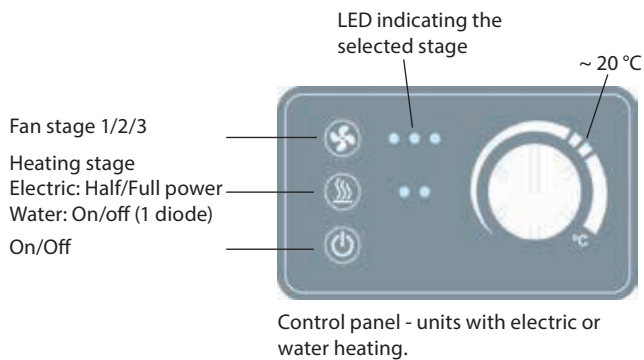
Length, dm

Electric heating

Regulation

Control panel with remote control (incl.)

The air curtain has a control panel discretely integrated into the side panel and may be controlled directly using the control panel, or the enclosed remote control. The air speed is set manually. The heat is regulated automatically. It is possible to use an external on/off switch, e.g., a timer. The air curtain for electric heating is supplied fully connected internally. The air curtain for water heating has a 230 V output for an on/off motorised valve.

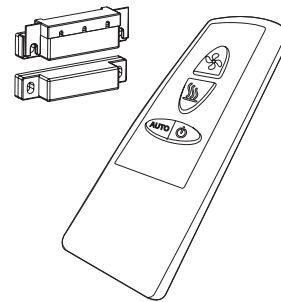


Remote control - on/off and fan and heating stages.

Door switch (optional)

With a door switch (optional), the fan runs automatically at a pre-set RPM when the door is open. The set point for heating is automatically increased by 2 °C when the door is opened. With the door closed and on the "Auto" setting, the fan starts at low speed when heat is required. When the set point has been reached, the fan runs for an additional 30 seconds to cool the elements.

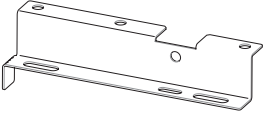


The door switch requires a different type of remote control, supplied with the door switch.



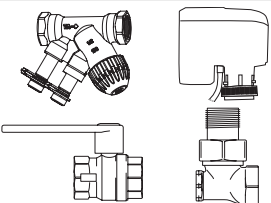

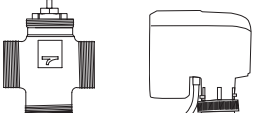
Optional features

	Product		Description
	PL2DR	Door switch with remote control	Door switch control with a special remote control for the Auto mode. With a door switch and operating in Auto mode, the fan starts/stops with the door open/closed. The automatic system enables selection of maintenance heating when the door is closed.
	PAMLK	Motor alarm board	Provides a potential free alarm connection when thermal contact is triggered in the motor. Installed in the air curtain.

Mounting accessories

	Product		Description
	PA2PF15	Ceiling mounting bracket for 1 and 1.5 meter unit Units: 4 pcs	Pendulum brackets for unit mounting and ceiling brackets for mounting on the ceiling using hangers or threaded rods (not included).
	PA2PF20	Ceiling mounting bracket for 2 meter unit Units: 6 pcs	
	PA34TR15	Threaded rods for 1 and 1.5 meter unit Length: 1 m Units: 4 pcs	Threaded rods for ceiling mounting. Used with ceiling mounting brackets PA2PF.
	PA34TR20	Threaded rods for 2 meter unit Length: 1 m Units: 6 pcs	
	PA2P15	Pendulums for 1 and 1.5 meter unit Length: 1 m Units: 2 pcs	Pendulum brackets for mounting the unit suspended from the ceiling. The pendulum brackets are covered by a white plastic duct to hide the cables. The brackets may be cut to the desired length should shorter suspension heights than 1 m be desired. Used with ceiling mounting brackets PA2PF.
	PA2P20	Pendulums for 2 meter unit Length: 1 m Units: 3 pcs	

Control valves for water systems (optional)

VOS, valve kit on/off			Description
	VOS15LF	Valve kit on/off, low flow, DN15	2-way combination control and adjustment valve with on/off actuator, shut-off valve, and bypass.
	VOS15NF	Valve kit on/off, DN15	
	VOS20	Valve kit on/off, DN20	
	VOS25	Valve kit on/off, DN25	
	VAT	Adjustment tool	For adjustment of VOS-valves.
VOT, valve kit on/off			Description
	VOT15	Valve kit on/off, DN15	3-way valve and actuator on/off.
	VOT20	Valve kit on/off, DN20	
	VOT25	Valve kit on/off, DN25	

Choosing a valve kit, see pages 40 and 41.

Capacity AC22-W

			Supply line water temperature: 90 °C Room temperature: +18 °C Output air temperature: +35 °C ¹				Water temperature: 90/70 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC22-10-W	max	1200	6.9	57.8	0.05	3.1	8.5	38.8	0.10	10.2
	min	700	4.0	48.1	0.02	0.8	6.2	44.1	0.08	5.8
AC22-15-W	max	1800	10.4	53.1	0.07	2.9	13.6	40.2	0.17	13.5
	min	1000	5.8	43.3	0.03	0.7	9.5	45.9	0.12	7.0
AC22-20-W	max	2400	13.9	55.4	0.10	2.7	17.7	39.7	0.22	11.1
	min	1400	8.1	46.2	0.05	0.7	12.8	45.0	0.16	6.3

			Supply line water temperature: 80 °C Room temperature: +18 °C Output air temperature: +35 °C ¹				Water temperature: 80/60 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC22-10-W	max	1200	6.9	60.2	0.09	7.3	6.9	35.0	0.08	7.2
	min	700	4.0	49.7	0.03	1.4	5.0	39.2	0.06	4.1
AC22-15-W	max	1800	10.4	56.1	0.11	6.2	11.1	36.2	0.14	9.6
	min	1000	5.8	45.5	0.04	1.2	7.8	40.8	0.10	5.1
AC22-20-W	max	2400	13.9	57.9	0.14	6.2	14.4	35.7	0.18	7.9
	min	1400	8.1	47.9	0.06	1.2	10.5	40.0	0.13	4.5

			Supply line water temperature: 70 °C Room temperature: +18 °C Output air temperature: +35 °C ¹				Water temperature: 70/50 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC22-10-W	max	1200	6.9	62.5	0.23	43.1	5.3	31.0	0.07	4.6
	min	700	4.0	51.7	0.05	3.3	3.9	34.3	0.05	2.7
AC22-15-W	max	1800	10.4	59.3	0.24	26.7	8.7	32.2	0.11	6.3
	min	1000	5.8	48.0	0.06	2.6	6.0	35.8	0.07	3.3
AC22-20-W	max	2400	13.9	60.5	0.35	28.5	11.1	31.6	0.14	5.1
	min	1400	8.1	50.0	0.10	2.9	8.1	35.0	0.10	2.9

¹ Recommended output air temperature for comfort with optimised power requirement.

² Rated power at a given supply and return line temperature.

AIR CURTAINS
AC 22

			Supply line water temperature: 60°C Room temperature: +18 °C Output air temperature: +32 °C				Water temperature: 60/40 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC22-10-W	max	1200	5.7	55.0	0.28	64.4	3.7	27.0	0.05	2.5
	min	700	3.3	46.3	0.06	4.0	2.7	29.3	0.03	1.4
AC22-15-W	max	1800	8.6	52.5	0.28	36.5	6.1	28.0	0.07	3.6
	min	1000	4.8	43.3	0.07	3.1	4.3	30.6	0.05	1.9
AC22-20-W	max	2400	11.4	53.4	0.42	39.7	7.8	27.5	0.09	2.8
	min	1400	6.7	44.9	0.11	3.5	5.6	29.8	0.07	1.6

			Supply line water temperature: 55°C Room temperature: +18 °C Output air temperature: +29 °C				Water temperature: 55/35 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC22-10-W	max	1200	4,5	46,5	0,13	16,3	2,8	24,9	0,03	1,6
	min	700	2,6	40,0	0,04	2,3	2,0	26,5	0,02	0,9
AC22-15-W	max	1800	6,7	44,2	0,15	12,5	4,9	25,9	0,06	2,4
	min	1000	3,7	37,4	0,05	1,9	3,4	27,9	0,04	1,3
AC22-20-W	max	2400	9,0	45,2	0,22	12,8	6,0	25,4	0,07	1,8
	min	1400	5,2	38,9	0,08	2,1	4,3	27,1	0,05	1,0

² Rated power at a given supply and return line temperature.

AC32

Air curtain with integrated control panel and remote control. For entrances to offices, schools, shops, cinemas...

AC32 is a compact air curtain, easy to use and maintain, which meets the requirements of entrances to offices, commercial and public spaces, etc. The air curtain functions are controlled using the integrated control panel or remote control.

- Integrated control panel with remote control
- 3 fan stages
- Horizontal installation (wall brackets included)
- Lengths: 1, 1.5 and 2 m
- Recommended installation height up to 3.2 meters*
- The front panel is easily removable, which facilitates installation and maintenance work
- CE marked



Type/capacity

AC32-A (without heating), see page 11.

AC32-E (electric heating), see page 11.

AC32-W (water heating), see pages 11 and 15.

Regulation

The air curtain is regulated using the control panel integrated into the side panel, or using the remote control (included). See pages 12 and 13.

Design

Corrosion proof housing made from hot galvanized and powder coated steel. AC32-W has a built-in filter for protection of the coil. The filter is accessible for cleaning.

Colour front: white, RAL 9016, NCS S 0500-N.

Colour grille, rear panel, side panels, and brackets: grey, RAL 7046.

Electrical installation

Unit without heating

The units are supplied fully connected internally with a 1.5 m long cable and a 230V AC electric plug for control voltage and fan operation.

Units with electric heating

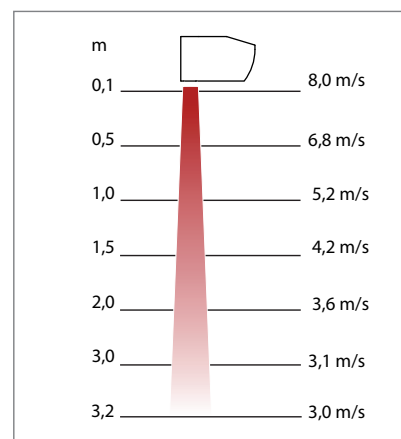
The units are intended for permanent installation.

The power supply (400V3N~) is connected to the terminal block inside the connection space. The 2 meter unit requires dual power supplies.

Units with water heating

The units are supplied fully connected internally with 1.5 m long cable and a 230V AC electric plug for control voltage and fan operation. The integrated circuit board has an output for connection of a 230V AC motorised valve. The warm water heater has 2 DN20 (3/4") connections (male thread) at the top.

Air velocity profile



Measurements according to ISO 27327-1.
Average values for products within the family.

Mounting

The air curtain is mounted horizontally with the outlet facing downward as close to the door as possible. Wall mounting is done using the included brackets. For mounting on the ceiling, use hangers or threaded rods (accessories).

* The recommended installation height may depend on the space in question.

