Corinte ADCS

Design air curtain for exclusive entrances, with intelligent control

- Horizontal mounting
  - Installation height up to 3 metres*
  - Lengths: 1,7 and 2,2 metres
- Vertical mounting
  - Installation width up to 5 metres* (2 units), one on each side
  - Lengths: 2,2 and 2,5 metres

Ambient, no heat

Electrical heat: 15–22,5 kW

Water heat WH, WL

Optimized airflow with Thermozone technology.

Application

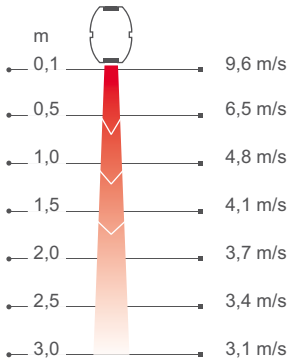
Corinte is intended for exclusive shop entrances and other environments with high demands in respect of design and soundlevel. Mounted with one unit on either side of the opening, thus creating a classic symmetry, the curtain effect and comfort is optimized.

The air curtain has many intelligent and energy saving features which provide fully automatic protection for the entrance, adaptable to each area of use.

Design

Corinte is a stylish and exclusive, stainless steel air curtain for horizontal or vertical installation. The product key offers many options for the design and finish of the air curtain.

Air velocity profile



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

Product specifications

- Prepared for the SIRe control system whose pre-programmed default settings and many features make it easy to install and use the air curtain. Read more about the SIRe controls package in the "Controls" section.
- Customised production based on the product key.
- Available for horizontal or vertical mounting.
- For vertical mounting, electricity and/or water may be connected from above or below.
- Available in polished, mirror-polished or brushed stainless steel. Colour intake and outlet grille: black, RAL 9005.

*) Recommended installation height and width varies depending on the relevant premises.

2012-10-15

Technical specifications

Ambient, no heat - ADCS A

Type	Output [kW]	Airflow [m³/h]	Sound level*3 [dB(A)]	Output-motor [W]	Voltage motor [V]	Amperage motor [A]	Length [mm]	Weight [kg]
ADCS17A*1	0	1400/3000	40/60	670	230V~	2,9	1700	73
ADCS22A	0	1800/4000	42/61	990	230V~	4,3	2200	95
ADCS25A*2	0	2050/4500	43/63	1150	230V~	5,0	2450	108

Electrical heat - ADCS E

Type	Outout steps [kW]	Airflow [m³/h]	Δt*4 [°C]	Sound level*3 [dB(A)]	Output-motor [W]	Voltage motor [V]	Amperage motor [A]	Voltage [V] Amperage [A] (heat)	Length [mm]	Weight [kg]
ADCS17E*1	0/7,5/15	1400/3000	32/15	40/60	670	230V~	2,9	400V3~/21,7	1700	73
ADCS22E	0/10/20	1800/3600	33/15	42/61	890	230V~	3,6	400V3~/28,9	2200	95
ADCS25E*2	0/11,2/22,5	2050/4100	33/15	43/63	1080	230V~	4,3	400V3~/32,5	2450	108

Water heat - ADCS WH, coil for high temperature water (≥80 °C)

Type	Output*5 [kW]	Airflow [m³/h]	Δt*4,5 [°C]	Water volume [l]	Sound level*3 [dB(A)]	Output-motor [W]	Voltage motor [V]	Amperage motor [A]	Length [mm]	Weight [kg]
ADCS17WH*1	22,5	1400/3000	29/22	2,8	39/59	670	230V~	2,9	1700	85
ADCS22WH	29,3	1800/4000	29/22	3,6	42/60	990	230V~	4,3	2200	110
ADCS25WH*2	34,3	2050/4500	30/22	4,0	42/61	1150	230V~	5,0	2450	125

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

Type	Output*6 [kW]	Airflow [m³/h]	Δt*4,6 [°C]	Water volume [l]	Sound level*3 [dB(A)]	Output-motor [W]	Voltage motor [V]	Amperage motor [A]	Length [mm]	Weight [kg]
ADCS17WL*1	17,3	1400/3000	22/17	2,8	39/59	670	230V~	2,9	1700	85
ADCS22WL	24,5	1800/4000	23/18	3,6	42/60	990	230V~	4,3	2200	110
ADCS25WL*2	28,0	2050/4500	24/18	4,0	42/61	1150	230V~	5,0	2450	125

*1) Available only for horizontal mounting.
*2) Available only for vertical mounting.
*3) Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200 m².
*4) Δt = temperature rise of passing air at maximum heat output and lowest/highest airflow.
*5) Applicable at water temperature 80/60 °C, air temperature, in +18 °C.
*6) Applicable at water temperature 60/40 °C, air temperature, in +18 °C.

