



# Air Curtains

Catalogue

# AIRTECNICS: The Air Curtain Specialist



Founded in 1986 and placed in Castellar del Vallès (Barcelona), Airtècnics has a large experience producing air curtains, air handling units, fan boxes, fan filter units, axial fans, centrifugal fans and other special and OEM equipment.

We export our products to more than 45 countries worldwide. Besides our own production, Airtècnics distributes a wide range of HVAC products, mostly produced by Rosenberg Group companies.

Loyal to our commitments regarding our customers, our products fulfill the highest standards of quality criteria.

We are proud of our highly qualified team composed by master engineers, designers, specialized technicians and skilled professionals, ready to assist you in any questions you may have in design, installation or service maintenance requirements.

Be sure that Airtècnics or our worldwide distributors network will give you the right solution for any air curtains application.

- Air curtains market leading
- Producing +20 years
- Exporting +45 countries
- Catalogue +25 languages
- Experimented R+D+i
- Continuous improving
- Complete range, all applications
- University knowledge collaboration

[www.airtecnicos.com](http://www.airtecnicos.com)

Find more information and our distributors list in our specialized air curtain websites:



Airtècnics headquarters in Castellar del Vallès (Spain)

Български	<a href="http://www.vazdushnizavesi.com">www.vazdushnizavesi.com</a>	Lietuviškai	<a href="http://www.orouzuolaidos.com">www.orouzuolaidos.com</a>
Català	<a href="http://www.cortinesaire.com">www.cortinesaire.com</a>	Magyar	<a href="http://www.legfuggonyok.com">www.legfuggonyok.com</a>
Česky	<a href="http://www.vzduchoveclony.com">www.vzduchoveclony.com</a>	Nederlands	<a href="http://www.luchtgardijnen.com">www.luchtgardijnen.com</a>
Српски	<a href="http://www.vazdusnezavese.com">www.vazdusnezavese.com</a>	Norsk	<a href="http://www.luftporter.com">www.luftporter.com</a>
Dansk	<a href="http://www.lufttaepper.com">www.lufttaepper.com</a>	Polski	<a href="http://www.kurtynapowietrzna.com">www.kurtynapowietrzna.com</a>
Deutsch	<a href="http://www.luftscheieranlagen.net">www.luftscheieranlagen.net</a>	Português	<a href="http://www.cortinadeair.com">www.cortinadeair.com</a>
Ελληνικά	<a href="http://www.aerokourlines.com">www.aerokourlines.com</a>	Русский	<a href="http://www.vozdushnyezavesy.com">www.vozdushnyezavesy.com</a>
English	<a href="http://www.dooraircurtain.com">www.dooraircurtain.com</a>	Românesc	<a href="http://www.perdeledeair.com">www.perdeledeair.com</a>
Español	<a href="http://www.cortinasdeaire.es">www.cortinasdeaire.es</a>	Slovenski	<a href="http://www.zracnezavese.com">www.zracnezavese.com</a>
Français	<a href="http://www.rideauxdair.com">www.rideauxdair.com</a>	Suomalainen	<a href="http://www.ilmaverho.com">www.ilmaverho.com</a>
Italiano	<a href="http://www.barrieradaria.com">www.barrieradaria.com</a>	Svenska	<a href="http://www.luftridaer.com">www.luftridaer.com</a>
Latviešu	<a href="http://www.gaisaaizkari.com">www.gaisaaizkari.com</a>	Türk	<a href="http://www.havaperdeleri.eu">www.havaperdeleri.eu</a>

## The Rosenberg Group

Airtècnics is from 1993 fully integrated in the Rosenberg Group, an organization specializing in the design, manufacturing and distribution of equipments and components of ventilation and air conditioning with factories, subsidiaries and agencies in more than 50 countries.

Founded in 1981, with a total of 1.400 employees, 14 production sites on 4 continents, as well as 4 development centres. Rosenberg develops, produces and distributes its products worldwide.

Through a combination of human know how and innovative production technology Rosenberg products achieve a quality which meets the highest requirements.



Rosenberg headquarters in Künzelsau (Germany)



The new and attractive generation of Airtècnics air curtains are the ideal solution to maintain a comfortable interior climate in commercial outlets and public buildings that need to keep their doors open.

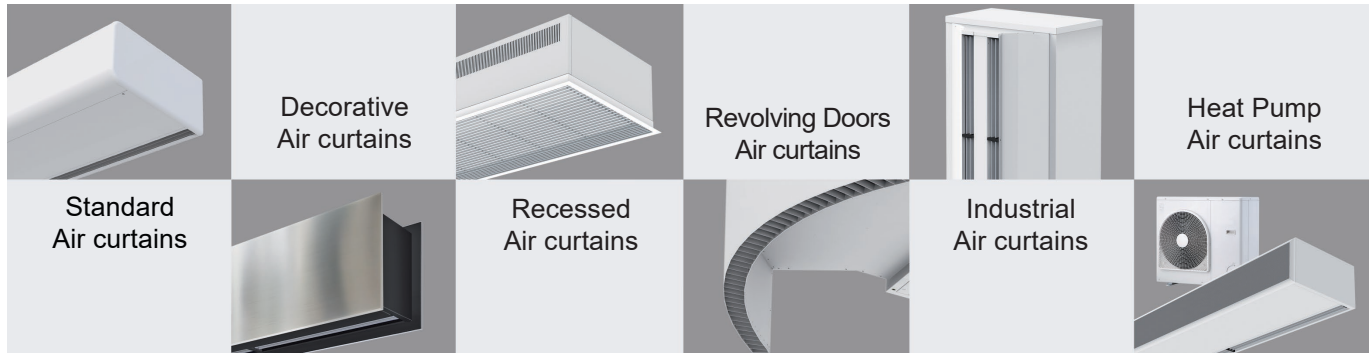
Airtècnics air curtains create an air stream layer over the doorway and act as an invisible barrier which efficiently divides the inside environment from the outside one. Therefore, it substantially reduces heating and cooling costs up to 80%, while increasing employees and clients comfort.

For shops, Airtècnics air curtains allow a clear view of the inside of the shop, welcoming the client to enter easily and freely.

The end result is more customers and an increase in sales. Airtècnics air curtains are a protection from the cold and heat, repel gusts of wind and minimize dust, fumes, pollution and insects entering the building.

In order to obtain these advantages it's very important to choose the appropriate air curtain. Factors such as interior drop, strong winds, the door's location, stairs between floors, opposite doors, and the installation height have to be taken into consideration.

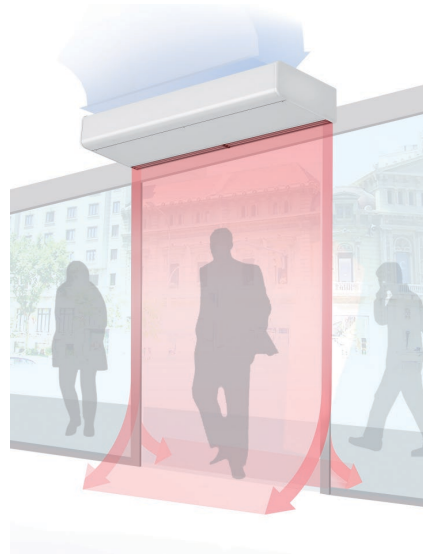
Our expert consultants with their extensive experience are at your disposal to help you choose.



## Advantages

### MAINTAIN:

- Heating levels
- Refrigeration
- Air conditioning
- Comfort
- Clean atmosphere



### PROTECT FROM:

- Cold winter temperatures
- Hot summer temperatures
- Car fumes
- Dust in the air
- Pollution
- Bad smells and odours
- Insects

## Selection of an air curtain

To select an air curtain the following factors have to be kept in mind:

- The height of the installation measured from the discharge diffuser to the floor
- The width of the door
- The location of the building to determine the level of protection needed against weather conditions
- If the building has several doors in the same, different or opposite facade
- If the building has several stores connected by escalators
- Pressure differences between the inside and outside of the building
- Door characteristics: if always open, if automatic door, manual door, revolving door, etc.
- Characteristics of the ventilation and air conditioning installation
- Voltage and electrical power availability
- Type of business, style and decoration of the premises



**WIDE RANGE**

*Models and main characteristics, Selection and applications*

6



**RECESSED WINDBOX**

15-16

*High pressure for commercial doors, recessed installation in false ceiling 2,5 - 4,2 m*



**MINIBEL**

*Economical for openings up to 1,8 m*

7



**SMART**

17-18

*Decorative high pressure for commercial and industrial doors 2,5 - 4,2 m*



**OPTIMA WIRELESS**

*For commercial doors 2,2 - 2,8 m*

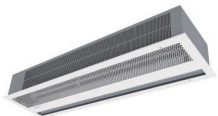
8



**ZEN**

19-20

*Customizable design with bespoke panels for commercial doors 2,5 - 4,2 m*



**RECESSED OPTIMA WIRELESS**

*For commercial doors, recessed installation in false ceiling 2,2 - 2,8 m*

9



**RUND**

21-22

*Decorative cylindrical for vertical or horizontal installation 2,5 - 4,2 m*



**OPTIMA**

*For commercial doors 2,2 - 2,8 m*

10



**DAM**

23-24

*High pressure for commercial doors with front panel 2,5 - 4,2 m*



**RECESSED OPTIMA**

*For commercial doors, recessed installation in false ceiling 2,2 - 2,8 m*

11



**RECESSED DAM**

25-26

*Compact recessed for commercial and industrial doors 2,5 - 4,2 m*



**ARIS**

*For commercial doors 2,2 - 2,8 m*

12



**HEAT PUMP AIR CURTAINS**

27-39

*Energy saving and very low consumption technology for commercial doors 2,5 - 4,2 m*



**WINDBOX M,G**

*High pressure for commercial and industrial doors 2,5 - 4,2 m*

13-14



**WINDBOX BB**

40-41

*High pressure for large commercial and industrial doors 5 - 7 m*



	<p><b>RECESSED WINDBOX BB</b> 42-43  <i>High pressure recessed for large commercial and industrial doors 5 - 7 m</i></p>		<p><b>TRIOJET SYSTEM</b> 55  <i>Combination system with multijets for large cold stores 2 - 4 m</i></p>
	<p><b>ZEN BB</b> 44-45  <i>Customizable design with bespoke panels for commercial and industrial doors 5 - 7 m</i></p>		<p><b>MAXWELL, MAX</b> 56-57  <i>Large industrial doors vertical or horizontal 4 - 6 m</i></p>
	<p><b>WINDBOX L, XL</b> 46-47  <i>High pressure for large industrial and commercial doors 4 - 7 m</i></p>		<p><b>ACCESSORIES, SPECIAL OPTIONS</b> 58  <i>Supports, valves, sensors, etc.</i></p>
	<p><b>INVISAIR</b> 48-49  <i>Recessed in column or bulkhead vertical or horizontal 2,5 - 4,2 m</i></p>		<p><b>POWER COEFFICIENTS</b> 59  <i>Water heated air curtains at different water temperatures</i></p>
	<p><b>ROTOWIND</b> 50-51  <i>Tailor made for revolving doors 2,5 - 4,2 m</i></p>		<p><b>EC TECHNOLOGY</b> 60  <i>Centrifugal EC fans with very low consumption technology</i></p>
	<p><b>VARIWIND</b> 52  <i>Tailor made variable length, VP or VW construction 2,5 - 4,2 m</i></p>		<p><b>REGULATION</b> 61-63  <i>Basic regulation: standard controls, Advanced regulation: Clever control</i></p>
	<p><b>RECESSED COMPACT</b> 53  <i>Air only compact recessed for commercial and industrial doors 2,5 - 4,2 m</i></p>		<p><b>GALLERY REFERENCES</b> 64-71  <i>Installation pictures                  Clients brand names</i></p>
	<p><b>KOOL</b> 54  <i>High velocity for cold store and freezer doors 2,5 - 4,2 m</i></p>		<p><b>DISTRIBUTORS</b> 72-73  <i>Worldwide distributors</i></p>



**Applications**

Model	Kind	Recommended Installation Height (*)	Heating				Common Applications
			A	E	P	DX	
Minibel		1,8 m	•	•			Kiosks, Fast Food and small sized shops. Restaurants and places with usually closed door or automatic door when low pedestrian flow.
Optima Wireless (A,E) Recessed Optima Wireless (A,E) Optima Recessed Optima Aris		2,2 - 2,8 m	•	•	•		Small and medium sized premises. Restaurants, shops and places with a medium and high pedestrian flow. Creation of different environment zones. Protection against dust, fumes, pollutants and insects. False ceiling installations. Isolation and sealing of smoking areas.
Windbox Recessed Windbox Smart, Zen, RUND Dam, Recessed Dam Invisair, Rotowind Variwind Recessed Compact (A) Kool (A)	M ECM G ECG	2,5 - 3,5 m 2,5 - 3,8 m 3,0 - 4,0 m 3,0 - 4,2 m	• • • •	• • • •	• • • •	• • • •	Medium and large sized premises with a high pedestrian flow. Protection against dust, fumes, pollutants and insects. Cold rooms. False ceiling installations. Isolation and sealing of smoking areas.
Triojet		2 - 4 m		•			Industrial doors for large cold rooms and freezers with very low temperatures or problems with ice production.
Windbox Recessed Windbox (BB) Zen (BB)	L LT XL, BB XLT	4 - 5 m 4 - 6 m 5 - 7 m 5 - 8 m	• • • •	• • • •	• • • •	(**) (**)	Medium and large sized premises with a high pedestrian flow. Industrial doors. Protection against dust, fumes, pollutants and insects. Cold rooms. False ceiling installations.
Maxwell Max		4 - 6 m	•	•	•		Industrial doors. Loading dock. Vertical Installation to one side of the door or at each side of the door. Horizontal Installation.

(\*) The maximum height of installation depends on the conditions of the premises. Contact us to clear up your queries or doubts.

(\*\*) Available under request.