Product range overview

Without heating - AC32-A

Type	Power kW	Air flow ¹ m ³ /h	Sound level ² dB(A)	Voltage motor V	Current motor A	Length mm	Weight kg	Protection class
AC32-10-A	0	1100/1750	46/57	230V~	0.7	1046	22	IP21
AC32-15-A	0	1700/2750	46/59	230V~	1.0	1556	31	IP21
AC32-20-A	0	2300/3500	50/60	230V~	1.3	2046	41	IP21

Electric heating - AC32-E

Type	Power-step kW	Air flow ¹ m ³ /h	Δt ³ °C	Sound level ² dB(A)	Voltage motor V	Current motor A	Voltage V Current A (heat)	Length mm	Weight kg	Protection class
AC32-10-E08	5/8	1100/1750	22/13	46/57	230V~	0.65	400V3N~/11.5	1046	26	IP20
AC32-15-E12	8/12	1700/2750	21/13	46/59	230V~	1.0	400V3N~/17.3	1556	37	IP20
AC32-20-E16	10/16	2300/3500	22/13	50/60	230V~	1.3	400V3N~/23.1	2046	51	IP20

Water heating - AC32-W

Type	Power ⁴ kW	Air flow ¹ m ³ /h	Δt ^{3,4} °C	Sound level ² dB(A)	Voltage motor V	Current motor A	Water volume l	Length mm	Weight kg	Protection class
AC32-10-W	14.6	1050/1700	16/14	45/55	230V~	0.65	1.3	1046	26	IP21
AC32-15-W	24.7	1850/2700	17/15	46/57	230V~	0.7	2.1	1556	36	IP21
AC32-20-W	31.2	2200/3300	18/16	49/58	230V~	1.3	2.7	2046	48	IP21

¹ Lowest/highest air flow of a total of 3 fan stages.

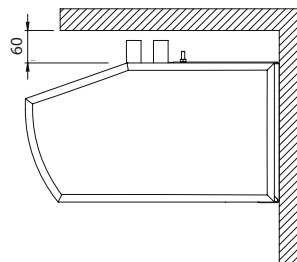
² Conditions: Distance to the unit 5 meters. Directional factor: 2. Equivalent absorption area 200 m². At the lowest/highest air flow.

³ Δt = temperature rise of passing air at maximum heat output and lowest and highest air flow.

⁴ Applicable at water temperature of 80/60 °C, air intake temperature of +18 °C.

Dimensions

For dimensions, see page 14.



Minimum distance in mm

Project design/orders

Descriptive text - AC32

Air curtain, VEAB type AC32 with corrosion proof housing made from hot galvanized and powder coated steel. Integrated control and included remote control.

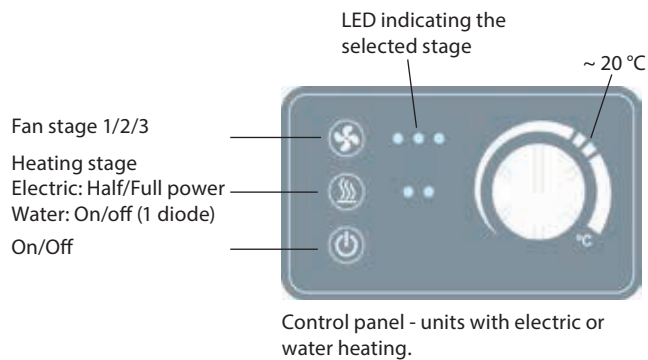
Type designation **AC 32 - 10 - E**
(example)

Installation height, dm _____
Length, dm _____
Electric heating _____

Regulation

Control panel with remote control (incl.)

The air curtain has a control panel discretely integrated into the side panel and may be controlled directly using the control panel, or the enclosed remote control. The air speed is set manually. The heat is regulated automatically. It is possible to use an external on/off switch, e.g., a timer. The air curtain for electric heating is supplied fully connected internally. The air curtain for water heating has a 230 V output for an on/off motorised valve.

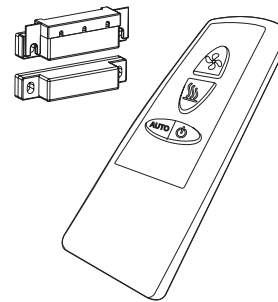


Remote control - on/off and fan and heating stages.

Door switch (optional)

With a door switch (optional), the fan runs automatically at a pre-set RPM when the door is open. The set point for heating is automatically increased by 2 °C when the door is opened. With the door closed and on the "Auto" setting, the fan starts at low speed when heat is required. When the set point has been reached, the fan runs for an additional 30 seconds to cool the elements.

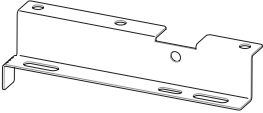


The door switch requires a different type of remote control, supplied with the door switch.



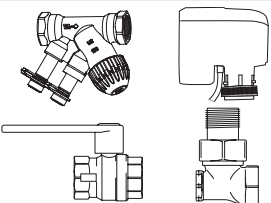

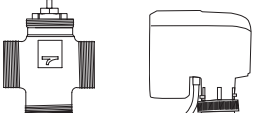
Optional features

	Product		Description
	PL2DR	Door switch with remote control	Door switch control with a special remote control for the Auto mode. With a door switch and operating in Auto mode, the fan starts/stops with the door open/closed. The automatic system enables selection of maintenance heating when the door is closed.
	PAMLK	Motor alarm board	Provides a potential free alarm connection when thermal contact is triggered in the motor. Installed in the air curtain.

Mounting accessories

	Product		Description
	PA2PF15	Ceiling mounting bracket for 1 and 1.5 meter unit. Units: 4 pcs	Pendulum brackets for unit mounting and ceiling bracket for mounting on the ceiling using hangers or threaded rods (not included).
	PA2PF20	Ceiling mounting bracket for 2 meter unit. Units: 6 pcs	
	PA34TR15	Threaded rods for 1 and 1.5 meter unit Length: 1 m Units: 4 pcs	Threaded rods for ceiling mounting. Used with ceiling mounting brackets PA2PF.
	PA34TR20	Threaded rods for 2 meter unit Length: 1 m Units: 6 pcs	
	PA2P15	Pendulums for 1 and 1.5 meter unit Length: 1 m Units: 2 pcs	Pendulum brackets for mounting the unit suspended from the ceiling. The pendulum brackets are covered by a white plastic duct to hide the cables. The brackets may be cut to the desired length should shorter suspension heights than 1 m be desired. Used with ceiling mounting brackets PA2PF.
	PA2P20	Pendulums for 2 meter unit Length: 1 m Units: 3 pcs	

Control valves for water systems (optional)

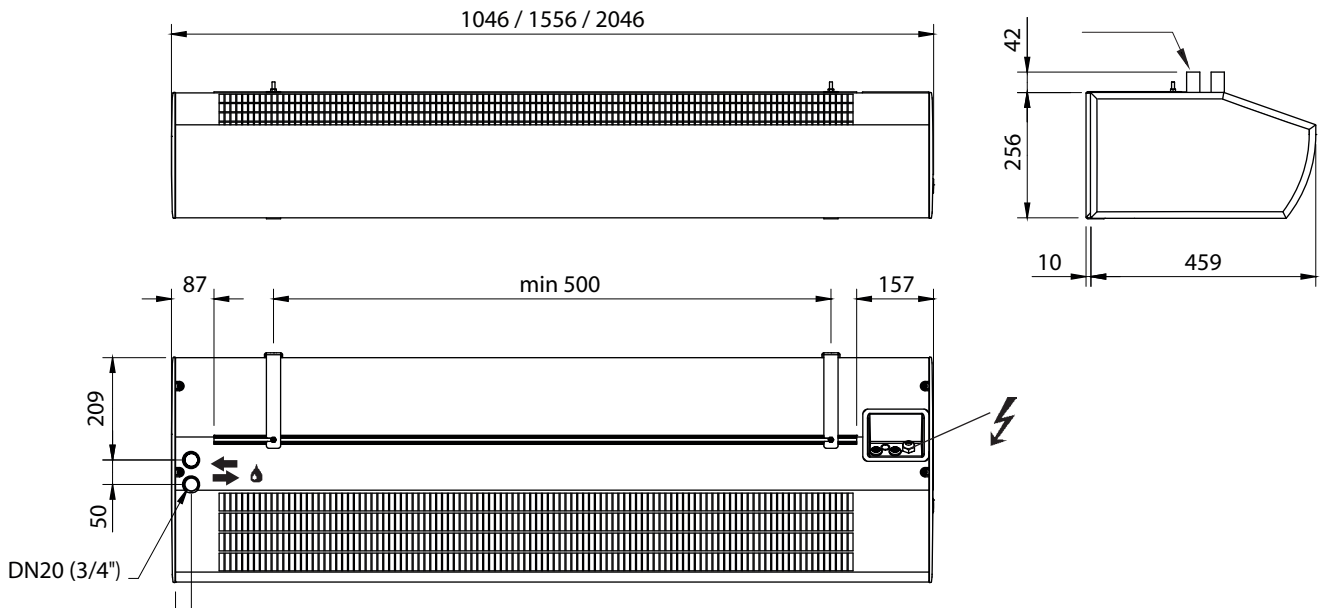
VOS, valve kit on/off			Description
	VOS15LF	Valve kit on/off, low flow, DN15	2-way combination control and adjustment valve with on/off actuator, shut-off valve, and bypass.
	VOS15NF	Valve kit on/off, DN15	
	VOS20	Valve kit on/off, DN20	
	VOS25	Valve kit on/off, DN25	
	VAT	Adjustment tool	For adjustment of VOS-valves.
VOT, valve kit on/off			Description
	VOT15	Valve kit on/off, DN15	3-way valve and actuator on/off.
	VOT20	Valve kit on/off, DN20	
	VOT25	Valve kit on/off, DN25	

Choosing a valve kit, see pages 40 and 41.

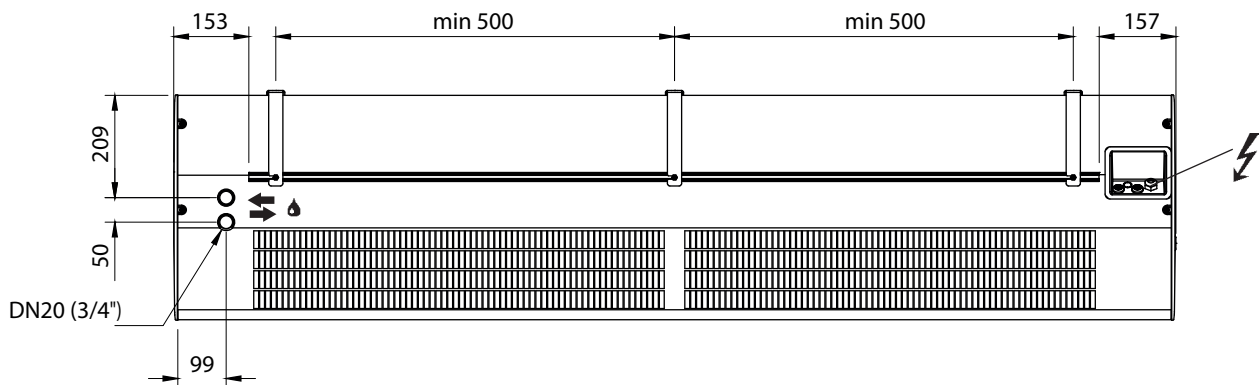
Dimensional drawing

All models

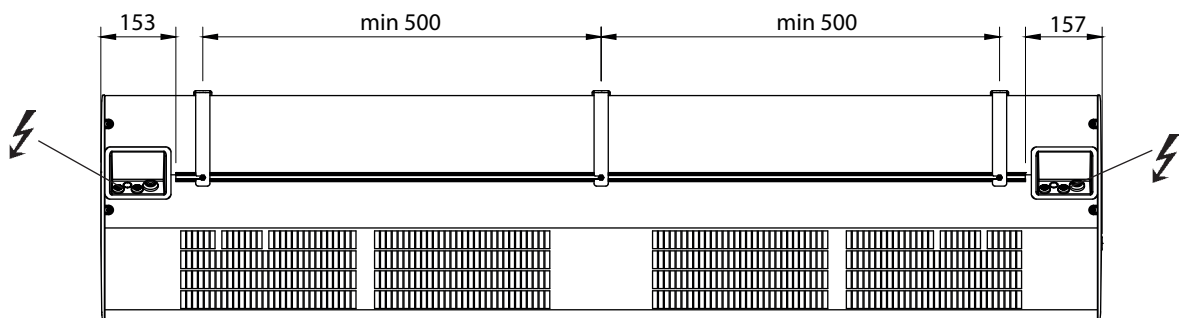
DN20 (3/4")
male thread (AC32-W)