CE compliant.
Protection class: IP20.

Product key

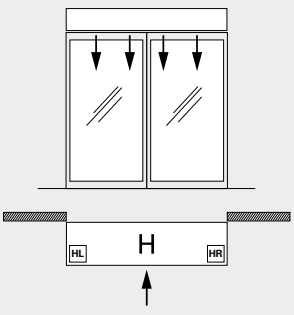
Type - Unit shape - Connections position - Finish / Material

Example: ADCS22WL - VL - A - P

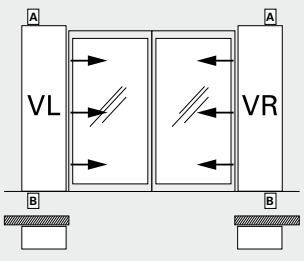
Type	See technical specifications
Unit shape	HL (Horizontal, connections to the left), HR (Horizontal, connections to the right), VL (Vertical Left) or VR (Vertical Right)
Connections position	A or B, see figure.
Finish / material	P = Polished bright annealed B = Brushed stainless steel MP = Mirror polished stainless steel

Connections position

Horizontal

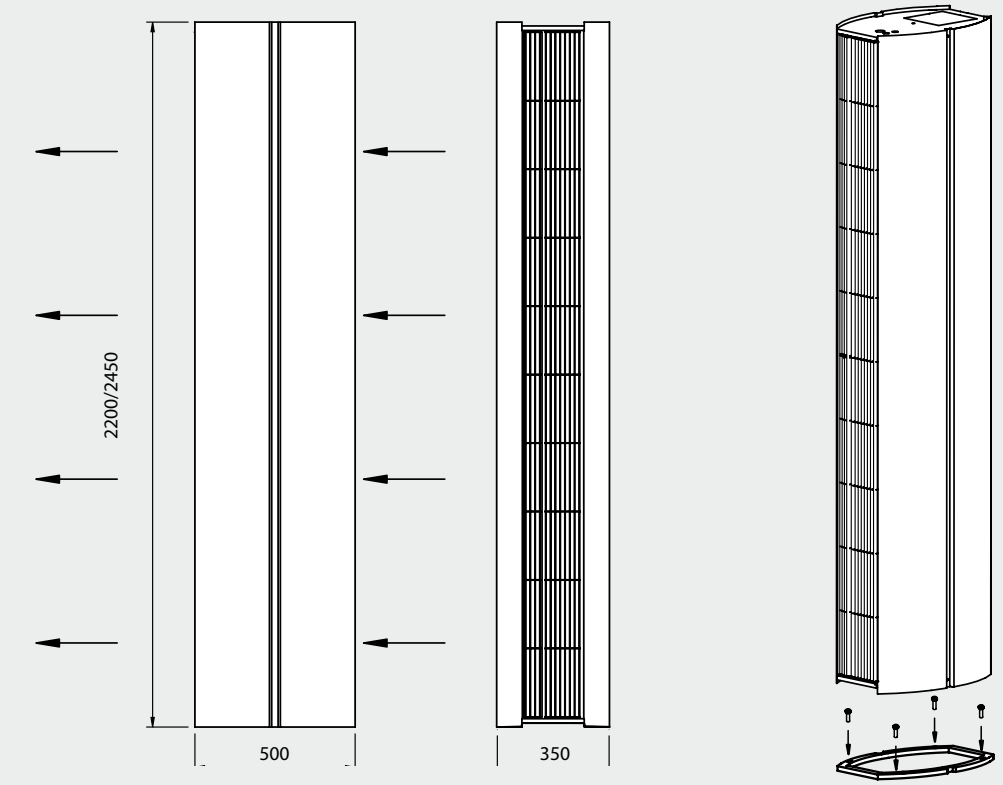


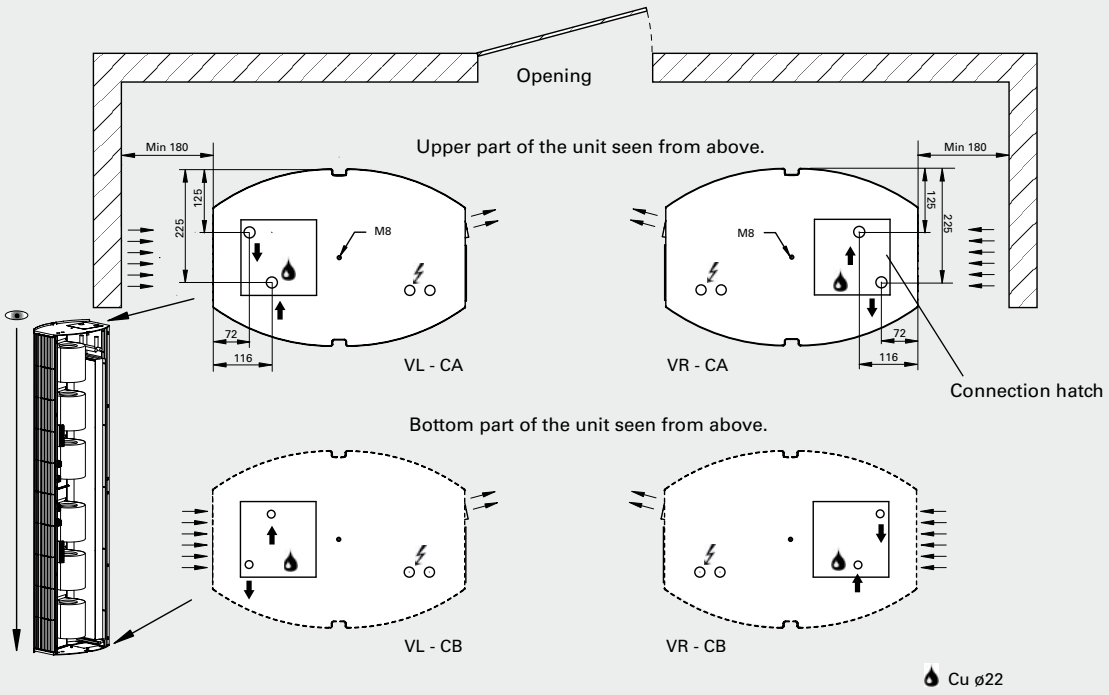
Vertical



Dimensions

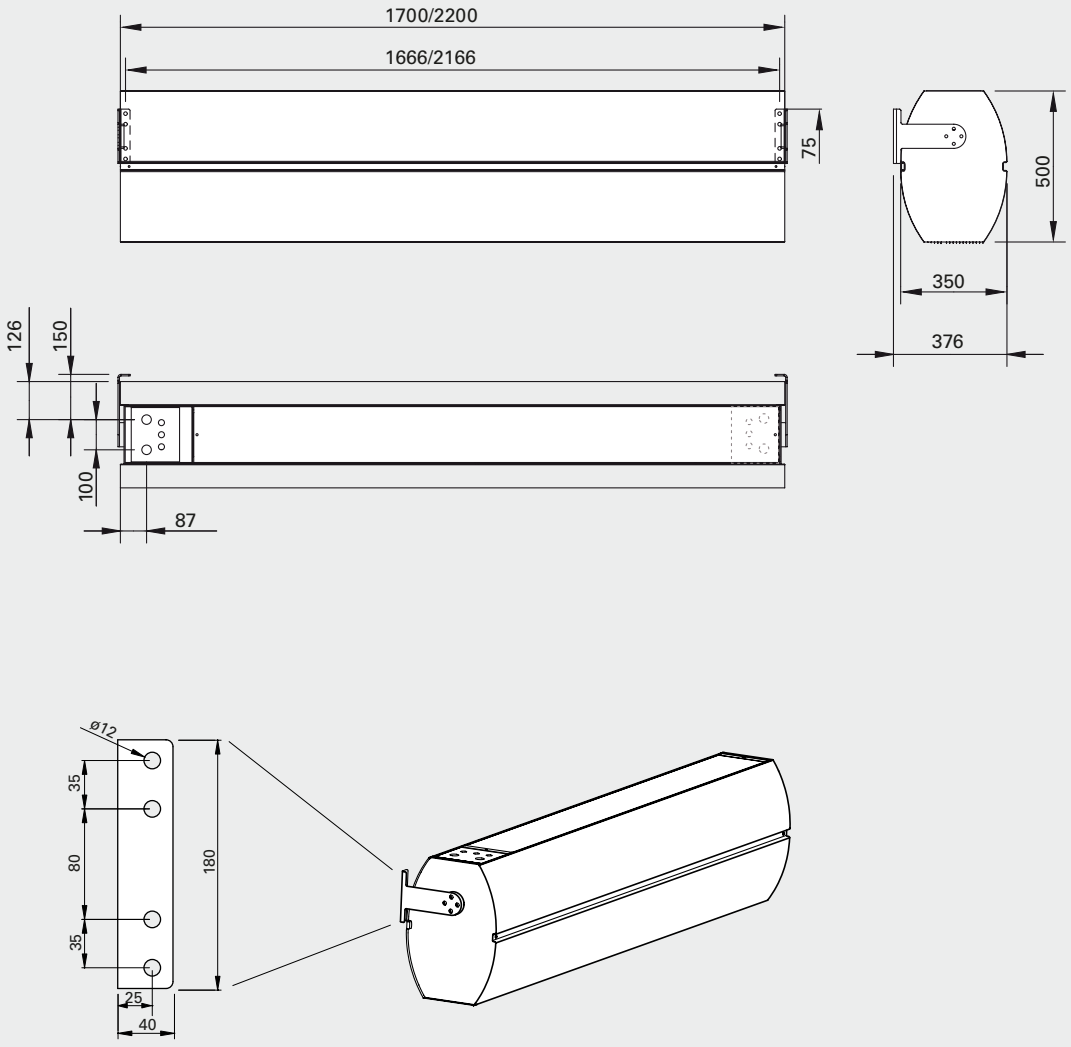
Vertical mounting





Dimensions

Horizontal mounting