(A) Air Only, (E) Electrical Heating, (P) Water Coil Heating LPHW, (DX) Heat Pump



**Characteristics**

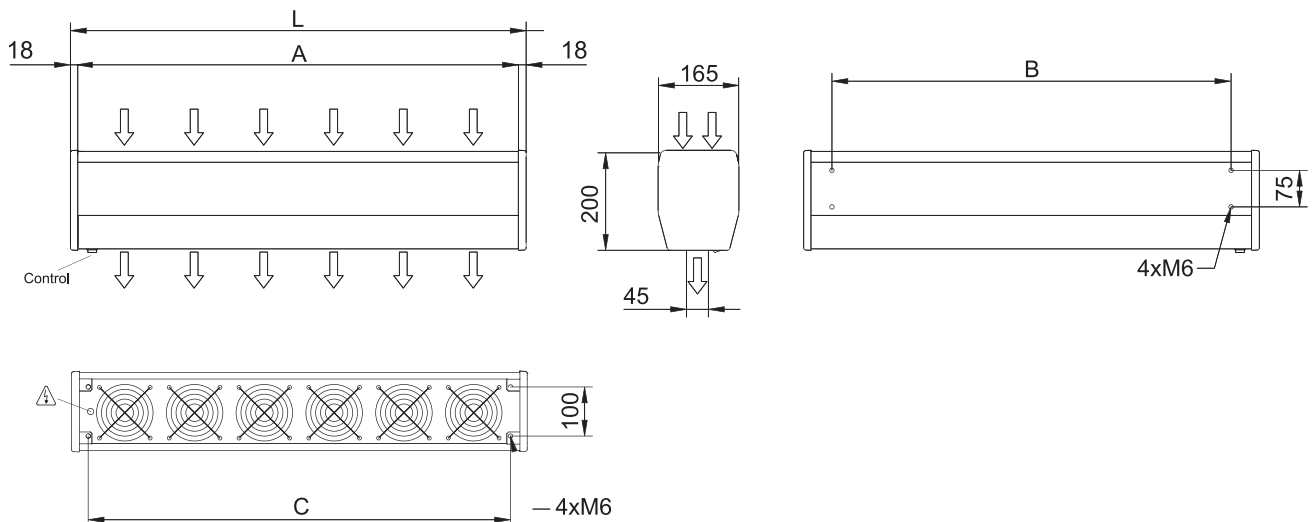


- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped.
- Compact axial fans, low noise level.
- “E” type with electrical shielded element. “A” type without heating, air only.
- Integrated switch for ventilation and heating control.
- Cable connection 1,5m length, integrated.
- Wall support included.

**Specifications**

		MIN 600 A	MIN 600 E230	MIN 900 A	MIN 900 E230
Power (fans)	W	60	60	90	90
Voltage (fans)	V	230~1	230~1	230~1	230~1
Current (fans)	A	0,52	0,52	0,78	0,78
Airflow	m³/h	420	420	630	630
Power (heating)	kW	-	2,5	-	3,2
Voltage (heating)	V	-	230~1	-	230~1
Current (heating)	A	-	10,8	-	13,9
Temperature Rise	°C	-	18	-	15
Weight	kg	9	10	12,5	13,5
Noise Level	dB(A)	46	46	47	47

**Dimensions**



	L	A	B	C
MIN 600	636	600	520	566
MIN 900	936	900	820	866



## Characteristics



- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Micro-perforated inlet grille with filter functions and easy service. It does not need prefilter.
- Anodized aluminium outlet vanes, airfoil shaped.
- Low noise twisted cross-flow fans driven by a 2-speed external rotor motor.
- “E” type with electrical shielded elements, two stages with integrated regulation.
- “A” type without heating, air only.
- Included regulation with infrared remote control and inbuilt keypad with leds.

## Specifications

### AIR ONLY

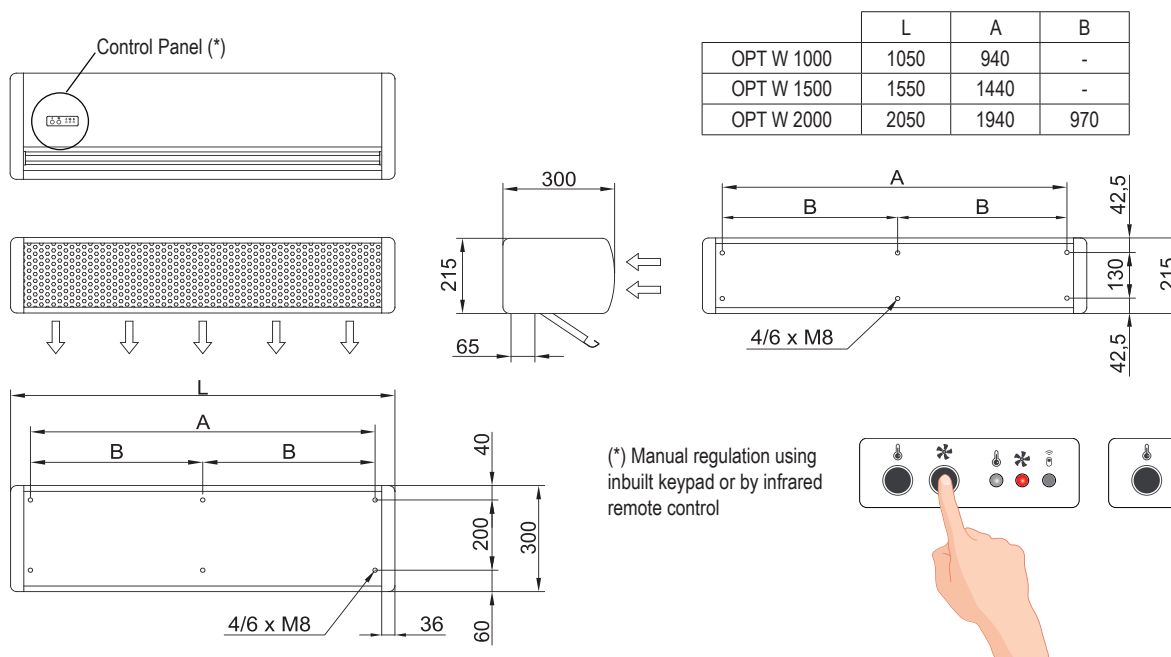
Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
OPT W 1000 A	1500	80	0,41	35/50	17,5
OPT W 1500 A	2150	117	0,53	36/51	25,5
OPT W 2000 A	2900	160	0,82	38/53	33

### ELECTRICAL HEATED

Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
OPT W 1000 E	1500	3,8/5,6	400Vx3	8,7	80	0,41	35/50	20,5
OPT W 1000 E230	1500	3,8/5,6	230Vx1	24,5	80	0,41	35/50	20,5
OPT W 1500 E	2150	6/9	400Vx3	13,0	117	0,53	36/51	27,5
OPT W 1500 E230-6	2150	3,8/5,6	230Vx1	24,5	117	0,53	36/51	27,5
OPT W 1500 E230-9	2150	6/9	230Vx1 (*)	39,1	117	0,53	36/51	27,5
OPT W 2000 E	2900	5,6/11,3	400Vx3	16,3	160	0,82	38/53	42
OPT W 2000 E230	2900	5,6/11,3	230Vx1 (*)	49,1	160	0,82	38/53	42

(\*) 2 separated power supplies.

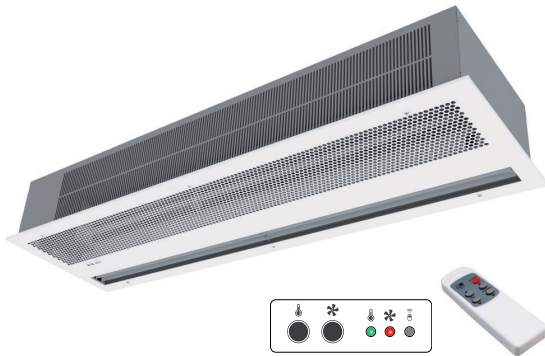
## Dimensions







## Characteristics



- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille panel (free of maintenance) integrated in a single frame colour white RAL 9016 or black RAL 9005. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped.
- Low noise twisted cross-flow fans driven by a 2-speed external rotor motor.
- “E” type with electrical shielded elements, two stages with integrated regulation.
- “A” type without heating, air only.
- Included regulation with infrared remote control and inbuilt keypad with leds.

## Specifications

### AIR ONLY

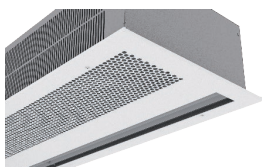
Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RO W 1000 A	1700	80	0,41	35/50	23
RO W 1500 A	2200	117	0,53	36/51	33
RO W 2000 A	3200	160	0,82	38/53	43

### ELECTRICAL HEATED

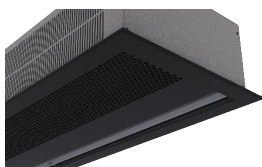
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RO W 1000 E	1700	3,8/5,6	400Vx3	8,7	80	0,41	35/50	25
RO W 1000 E230	1700	3,8/5,6	230Vx1	24,5	80	0,41	35/50	25
RO W 1500 E	2200	6/9	400Vx3	13,0	117	0,53	36/51	36
RO W 1500 E230-6	2200	3,8/5,6	230Vx1	24,5	117	0,53	36/51	36
RO W 1500 E230-9	2200	6/9	230Vx1 (*)	39,1	117	0,53	36/51	36
RO W 2000 E	3200	5,6/11,3	400Vx3	16,3	160	0,82	38/53	51
RO W 2000 E230	3200	5,6/11,3	230Vx1 (*)	49,1	160	0,82	38/53	51

(\*) 2 separated power supplies.

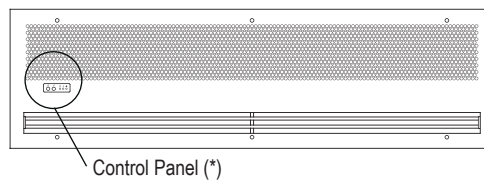
## Dimensions and finishes



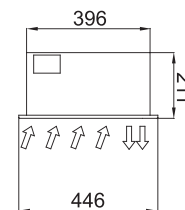
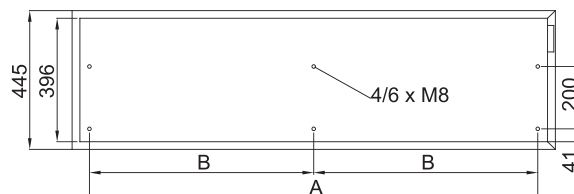
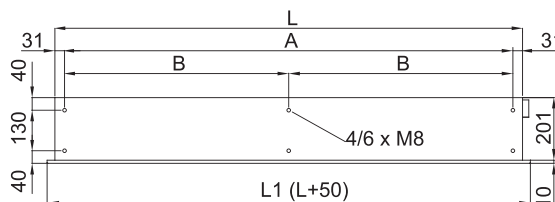
White Finish RAL 9016



Black Finish RAL 9005



(\*) Manual regulation using inbuilt keypad or by infrared remote control



	L	L1	A	B
RO W 1000	1000	1050	938	-
RO W 1500	1500	1550	1438	-
RO W 2000	2000	2050	1938	969



**Characteristics**



- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Micro-perforated inlet grille with filter functions and easy service. It does not need prefilter.
- Anodized aluminium outlet vanes, airfoil shaped.
- Low noise twisted cross-flow fans driven by a 2-speed external rotor motor.
- "P" type with water heated coil. "E" type with electrical shielded elements, two stages with integrated regulation. "A" type without heating, air only.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

AIR ONLY					
Model	Airflow m³/h	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
OPT 1000 A	1500	80	0,41	35/50	17,5
OPT 1500 A	2150	117	0,53	36/51	25,5
OPT 2000 A	2900	160	0,82	38/53	33

WATER HEATED							
Model	Airflow m³/h	Heating Capacity 80/60°C kW	Water Drop Pressure Pa	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
OPT 1000 P	1400	8,2	7090	80	0,41	37/51	20,5
OPT 1500 P	2100	12,7	7200	117	0,53	38/52	27,5
OPT 2000 P	2750	16,7	6550	160	0,82	40/54	37,5

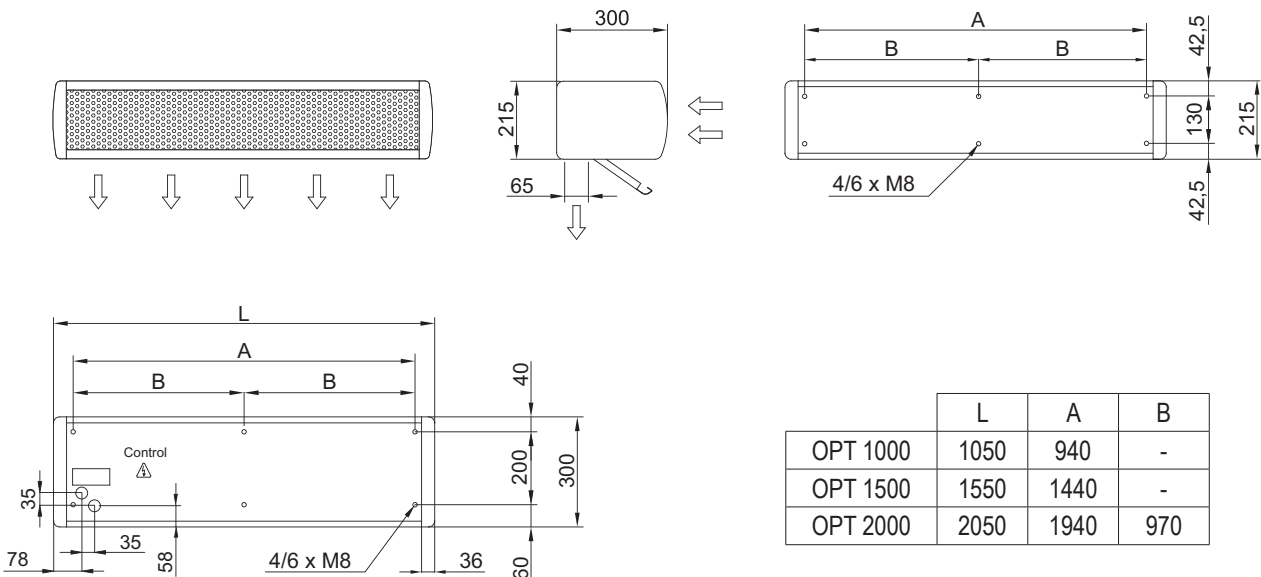
ELECTRICAL HEATED								
Model	Airflow m³/h	Electrical Heating Capacity (**) kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
OPT 1000 E	1500	3,8/5,6	400Vx3	8,7	80	0,41	35/50	20,5
OPT 1000 E-9	1500	6/9	400Vx3	13,0	80	0,41	35/50	21,5
OPT 1000 E230	1500	3,8/5,6	230Vx1	24,5	80	0,41	35/50	20,5
OPT 1500 E	2150	6/9	400Vx3	13,0	117	0,53	36/51	27,5
OPT 1500 E230-6	2150	3,8/5,6	230Vx1	24,5	117	0,53	36/51	27,5
OPT 1500 E230-9	2150	6/9	230Vx1 (*)	39,1	117	0,53	36/51	27,5
OPT 2000 E	2900	5,6/11,3	400Vx3	16,3	160	0,82	38/53	42
OPT 2000 E230	2900	5,6/11,3	230Vx1 (*)	49,1	160	0,82	38/53	42

Water heated: connection pipes 1/2" female. 2 rows coil.

(\*) 2 separated power supplies.

(\*\*) Under request other electrical heating capacities may be supplied.