2 meter unit
units with water heating (W)



Units with electrical heating (E)



Capacity 32-W

			Supply line water temperature: 80°C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 80/60 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC32-10-W	max	1700	9.8	42	0.06	1.4	14.6	43	0.18	8.5
	min	1050	6.2	38	0.04	0.5	10.6	48	0.13	4.8
AC32-15-W	max	2700	15.6	38	0.09	2.0	24.7	45	0.30	16.8
	min	1850	10.5	34	0.06	0.	19.2	49	0.23	10.6
AC32-20-W	max	3300	18.6	36	0.10	1.9	31.2	46	0.38	19.0
	min	2200	12.6	34	0.07	0.9	23.7	50	0.29	11.5

			Supply line water temperature: 70°C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 70/50 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC32-10-W	max	1700	9.7	44	0.09	2.7	11.3	38	0.14	5.5
	min	1050	6.1	39	0.05	0.9	8.3	41	0.10	3.2
AC32-15-W	max	2700	15.6	41	0.13	3.9	19.4	39	0.24	11.1
	min	1850	11.0	38	0.08	1.7	15.0	42	0.18	7.0
AC32-20-W	max	3300	18.9	39	0.15	3.7	24.4	40	0.30	12.5
	min	2200	12.9	36	0.09	1.6	18.6	43	0.23	7.6

			Supply line water temperature: 60°C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 60/40 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC32-10-W	max	1700	10.0	48	0.19	10.5	8.0	32	0.10	3.1
	min	1050	6.1	41	0.08	2.1	5.8	34	0.07	1.8
AC32-15-W	max	2700	16.0	45	0.26	13.4	13.9	33	0.17	6.3
	min	1850	10.8	40	0.13	4.0	10.8	35	0.13	4.0
AC32-20-W	max	3300	18.9	42	0.26	10.2	17.6	34	0.21	7.1
	min	2200	12.9	39	0.15	3.6	13.4	36	0.16	4.4

			Supply line water temperature: 55°C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 55/35 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC32-10-W	max	1700	9.8	48	0.35	31.3	6.3	29	0.08	2.1
	min	1050	5.9	42	0.11	3.6	4.6	31	0.06	1.2
AC32-15-W	max	2700	15.7	46	0.42	32.9	11.2	30	0.14	4.3
	min	1850	10.8	42	0.19	8.1	8.7	32	0.11	2.8
AC32-20-W	max	3300	18.7	44	0.40	22.4	14.1	31	0.17	4.9
	min	2200	12.5	39	0.19	5.9	10.7	32	0.13	3.0

¹⁾ Recommended output air temperature for comfort with optimised power requirement

²⁾ Rated power at a given supply and return line temperature.

AC25

Air curtain with practical and energy saving features. For offices, shops, schools, public spaces...

AC25 is an air curtain suitable for shops, offices, escalators, theatres, and other public spaces.

With control units Basic with basic features or Competent with smart features, which facilitate operation and saves energy, the air curtain may be adapted to suit every need.

- Integrated PLS control system with preprogrammed settings
- 3 fan stages
- Horizontal installation (wall brackets included)
- Lengths 1, 1.5, and 2 m
- Recommended installation height up to 2.5 meters*
- The front panel is easily removable, which facilitates installation and maintenance work.
- CE marked



Type/capacity

AC25-E (electric heating), see page 17.

AC25-W (water heating), see pages 17, 22, and 23.

Regulation

The air curtain has an integrated control board PLS. This is supplemented by the control unit Basic (PLSB) or Competent (PLSACY), which facilitates operation, saves energy and enables optimal adaptation to every application. One PLSB or PLSACY can control several units parallel (max. 9 units).

See also pages 18 and 19.

Design

Corrosion proof housing made from hot galvanized and powder coated steel. AC25-W has a built-in filter for protection of the coil. The filter is accessible for cleaning.

Colour front: white, RAL 9016, NCS S 0500-N.

Colour grille, rear panel, side panels, and brackets: grey, RAL 7046.

Air velocity profile

m		AC25-E	AC25-W
0,1		8,0 m/s	6,9 m/s
0,5		6,0 m/s	5,2 m/s
1,0		4,5 m/s	3,8 m/s
1,5		3,7 m/s	3,2 m/s
2,0		3,3 m/s	2,8 m/s
2,5		3,0 m/s	2,5 m/s

Measurements according to ISO 27327-1.
Average values for products within the family.

Electrical connections

The units have integrated PLS control boards with modular connectors for easy connection of external components.

Read more about the PLS control system in the regulation section, pages 18 and 19.

Units with electric heating

The units are intended for permanent installation. The power supply (400 V 3N~) is connected to the terminal block inside the connection space. The 2 meter unit requires dual power supplies.

Units with water heating

The units are supplied fully connected internally with 1.5 m long cable and a 230 VAC electric plug for control voltage and fan operation. The integrated circuit board has an output for connection of a 230 VAC motorised valve.

The warm water heater has 2 x Ø15 mm connections (smooth copper pipes) at the top.

Mounting

The air curtain is mounted horizontally with the exhaust port pointing down, as close as possible to the door.

Wall mounting is done using the included brackets.

Mounting on the ceiling using hangers or threaded rods (accessories).

For wide openings, several units may be mounted directly next to each other.

*) The recommended installation height may depend on the space in question.

Product range overview

Electric heating - AC25-E

Type	Power-step kW	Air flow ¹ m ³ /h	Δt ³ °C	Sound level ² dB(A)	Voltage motor V	Current motor A	Voltage V Current A (heat)	Length mm	Weight kg	Protection class
AC25-10-E08	3/5/8	900/1450	27/16.5	42/51	230V~	0.5	400V3N~/11.5	1025	20	IP20
AC25-15-E12	3.9/8/12	1400/2200	26/16.5	40/52	230V~	0.7	400V3N~/17.5	1535	32	IP20
AC25-20-E16	6/10/16	1800/2900	27/16.5	43/53	230V~	1.0	400V3N~/23.1	2050	40	IP20

Water heating - AC25-W

Type	Power ⁴ kW	Air flow ¹ m ³ /h	Δt ^{3,4} °C	Sound level ² dB(A)	Voltage motor V	Current motor A	Water volume l	Length mm	Weight kg	Protection class
AC25-10-W	8.8	900/1300	12/11	42/53	230V~	0.45	0.71	1025	17.5	IP21
AC25-15-W	16.3	1250/2100	16/13	41/54	230V~	0.6	1.09	1535	26	IP21
AC25-20-W	20.1	1800/2600	15/13	43/55	230V~	0.9	1.42	2050	35	IP21

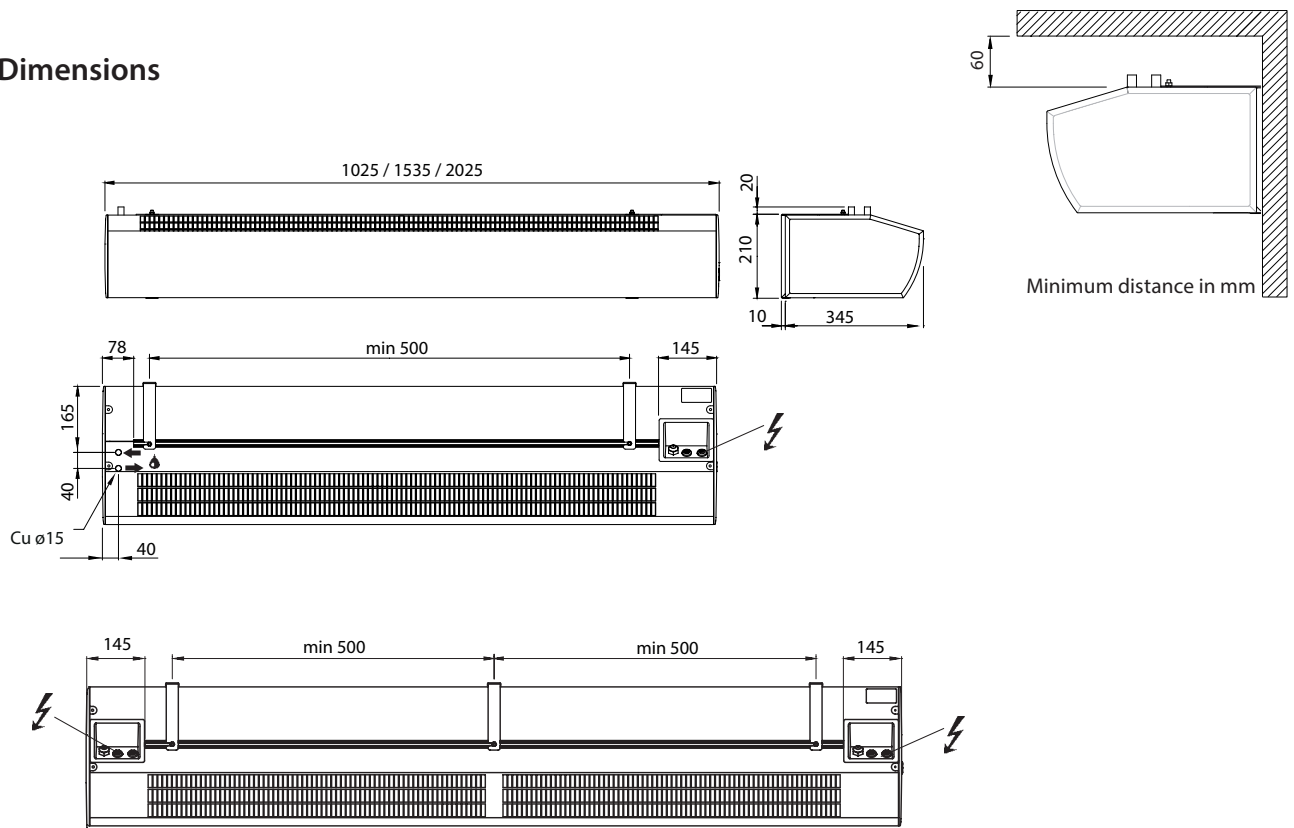
¹ Lowest/highest air flow of a total of 3 fan stages.

² Conditions: Distance to the unit 5 meters. Directional factor: 2. Equivalent absorption area 200 m². At the lowest/highest air flow.

³ Δt = temperature rise of passing air at maximum heat output and lowest and highest air flow.

⁴ Applicable at water temperature of 80/60 °C, air intake temperature of +18 °C.

Dimensions



Project design/orders

Descriptive text - AC25

Air curtain, VEAB type AC25 with corrosion proof housing made from hot galvanized and powder coated steel. Including control system PLS Basic or PLS Competent.

Type designation **AC 25 - 10 - E**
(example)

Installation height, dm

Length, dm

Electric heating

Regulation PLS Basic



At start-up, Manual or Automatic operation is selected.