Mounting

The air curtain range includes variants for horizontal and vertical installation.

Horizontal mounting
The air curtain is installed horizontally with the supply air grille facing downwards as close to the door as possible.

It must be specified when ordering whether the connections are to be on the left or right hand side (seen from inside the premises). The air curtain may be mounted on the wall or on the ceiling with the enclosed brackets. For suspended mounting from the ceiling, suitable devices (threaded bars, rails etc.) are fixed on the brackets.

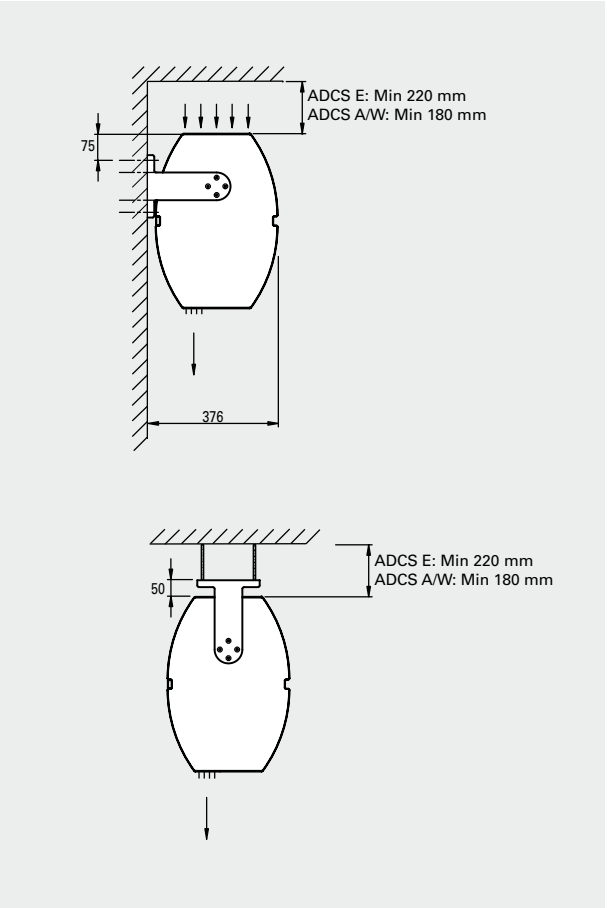
Minimum distance from outlet to floor for electrically heated units is 1800 mm.

Vertical mounting
The air curtain is mounted vertically as close as possible to the door. For the best effect air curtains should be placed on both sides of the opening.