**Dimensions**





## Characteristics



- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille (free of maintenance) made with aluminium profiles and blow-out nozzle, integrated in a single white frame colour RAL 9016. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped.
- Low noise twisted cross-flow fans driven by a 2-speed external rotor motor.
- "P" type with water heated coil. "E" type with electrical shielded elements, two stages with integrated regulation. "A" type without heating, air only.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

## Specifications

### AIR ONLY

Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RO 1000 A	1700	80	0,41	35/50	24
RO 1500 A	2200	117	0,53	36/51	34
RO 2000 A	3200	160	0,82	38/53	44,5

### WATER HEATED

Model	Airflow m <sup>3</sup> /h	Heating Capacity 80/60°C kW	Water Drop Pressure Pa	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RO 1000 P	1450	8,3	7360	80	0,41	37/51	26,5
RO 1500 P	2175	13	7480	117	0,53	38/52	37,5
RO 2000 P	2850	17,1	6810	160	0,82	40/54	49

### ELECTRICAL HEATED

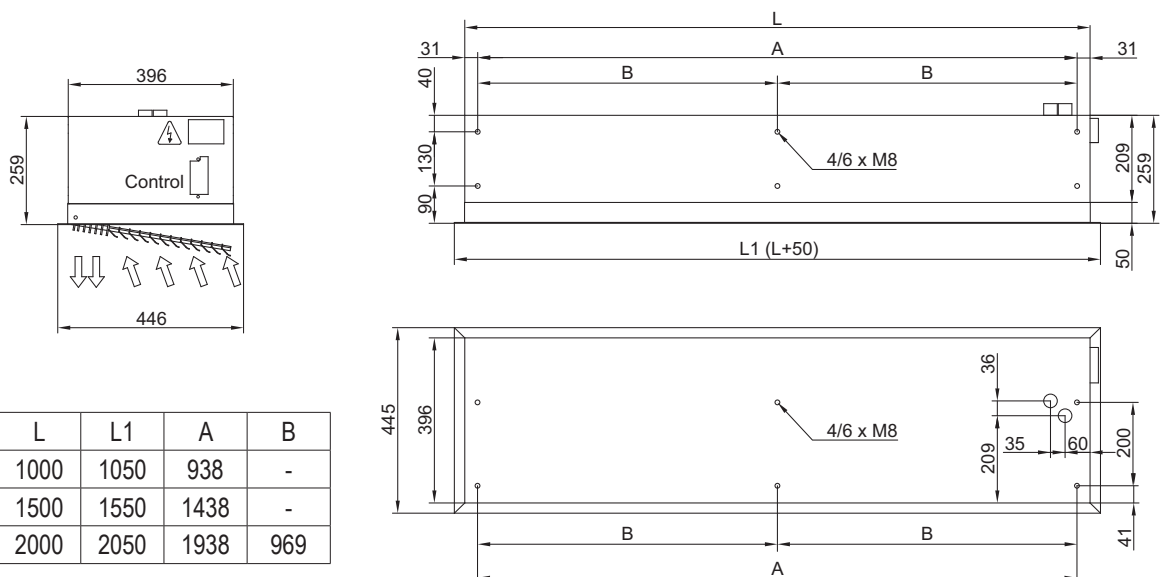
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity (**) kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RO 1000 E	1700	3,8/5,6	400Vx3	8,7	80	0,41	35/50	26
RO 1000 E-9	1700	6/9	400Vx3	13,0	80	0,41	35/50	27
RO 1000 E230	1700	3,8/5,6	230Vx1	24,5	80	0,41	35/50	26
RO 1500 E	2200	6/9	400Vx3	13,0	117	0,53	36/51	37,5
RO 1500 E230-6	2200	3,8/5,6	230Vx1	24,5	117	0,53	36/51	37,5
RO 1500 E230-9	2200	6/9	230Vx1 (*)	39,1	117	0,53	36/51	37,5
RO 2000 E	3200	5,6/11,3	400Vx3	16,3	160	0,82	38/53	53,5
RO 2000 E230	3200	5,6/11,3	230Vx1 (*)	49,1	160	0,82	38/53	53,5

Water heated: connection pipes 1/2" female. 2 rows coil.

(\*) 2 separated power supplies.

(\*\*) Under request other electrical heating capacities may be supplied.

## Dimensions



	L	L1	A	B
RO 1000	1000	1050	938	-
RO 1500	1500	1550	1438	-
RO 2000	2000	2050	1938	969



**Characteristics**



- Stylish, discreet and contemporary design adaptive to any interior architecture.
- Smooth front panel can be customized with logotypes, lighting, lettering or safety and informative signals, according to the client requirements.
- Self-supporting steel rounded casing with edgeless plastic side covers, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Hidden top air entrance, avoiding the inside view of the unit and the inlet grille.
- Anodized aluminium outlet vanes, airfoil shaped.
- Low noise twisted cross-flow fans driven by a 2-speed external rotor motor.
- “P” type with water heated coil. “E” type with electrical shielded elements, two stages with integrated regulation. “A” type without heating, air only.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

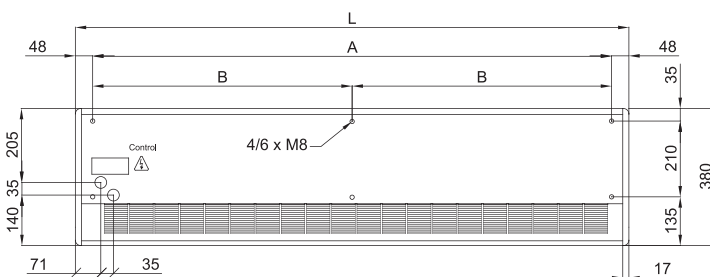
AIR ONLY					
Model	Airflow m³/h	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
ARIS 1000 A	1500	80	0,41	34/48	20
ARIS 1500 A	2150	117	0,53	35/49	29
ARIS 2000 A	2900	160	0,82	37/51	38

WATER HEATED							
Model	Airflow m³/h	Heating Capacity 80/60°C kW	Water Drop Pressure Pa	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
ARIS 1000 P	1400	8,2	7090	80	0,41	36/49	23
ARIS 1500 P	2100	12,7	7200	117	0,53	37/51	31
ARIS 2000 P	2750	16,7	6550	160	0,82	39/52	42,5

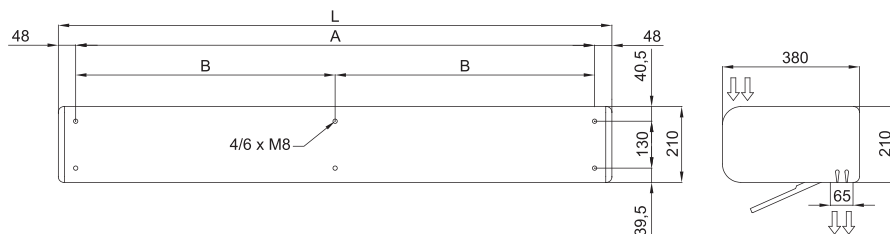
ELECTRICAL HEATED								
Model	Airflow m³/h	Electrical Heating Capacity (**) kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
ARIS 1000 E	1500	3,8/5,6	400Vx3	8,7	80	0,41	34/48	23
ARIS 1000 E-9	1500	6/9	400Vx3	13,0	80	0,41	34/48	23
ARIS 1000 E230	1500	3,8/5,6	230Vx1	24,5	80	0,41	34/48	24
ARIS 1500 E	2150	6/9	400Vx3	13,0	117	0,53	35/49	31
ARIS 1500 E230-6	2150	3,8/5,6	230Vx1	24,5	117	0,53	35/49	31
ARIS 1500 E230-9	2150	6/9	230Vx1 (*)	39,1	117	0,53	35/49	31
ARIS 2000 E	2900	5,6/11,3	400Vx3	16,3	160	0,82	37/51	47
ARIS 2000 E230	2900	5,6/11,3	230Vx1 (*)	49,1	160	0,82	37/51	47

Water heated: connection pipes 1/2" female. 2 rows coil.  
 (\*) 2 separated power supplies.  
 (\*\*) Under request other electrical heating capacities may be supplied.

**Dimensions**



	L	A	B
ARIS 1000	1034	940	-
ARIS 1500	1534	1440	-
ARIS 2000	2034	1940	970





## Characteristics



- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. It does not need prefilter.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

## Specifications

### AIR ONLY

Model	Airflow m³/h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
M 1000 A	1800	0,212	0,94	55	31	
M 1500 A	2700	0,318	1,41	56	46	
M 2000 A	3600	0,424	1,88	57	58	
M 2500 A	4500	0,530	2,35	58	72	
M 3000 A	5400	0,636	2,82	59	86	
ECM 1000 A	1840	0,142	1,24	56	31	
ECM 1500 A	2760	0,213	1,86	57	46	
ECM 2000 A	3680	0,284	2,48	58	58	
ECM 2500 A	4600	0,355	3,10	59	72	
ECM 3000 A	5520	0,426	3,72	60	86	
G 1000 A	2400	0,642	2,85	57	43	
G 1500 A	3200	0,856	3,80	58	51	
G 2000 A	4800	1,284	5,70	59	80	
G 2500 A	5600	1,498	6,65	60	84	
G 3000 A	6400	1,712	7,60	61	95	
ECG 1000 A	2700	0,213	1,86	61	43	
ECG 1500 A	3600	0,284	2,48	62	51	
ECG 2000 A	5400	0,426	3,72	63	80	
ECG 2500 A	6300	0,497	4,34	64	84	
ECG 3000 A	7200	0,568	5,96	65	95	

### ELECTRICAL HEATED

Model	Airflow m³/h	Electrical Heating Capacity		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		400Vx3-50Hz kW	230V-50Hz				
M 1000 E	1800	3/6/9	0,212	0,94	55	37	
M 1500 E	2700	4/8/12	0,318	1,41	56	57	
M 2000 E	3600	6/12/18	0,424	1,88	57	75	
M 2500 E	4500	6/12/18	0,530	2,35	58	94	
M 3000 E	5400	8/16/24	0,636	2,82	59	112	
ECM 1000 E	1840	3/6/9	0,142	1,24	56	37	
ECM 1500 E	2760	4/8/12	0,213	1,86	57	57	
ECM 2000 E	3680	6/12/18	0,284	2,48	58	75	
ECM 2500 E	4600	6/12/18	0,355	3,10	59	94	
ECM 3000 E	5520	8/16/24	0,426	3,72	60	112	
G 1000 E	2400	5/10/15	0,642	2,85	57	52	
G 1500 E	3200	7,5/15/22,5	0,856	3,80	58	63	
G 2000 E	4800	10/20/30	1,284	5,70	59	100	
G 2500 E	5600	10/20/30	1,498	6,65	60	106	
G 3000 E	6400	10/20/30	1,712	7,60	61	120	
ECG 1000 E	2700	5/10/15	0,213	1,86	61	52	
ECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	63	
ECG 2000 E	5400	10/20/30	0,426	3,72	63	100	
ECG 2500 E	6300	10/20/30	0,497	4,34	64	106	
ECG 3000 E	7200	10/20/30	0,568	5,96	65	120	

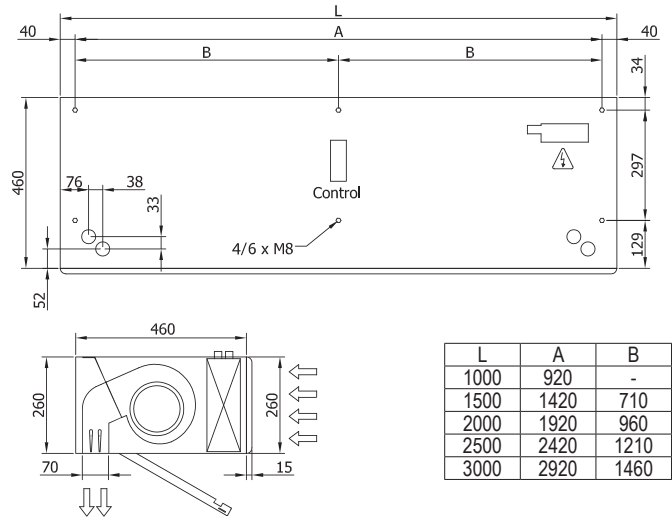
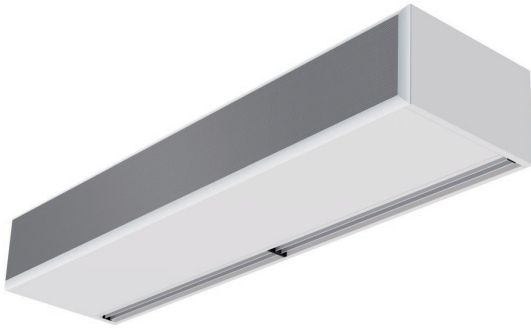
### WATER HEATED

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
M 1000 P	1660	9,17	880	8,56	4370	8,52	1220	0,428	1,90	56	35
M 1500 P	2490	14,26	760	13,69	6460	14,34	4480	0,642	2,85	57	53
M 2000 P	3320	20,65	1930	18,26	4790	18,65	2060	0,856	3,80	58	69
M 2500 P	4150	26,92	3810	22,12	3850	24,32	4040	1,070	4,75	59	86
M 3000 P	4980	33,24	6590	28,37	6760	29,77	5660	1,280	5,70	60	103
ECM 1000 P	1720	9,38	920	8,77	4560	8,74	1280	0,142	1,24	56	35
ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,213	1,86	57	53
ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,284	2,48	58	69
ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,355	3,10	59	86
ECM 3000 P	5160	33,99	6860	29,05	7050	30,54	5920	0,426	3,72	60	103
G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	50
G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	59
G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	92
G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	96
G 3000 P	6000	37,35	8110	32,10	8410	34,03	7180	1,712	7,60	61	109
ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	50
ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	59
ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	92
ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	96
ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,568	5,96	65	109

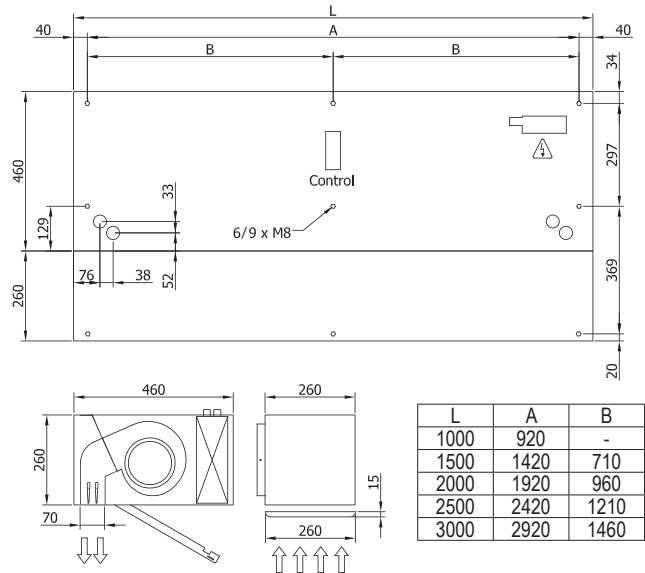
Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