Mode

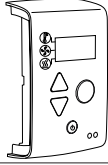
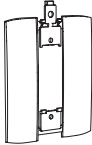

Manual operation:

The fan runs continuously at the selected fan speed, the heating is regulated against the selected set point.


Automatic operation:

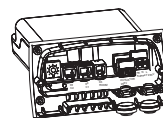
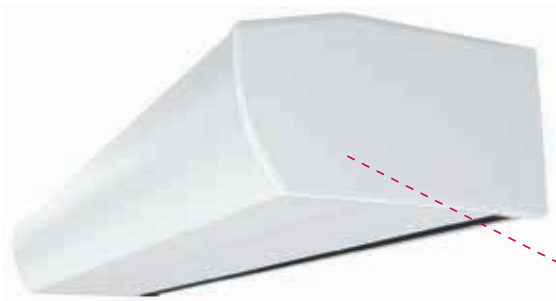
The fan runs intermittently (starts when heat is required, stops when the heating is switched off). The heating is regulated against the selected set point.

The PLSB control kit contains

	Product	Description
	PLSUB1	Control unit, integrated room sensor.
	Box cover	
	SIRECC	Modular cable, RJ12, 5 m

Optional

	PLSRTX	External room temp. sensor, incl. RJ11 cable, 10 m. See page 21.
	Mounting hardware	See page 20
	Valve kit	See page 21



Control board



Internal temp. sensor

Control boards and temperature sensors are installed in the air curtain as delivered and must be supplemented by control kit PLSB or PLSACY and various accessories.

Regulation PLS Competent



At start-up, choose mode:
"Flexible", "Open door" or "Auto".

Mode

Flexible

This mode is suitable for most installations.

Select one fan speed for "open door" and one fan speed for "closed door". When the door is closed, the fan stops, with some after-running, upon reaching the set point. When the door is closed, the heat is regulated to the selected set point. When the door is open, the set point is increased automatically by 3°C (adjustable). It is also possible to set the system to switch off the air curtain when the door is closed.

Open door

When the door is open, the fan speed and heat is regulated automatically depending on the deviation from the set point. When the door is closed, the air curtain runs intermittently at a selectable fan speed. (The heating and fan start when heat is required and turns off when the set point has been reached).

Auto

The control automatically switches between "Flexible mode" and "Open door". When the door is closed, "Flexible mode" is used; if the door is open for more than 300 seconds, the automatic system switches to "Open door" mode; when the door is closed, the automatic system switches to "Flexible mode".

Functions regardless of mode

Calendar function:

The control system has a calendar function which allows you to lower the temperature (adjustable lowering) during the times when the space is not in use. Set point range for night-time reduction of 0-20 °C.

Filter alarm:

The control system prompts for a filter change after a certain number of operating hours. This time period is adjustable and should be adjusted to how fast the filter gets soiled in the space in question. Filters are not used for electric heating.

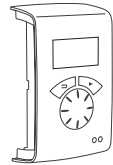
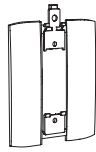
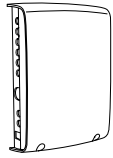


Summer/winter:

In the summer mode, heating is blocked.

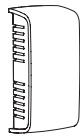
DUC communication:

The air curtain can be started/stopped using an external ON/OFF voltage, 5 to 30 V, AC or DC. The control system uses a potential free alarm contact for main alarm, max. 3 A, 230 V.

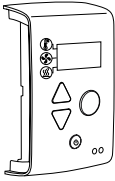
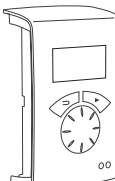
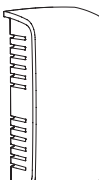
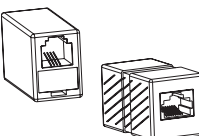
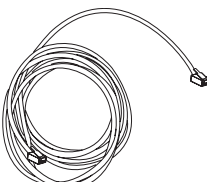
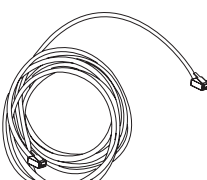
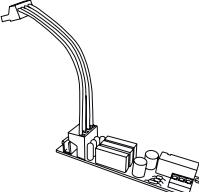
The PLSACY control kit contains

	Product	Description
	PLSUA1	Control unit, integrated room sensor.
	Box cover	
	PLSC1X	Control board HUB Competent.
	PLSDC	Door switch
	SIRECC	Modular cables, RJ12, 3 m and 5 m

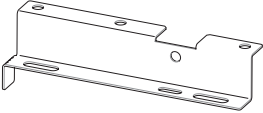


Optional

	PLSRTX	External room temp. sensor, incl. RJ11 cable, 10 m. See page 21.
	Mounting hardware	See page 20
	Valve kit	See page 21

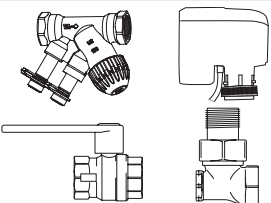

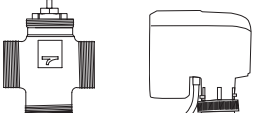
Accessories PLS

PLSB control system			Description
	PLSB	Control unit Basic	Incl. control unit PLSUB1 and 5 meter modular cable with RJ12 quick connect. IP30
	PLSACY	Control unit Competent	Incl. PLSUA1 control unit, box cover, PLSC1X hub unit, PLSDC door switch, and 2 modular cables with RJ12 quick connects (1 pc 3 m, 1 pc 5 m). IP30
	PLSRTX	External room temperature sensor	Used to create a better measuring point within the space, when the control unit is located such that the internal room temperature sensor does not provide a relevant value. Cable with RJ11 modular connector included (10 m). IP30
	SIRECJ4	RJ11 coupler (4/4)	Used to join together two RJ11 or RJ12 connectors.
	SIRECJ6	RJ12 coupler (6/6)	
	SIRECC403	RJ11 modular cable (4/4) For roomsensor PLSRTX	Length 3 m
	SIRECC405		Length 5 m
	SIRECC410		Length 10 m
	SIRECC415		Length 15 m
	SIRECC603	RJ12 modular cable (6/6)	Length 3 m
	SIRECC605		Length 5 m
	SIRECC610		Length 10 m
	SIRECC615		Length 15 m
	PAMLK	Motor alarm board	Provides a potential free alarm connection when thermal contact is triggered in the motor. Installed in the air curtain.

Mounting accessories

	Product		Description
	PA2PF15	Ceiling mounting bracket for 1 and 1.5 meter unit. Units: 4 pcs	Pendulum brackets for unit mounting and ceiling bracket for mounting on the ceiling using hangers or threaded rods (not included).
	PA2PF20	Ceiling mounting bracket for 2 meter unit. Units: 6 pcs	
	PA34TR15	Threaded rods for 1 and 1.5 meter unit. Length: 1 m Units: 4 pcs	Threaded rods for ceiling mounting. Used with ceiling mounting brackets PA2PF.
	PA34TR20	Threaded rods for 2 meter unit. Length: 1 m Units: 6 pcs	
	PA2P15	Pendulums for 1 and 1.5 meter unit Length: 1 m Units: 2 pcs	Pendulum brackets for mounting the unit suspended from the ceiling. The pendulum brackets are covered by a white plastic duct to hide the cables. The brackets may be cut to the desired length should shorter suspension heights than 1 m be desired. Used with ceiling mounting brackets PA2PF.
	PA2P20	Pendulums for 2 meter unit Length: 1 m Units: 3 pcs	

Control valves for water systems (optional)

VOS, valve kit on/off			Description
	VOS15LF	Valve kit on/off, low flow, DN15	2-way combination control and adjustment valve with on/off actuator, shut-off valve, and bypass.
	VOS15NF	Valve kit on/off, DN15	
	VOS20	Valve kit on/off, DN20	
	VOS25	Valve kit on/off, DN25	
	VAT	Adjustment tool	For adjustment of VOS-valves.
VOT, valve kit on/off			Description
	VOT15	Valve kit on/off, DN15	3-way valve and actuator on/off.
	VOT20	Valve kit on/off, DN20	
	VOT25	Valve kit on/off, DN25	

Choosing a valve kit, see pages 40 and 41.

Capacity AC25-W

			Supply line water temperature: 110 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 110/80 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC25-10-W	max	1300	7.4	47	0.03	0.3	13.3	48.1	0.11	3.3
	min	900	5.3	46	0.02	0.2	10.6	52.8	0.09	2.2
AC25-15-W	max	2100	12.5	39	0.04	0.9	24.4	52.2	0.20	13.3
	min	1250	7.4	34	0.02	0.3	17.6	59.4	0.15	7.4
AC25-20-W	max	2600	15.0	36	0.05	1.5	30.1	52.0	0.25	23.6
	min	1800	10.2	32	0.03	0.7	23.9	57.0	0.20	15.6

			Supply line water temperature: 90 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 90/70 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC25-10-W	max	1300	7.4	50	0.04	0.7	10.8	42.5	0.13	4.8
	min	900	5.2	46	0.03	0.4	8.7	46.3	0.11	3.2
AC25-15-W	max	2100	12.5	43	0.07	1.9	19.8	45.8	0.24	19.6
	min	1250	7.2	36	0.03	0.6	14.3	51.5	0.18	10.8
AC25-20-W	max	2600	15.1	41	0.08	3.1	24.4	45.6	0.30	34.6
	min	1800	10.6	36	0.05	1.5	19.3	49.6	0.24	22.8

			Supply line water temperature: 80 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 80/60 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC25-10-W	max	1300	7.4	52	0.07	1.4	8.8	38.0	0.11	3.4
	min	900	5.2	47	0.04	0.6	7.0	41.0	0.09	2.3
AC25-15-W	max	2100	12.0	44	0.08	3.0	16.3	40.8	0.20	14.1
	min	1250	7.3	38	0.04	1.0	11.7	45.6	0.14	7.8
AC25-20-W	max	2600	15.2	44	0.10	5.5	20.1	40.8	0.25	25.0
	min	1800	10.4	38	0.06	2.2	16.0	44.1	0.20	16.5

¹⁾ Recommended output air temperature for comfort with optimised power requirement.

²⁾ Rated power at a given supply and return line temperature.

AIR CURTAINS AC 25

			Supply line water temperature: 70 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 70/50 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC25-10-W	max	1300	7.4	54	0.11	3.7	6.8	33.4	0.08	2.2
	min	900	5.3	49	0.06	1.3	5.4	35.7	0.07	1.5
AC25-15-W	max	2100	12.0	47	0.13	6.7	12.8	35.9	0.16	9.3
	min	1250	7.3	41	0.06	1.9	9.2	39.6	0.11	5.2
AC25-20-W	max	2600	15.0	47	0.16	12.1	15.8	35.9	0.19	16.7
	min	1800	10.3	41	0.09	4.1	12.6	38.5	0.15	11.1

			Supply line water temperature: 60 °C Room temperature: +18 °C Output air temperature: +32 °C				Water temperature: 60/40 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC25-10-W	max	1300	6.4	50	0.16	7.1	4.7	28.6	0.06	1.2
	min	900	4.5	45	0.07	1.8	3.7	30.0	0.05	0.8
AC25-15-W	max	2100	10.5	45	0.17	11.3	9.2	30.8	0.11	5.4
	min	1250	6.6	40	0.08	3.0	6.6	33.5	0.08	3.0
AC25-20-W	max	3600	13.1	45	0.21	20.3	11.5	31.0	0.14	9.8
	min	1800	9.1	40	0.11	6.5	9.1	32.9	0.11	6.5

			Supply line water temperature: 55 °C Room temperature: +18 °C Output air temperature: +29 °C				Water temperature: 55/35 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC25-10-W	max	1300	6.4	50	0.34	29.3	3.5	25.9	0.04	0.7
	min	900	4.2	44	0.09	2.7	2.6	26.6	0.03	0.5
AC25-15-W	max	2100	10.3	46	0.28	27.5	7.3	28.2	0.09	3.7
	min	1250	6.1	39	0.09	4.1	5.2	30.3	0.06	2.1
AC25-20-W	max	2600	12.7	46	0.34	48.7	9.3	28.5	0.11	6.9
	min	1800	8.5	39	0.13	8.8	7.4	30.0	0.09	4.6

¹⁾ Recommended output air temperature for comfort with optimised power requirement.