When ordering, state on which side of the door the unit is to be placed and whether electricity and/or water connections are made from above or below.

The air curtain is mounted on a floor frame which is included. The edging is attached horizontal to the floor using fasteners appropriate for the surface. The air curtain must always be secured at the top.

By using an extension hood, the gap between the air curtain and the ceiling is filled in.



Minimum distances

Connection

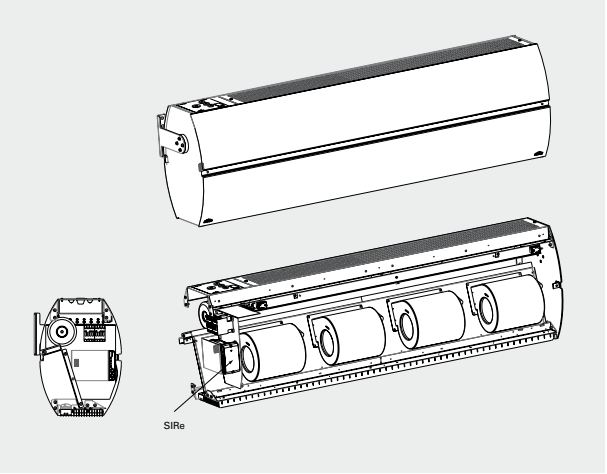
The PC board SIRe is built into the air curtain on delivery and is equipped with modular connectors for easy connection of external components. Read more about the SIRe control system in the "Controls" section.