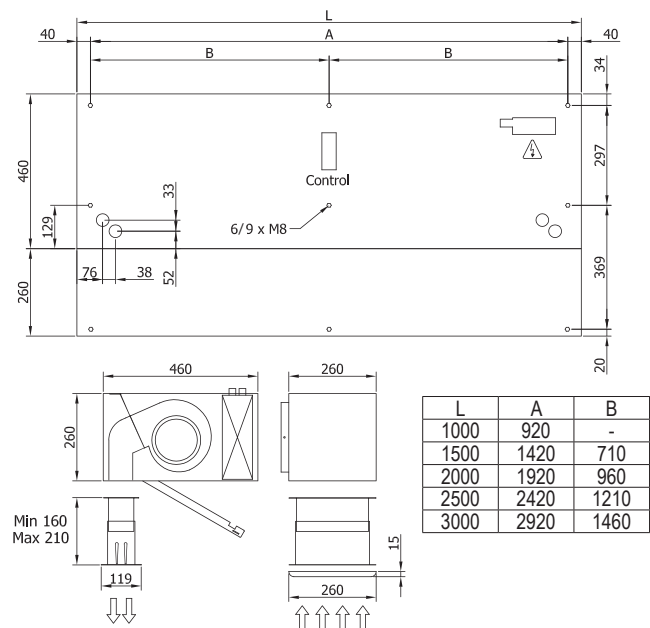
## Layouts and dimensions



Free hanging mounting



Inside ceiling surface mounting



False ceiling invisible mounting



## Characteristics



- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille (free of maintenance) made with aluminium profiles and blow-out nozzle, integrated in a single white frame colour RAL 9016. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable in both directions.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

## Specifications

AIR ONLY						
Model	Airflow m³/h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
RM 1000 A	1800	0,212	0,94	55	57	
RM 1500 A	2700	0,318	1,41	56	85	
RM 2000 A	3600	0,424	1,88	57	109	
RM 2500 A	4500	0,530	2,35	58	137	
RECM 1000 A	1840	0,142	1,24	56	57	
RECM 1500 A	2760	0,213	1,86	57	85	
RECM 2000 A	3680	0,284	2,48	58	109	
RECM 2500 A	4600	0,355	3,10	59	137	
RG 1000 A	2400	0,642	2,85	57	61	
RG 1500 A	3200	0,856	3,80	58	90	
RG 2000 A	4800	1,284	5,70	59	118	
RG 2500 A	5600	1,498	6,65	60	145	
RECG 1000 A	2700	0,213	1,86	61	61	
RECG 1500 A	3600	0,284	2,48	62	90	
RECG 2000 A	5400	0,426	3,72	63	118	
RECG 2500 A	6300	0,497	4,34	64	145	

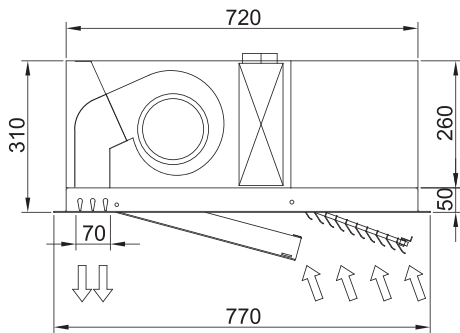
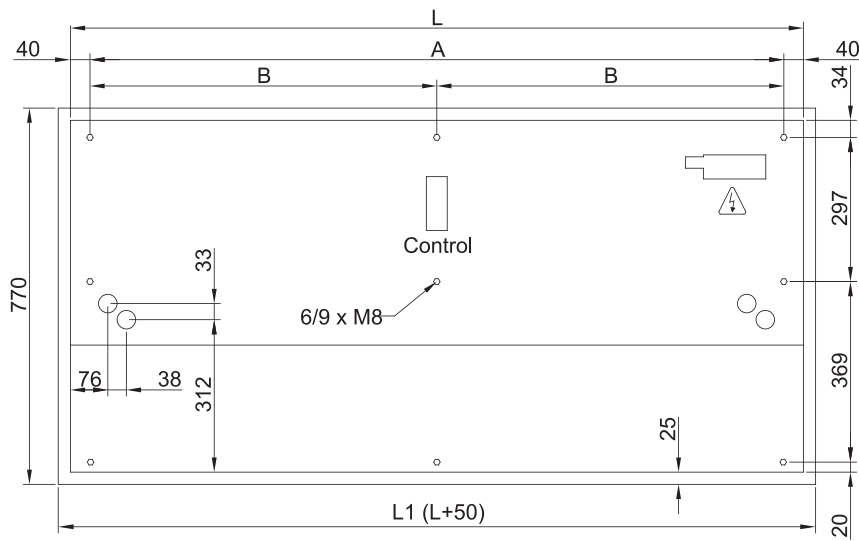
ELECTRICAL HEATED							
Model	Airflow m³/h	Electrical Heating Capacity		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		400Vx3-50Hz kW	230V-50Hz				
RM 1000 E	1800	3/6/9	0,212	0,94	55	65	
RM 1500 E	2700	4/8/12	0,318	1,41	56	98	
RM 2000 E	3600	6/12/18	0,424	1,88	57	130	
RM 2500 E	4500	6/12/18	0,530	2,35	58	162	
RECM 1000 E	1840	3/6/9	0,142	1,24	56	65	
RECM 1500 E	2760	4/8/12	0,213	1,86	57	98	
RECM 2000 E	3680	6/12/18	0,284	2,48	58	130	
RECM 2500 E	4600	6/12/18	0,355	3,10	59	162	
RG 1000 E	2400	5/10/15	0,642	2,85	57	70	
RG 1500 E	3200	7,5/15/22,5	0,856	3,80	58	104	
RG 2000 E	4800	10/20/30	1,284	5,70	59	140	
RG 2500 E	5600	10/20/30	1,498	6,65	60	172	
RECG 1000 E	2700	5/10/15	0,213	1,86	61	70	
RECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	104	
RECG 2000 E	5400	10/20/30	0,426	3,72	63	140	
RECG 2500 E	6300	10/20/30	0,497	4,34	64	172	

WATER HEATED											
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
RM 1000 P	1660	9,17	880	8,56	4370	8,52	1220	0,428	1,90	56	63
RM 1500 P	2490	14,26	760	13,69	6460	14,34	4480	0,642	2,85	57	93
RM 2000 P	3320	20,65	1930	18,26	4790	18,65	2060	0,856	3,80	58	122
RM 2500 P	4150	26,92	3810	22,12	3850	24,32	4040	1,070	4,75	59	153
RECM 1000 P	1720	9,38	920	8,77	4560	8,74	1280	0,142	1,24	56	63
RECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,213	1,86	57	93
RECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,284	2,48	58	122
RECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,355	3,10	59	153
RG 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	67
RG 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	98
RG 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	131
RG 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	163
RECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	67
RECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	98
RECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	131
RECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	163

Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



**Dimensions**



	L	L1	A	B
RWIN 1000	1000	1050	920	-
RWIN 1500	1500	1550	1420	710
RWIN 2000	2000	2050	1920	960
RWIN 2500	2500	2550	2420	1210

**Finishes and details**

Designed to be integrated in a false ceiling or in a bulkhead at the entrance of a local



Customizable inlet grille in RAL color optionally





**Characteristics**



- Stylish, discreet and contemporary design adaptive to any interior architecture.
- Smooth front panel can be customized with logotypes, lighting, lettering or safety and informative signals, according to the client requirements.
- Self-supporting steel rounded casing with edgeless plastic side covers, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Hidden top air entrance, avoiding the inside view of the unit and the inlet grille.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

**AIR ONLY**

Model	Airflow m³/h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
SMART M 1000 A	1800	0,212	0,94	53	34	
SMART M 1500 A	2700	0,318	1,41	54	50	
SMART M 2000 A	3600	0,424	1,88	55	62	
SMART M 2500 A	4500	0,530	2,35	56	66	
SMART M 3000 A	5400	0,636	2,82	57	76	
SMART ECM 1000 A	1840	0,142	1,24	54	34	
SMART ECM 1500 A	2760	0,213	1,86	55	50	
SMART ECM 2000 A	3680	0,284	2,48	56	62	
SMART ECM 2500 A	4600	0,355	3,10	57	66	
SMART ECM 3000 A	5520	0,426	3,72	58	76	
SMART G 1000 A	2400	0,642	2,85	55	38	
SMART G 1500 A	3200	0,856	3,80	56	55	
SMART G 2000 A	4800	1,284	5,70	57	72	
SMART G 2500 A	5600	1,498	6,65	58	76	
SMART G 3000 A	6400	1,712	7,60	59	86	
SMART ECG 1000 A	2700	0,213	1,86	59	38	
SMART ECG 1500 A	3600	0,284	2,48	60	55	
SMART ECG 2000 A	5400	0,426	3,72	61	72	
SMART ECG 2500 A	6300	0,497	4,34	62	76	
SMART ECG 3000 A	7200	0,568	5,96	63	86	

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW	230V-50Hz				
SMART M 1000 E	1800	3/6/9	0,212	0,94	53	41	
SMART M 1500 E	2700	4/8/12	0,318	1,41	54	62	
SMART M 2000 E	3600	6/12/18	0,424	1,88	55	80	
SMART M 2500 E	4500	6/12/18	0,530	2,35	56	86	
SMART M 3000 E	5400	8/16/24	0,636	2,82	57	99	
SMART ECM 1000 E	1840	3/6/9	0,142	1,24	54	41	
SMART ECM 1500 E	2760	4/8/12	0,213	1,86	55	62	
SMART ECM 2000 E	3680	6/12/18	0,284	2,48	56	80	
SMART ECM 2500 E	4600	6/12/18	0,355	3,10	57	86	
SMART ECM 3000 E	5520	8/16/24	0,426	3,72	58	99	
SMART G 1000 E	2400	5/10/15	0,642	2,85	55	46	
SMART G 1500 E	3200	7,5/15/22,5	0,856	3,80	56	68	
SMART G 2000 E	4800	10/20/30	1,284	5,70	57	90	
SMART G 2500 E	5600	10/20/30	1,498	6,65	58	96	
SMART G 3000 E	6400	10/20/30	1,712	7,60	59	109	
SMART ECG 1000 E	2700	5/10/15	0,213	1,86	59	46	
SMART ECG 1500 E	3600	7,5/15/22,5	0,284	2,48	60	68	
SMART ECG 2000 E	5400	10/20/30	0,426	3,72	61	90	
SMART ECG 2500 E	6300	10/20/30	0,497	4,34	62	96	
SMART ECG 3000 E	7200	10/20/30	0,568	5,96	63	109	

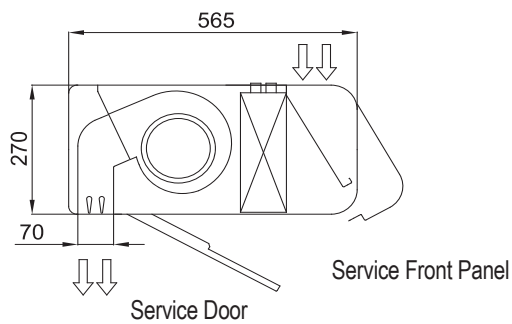
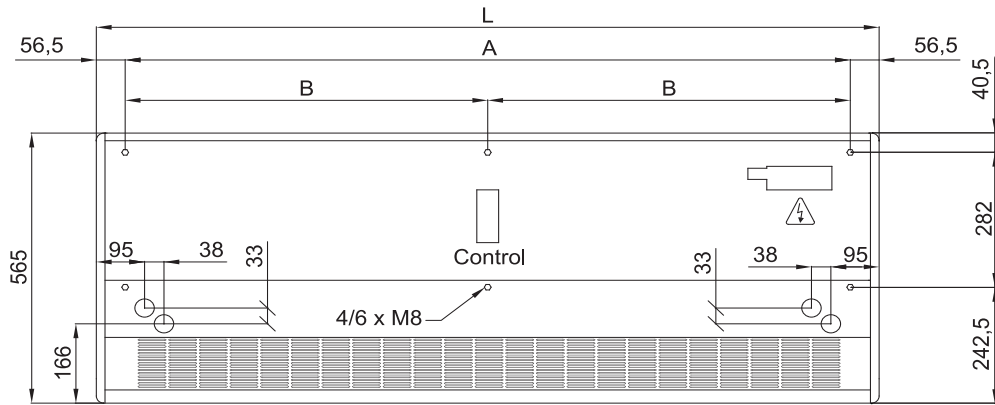
**WATER HEATED**

Model	Airflow m³/h	P86			P64			P54			Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa	Power Fans 230V-50Hz kW					
SMART M 1000 P	1660	9,17	880	8,56	4370	8,52	1220	0,428	1,90	54	39		
SMART M 1500 P	2490	14,26	760	13,69	6460	14,34	4480	0,642	2,85	55	58		
SMART M 2000 P	3320	20,65	1930	18,26	4790	18,65	2060	0,856	3,80	56	73		
SMART M 2500 P	4150	26,92	3810	22,12	3850	24,32	4040	1,070	4,75	57	79		
SMART M 3000 P	4980	33,24	6590	28,37	6760	29,77	5660	1,280	5,70	58	91		
SMART ECM 1000 P	1720	9,38	920	8,77	4560	8,74	1280	0,142	1,24	54	39		
SMART ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,213	1,86	55	58		
SMART ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,284	2,48	56	73		
SMART ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,355	3,10	57	79		
SMART ECM 3000 P	5160	33,99	6860	29,05	7050	30,54	5920	0,426	3,72	58	91		
SMART G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	55	44		
SMART G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	56	64		
SMART G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	57	83		
SMART G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	58	87		
SMART G 3000 P	6000	37,35	8110	32,10	8410	34,03	7180	1,712	7,60	59	99		
SMART ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	59	44		
SMART ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	60	64		
SMART ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	61	83		
SMART ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	62	87		
SMART ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,568	5,96	63	99		

Water heated: connection pipes P86 and P64 are 2x3/4" female, P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.