²⁾ Rated power at a given supply and return line temperature.

AC35

Powerful air curtain with practical and energy saving features. For shops, shopping centres, hospitals, terminal buildings...

AC35 is a powerful air curtain suitable for entrances to larger spaces. With control units Basic with basic features or Competent with smart features, which facilitate operation and saves energy, the air curtain may be adapted to suit every need.

- Integrated PLS control system with preprogrammed settings
- 5 fan stages
- Mounts horizontally or vertically
- Lengths 1, 1.5, 2, and 2.5 m
- Recommended installation height up to 3.5 meters*
- The front panel is easily removable and locks in the open position, which facilitates installation and maintenance work.
- CE marked



Type/capacity

AC35-A (without heating), see page 25.

AC35-E (electric heating), see page 25.

AC35-W (water heating), see pages 25 and 31.

Regulation

The air curtain has an integrated control board PLS. This is supplemented by the control unit Basic (PLSB) or Competent (PLSACY), which facilitates operation, saves energy and enables optimal adaptation to every application. One PLSB or PLSACY can control several units parallel (max. 9 units). See also pages 26-27.

Design

Corrosion proof housing made from hot galvanized and powder coated steel. AC35-W has a built-in filter for protection of the coil. The filter is accessible for cleaning. Colour front and inspection cover: white, RAL 9016, NCS S0500-N. Colour grille, rear panel, and side panels: grey, RAL7046.

Electrical connections

Unit without heating

The units are supplied fully connected internally with a 2 m long cable and a 230V AC electric plug for control voltage and fan operation.

Units with electric heating

The units are intended for permanent installation.

The power supply (400V3N~) is connected to the terminal block inside the connection space. The 2 meter unit requires dual power supplies.

Units with water heating

The units are supplied fully connected internally with a 2 m long cable and a 230V AC electric plug for control voltage and fan operation. The integrated circuit board has an output for connection of a 230 V motorised valve.

The warm water heater has 2 DN20 (3/4") connections (male thread) at the top.

** The recommended installation height may depend on the space in question.*

Mounting

The air curtain may be mounted horizontally or vertically. Recommended installation height for horizontal installation is 3.5 m*. In vertical installations, the recommended installation width is 5 m* (with a unit on each side of the door opening).

Vertical installation

Air curtains that are 1.5 meters or longer can be mounted floor standing using the accessory kit, which includes floor edging and other mounting hardware. The floor edging is also used as a connecting bracket when two air curtains are to be installed together vertically.

The air curtain can be placed on either side of the door. For the right mounting position (as seen from the room) connections and electronics are accessed at the top of the air curtain, and for the left mounting position down by the floor.

Horizontal installation

The air curtain is mounted horizontally with the outlet facing downward as close to the door as possible. For wide doorways, several units may be joined together using a connecting kit.

Horizontal ceiling installation

Threaded rods, wires, and ceiling brackets are available as accessories, see page 29.

Product range overview

Without heating - AC35-A

Type	Power kW	Air flow ² m³/h	Sound level ³ dB(A)	Voltage motor V	Current motor A	Length mm	Weight kg	Protection class
AC35-10-A	0	860/1800	40/57	230V~	2.0	1073	35	IP21
AC35-15-A	0	1240/2600	40.50/58.5	230V~	2.8	1583	49	IP21
AC35-20-A	0	1530/3200	42/59.5	230V~	3.5	2073	63	IP21
AC35-25-A	0	2200/4600	42/60.5	230V~	4.9	2589	91	IP21

Electric heating - AC35-E

Type	Powerstep kW	Air flow ² m³/h	Δt ⁵ °C	Sound level ³ dB(A)	Voltage motor V	Current motor A	Voltage V Current A (heat)	Length mm	Weight kg	Protection class
AC35-10-E08 ¹	2.7/5.4/8.1	860/1800	35/13	40/57	230V~	2.0	400V3N~/11.7	1073	43	IP20
AC35-15-E12	3.9/7.8/11.7	1240/2600	38/14	40.5/58.5	230V~	2.8	400V3N~/16.9	1583	62	IP20
AC35-20-E16	5.4/10.8/16.2	1530/3200	35/13	42/59.5	230V~	3.5	400V3N~/23.4	2073	78	IP20
AC35-25-E20	6.6/13.2/19.8	2200/4600	37/14	42/60.5	230V~	4.9	400V3N~/28.6	2589	116	IP20

Water heating - AC35-W

Type	Power ⁴ kW	Air flow ² m³/h	Δt ^{4,5} °C	Sound level ³ dB(A)	Voltage motor V	Current motor A	Water volume l	Length mm	Weight kg	Protection class
AC35-10-W ¹	20.3	860/1800	24/18	40/57	230V~	2.0	1.51	1073	42	IP21
AC35-15-W	31.0	1240/2600	26/21	40.5/58.5	230V~	2.8	2.38	1583	59	IP21
AC35-20-W	39.4	1530/3200	26/21	42/59.5	230V~	3.5	3.33	2073	73	IP21
AC35-25-W	55.4	2200/4600	26/21	42/60.5	230V~	4.9	4.18	2589	107	IP21

¹ Only for horizontal installation.

² Lowest/highest air flow of a total of 5 fan stages.

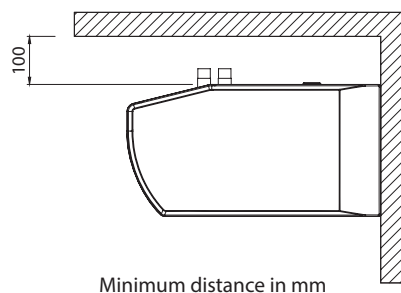
³ Conditions: Distance to the unit 5 meters. Directional factor: 2, Equivalent absorption area: 200 m². At the lowest/highest air flow.

⁴ Applicable at water temperature of 80/60 °C, air intake temperature of +18 °C.

⁵ Δt = temperature rise of passing air at maximum heat output and lowest and highest air flow.

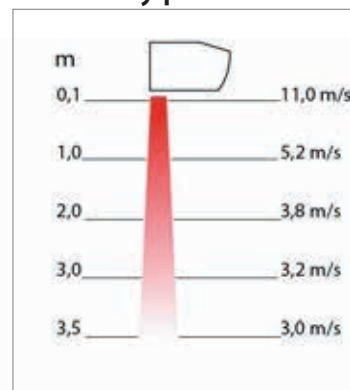
Dimensions

For dimensions, see page 30.



Minimum distance in mm

Air velocity profile



Measurements according to ISO 27327-1.

Average values for products within the family.

Project design/orders

Descriptive text - AC35

Air curtain, VEAB type AC35 with corrosion proof housing made from hot galvanized and powder coated steel. Including control system PLS Basic or PLS Competent.

Type designation **AC 35 - 10 - E**
(example)

Installation height, dm _____
Length, dm _____
Electric heating _____

Regulation PLS Basic



At start-up, Manual or Automatic operation is selected.

Mode

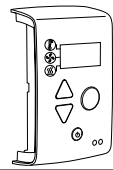
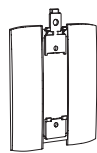

Manual operation:

The fan runs continuously at the selected fan speed, the heating is regulated against the selected set point.

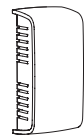
Automatic operation:

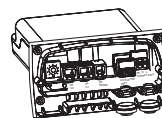
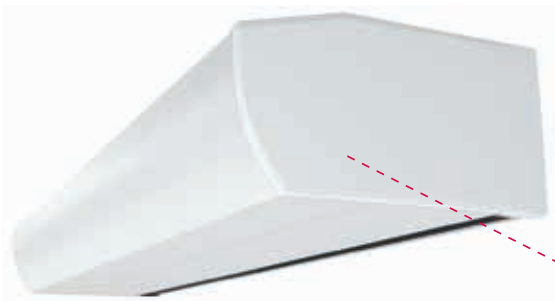
The fan runs intermittently (starts when heat is required, stops when the heating is switched off). The heating is regulated against the selected set point.

The PLSB control kit contains

	Product	Description
	PLSUB1	Control unit, integrated room sensor.
	Box cover	
	SIRECC	Modular cable, RJ12, 5 m

Optional

	PLSRTX	External room temp. sensor, incl. RJ11 cable, 10 m. See page 21.
	Mounting hardware	See page 20
	Valve kit	See page 21



Control board



Internal temp. sensor

Control boards and temperature sensors are installed in the air curtain as delivered and must be supplemented by control kit PLSB or PLSACY and various accessories.

Regulation PLS Competent



At start-up, choose mode:
"Flexible", "Open door" or "Auto".

Mode

Flexible mode:

This mode is suitable for most installations. Select one fan speed for "open door" and one fan speed for "closed door". When the door is closed, the fan stops, with some after-running, upon reaching the set point. When the door is closed, the heat is regulated to the selected set point. When the door is open, the set point is increased automatically by 3°C (adjustable). It is also possible to set the system to switch off the air curtain when the door is closed.

Open door mode:

When the door is open, the fan speed and heat is regulated automatically depending on the deviation from the set point. When the door is closed, the air curtain runs intermittently at a selectable fan speed. (The heating and fan start when heat is required and turns off when the set point has been reached).

Auto mode:

The control automatically switches between "Flexible mode" and "Open door". When the door is closed, "Flexible mode" is used; if the door is open for more than 300 seconds, the automatic system switches to "Open door" mode; when the door is closed, the automatic system switches to "Flexible mode".

Functions regardless of mode

Calendar function:

The control system has a calendar function which allows you to lower the temperature (adjustable lowering) during the times when the space is not in use. Set point range for night-time reduction of 0-20 °C.

Filter alarm:

The control system prompts for a filter change after a certain number of operating hours. This time period is adjustable and should be adjusted to how fast the filter gets soiled in the space in question. Filters are not used for electric heating.

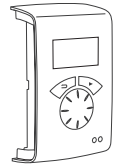
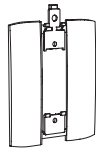
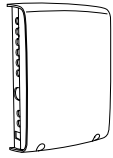


Summer/winter:

In the summer mode, heating is blocked.

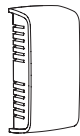
DUC communication:

The air curtain can be started/stopped using an external ON/OFF voltage, 5 to 30 V, AC or DC. The control system uses a potential free alarm contact for main alarm, max. 3 A, 230 V.