Unit without heating
The electrical connection may be done from above or below when mounted vertically, and from left or right when mounted horizontally, according to ordering key. Control (230V~) should be connected to a terminal block.

Unit with electrical heating
The electrical connection may be done from above or below when mounted vertically, and from left or right when mounted horizontally, according to ordering key. Control (230V~) and power supply for heat (400V3~) should be connected to a terminal block. For units with electrical heating, power and control should be supplied separately.

Unit with water heating
The electrical connection may be done from above or below when mounted vertically, and from left or right when mounted horizontally, according to ordering key. Control (230V~) should be connected to a terminal block.

The water connection may be done from above or below when mounted vertically, and from the left or right when mounted horizontally. The smooth Ø22 mm copperpipes is connected by compression fitting or through welding the pipe work to the unit.



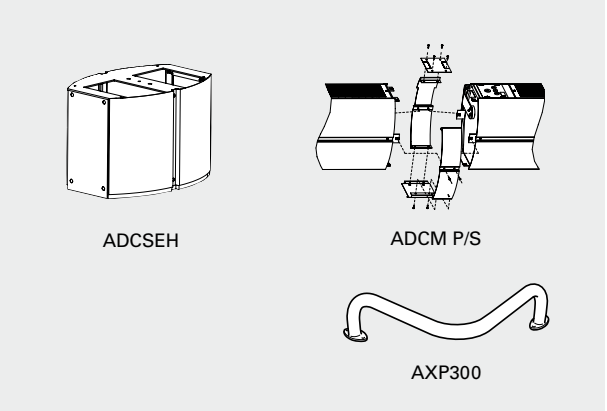
PC board SIRe is built in to the air curtain.

Accessories

ADCSEH, extension hood
Fills the space between the unit and the ceiling for vertical mounting and provides a neater installation. Special order to required dimension. Height 100-1000 mm.

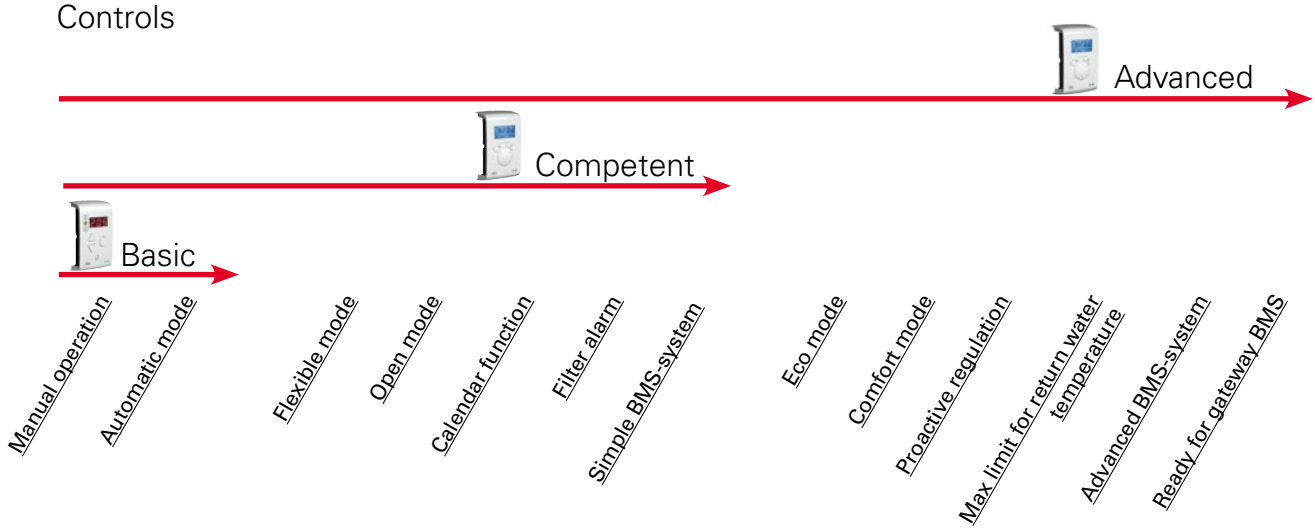
ADCM P/S, joining kit
Used to join horizontal units together for a sleek and unified installation. ADCMP for suspended installation and ADCMS for wall installation.