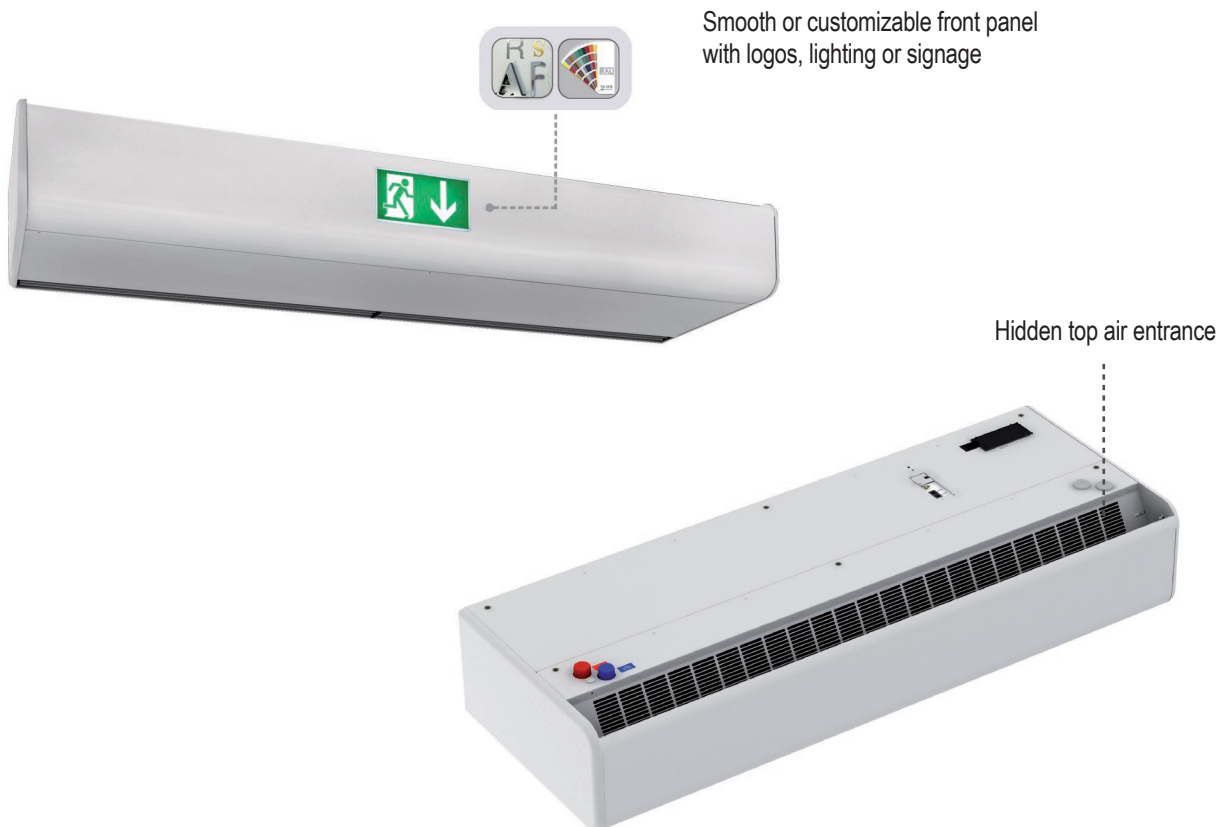


**Dimensions**



	L	A	B
SMART 1000	1034	920	-
SMART 1500	1534	1420	710
SMART 2000	2034	1920	960
SMART 2500	2534	2420	1210
SMART 3000	3034	2920	1460

**Finishes and details**





Characteristics



- Decorative air curtain in contemporary architectural style. Its minimalist and smart design integrates in any environment and offers infinite options to customize.
- Can include personalized logotypes, signs or graphic designs. It can even incorporate clocks or lighting.
- Front anodized aluminium panels. Optionally manufactured in brushed or mirror polished stainless steel. Other materials are possible, such as wood, metal, etc.
- Central structure made of galvanized steel finished in black forge as standard. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable in both directions.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

Specifications

AIR ONLY

Model	Airflow m³/h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz A			
ZEN M 1000 A	1980	0,318	1,41	55	32	
ZEN M 1500 A	2640	0,424	1,88	56	46	
ZEN M 2000 A	3960	0,636	2,82	57	62	
ZEN M 2500 A	4620	0,742	3,29	58	75	
ZEN G 1000 A	2400	0,642	2,85	57	36	
ZEN G 1500 A	3200	0,856	3,80	58	50	
ZEN G 2000 A	4800	1,284	5,70	59	69	
ZEN G 2500 A	5600	1,498	6,65	60	83	
ZEN ECG 1000 A	2700	0,213	1,86	61	36	
ZEN ECG 1500 A	3600	0,284	2,48	62	50	
ZEN ECG 2000 A	5400	0,426	3,72	63	69	
ZEN ECG 2500 A	6300	0,497	4,34	64	83	

ELECTRICAL HEATED

Model	Airflow m³/h	Electrical Heating Capacity		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		400Vx3-50Hz kW	230V-50Hz A				
ZEN M 1000 E	1980	3/6/9	0,318	1,41	55	40	
ZEN M 1500 E	2640	4/8/12	0,424	1,88	56	58	
ZEN M 2000 E	3960	6/12/18	0,636	2,82	57	77	
ZEN M 2500 E	4620	6/12/18	0,742	3,29	58	94	
ZEN G 1000 E	2400	5/10/15	0,642	2,85	57	43	
ZEN G 1500 E	3200	7,5/15/22,5	0,856	3,80	58	62	
ZEN G 2000 E	4800	10/20/30	1,284	5,70	59	85	
ZEN G 2500 E	5600	10/20/30	1,498	6,65	60	103	
ZEN ECG 1000 E	2700	5/10/15	0,213	1,86	61	43	
ZEN ECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	62	
ZEN ECG 2000 E	5400	10/20/30	0,426	3,72	63	85	
ZEN ECG 2500 E	6300	10/20/30	0,497	4,34	64	103	

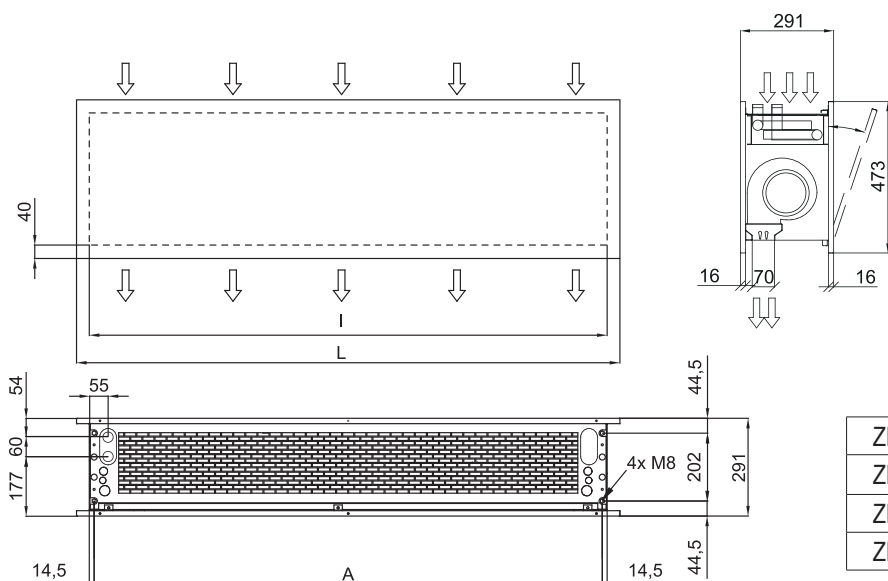
WATER HEATED

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
ZEN M 1000 P	1860	9,84	1000	9,22	4990	-	-	0,318	1,41	55	37
ZEN M 1500 P	2480	14,23	760	13,65	6430	-	-	0,424	1,88	56	53
ZEN M 2000 P	3720	22,17	2190	19,70	5470	-	-	0,636	2,82	57	71
ZEN M 2500 P	4340	27,69	4000	23,48	4060	-	-	0,742	3,29	58	86
ZEN G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	40
ZEN G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	57
ZEN G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	78
ZEN G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	95
ZEN ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	40
ZEN ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	57
ZEN ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	78
ZEN ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	95

Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



Dimensions



	L	I	A
ZEN 1000	1220	1140	1115
ZEN 1500	1620	1544	1515
ZEN 2000	2120	2044	2015
ZEN 2500	2620	2544	2515

Finishes



- Painted any RAL colour or metal
- Different materials: aluminium, stainless steel AISI 304 (brushed or polished), wood, glass, PVC/PES, etc.
- Logos, lights, clocks, signs, vinyls, patterns, etc.



**Characteristics**



- Decorative rounded air curtain for vertical or horizontal installation.
- Faceted self-supporting casing construction made of galvanized plated steel, finished in structural epoxy-polyester painting white RAL9016 or silver grey RAL9006 as standard. Other colours or stainless steel are available on request.
- Large perforated inlet grille avoiding intensive maintenance.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

**AIR ONLY**

Model	Airflow m³/h	Power Fans		Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
RUND M 1000 A	1980	0,318	1,41	55	42	
RUND M 1500 A	2640	0,424	1,88	56	63	
RUND M 2000 A	3960	0,636	2,82	57	79	
RUND M 2500 A	4620	0,742	3,29	58	88	
RUND M 3000 A	5280	0,848	3,76	59	99	
RUND G 1000 A	2400	0,642	2,85	57	46	
RUND G 1500 A	3200	0,856	3,80	58	68	
RUND G 2000 A	4800	1,284	5,70	59	89	
RUND G 2500 A	5600	1,498	6,65	60	98	
RUND G 3000 A	6400	1,712	7,60	61	108	
RUND ECG 1000 A	2700	0,213	1,86	61	46	
RUND ECG 1500 A	3600	0,284	2,48	62	68	
RUND ECG 2000 A	5400	0,426	3,72	63	89	
RUND ECG 2500 A	6300	0,497	4,34	64	98	
RUND ECG 3000 A	7200	0,568	5,96	65	108	

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW	230V-50Hz				
RUND M 1000 E	1980	3/6/9	0,318	1,41	55	49	
RUND M 1500 E	2640	4/8/12	0,424	1,88	56	75	
RUND M 2000 E	3960	6/12/18	0,636	2,82	57	97	
RUND M 2500 E	4620	6/12/18	0,742	3,29	58	108	
RUND M 3000 E	5280	8/16/24	0,848	3,76	59	119	
RUND G 1000 E	2400	5/10/15	0,642	2,85	57	54	
RUND G 1500 E	3200	7,5/15/22,5	0,856	3,80	58	81	
RUND G 2000 E	4800	10/20/30	1,284	5,70	59	107	
RUND G 2500 E	5600	10/20/30	1,498	6,65	60	118	
RUND G 3000 E	6400	10/20/30	1,712	7,60	61	128	
RUND ECG 1000 E	2700	5/10/15	0,213	1,86	61	54	
RUND ECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	81	
RUND ECG 2000 E	5400	10/20/30	0,426	3,72	63	107	
RUND ECG 2500 E	6300	10/20/30	0,497	4,34	64	118	
RUND ECG 3000 E	7200	10/20/30	0,568	5,96	65	128	

**WATER HEATED**

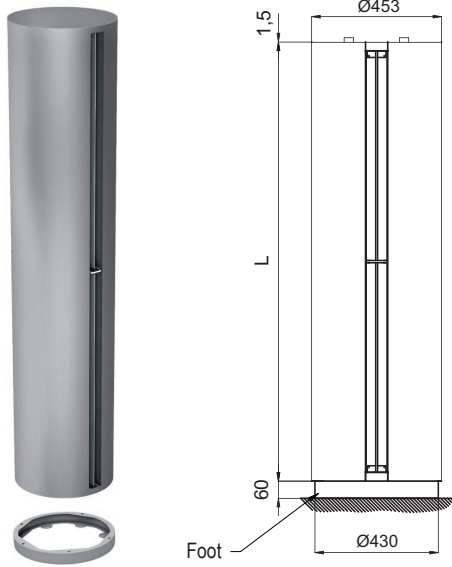
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
RUND M 1000 P	1860	9,84	1000	9,22	4990	-	-	0,318	1,41	55	47
RUND M 1500 P	2480	14,23	760	13,65	6430	-	-	0,424	1,88	56	71
RUND M 2000 P	3720	22,17	2190	19,70	5470	-	-	0,636	2,82	57	90
RUND M 2500 P	4340	27,69	4000	23,48	4060	-	-	0,742	3,29	58	101
RUND M 3000 P	4960	33,15	6560	28,29	6730	-	-	0,848	3,76	59	112
RUND G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	52
RUND G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	77
RUND G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	100
RUND G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	109
RUND G 3000 P	6000	37,35	8110	32,10	8410	34,03	7180	1,712	7,60	61	119
RUND ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	52
RUND ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	77
RUND ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	100
RUND ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	109
RUND ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,568	5,96	65	119

Water heated: connection pipes P86 and P64 are 2x3/4" male (female if rear pipes), P54 2x1" male . P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.

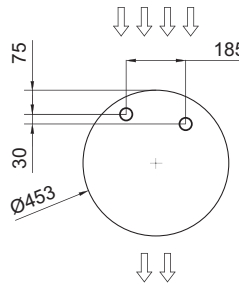


**Layouts and dimensions**

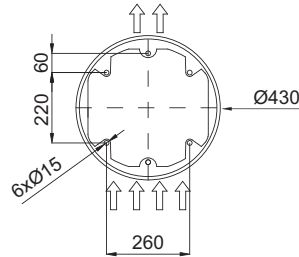
**Vertical installation**



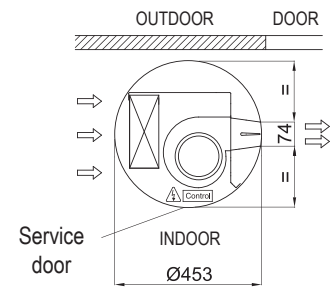
**Water pipes top entrance**



**Floor fixing points with foot**



**Standard installation (vertical left side)**



	L
RUND 1000	1025
RUND 1500	1525
RUND 2000	2030
RUND 2500	2530
RUND 3000	2980

**Horizontal installation**



Ceiling fixation through threaded rods



Wall/ceiling fixation through arms



Wall/ceiling fixation through angle supports



Wall fixation through lateral arms



Floor fixation (goalpost)



Characteristics



- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Front panel with option to customize and the possibility of including personalize logos, signs, graphic designs, images, etc.
- The inlet areas are located behind the front panel. They do not need maintenance.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

Specifications

AIR ONLY

Model	Airflow m³/h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
DAM M 1000 A	1800	0,212	0,94	55	38	
DAM M 1500 A	2700	0,318	1,41	56	56	
DAM M 2000 A	3600	0,424	1,88	57	70	
DAM M 2500 A	4500	0,530	2,35	58	76	
DAM M 3000 A	5400	0,636	2,82	59	88	
DAM ECM 1000 A	1840	0,142	1,24	56	38	
DAM ECM 1500 A	2760	0,213	1,86	57	56	
DAM ECM 2000 A	3680	0,284	2,48	58	70	
DAM ECM 2500 A	4600	0,355	3,10	59	76	
DAM ECM 3000 A	5520	0,426	3,72	60	88	
DAM G 1000 A	2400	0,642	2,85	57	42	
DAM G 1500 A	3200	0,856	3,80	58	61	
DAM G 2000 A	4800	1,284	5,70	59	80	
DAM G 2500 A	5600	1,498	6,65	60	86	
DAM G 3000 A	6400	1,712	7,60	61	98	
DAM ECG 1000 A	2700	0,213	1,86	61	42	
DAM ECG 1500 A	3600	0,284	2,48	62	61	
DAM ECG 2000 A	5400	0,426	3,72	63	80	
DAM ECG 2500 A	6300	0,497	4,34	64	86	
DAM ECG 3000 A	7200	0,568	5,96	65	98	