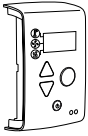
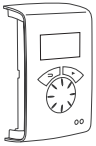
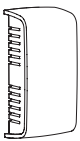
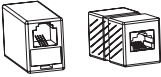


The PLSACY control kit contains

	Product	Description
	PLSUA1	Control unit, integrated room sensor.
	Box cover	
	PLSC1X	Control board HUB Competent.
	PLSDC	Door switch
	SIRECC	Modular cables, RJ12, 3 m and 5 m

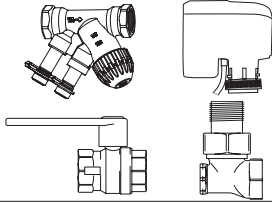

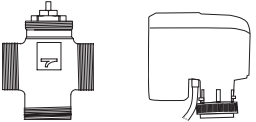
Optional

	PLSRTX	External room temp. sensor, incl. RJ11 cable, 10 m. See page 21.
	Mounting hardware	See page 20
	Valve kit	See page 21

Accessories PLS

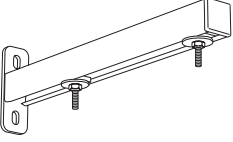
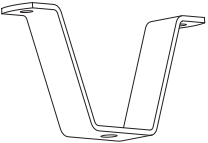


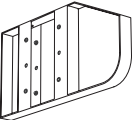
PLSB control system			Description
	PLSB	Control unit Basic	Incl. control unit PLSUB1 and 5 meter modular cable with RJ12 quick connect. IP30
	PLSACY	Control unit Competent	Incl. PLSUA1 control unit, box cover, PLSC1X hub unit, PLSDC door switch, and 2 modular cables with RJ12 quick connects (1 pc 3 m, 1 pc 5 m). IP30
	PLSRTX	External room temperature sensor	Used to create a better measuring point within the space, when the control unit is located such that the internal room temperature sensor does not provide a relevant value. Cable with RJ11 modular connector included (10 m). IP30
	SIRECJ4	RJ11 coupler (4/4)	Used to join together two RJ11 or RJ12 connectors.
	SIRECJ6	RJ12 coupler (6/6)	
	SIRECC403	RJ11 modular cable (4/4) For roomsensor PLSRTX	Length 3 m
	SIRECC405		Length 5 m
	SIRECC410		Length 10 m
	SIRECC415		Length 15 m
	SIRECC603	RJ12 modular cable (6/6)	Length 3 m
	SIRECC605		Length 5 m
	SIRECC610		Length 10 m
	SIRECC615		Length 15 m

Control valves for water systems (optional)

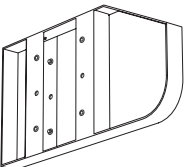

VOS, valve kit on/off			Description
	VOS15LF	Valve kit on/off, low flow, DN15	2-way combination control and adjustment valve with on/off actuator, shut-off valve, and bypass.
	VOS15NF	Valve kit on/off, DN15	
	VOS20	Valve kit on/off, DN20	
	VOS25	Valve kit on/off, DN25	
	VAT	Adjustment tool	For adjustment of VOS-valves.
VOT, valve kit on/off			Description
	VOT15	Valve kit on/off, DN15	3-way valve and actuator on/off.
	VOT20	Valve kit on/off, DN20	
	VOT25	Valve kit on/off, DN25	

Choosing a valve kit, see pages 40 and 41.

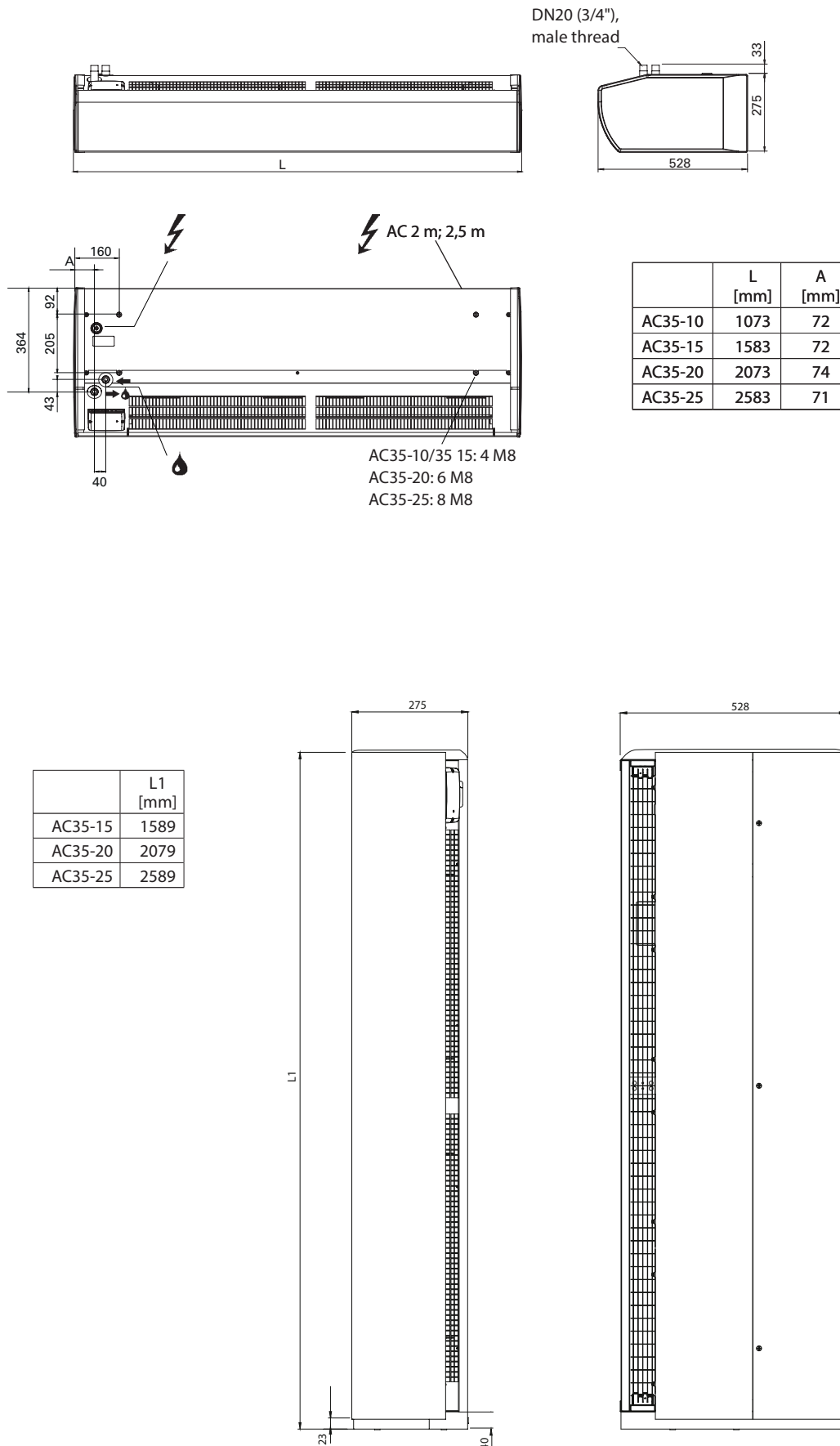
Accessories for horizontal installation

	Product		Description
	PA34WB15	Wall bracket for 1 and 1.5 meter unit Units: 2 pcs	Brackets for mounting the unit horizontally on the wall. Length: 400 mm
	PA34WB20	Wall bracket for 2 meter unit Units: 3 pcs	
	PA34WB30	Wall bracket for 2.5-meter unit Units: 4 st	
	PA34CB15	Ceiling brackets for 1 and 1.5 meter unit Units: 4 pcs	Ceiling brackets for mounting the unit on the ceiling using wires or threaded rods (not included).
	PA34CB20	Ceiling brackets for 2 meter unit Units: 6 pcs	
	PA34CB30	Ceiling brackets for 2.5 meter unit Units: 8 pcs	
	PA34WS15	Wire suspension kit for 1 and 1.5 meter units Units: 4 pcs	Wire suspension kit with bright-galvanized wires with wire locks for ceiling installation. Used with ceiling mounts (PA34CB15/20/30). Length: 3 m
	PA34WS20	Wire suspension kit for 2 meter units Units: 6 pcs	
	PA34WS30	Wire suspension kit for 2.5 meter units Units: 8 pcs	
	PA34TR15	Threaded rods for 1 and 1.5 meter unit Units: 4 pcs	Threaded rods for ceiling mounting. Used with ceiling mounting brackets PA34CB. Length: 1 m
	PA34TR20	Threaded rods for 2 meter unit Units: 6 pcs	
	PA34TR30	Threaded rods for 2.5 meter unit Units: 8 pcs	
	PL3JK	Connecting bracket with mounting hardware	For joining together horizontal air curtains. Provides a neat and uniform installation. Also used for vertical mounting.

Accessories for vertical installation

			Description
	PL3JK	Vertical kit for AC35	Used to adapt a unit for vertical mounting. Contains floor edging and mounting hardware to brace the top. The vertical kit makes it possible to mount two units on top of each other. One vertical kit is required per unit. Also used as a connecting bracket for horizontal mounting.
	AXP300	Collision guard	Floor positioned guard against collisions with, e.g., a shopping trolley.

Dimensions



Capacity AC35-W

			Supply line water temperature: 80 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 80/60 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC35-10-W	max	1800	10.4	31.5	0.05	1.2	20.3	51.2	0.25	19.0
	min	860	5.0	29.2	0.02	0.3	12.1	59.2	0.15	7.4
AC35-15-W	max	2600	15.0	28.8	0.07	1.5	31.0	53.2	0.38	28.5
	min	1240	7.2	26.6	0.03	0.4	18.1	61.1	0.22	10.8
AC35-20-W	max	3200	18.5	28.8	0.09	0.9	39.4	54.2	0.48	18.6
	min	1530	9.0	28.2	0.04	0.3	22.9	62.0	0.28	6.9
AC35-25-W	max	4600	26.6	27.7	0.12	2.1	55.4	53.5	0.68	40.9
	min	2200	12.7	24.9	0.06	0.5	32.4	61.4	0.40	15.4

			Supply line water temperature: 70 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 70/50 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC35-10-W	max	1800	10.4	33.5	0.07	2.1	16.0	44.2	0.19	12.7
	min	860	5.0	29.8	0.03	0.5	9.6	50.7	0.12	5.0
AC35-15-W	max	2600	15.0	30.9	0.09	2.5	24.6	45.9	0.30	19.2
	min	1240	7.2	27.4	0.04	0.6	14.5	52.4	0.18	7.4
AC35-20-W	max	3200	18.5	30.6	0.11	1.5	31.2	46.7	0.38	12.5
	min	1530	8.8	28.4	0.05	0.4	18.2	53.1	0.22	4.8
AC35-25-W	max	4600	26.5	29.8	0.16	3.3	44.1	46.2	0.54	27.6
	min	2200	12.7	26.0	0.07	0.8	26.0	52.7	0.32	10.6

			Supply line water temperature: 60 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 60/40 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC35-10-W	max	1800	10.4	36.0	0.11	4.5	11.7	37.1	0.14	7.4
	min	860	5.0	31.0	0.04	0.9	7.0	42.0	0.08	3.0
AC35-15-W	max	2600	15.0	33.7	0.14	5.0	18.1	38.5	0.22	11.3
	min	1240	7.2	28.9	0.06	1.0	10.7	43.5	0.13	4.5
AC35-20-W	max	3200	18.5	33.1	0.17	3.0	22.8	39.1	0.28	7.4
	min	1530	8.8	29.2	0.07	0.7	13.5	43.9	0.16	2.9
AC35-25-W	max	4600	26.6	32.9	0.24	6.7	32.6	38.9	0.39	16.5
	min	2200	12.7	27.8	0.09	1.4	19.3	43.9	0.23	6.5

			Supply line water temperature: 55 °C Room temperature: +18 °C Output air temperature: +35 °C ¹⁾				Water temperature: 55/35 °C Room temperature: +18 °C			
Type	Fan mode	Air flow	Power	Output water temp.	Water flow	Pressure drop water	Power ²⁾	Output air temp.	Water flow	Pressure drop water
		m ³ /h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
AC35-10-W	max	1800	10.4	37.9	0.15	8.1	9.4	33.4	0.11	5.2
	min	860	5.0	31.9	0.05	1.3	5.7	37.4	0.07	2.1
AC35-15-W	max	2600	15.0	35.5	0.19	8.6	14.7	34.7	0.18	8.0
	min	1240	7.1	29.9	0.07	1.5	8.7	38.9	0.10	3.1
AC35-20-W	max	3200	18.5	34.8	0.22	5.0	18.6	35.1	0.23	5.2
	min	1530	8.9	30.1	0.09	1.0	11.1	39.1	0.13	2.1
AC35-25-W	max	4600	26.6	34.9	0.32	11.6	26.7	35.1	0.32	11.7
	min	2200	12.7	29.0	0.12	2.0	15.9	39.3	0.19	4.7

¹⁾ Recommended output air temperature for comfort with optimised power requirement.