AXP300, collision protection
Floor placed protection against impact from e.g. shopping trolleys.



Type	Description
ADCSEH	Extension hood
ADCMP	Joining kit for suspended installation
ADCMS	Joining kit for wall installation
AXP300	Collision protection

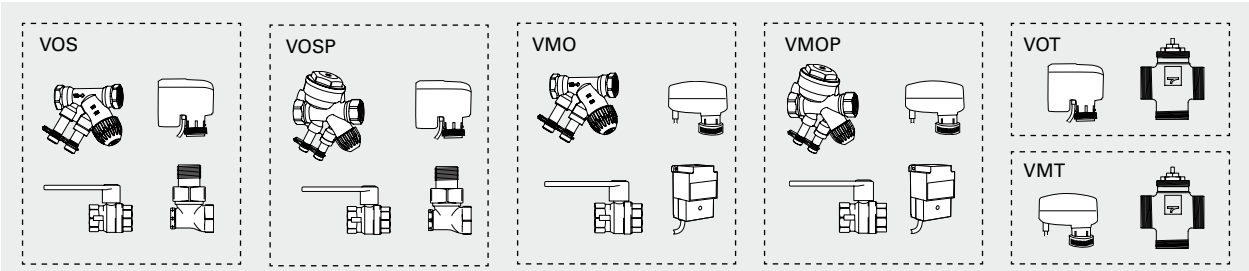
Controls



This air curtain is supplied with an intregrated PC board SIRe. There are three different levels with different functionality to choose from, Basic, Competent or Advanced. Read more about the SIRe control system in the "Controls" section.

Type	Description
SIReB	Control system SIRe Basic
SIReAC	Control system SIRe Competent
SIReAA	Control system SIRe Advanced

Water control



Valve kit VOS(P), VOT, VMO(P) or VMT is used to control the water flow. For more information see the "Controls" section.

Type	Description
VOS15LF	Valve kit on/off, low flow, DN15
VOS15NF	Valve kit on/off, DN15
VOS20	Valve kit on/off, DN20
VOS25	Valve kit on/off, DN25
VOSP15LF	Pressure independent valve kit, low flow, DN15
VOSP15NF	Pressure independent valve kit, DN15
VOSP20	Pressure independent valve kit, DN20
VOSP25	Pressure independent valve kit, DN25
VOT15	Three way control valve and actuator on/off, DN15
VOT20	Three way control valve and actuator on/off, DN20
VOT25	Three way control valve and actuator on/off, DN25

Type	Description
VMO15LF	Modulating valve kit, low flow, DN15
VMO15NF	Modulating valve kit, DN15
VMO20	Modulating valve kit, DN20
VMO25	Modulating valve kit, DN25
VMOP15LF	Pressure independent and modulating valve kit, low flow, DN15
VMOP15NF	Pressure independent and modulating valve kit, DN15
VMOP20	Pressure independent and modulating valve kit, DN20
VMOP25	Pressure independent and modulating valve kit, DN25
VMT15	Three way control valve and modulating actuator, DN15
VMOP20	Three way control valve and modulating actuator, DN20
VMOP25	Three way control valve and modulating actuator, DN25

Output charts water

ADCS WH

			Supply water temperature: 110 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 110/80 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WH	max	3000	17,3	39,9	0,06	0,4	33,8	51,2	0,28	6,0
	min	1400	8,1	38,5	0,02	0,1	20,6	61,4	0,17	2,5
ADCS22WH	max	4000	23,1	38,0	0,08	0,7	43,9	50,3	0,36	10,7
	min	1800	10,4	33,2	0,03	0,2	26,6	61,5	0,22	4,3
ADCS25WH	max	4500	26,0	35,2	0,08	1,1	51,4	51,7	0,42	17,6
	min	2050	11,8	29,7	0,04	0,3	31,0	62,6	0,26	7,1

			Supply water temperature: 90 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 90/70 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WH	max	3000	17,3	43,8	0,09	0,9	27,3	44,8	0,34	8,8
	min	1400	8,1	38,2	0,04	0,2	16,7	53,0	0,20	6,3
ADCS22WH	max	4000	23,1	43,0	0,12	1,6	35,5	44,1	0,43	15,5
	min	1800	10,4	34,7	0,05	0,3	21,4	53,0	0,26	6,2
ADCS25WH	max	4500	26,0	40,2	0,13	2,3	41,5	45,2	0,51	25,6
	min	2050	11,8	32,1	0,05	0,5	25,0	53,9	0,31	10,2