ELECTRICAL HEATED

Model	Airflow m³/h	Electrical Heating		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW	230V-50Hz				
DAM M 1000 E	1800	3/6/9	0,212	0,94	55	45	
DAM M 1500 E	2700	4/8/12	0,318	1,41	56	68	
DAM M 2000 E	3600	6/12/18	0,424	1,88	57	88	
DAM M 2500 E	4500	6/12/18	0,530	2,35	58	96	
DAM M 3000 E	5400	8/16/24	0,636	2,82	59	111	
DAM ECM 1000 E	1840	3/6/9	0,142	1,24	56	45	
DAM ECM 1500 E	2760	4/8/12	0,213	1,86	57	68	
DAM ECM 2000 E	3680	6/12/18	0,284	2,48	58	88	
DAM ECM 2500 E	4600	6/12/18	0,355	3,10	59	96	
DAM ECM 3000 E	5520	8/16/24	0,426	3,72	60	111	
DAM G 1000 E	2400	5/10/15	0,642	2,85	57	50	
DAM G 1500 E	3200	7,5/15/22,5	0,856	3,80	58	74	
DAM G 2000 E	4800	10/20/30	1,284	5,70	59	98	
DAM G 2500 E	5600	10/20/30	1,498	6,65	60	106	
DAM G 3000 E	6400	10/20/30	1,712	7,60	61	121	
DAM ECG 1000 E	2700	5/10/15	0,213	1,86	61	50	
DAM ECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	74	
DAM ECG 2000 E	5400	10/20/30	0,426	3,72	63	98	
DAM ECG 2500 E	6300	10/20/30	0,497	4,34	64	106	
DAM ECG 3000 E	7200	10/20/30	0,568	5,96	65	121	

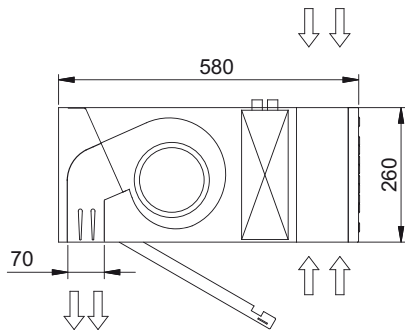
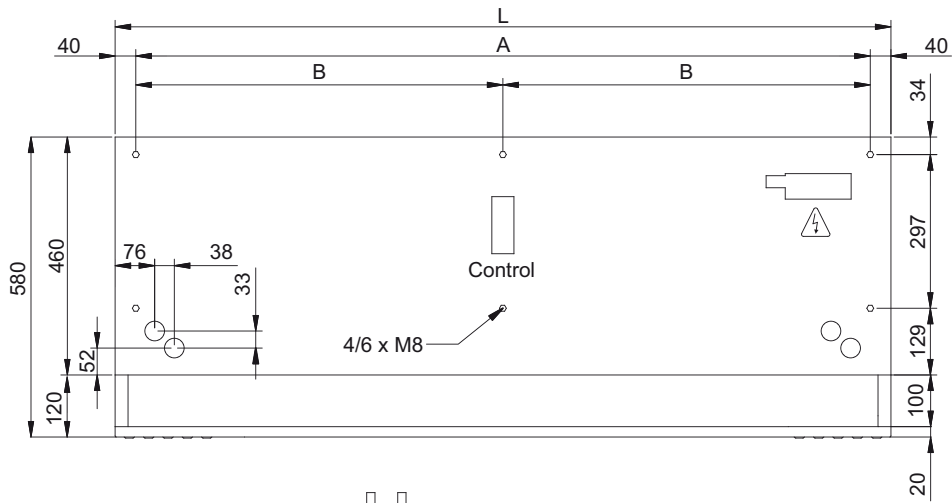
WATER HEATED

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
DAM M 1000 P	1660	9,17	880	8,56	4370	8,52	1220	0,428	1,90	56	43
DAM M 1500 P	2490	14,26	760	13,69	6460	14,34	4480	0,642	2,85	57	64
DAM M 2000 P	3320	20,65	1930	18,26	4790	18,65	2060	0,856	3,80	58	81
DAM M 2500 P	4150	26,92	3810	22,12	3850	24,32	4040	1,070	4,75	59	89
DAM M 3000 P	4980	33,24	6590	28,37	6760	29,77	5660	1,280	5,70	60	103
DAM ECM 1000 P	1720	9,38	920	8,77	4560	8,74	1280	0,142	1,24	56	43
DAM ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,213	1,86	57	64
DAM ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,284	2,48	58	81
DAM ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,355	3,10	59	89
DAM ECM 3000 P	5160	33,99	6860	29,05	7050	30,54	5920	0,426	3,72	60	103
DAM G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	48
DAM G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	70
DAM G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	91
DAM G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	97
DAM G 3000 P	6000	37,35	8110	32,10	8410	34,03	7180	1,712	7,60	61	111
DAM ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	48
DAM ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	70
DAM ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	91
DAM ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	97
DAM ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,568	5,96	65	111

Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



**Dimensions**



	L	A	B
DAM 1000	1000	920	-
DAM 1500	1500	1420	710
DAM 2000	2000	1920	960
DAM 2500	2500	2420	1210
DAM 3000	3000	2920	1460

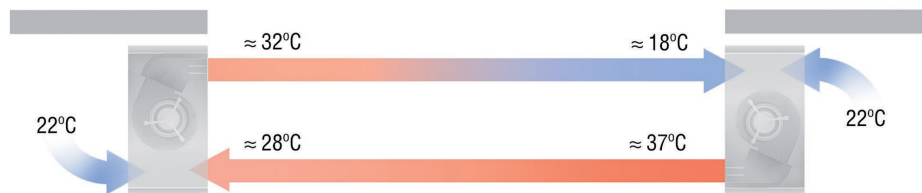
**Dam Twin System**

The DAM TWIN system consists on two vertical DAM air curtains face to face, one with the air jet ahead and the other behind.

At the end of each jet there is the inlet of the other air curtain helping to close the air barrier.

This double jet works as a closed circuit creating a separation zone at the door entrance.

DAM TWIN system is an optimal solution for installations with very adverse conditions.







## Characteristics



- Compact and low profile recessed air curtain with full grille view.
- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille (free of maintenance) made with aluminium profiles and blow-out nozzle, integrated in a single white frame colour RAL 9016. Other colours are available on request.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

## Specifications

### AIR ONLY

Model	Airflow m <sup>3</sup> /h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
RDAM M 1000 A	1800	0,212	0,94	0,94	55	45
RDAM M 1500 A	2700	0,318	1,41	1,41	56	66
RDAM M 2000 A	3600	0,424	1,88	1,88	57	84
RDAM M 2500 A	4500	0,530	2,35	2,35	58	93
RDAM ECM 1000 A	1840	0,142	1,24	1,24	56	45
RDAM ECM 1500 A	2760	0,213	1,86	1,86	57	66
RDAM ECM 2000 A	3680	0,284	2,48	2,48	58	84
RDAM ECM 2500 A	4600	0,355	3,10	3,10	59	93
RDAM G 1000 A	2400	0,642	2,85	2,85	57	49
RDAM G 1500 A	3200	0,856	3,80	3,80	58	71
RDAM G 2000 A	4800	1,284	5,70	5,70	59	94
RDAM G 2500 A	5600	1,498	6,65	6,65	60	103
RDAM ECG 1000 A	2700	0,213	1,86	1,86	61	49
RDAM ECG 1500 A	3600	0,284	2,48	2,48	62	71
RDAM ECG 2000 A	5400	0,426	3,72	3,72	63	94
RDAM ECG 2500 A	6300	0,497	4,34	4,34	64	103

### ELECTRICAL HEATED

Model	Airflow m <sup>3</sup> /h	Electrical Heating		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW	230V-50Hz				
RDAM M 1000 E	1800	3/6/9	0,212	0,212	0,94	55	52
RDAM M 1500 E	2700	4/8/12	0,318	0,318	1,41	56	78
RDAM M 2000 E	3600	6/12/18	0,424	0,424	1,88	57	102
RDAM M 2500 E	4500	6/12/18	0,530	0,530	2,35	58	113
RDAM ECM 1000 E	1840	3/6/9	0,142	0,142	1,24	56	52
RDAM ECM 1500 E	2760	4/8/12	0,213	0,213	1,86	57	78
RDAM ECM 2000 E	3680	6/12/18	0,284	0,284	2,48	58	102
RDAM ECM 2500 E	4600	6/12/18	0,355	0,355	3,10	59	113
RDAM G 1000 E	2400	5/10/15	0,642	0,642	2,85	57	57
RDAM G 1500 E	3200	7,5/15/22,5	0,856	0,856	3,80	58	84
RDAM G 2000 E	4800	10/20/30	1,284	1,284	5,70	59	112
RDAM G 2500 E	5600	10/20/30	1,498	1,498	6,65	60	123
RDAM ECG 1000 E	2700	5/10/15	0,213	0,213	1,86	61	57
RDAM ECG 1500 E	3600	7,5/15/22,5	0,284	0,284	2,48	62	84
RDAM ECG 2000 E	5400	10/20/30	0,426	0,426	3,72	63	112
RDAM ECG 2500 E	6300	10/20/30	0,497	0,497	4,34	64	123

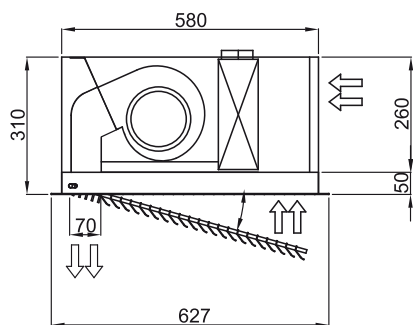
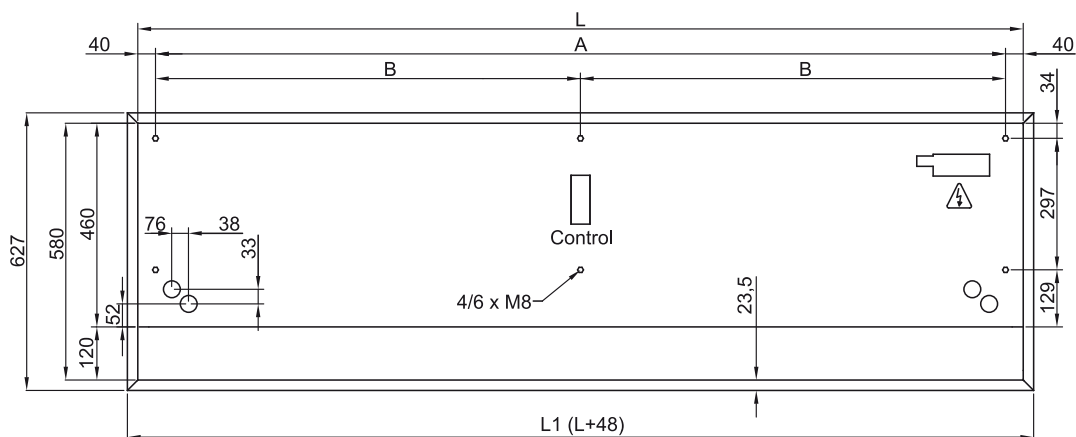
### WATER HEATED

Model	Airflow m <sup>3</sup> /h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
RDAM M 1000 P	1660	9,17	880	8,56	4370	8,52	1220	0,428	1,90	56	50
RDAM M 1500 P	2490	14,26	760	13,69	6460	14,34	4480	0,642	2,85	57	74
RDAM M 2000 P	3320	20,65	1930	18,26	4790	18,65	2060	0,856	3,80	58	95
RDAM M 2500 P	4150	26,92	3810	22,12	3850	24,32	4040	1,070	4,75	59	106
RDAM ECM 1000 P	1720	9,38	920	8,77	4560	8,74	1280	0,142	1,24	56	50
RDAM ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,213	1,86	57	74
RDAM ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,284	2,48	58	95
RDAM ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,355	3,10	59	106
RDAM G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	55
RDAM G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	80
RDAM G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	105
RDAM G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	114
RDAM ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	55
RDAM ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	80
RDAM ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	105
RDAM ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	114

Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



**Dimensions**

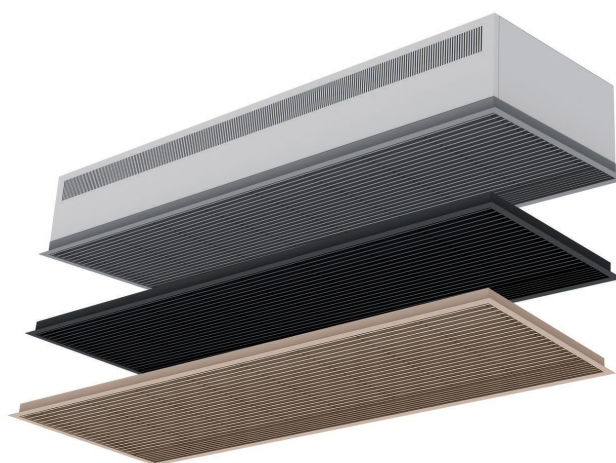


	L	L1	A	B
RDAM 1000	1000	1048	920	-
RDAM 1500	1500	1548	1420	710
RDAM 2000	2000	2048	1920	960
RDAM 2500	2500	2548	2420	1210

**Finishes and details**



Detail of exposed inlet grille

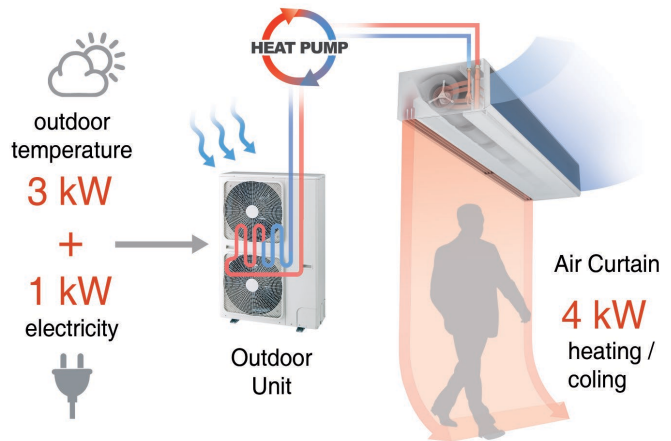


Customizable inlet grille in RAL color optionally



## Heat Pump Technology

The heat pump is a machine that allows energy to be transferred in the form of heat from one environment to another using only a small amount of electrical power from the network. It consists of a closed circuit through which a refrigerant flows, and depending on the temperature and pressure conditions, changes its state from liquid to gas or vice versa. For each electrical kW consumed, the heat pump gets 4kW of heating / cooling capacity (gets free 3kW of outside air). This system is so efficient that it is considered renewable energy.