²⁾ Rated power at a given supply and return line temperature.

ACR35

The air curtain with practical and energy saving features for uniform and uncluttered installation in false ceilings

ACR35 is the air curtain for environments where you want to hide the installation in a false ceiling, for example in hotels, restaurants, cinemas, and other public spaces. The recessed air curtain is also suitable for spaces where the area above the door is limited. With control units Basic with basic features or Competent with smart features, which facilitate operation and saves energy, the air curtain may be adapted to suit every need.

- Integrated PLS control system with preprogrammed default settings
- 5 fan stages
- Recessed, horizontal installation
- Recommended installation height up to 3.5 meters*
- Lengths 1, 1.5, and 2 m
- Service is made easy by the removable front cover
- CE marked

Type/capacity

ACR35-E (electric heating), see page 33.

ACR35-W (water heating), see pages 33, 38, and 39.

Regulation

The air curtain has an integrated control board PLS. This is supplemented by the control unit Basic (PLSB) or Competent (PLSACY), which facilitates operation, saves energy and enables optimal adaptation to every application. One PLSB or PLSACY can control several units parallel (max. 9 units).
See also pages 34-35.

Design

Corrosion proof housing made from hot galvanized and powder coated steel.
Colour front and cover: white, RAL 9016, NCS S 0500-N.
Colour grille: grey, RAL 7046.

Electrical connections

Units with electric heating

The units are intended for permanent installation. The power supply (400 V 3N~) is connected to the terminal block inside the connection space.

Units with water heating

The units are supplied fully connected internally with a 1.5 m long cable and a 230 VAC electric plug for control voltage and fan operation. The integrated circuit board has an output for connection of a 230 V motorised valve.

The warm water heater has 2 DN20 (3/4") connections (male thread) at the top.



Mounting

The air curtain comes with four mounting brackets which place it level with the false ceiling using threaded rods (not included). These are reversible, making it possible to attach the rods on the inside or outside of the unit. The air curtain is placed with the exhaust as close to the doorway as possible. For wide door openings, several units may be mounted directly next to each other.

*) The recommended installation height may depend on the space in question.

Product range overview

Electric heating - ACR35-E

Type	Powerstep kW	Air flow m ³ /h	Δt ¹⁾ °C	Sound level ²⁾ dB(A)	Voltage motor V	Current motor A	Voltage V Current A (heat)	Length mm	Weight kg	Protection class
ACR35-10-E09	4.5/9	1000/2100	27/13	39/58	230V~	2.1	400V3N~/13 A	1057	42	IP20
ACR35-15-E14	7/13.5	1400/2900	29/14	40/59	230V~	2.9	400V3N~/19.5 A	1567	58	IP20
ACR35-20-E18	9/18	2000/4200	27/15	41/61	230V~	4.3	400V3N~/26 A	2073	78	IP20

Water heating- ACR35-W

Type	Power ³⁾ kW	Air flow m ³ /h	Δt ^{1,3)} °C	Sound level ²⁾ dB(A)	Voltage motor V	Current motor A	Water volume l	Length mm	Weight kg	Protection class
ACR35-10-W	16	1000/2000	30/23	39/58	230V~	2.1	1.3	1057	42	IP20
ACR35-15-W	23	1400/2800	31/24	40/58	230V~	2.9	2.1	1567	58	IP20
ACR35-20-W	33	2000/4000	31/25	41/60	230V~	4.3	2.9	2073	78	IP20

¹⁾ Δt = temperature rise of passing air at maximum heat output and lowest and highest air flow.

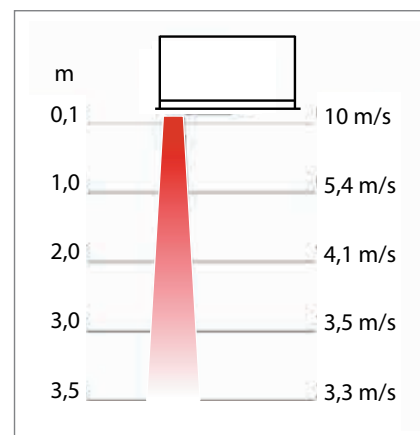
²⁾ Conditions: Distance to the unit 5 meters. Directional factor: 2. Equivalent absorption area 200 m². At the lowest/highest air flow.

³⁾ Applicable at water temperature of 80/60 °C, air intake temperature of +15 °C.

Dimensions

For dimensions, see page 37.

Air velocity profile



Measurements according to ISO 27327-1.

Average values for products within the family.

Project design/orders

Descriptive text - ACR35

Air curtain, VEAB type ACR35 with corrosion proof housing made from hot galvanized and powder coated steel. Including control system PLS Basic or PLS Competent.

Type designation ACR 35 - 10 - E (example)

Installation height, dm

Length, dm

Electric heating

Regulation PLS Basic



At start-up, Manual or Automatic operation is selected.

Mode

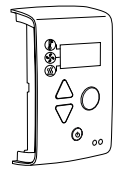
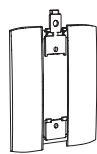

Manual operation:

The fan runs continuously at the selected fan speed, the heating is regulated against the selected set point.

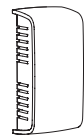
Automatic operation:

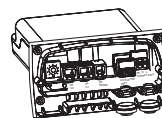
The fan runs intermittently (starts when heat is required, stops when the heating is switched off). The heating is regulated against the selected set point.

The PLSB control kit contains

	Product	Description
	PLSUB1	Control unit, integrated room sensor.
	Box cover	
	SIRECC	Modular cable, RJ12, 5 m

Optional

	PLSRTX	External room temp. sensor, incl. RJ11 cable, 10 m. See page 21.
	Mounting hardware	See page 20
	Valve kit	See page 21



Control board



Internal temp. sensor

Control boards and temperature sensors are installed in the air curtain as delivered and must be supplemented by control kit PLSB or PLSACY and various accessories.

Regulation PLS Competent



At start-up, choose mode:
"Flexible", "Open door" or "Auto".

Mode

Flexible

This mode is suitable for most installations.

Select one fan speed for "open door" and one fan speed for "closed door". When the door is closed, the fan stops, with some after-running, upon reaching the set point. When the door is closed, the heat is regulated to the selected set point. When the door is open, the set point is increased automatically by 3°C (adjustable). It is also possible to set the system to switch off the air curtain when the door is closed.

Open door

When the door is open, the fan speed and heat is regulated automatically depending on the deviation from the set point. When the door is closed, the air curtain runs intermittently at a selectable fan speed. (The heating and fan start when heat is required and turns off when the set point has been reached).

Auto

The control automatically switches between "Flexible mode" and "Open door". When the door is closed, "Flexible mode" is used; if the door is open for more than 300 seconds, the automatic system switches to "Open door" mode; when the door is closed, the automatic system switches to "Flexible mode".

Functions regardless of mode

Calendar function:

The control system has a calendar function which allows you to lower the temperature (adjustable lowering) during the times when the space is not in use. Set point range for night-time reduction of 0-20 °C.

Filter alarm:

The control system prompts for a filter change after a certain number of operating hours. This time period is adjustable and should be adjusted to how fast the filter gets soiled in the space in question. Filters are not used for electric heating.

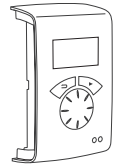
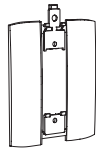
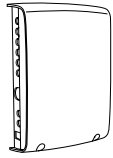


Summer/winter:

In the summer mode, heating is blocked.

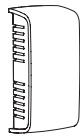
DUC communication:

The air curtain can be started/stopped using an external ON/OFF voltage, 5 to 30 V, AC or DC. The control system uses a potential free alarm contact for main alarm, max. 3 A, 230 V.

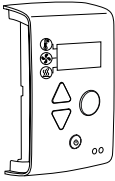
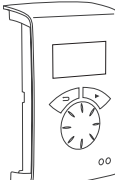
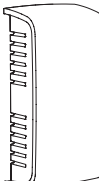
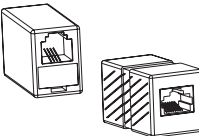
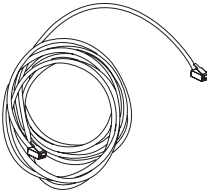
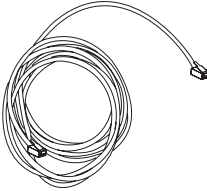
The PLSACY control kit contains

	Product	Description
	PLSUA1	Control unit, integrated room sensor.
	Box cover	
	PLSC1X	Control board HUB Competent.
	PLSDC	Door switch
	SIRECC	Modular cables, RJ12, 3 m and 5 m

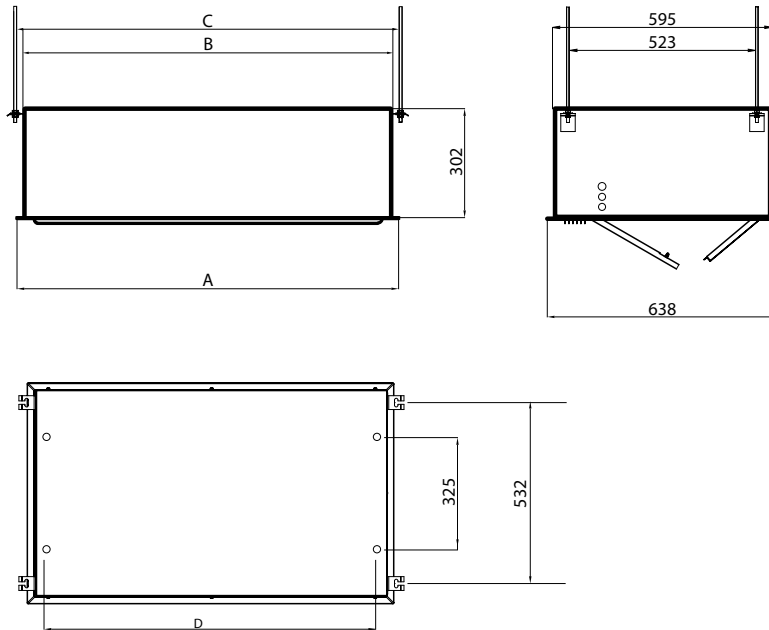
Optional

	PLSRTX	External room temp. sensor, incl. RJ11 cable, 10 m. See page 21.
	Mounting hardware	See page 20
	Valve kit	See page 21