			Supply water temperature: 80 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 80/60 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WH	max	3000	17,3	46,3	0,13	1,6	22,5	40,0	0,27	6,4
	min	1400	8,1	38,7	0,05	0,3	13,7	46,8	0,17	2,6
ADCS22WH	max	4000	23,1	46,2	0,17	2,9	29,3	39,6	0,36	11,2
	min	1800	10,4	36,0	0,06	0,5	17,7	47,0	0,22	4,5
ADCS25WH	max	4500	26,0	43,6	0,17	4,0	34,3	40,5	0,42	18,6
	min	2050	11,8	33,8	0,06	0,7	20,7	47,7	0,25	7,5

			Supply water temperature: 82 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 82/71 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WH	max	3000	17,3	45,7	0,12	1,4	26,4	43,9	0,59	24,7
	min	1400	8,1	38,6	0,05	0,3	16,0	51,6	0,36	9,9
ADCS22WH	max	4000	23,1	45,5	0,15	2,5	34,1	43,1	0,76	43,4
	min	1800	10,4	35,7	0,05	0,4	20,5	51,5	0,46	17,1
ADCS25WH	max	4500	26,0	42,8	0,16	3,5	39,8	44,0	0,89	70,7
	min	2050	11,8	33,4	0,06	0,6	23,8	52,2	0,53	27,8

*1) Recommended outlet air temperature for good comfort and optimized output.

*2) Nominal output at given supply and return water temperature.

See www.frico.se for additional calculations.

Output charts water

ADCS WL

			Supply water temperature: 80 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 80/60 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WL	max	3000	17,2	35,8	0,09	0,9	30,9	48,4	0,38	10,2
	min	1400	8,2	33,9	0,04	0,2	18,3	56,6	0,22	4,0
ADCS22WL	max	4000	23,0	32,6	0,12	1,6	42,6	49,4	0,52	22,1
	min	1800	10,4	29,2	0,05	0,4	24,4	58,0	0,30	8,1
ADCS25WL	max	4500	26,0	31,6	0,13	2,1	48,4	49,7	0,59	30,4
	min	2050	11,8	27,6	0,05	0,5	28,0	58,2	0,34	11,3

			Supply water temperature: 70 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 70/50 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WL	max	3000	17,2	37,6	0,13	1,6	24,2	41,8	0,29	6,7
	min	1400	8,1	33,7	0,05	0,3	14,4	48,3	0,18	2,7
ADCS22WL	max	4000	23,0	34,9	0,16	2,8	33,6	42,8	0,41	14,8
	min	1800	10,4	30,0	0,06	0,6	19,4	49,7	0,24	5,5
ADCS25WL	max	4500	26,0	34,0	0,17	3,6	38,3	43,1	0,47	20,4
	min	2050	11,8	28,7	0,07	0,7	22,3	50,0	0,27	7,7

			Supply water temperature: 60 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 60/40 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WL	max	3000	17,2	39,9	0,21	3,7	17,3	35,0	0,21	3,8
	min	1400	8,1	34,2	0,08	0,6	10,3	39,8	0,13	1,5
ADCS22WL	max	4000	23,0	38,0	0,25	6,6	24,5	36,0	0,30	8,6
	min	1800	10,4	31,4	0,09	1,0	14,2	41,2	0,17	3,3
ADCS25WL	max	4500	26,0	37,3	0,28	8,4	28,0	36,4	0,34	11,9
	min	2050	11,8	30,5	0,10	1,3	16,4	41,6	0,20	4,6

			Supply water temperature: 55 °C Room temperature: +18 °C Outlet air temperature: +35 °C*1				Water temperature: 55/35 °C Room temperature: +18 °C			
Type	**Fan position**	**Airflow [m³/h]**	**Output [kW]**	**Return water temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**	**Output*2 [kW]**	**Outlet air temp. [°C]**	**Water flow [l/s]**	**Pressure drop [kPA]**
ADCS17WL	max	3000	17,5	41,5	0,31	7,7	13,7	31,5	0,17	2,5
	min	1400	8,1	34,8	0,10	1,0	8,2	35,0	0,10	1,0
ADCS22WL	max	4000	23,0	39,9	0,37	12,9	19,8	32,6	0,24	6,0
	min	1800	10,4	32,5	0,11	1,6	11,5	36,8	0,14	2,3
ADCS25WL	max	4500	26,0	39,4	0,40	16,5	22,8	32,9	0,28	8,4
	min	2050	11,8	31,8	0,12	2,0	13,4	37,2	0,16	3,3

*1) Recommended outlet air temperature for good comfort and optimized output.