## Advantages and Benefits

Heat pump air curtains are absolutely efficient reducing the heating cost and CO2 emissions up to 70%.

- High energy efficiency ratings to save big amounts of money on your energy bill
- Short payback period thanks to very high level of energy saving
- Heating and cooling included in the same system (reverse cycle)
- Environmentally friendly thanks to low consumption (it is considered renewable energy)

## Heat Pump vs Electrical Air Curtain - Energy Saving up to 70%

How much money can I save using a Heat Pump Air curtain?

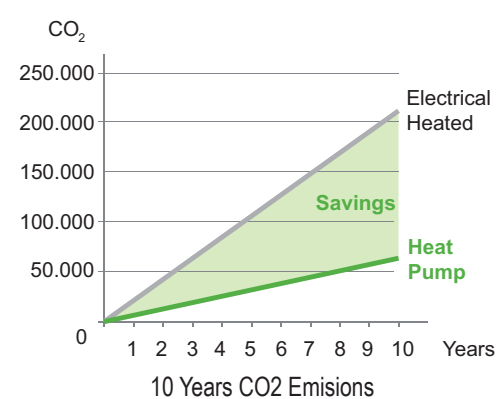
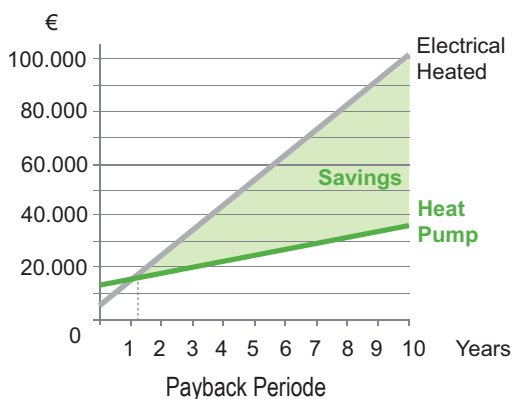
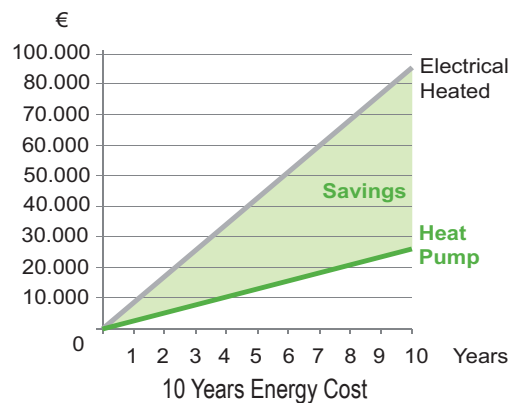
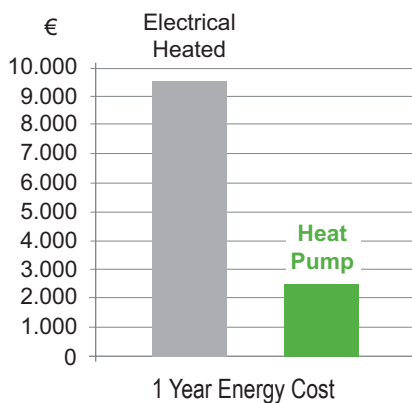
### Example:

Door dimension: 2,5 m width x 4 m height  
 Running time: 12 hours/day, 6 days/week, 27 weeks (~ 1/2 years)  
 Energy cost: 0,17 €/kW/h (EU-27 average cost)  
 Selected unit: ECG 2500 of 25kW  
 COP: 4,09 (Coefficient of Performance)

	Electrical Air Curtain		Heat Pump Air Curtain		Difference
Total Heating Power	25	kW	25	kW	0 kW
Air Curtain Price	5.616	€/unit	13.933	€/unit	+ 8.317 €
Energy Consumption	56.376	kW/h	13.783	kW/h	- 42.593 kW/h
Energy Cost	9.583	€	2.343	€	- 7.240 €
CO2 Emissions	22.550	kg	5.513	kg	- 17.037 kg

### Result:

The payback periode is 1 year and 2 months. In addition, 70% of energy and CO2 emissions to the environment are saved every year.





## Complete Solution

Airtècnics manufactures air curtains for heat pumps of different brands and systems for more than 10 years. Our policy is to design and test the combination in conjunction with each heat pump manufacturer to offer a complete technical solution. The objective is to facilitate the entire process from the engineering project to the installation, including:

- The selection of curtain model, outdoor unit, Kit Interface and direct expansion valve
- The choice of the regulation system that best suits the customer's needs
- Kit Interface adaptation and configuration of the programmable control to communicate with the air curtain
- Installation and thermal insulation of the temperature sensors in the heat exchanger inside the air curtain
- All the necessary documentation for the combination (installation manual, electrical diagram, regulation ...) to facilitate installation and start-up (avoiding errors and reducing installation time)

## Compatible - Brands

Airtècnics air curtains are compatible with the main heat pump brands:



Please consult, for other brands: Samsung, Mitsubishi Heavy Industries, Panasonic, Fujitsu, Electrolux ...

## Compatible - Systems

They can be combined with two systems:

- 1:1 Simple: An exclusive outdoor unit for the air curtain (or 1:2 for great powers: 1 air curtain with 2 outdoor units)
- VRF / VRV Combined: Variable volume systems that share an outdoor machine for several indoor units. This system can be heat pump (2 tubes) or with heat recovery (3 tubes)

## Only Heating or Heating / Cooling Mode

It is recommended that heat pump air curtains work only in Heating Mode.

In Cooling Mode, the ventilation speed must be limited to avoid water droplet entrainment. The limitation of ventilation supposes a reduction of the efficiency (barrier effect) of the air curtain. By default the curtains are only heating, but on request they can be heating and cooling.

## Regulation - Slave or Master

We have different control options depending on the needs of the client:

- Basic in Slave mode with CS-5DX-NE control (standard) or Master with CD-5AW-IR control.
- Advanced in Slave mode or Master with Clever control

### CS-5DX-NE

Basic Control Slave heat pump, 5 ventilation speed, Door contact, Cooling signal and Defrost



### CD-5AW-IR

Basic Control Master heat pump, 5 ventilation speed, ON/OFF heat pump















### CLEVER

Advanced Control Master/Slave heat pump, Ventilation and heating proportional 0-100%, Mode, Door contact, Cooling signal, Defrost, Modbus RTU



## Available Air Curtains Models for Heat Pump

Commercial				Industrial (*)
Standard		Decorative / Tailor Made		
 Windbox	 Dam	 Smart	 Zen ❄️	 Rund ❄️
			 Rotowind	 Windbox L,XL
 Recessed Windbox	 Recessed Dam	 Invisair ❄️	 Windbox M,G False Ceiling Kit	 Windbox L,XL False Ceiling Kit

(\*) Consult ❄️ Models not available in Heating / Cooling



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires DAIKIN DX Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to DAIKIN Inverter outdoor heat pump unit (R410A) and expansion valve not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Outdoor Unit		Daikin Direct Expansion Valve	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230Vx1	400Vx3					
ECM 1500 DX13-DA	2460	ERQ 100 AV1	-	EKEXV 100	0,213	1,86	57	53
ECM 2000 DX16-DA	3280	ERQ 125 AV1	ERQ 125 AW1	EKEXV 125	0,284	2,48	58	69
ECM 2000 DX18-DA	3280	ERQ 140 AV1	-	EKEXV 140	0,284	2,48	58	69
ECM 2500 DX24-DA	4100	-	ERQ 200 AW1	EKEXV 200	0,355	3,10	59	86
ECM 3000 DX25-DA	4920	-	ERQ 200 AW1	EKEXV 200	0,426	3,72	60	103
ECG 1000 DX10-DA	2190	ERQ 100 AV1	-	EKEXV 80	0,213	1,86	61	50
ECG 1500 DX13-DA	2920	ERQ 100 AV1	-	EKEXV 100	0,284	2,48	62	59
ECG 1500 DX15-DA	2920	ERQ 125 AV1	ERQ 125 AW1	EKEXV 125	0,284	2,48	62	59
ECG 2000 DX24-DA	4380	-	ERQ 200 AW1	EKEXV 200	0,426	3,72	63	92
ECG 2500 DX25-DA	5110	-	ERQ 200 AW1	EKEXV 200	0,497	4,34	64	96
ECG 2500 DX29-DA	5110	-	ERQ 250 AW1	EKEXV 250	0,497	4,34	64	96
ECG 3000 DX32-DA	5840	-	ERQ 250 AW1	EKEXV 250	0,568	5,96	65	109

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

DAIKIN Inverter Outdoor Units	Heating Capacity	Heating Power	SCOP / COP	Cooling Capacity	Cooling Power	SEER / EER	Power Supply	Pipes		Pipes Minimum Length	Pipes Maximum Length	Pipes Maximum Height
	kW	kW		kW	kW			Gas	Liquid			
ERQ 100 AV1	12,5	2,74	4,56	11,2	2,81	3,99	230Vx1	5/8	3/8	-	55	35
ERQ 125 AV1	16,0	3,86	4,15	14,0	3,51	3,99	230Vx1	5/8	3/8	-	55	35
ERQ 125 AW1	16,0	4,00	4,00	14,0	3,52	3,98	400Vx3	5/8	3/8	-	55	30
ERQ 140 AV1	18,0	4,57	3,94	15,5	4,53	3,42	230Vx1	3/4	3/8	-	55	35
ERQ 200 AW1	25,0	5,56	4,50	22,4	5,22	4,29	400Vx3	3/4	3/8	-	55	30
ERQ 250 AW1	31,5	7,70	4,09	28,0	7,42	3,77	400Vx3	7/8	3/8	-	55	30

Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.

Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires DAIKIN VRV Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to DAIKIN VRV outdoor heat pump unit (R410A) and expansion valve not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Daikin Direct Expansion Valve	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
ECM 1000 VRV8-DA	1640	EKEXV 63	0,142	1,24	56	35
ECM 1500 VRV12-DA	2460	EKEXV 100	0,213	1,86	57	53
ECM 2000 VRV16-DA	3280	EKEXV 125	0,284	2,48	58	69
ECM 2000 VRV19-DA	3280	EKEXV 140	0,284	2,48	58	69
ECM 2500 VRV21-DA	4100	EKEXV 200	0,355	3,10	59	86
ECM 2500 VRV24-DA	4100	EKEXV 200	0,355	3,10	59	86
ECM 3000 VRV26-DA	4920	EKEXV 200	0,426	3,72	60	103
ECM 3000 VRV30-DA	4920	EKEXV 250	0,426	3,72	60	103
ECG 1000 VRV10-DA	2190	EKEXV 80	0,213	1,86	61	50
ECG 1500 VRV13-DA	2920	EKEXV 100	0,284	2,48	62	59
ECG 1500 VRV15-DA	2920	EKEXV 125	0,284	2,48	62	59
ECG 2000 VRV20-DA	4380	EKEXV 200	0,426	3,72	63	92
ECG 2000 VRV24-DA	4380	EKEXV 200	0,426	3,72	63	92
ECG 2500 VRV25-DA	5110	EKEXV 200	0,497	4,34	64	96
ECG 2500 VRV29-DA	5110	EKEXV 250	0,497	4,34	64	96
ECG 3000 VRV29-DA	5840	EKEXV 250	0,568	5,96	65	109
ECG 3000 VRV34-DA	5840	EKEXV 250	0,568	5,96	65	109

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

### DAIKIN VRV Outdoor Units

VRV IV HP (Heat Pump)

VRV IV HR (Heat Recovery)



When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires MITSUBISHI ELECTRIC DX Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to MITSUBISHI ELECTRIC Power Inverter outdoor heat pump unit (R32 / R410A) with expansion valve, not included, the customer should purchase it.

## Specifications

Model	Airflow m³/h	Outdoor Unit (*)		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230Vx1	400Vx3				
ECM 1000 DX8-ME	1640	PUZ-ZM71VHA	-	0,142	1,24	56	35
ECM 1500 DX11-ME	2460	PUZ-ZM100VKA	PUZ-ZM100YKA	0,213	1,86	57	53
ECM 1500 DX13-ME	2460	PUZ-ZM125VKA	PUZ-ZM125YKA	0,213	1,86	57	53
ECM 2000 DX16-ME	3280	PUZ-ZM140VKA	PUZ-ZM140YKA	0,284	2,48	58	69
ECM 2500 DX22-ME	4100	-	PUHZ-ZRP200YKA	0,355	3,10	59	86
ECM 2500 DX24-ME	4100	-	PUHZ-ZRP250YKA	0,355	3,10	59	86
ECM 3000 DX26-ME	4920	-	PUHZ-ZRP250YKA	0,426	3,72	60	103
ECG 1000 DX10-ME	2190	PUZ-ZM100VKA	PUZ-ZM100YKA	0,213	1,86	61	50
ECG 1500 DX14-ME	2920	PUZ-ZM125VKA	PUZ-ZM125YKA	0,284	2,48	62	59
ECG 2000 DX22-ME	4380	-	PUHZ-ZRP200YKA	0,426	3,72	63	92
ECG 2000 DX24-ME	4380	-	PUHZ-ZRP250YKA	0,426	3,72	63	92
ECG 2500 DX27-ME	5110	-	PUHZ-ZRP250YKA	0,497	4,34	64	96
ECG 3000 DX27-ME	5840	-	PUHZ-ZRP250YKA	0,568	5,96	65	109

(\*) Includes direct expansion valve.

ZM units with gas R32 and ZRP with gas R410A.

(\*) Also compatible with Standard Inverter units PUHZ-P200YKA and PUHZ-P250YKA (R410A) and Zubadan range.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

MITSUBISHI ELECTRIC												
Power Inverter (*) Outdoor Units	Heating Capacity	Heating Power	SCOP / COP	Cooling Capacity	Cooling Power	SEER / EER	Power Supply	Pipes		Pipes Minimum Length	Pipes Maximum Length	Pipes Maximum Height
ZM (R32) / ZRP (R410A)	kW	kW		kW	kW			Gas	Liquid	inch	m	m
PUZ-ZM71VHA	8,0	1,93	3,90	7,1	1,86	5,80	230Vx1	5/8	3/8	-	50	30
PUZ-ZM100VKA	11,2	2,60	4,10	9,5	2,27	6,20	230Vx1	5/8	3/8	-	100	30
PUZ-ZM100YKA	11,2	2,60	4,10	9,5	2,27	6,10	400Vx3	5/8	3/8	-	100	30
PUZ-ZM125VKA	14,0	3,35	3,90	12,5	3,33	6,00	230Vx1	5/8	3/8	-	100	30
PUZ-ZM125YKA	14,0	3,35	3,90	12,5	3,33	5,90	400Vx3	5/8	3/8	-	100	30
PUZ-ZM140VKA	16,0	3,97	4,00	13,4	3,63	5,90	230Vx1	5/8	3/8	-	100	30
PUZ-ZM140YKA	16,0	3,97	4,00	13,4	3,63	5,80	400Vx3	5/8	3/8	-	100	30
PUHZ-ZRP200YKA	22,4	6,94	3,23	19,0	6,46	2,94	400Vx3	1	3/8	-	100	30
PUHZ-ZRP250YKA	27,0	8,94	3,75	22,0	8,31	2,65	400Vx3	1	1/2	-	100	30

(\*) Also compatible with Standard Inverter units PUHZ-P200YKA and PUHZ-P250YKA (R410A) and Zubadan range.