Accessories PLS

PLSB control system			Description
	PLSB	Control unit Basic	Incl. control unit PLSUB1 and 5 meter modular cable with RJ12 quick connect. IP30
	PLSACY	Control unit Competent	Incl. PLSUA1 control unit, box cover, PLSC1X hub unit, PLSDC door switch, and 2 modular cables with RJ12 quick connects (1 pc 3 m, 1 pc 5 m). IP30
	PLSRTX	External room temperature sensor	Used to create a better measuring point within the space, when the control unit is located such that the internal room temperature sensor does not provide a relevant value. Cable with RJ11 modular connector included (10 m). IP30
	SIRECJ4	RJ11 coupler (4/4)	Used to join together two RJ11 or RJ12 connectors.
	SIRECJ6	RJ12 coupler (6/6)	
	SIRECC403	RJ11 modular cable (4/4) For roomsensor PLSRTX	Length 3 m
	SIRECC405		Length 5 m
	SIRECC410		Length 10 m
	SIRECC415		Length 15 m
	SIRECC603	RJ12 modular cable (6/6)	Length 3 m
	SIRECC605		Length 5 m
	SIRECC610		Length 10 m
	SIRECC615		Length 15 m

Dimensions



Type	A [mm]	B [mm]	C [mm]	D [mm]
ACR35-10	1057	1016	1067	956
ACR35-15	1567	1526	1577	1466
ACR35-20	2073	2031	2083	1971

Control valves for water systems (optional)

VOS, valve kit on/off				Description
	VOS15LF	Valve kit on/off, low flow, DN15		2-way combination control and adjustment valve with on/off actuator, shut-off valve, and bypass.
	VOS15NF	Valve kit on/off, DN15		
	VOS20	Valve kit on/off, DN20		
	VOS25	Valve kit on/off, DN25		
	VAT	Adjustment tool		For adjustment of VOS-valves.
VOT, valve kit on/off				Description
	VOT15	Valve kit on/off, DN15		3-way valve and actuator on/off.
	VOT20	Valve kit on/off, DN20		
	VOT25	Valve kit on/off, DN25		

Choosing a valve kit, see pages 40 and 41.

Capacity ACR35-W

			Input/output water temperature 90/70 °C							
			Input air temperature = +15 °C				Input air temperature = +20 °C			
Type	Fan mode	Air flow	Power	Output air temp.	Water flow	Pressure drop water	Power	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
ACR35-10-W	max	2000	19	43	0.23	19	17	46	0.21	16
	min	1000	12	51	0.15	9	11	53	0.14	6
ACR35-15-W	max	2800	28	44	0.34	13	25	47	0.31	11
	min	1400	18	52	0.22	6	16	54	0.20	5
ACR35-20-W	max	4000	40	44	0.49	32	36	47	0.45	27
	min	2000	25	52	0.31	14	23	54	0.28	12

			Input/output water temperature 80/60 °C							
			Input air temperature = +15 °C				Input air temperature = +20 °C			
Type	Fan mode	Air flow	Power	Output air temp.	Water flow	Pressure drop water	Power	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
ACR35-10-W	max	2000	16	38	0.19	14	14	41	0.17	12
	min	1000	10	45	0.13	7	9	47	0.11	4
ACR35-15-W	max	2800	23	39	0.29	10	21	42	0.26	8
	min	1400	15	46	0.18	5	13	48	0.16	4
ACR35-20-W	max	4000	33	40	0.41	24	30	42	0.37	20
	min	2000	21	46	0.26	11	19	48	0.23	9

			Input/output water temperature 60/40 °C							
			Input air temperature = +15 °C				Input air temperature = +20 °C			
Type	Fan mode	Air flow	Power	Output air temp.	Water flow	Pressure drop water	Power	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
ACR35-10-W	max	2000	9	29	0.12	6	8	32	0.10	4
	min	1000	6	33	0.08	3	5	35	0.06	1
ACR35-15-W	max	2800	14	30	0.17	4	11	32	0.14	3
	min	1400	9	34	0.11	2	7	36	0.09	1
ACR35-20-W	max	4000	20	30	0.25	11	17	33	0.21	8
	min	2000	13	34	0.16	5	11	36	0.13	4

AIR CURTAINS
ACR35

			Input/output water temperature 60/30 °C							
			Input air temperature = +15 °C				Input air temperature = +20 °C			
Type	Fan mode	Air flow	Power	Output air temp.	Water flow	Pressure drop water	Power	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
ACR35-10-W	max	2000	7	25	0.06	2	5	28	0.04	1
	min	1000	5	29	0.04	1	3	31	0.03	1
ACR35-15-W	max	2800	10	26	0.08	1	8	28	0.06	1
	min	1400	7	29	0.06	1	5	31	0.04	0.4
ACR35-20-W	max	4000	15	26	0.13	3	12	29	0.09	2
	min	2000	10	30	0.08	2	8	32	0.06	1

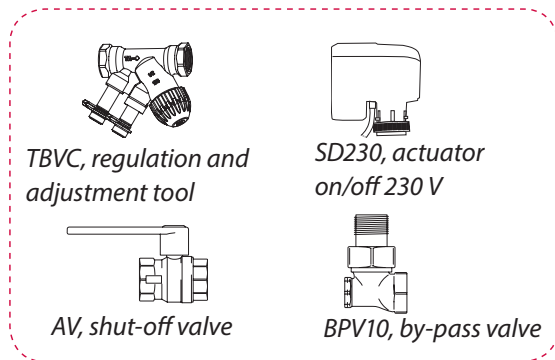
			Input/output water temperature 55/35 °C							
			Input air temperature = +15 °C				Input air temperature = +20 °C			
Type	Fan mode	Air flow	Power	Output air temp.	Water flow	Pressure drop water	Power	Output air temp.	Water flow	Pressure drop water
		m³/h	kW	°C	l/s	kPa	kW	°C	l/s	kPa
ACR35-10-W	max	2000	8	27	0.10	5	6	29	0.08	3
	min	1000	5	30	0.06	2	4	32	0.05	1
ACR35-15-W	max	2800	11	27	0.14	3	9	30	0.11	2
	min	1400	7	31	0.09	2	6	33	0.07	1
ACR35-20-W	max	4000	17	28	0.21	8	13	30	0.16	5
	min	2000	11	31	0.13	4	9	33	0.11	3

Choosing a valve kit

Select VOS or VOT, then the size that fits the flow range that the unit should operate at.

VOS, two-way valve

The valve kit is available in four variants and consists of the following:



Valve kit Order no.	Voltage V	TBVC. AV Connection	TBVC Kvs	Rec. max. flow ²⁾ l/s
VOS15LF ¹⁾	230V	DN15 (1/2")	0.90	0.079
VOS15NF	230V	DN15 (1/2")	1.8	0.158
VOS20	230V	DN20 (3/4")	3.4	0.299
VOS25	230V	DN25 (1")	7.2	0.630

¹⁾ Low flow

²⁾ Max. flow at 10kPa pressure drop.

TBVC, control and adjustment valve

Using the control and adjustment valve, the flow can be finetuned manually or turned off completely. The water flow for open valve is set with the adjustment tool (optional). TBVC has self-sealing measuring taps, enabling simple and fast measurements.

SD230, actuator

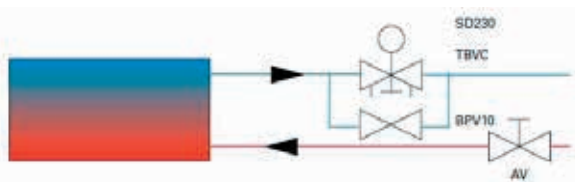
The actuator regulates the heat supply on/off. In the de-energized position, the SD230 valve opens TBVC.

AV, shut-off valve

The shut-off valve consists of a ball valve which is either open or closed and is used to turn off the flow, e.g., when servicing.

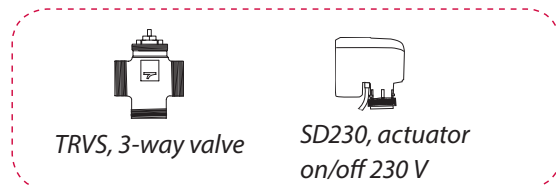
BPV10, by-pass valve

If the valve is closed, a low flow passes through the bypass valve to ensure there is always warm water in the water heater. This is to quickly provide heat, e.g., when a door is opened, and as a measure of frost protection. Connection DN10 (3/8").



VOT, three-way valve

The valve kit is available in three variants and consists of the following:



Valve kit Order no.	Voltage V	TBVC. AV Connection	TBVC Kvs	Rec. max. flow ²⁾ l/s
VOT15	230V	DN15 (1/2")	1.7	0.149
VOT20	230V	DN20 (3/4")	2.5	0.220
VOT25	230V	DN25 (1")	4.5	0.395

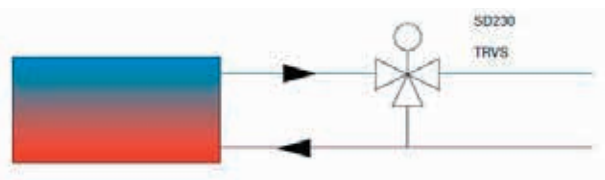
²⁾ Max. flow at 10kPa pressure drop.

TRVS, three-way valve

The three-way valve regulates the flow of water through the air curtain on/off via actuator SD230. If one of the valve connections is blocked off at installation, it may be used as a two-way valve.

SD230, actuator

The actuator regulates the heat supply on/off.



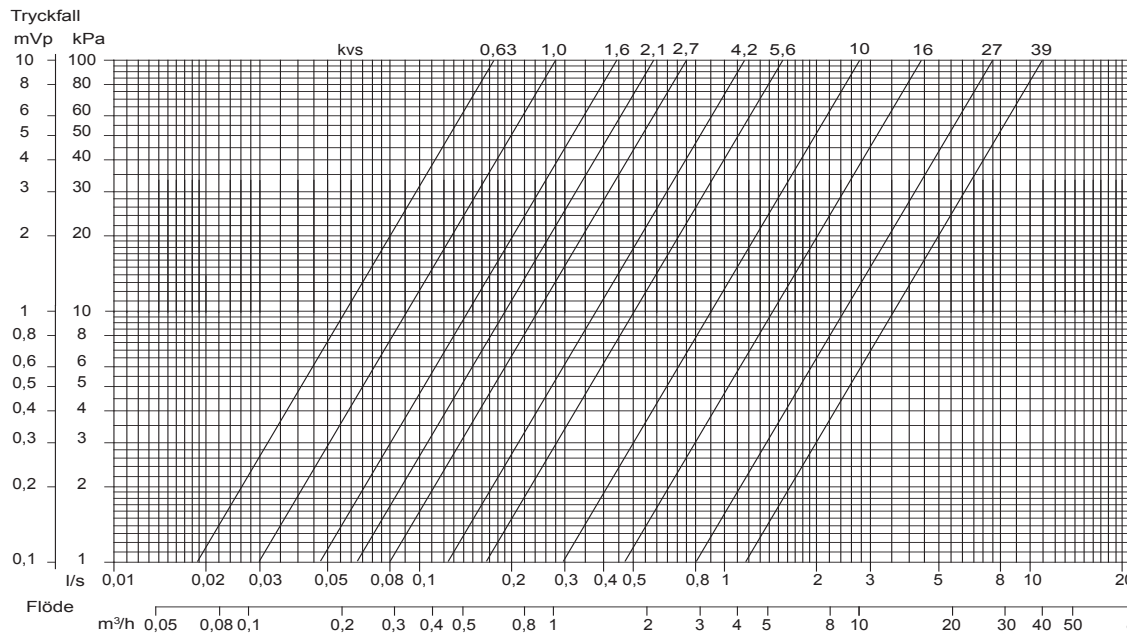
Accessories for VOS valve kit

VAT, adjustment tool

Makes the adjustment of the water flow simple and accurate.



Valve pressure drop chart





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