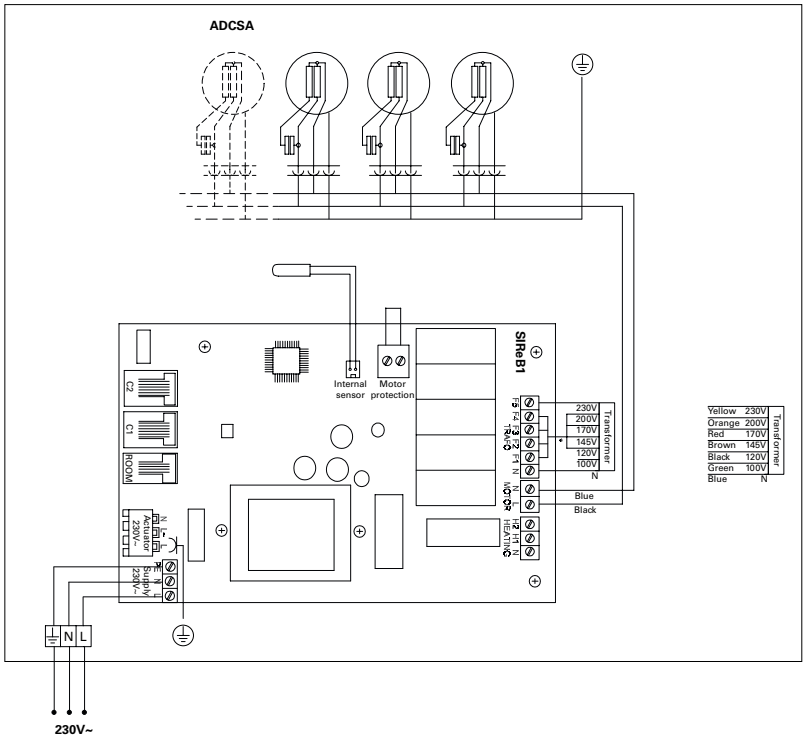
*2) Nominal output at given supply and return water temperature.

See www.frico.se for additional calculations.

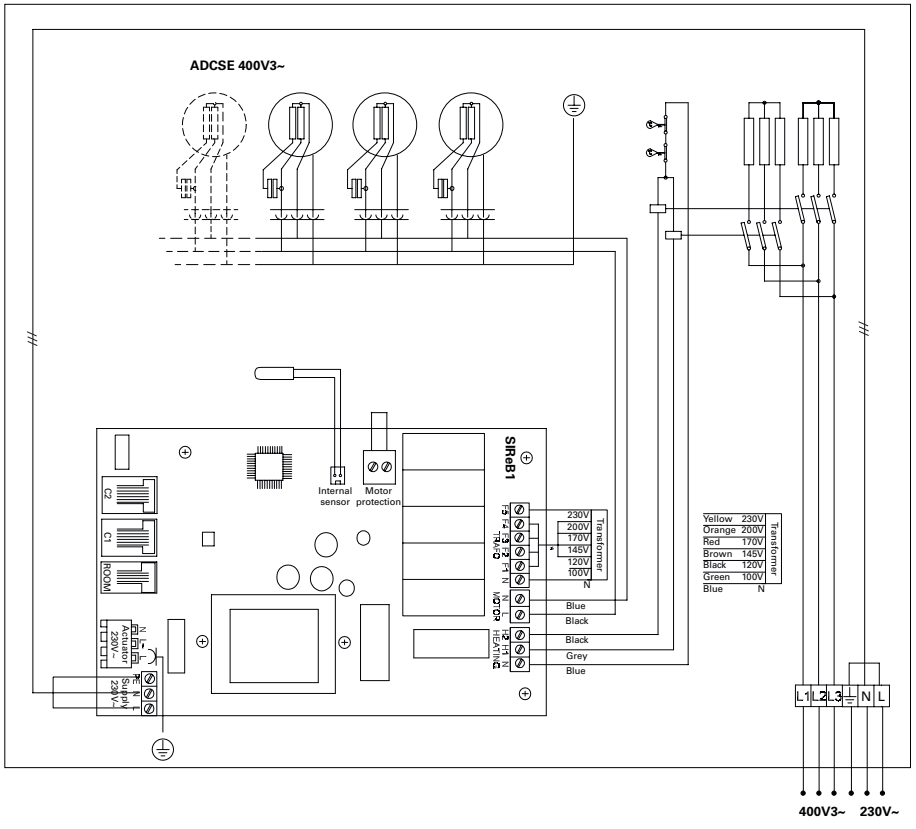
Wiring diagrams

Internal wiring diagram

Unit without heating



Unit with electrical heating



Wiring diagrams

Internal wiring diagram

Unit with water heating