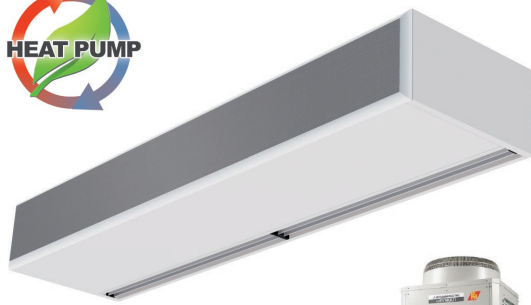
Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.

Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires MITSUBISHI ELECTRIC VRF Interface KIT adapted for air curtain with expansion valve and programmable control, please consult.
- Ready to connect to MITSUBISHI ELECTRIC VRF outdoor heat pump unit (R410A), not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Power Fans	Current Fans	Noise Level	Weight kg	Mitsubishi Electric Kit Interface VRF (*)
		230V-50Hz kW	230V-50Hz A	(5m) dB(A)		
ECM 1500 VRF12-ME	2460	0,213	1,86	57	53	PAC-AH125M-J
ECM 2000 VRF16-ME	3280	0,284	2,48	58	69	PAC-AH125M-J
ECM 2000 VRF19-ME	3280	0,284	2,48	58	69	PAC-AH250M-J
ECM 2500 VRF21-ME	4100	0,355	3,10	59	86	PAC-AH250M-J
ECM 2500 VRF24-ME	4100	0,355	3,10	59	86	PAC-AH250M-J
ECM 3000 VRF26-ME	4920	0,426	3,72	60	103	PAC-AH250M-J
ECM 3000 VRF30-ME	4920	0,426	3,72	60	103	PAC-AH250M-J
ECG 1000 VRF10-ME	2190	0,213	1,86	61	50	PAC-AH125M-J
ECG 1500 VRF13-ME	2920	0,284	2,48	62	59	PAC-AH125M-J
ECG 1500 VRF15-ME	2920	0,284	2,48	62	59	PAC-AH125M-J
ECG 2000 VRF20-ME	4380	0,426	3,72	63	92	PAC-AH250M-J
ECG 2000 VRF24-ME	4380	0,426	3,72	63	92	PAC-AH250M-J
ECG 2500 VRF25-ME	5110	0,497	4,34	64	96	PAC-AH250M-J
ECG 2500 VRF29-ME	5110	0,497	4,34	64	96	PAC-AH250M-J
ECG 3000 VRF29-ME	5840	0,568	5,96	65	109	PAC-AH250M-J

(\*) Includes direct expansion valve.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

### MITSUBISHI ELECTRIC VRF Outdoor Units

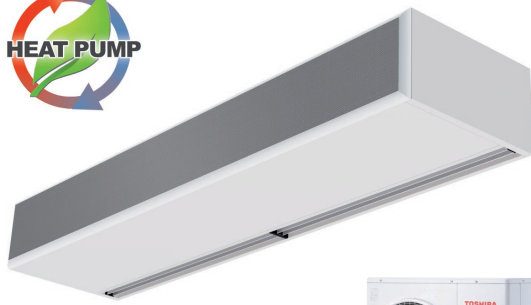
Range	Series
City Multi	S/Y (Heat Pump)
City Multi	R2 (Heat Recovery)

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.





## Characteristics



**TOSHIBA**



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires TOSHIBA DX Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to TOSHIBA Inverter outdoor heat pump unit (R410A / R32) with expansion valve, not included, the customer should purchase it.

## Specifications

Model	Airflow m³/h	Outdoor Unit (*)		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230Vx1	400Vx3				
ECM 1500 DX11-TO	2460	RAV-SM1104ATP-E	RAV-SP1104AT8-E	0,213	1,86	57	53
ECM 2000 DX16-TO	3280	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,284	2,48	58	69
ECM 2000 DX19-TO	3280	-	RAV-SM2244AT8-E	0,284	2,48	58	69
ECM 2500 DX21-TO	4100	-	RAV-SM2244AT8-E	0,355	3,10	59	86
ECM 2500 DX24-TO	4100	-	RAV-SM2804AT8-E	0,355	3,10	59	86
ECM 3000 DX26-TO	4920	-	RAV-SM2804AT8-E	0,426	3,72	60	103
ECG 1000 DX10-TO	2190	RAV-SM1104ATP-E	RAV-SP1104AT8-E	0,213	1,86	61	50
ECG 1500 DX13-TO	2920	RAV SM1404ATP-E	RAV SP1404AT8-E	0,284	2,48	62	59
ECG 1500 DX15-TO	2920	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,284	2,48	62	59
ECG 2000 DX22-TO	4380	-	RAV-SM2244AT8-E	0,426	3,72	63	92
ECG 2000 DX24-TO	4380	-	RAV-SM2804AT8-E	0,426	3,72	63	92
ECG 2500 DX22-TO	5110	-	RAV-SM2244AT8-E	0,497	4,34	64	96
ECG 2500 DX27-TO	5110	-	RAV-SM2804AT8-E	0,497	4,34	64	96
ECG 3000 DX27-TO	5840	-	RAV-SM2804AT8-E	0,568	5,96	65	109

(\*) Includes direct expansion valve.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

TOSHIBA Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP / COP	Cooling Capacity kW	Cooling Power kW	SEER / EER	Power Supply	Pipes		Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
								Gas	Liquid			
								inch				
RAV-SM1104ATP-E	11,2	2,93	3,54	10,0	3,11	5,58	230Vx1	5/8	3/8	5	50	30
RAV-SP1104AT8-E	11,2	2,42	4,28	10,0	2,37	6,57	400Vx3	5/8	3/8	3	75	30
RAV SM1404ATP-E	14,0	3,80	3,68	12,0	3,74	3,21	230Vx1	5/8	3/8	5	50	30
RAV SP1404AT8-E	14,0	3,42	4,09	12,5	3,46	3,61	400Vx3	5/8	3/8	3	75	30
RAV-SM1603AT-E	16,0	4,43	3,61	14,0	4,49	3,12	230Vx1	5/8	3/8	5	50	30
RAV-SP1604AT8-E	16,0	4,30	3,72	14,0	4,49	3,12	400Vx3	5/8	3/8	3	75	30
RAV-SM2244AT8-E	22,4	6,49	3,45	20,0	7,20	2,78	400Vx3	1"1/8	1/2"	7,5	70	30
RAV-SM2804AT8-E	27,0	8,15	3,31	23,0	8,75	2,63	400Vx3	1"1/8	1/2"	7,5	70	30

Energy efficiency: SCOP/SEER seasonal  $\leq 12$  kW, COP/EER  $> 12$  kW.

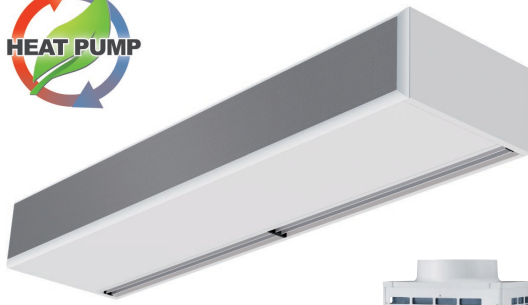
Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.

(\*) Also compatible with outdoor units with R32 gas: RAV-GM1101ATJP-E, RAV-GM1101AT8JP-E, RAV-GM1401ATJP-E, RAV-GM1401AT8JP-E



## Characteristics



**TOSHIBA**



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires TOSHIBA VRF Interface KIT adapted for air curtain, programmable control and expansion valve, please consult.
- Ready to connect to TOSHIBA VRF outdoor heat pump unit (R410A), not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Toshiba Direct Expansion Valve	Power Fans 230V-50Hz kW	Current	Noise Level (5m) dB(A)	Weight kg
				Fans 230V-50Hz A		
ECM 1500 VRF12-TO	2460	MMDXV140	0,213	1,86	57	53
ECM 2000 VRF16-TO	3280	MMDXV140	0,284	2,48	58	69
ECM 2000 VRF19-TO	3280	MMDXV280	0,284	2,48	58	69
ECM 2500 VRF21-TO	4100	MMDXV280	0,355	3,10	59	86
ECM 2500 VRF24-TO	4100	MMDXV280	0,355	3,10	59	86
ECM 3000 VRF26-TO	4920	MMDXV280	0,426	3,72	60	103
ECG 1000 VRF10-TO	2190	MMDXV140	0,213	1,86	61	50
ECG 1500 VRF13-TO	2920	MMDXV140	0,284	2,48	62	59
ECG 1500 VRF15-TO	2920	MMDXV140	0,284	2,48	62	59
ECG 2000 VRF20-TO	4380	MMDXV280	0,426	3,72	63	92
ECG 2000 VRF24-TO	4380	MMDXV280	0,426	3,72	63	92
ECG 2500 VRF25-TO	5110	MMDXV280	0,497	4,34	64	96
ECG 2500 VRF29-TO	5110	MMDXV280	0,497	4,34	64	96
ECG 3000 VRF29-TO	5840	MMDXV280	0,568	5,96	65	109

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

## TOSHIBA VRF Outdoor Units

Mini, Mini SMMSe, SMMSe (Heat Pump)

SHRMe (Heat Recovery)



When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



**HITACHI**



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires HITACHI DX Interface KIT adapted for air curtain with expansion valve and programmable control, please consult.
- Ready to connect to HITACHI Inverter outdoor heat pump unit (R410A), not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Outdoor Unit		Hitachi Kit Interface DX (*)	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230Vx1	400Vx3					
ECM 1000 DX8-HI	1640	RAS-3HVNC1	-	EXV-3.0E2	0,142	1,24	56	35
ECM 1500 DX11-HI	2460	RAS-4HVNC1E	RAS-4HNC1E	EXV-4.0E2	0,213	1,86	57	53
ECM 2000 DX16-HI	3280	RAS-6HVNC1E	RAS-6HNC1E	EXV-6.0E2	0,284	2,48	58	69
ECM 2500 DX21-HI	4100	-	RAS-8HNCE	EXV-8.0E2	0,355	3,10	59	86
ECM 3000 DX26-HI	4920	-	RAS-10HNCE	EXV-10.0E2	0,426	3,72	60	103
ECG 1000 DX8-HI	2190	RAS-3HVNC1	-	EXV-3.0E2	0,213	1,86	61	50
ECG 1500 DX13-HI	2920	RAS-5HVNC1E	RAS-5HNC1E	EXV-5.0E2	0,284	2,48	62	59
ECG 1500 DX15-HI	2920	RAS-6HVNC1E	RAS-6HNC1E	EXV-6.0E2	0,284	2,48	62	59
ECG 2000 DX22-HI	4380	-	RAS-8HNCE	EXV-8.0E2	0,426	3,72	63	92
ECG 2500 DX22-HI	5110	-	RAS-8HNCE	EXV-8.0E2	0,497	4,34	64	96
ECG 2500 DX28-HI	5110	-	RAS-10HNCE	EXV-10.0E2	0,497	4,34	64	96
ECG 3000 DX28-HI	5840	-	RAS-10HNCE	EXV-10.0E2	0,568	5,96	65	109

(\*) Includes direct expansion valve.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

HITACHI Utopia IXV Confort (*) Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP / COP	Cooling Capacity kW	Cooling Power kW	SEER / EER	Power Supply	Pipes		Pipes Maximum Length m	Pipes Maximum Height m
								Gas	Liquid		
								inch			
RAS-3HVNC1	8,0	2,00	4,00	7,1	2,26	3,14	230Vx1	5/8	3/8	50	30
RAS-4HVNC1E	11,2	2,45	4,57	10,0	2,70	3,70	230Vx1	5/8	3/8	70	30
RAS-4HNC1E	11,2	2,45	4,57	10,0	2,70	3,70	400Vx3	5/8	3/8	70	30
RAS-5HVNC1E	14,0	3,60	3,89	12,5	3,71	3,37	230Vx1	5/8	3/8	75	30
RAS-5HNC1E	14,0	3,60	3,89	12,5	3,71	3,37	400Vx3	5/8	3/8	75	30
RAS-6HVNC1E	16,0	4,29	3,73	14,0	4,29	3,26	230Vx1	5/8	3/8	75	30
RAS-6HNC1E	16,0	4,29	3,73	14,0	4,29	3,26	400Vx3	5/8	3/8	75	30
RAS-8HNCE	22,4	5,88	3,81	20,0	5,95	3,36	400Vx3	1	3/8	100	30
RAS-10HNCE	28,0	7,71	3,63	25,0	8,28	3,02	400Vx3	1	1/2	100	30

(\*) Also compatible with outdoor units Utopia ES, VRF Centrifugal, Utopia IXV Premium.

Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.

Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



**HITACHI**



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires HITACHI VRF Interface KIT adapted for air curtain with expansion valve and programmable control, please consult.
- Ready to connect to HITACHI VRF outdoor heat pump unit (R410A), not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Hitachi Kit Interface VRF (*)	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
ECM 1000 VRF8-HI	1640	EXV-3.0E2	0,142	1,24	56	35
ECM 1500 VRF12-HI	2460	EXV-4.0E2	0,213	1,86	57	53
ECM 2000 VRF16-HI	3280	EXV-6.0E2	0,284	2,48	58	69
ECM 2000 VRF19-HI	3280	EXV-8.0E2	0,284	2,48	58	69
ECM 2500 VRF21-HI	4100	EXV-8.0E2	0,355	3,10	59	86
ECM 2500 VRF24-HI	4100	EXV-10.0E2	0,355	3,10	59	86
ECM 3000 VRF26-HI	4920	EXV-10.0E2	0,426	3,72	60	103
ECG 1000 VRF10-HI	2190	EXV-4.0E2	0,213	1,86	61	50
ECG 1500 VRF13-HI	2920	EXV-5.0E2	0,284	2,48	62	59
ECG 1500 VRF15-HI	2920	EXV-6.0E2	0,284	2,48	62	59
ECG 2000 VRF20-HI	4380	EXV-8.0E2	0,426	3,72	63	92
ECG 2000 VRF24-HI	4380	EXV-8.0E2	0,426	3,72	63	92
ECG 2500 VRF25-HI	5110	EXV-8.0E2	0,497	4,34	64	96
ECG 2500 VRF29-HI	5110	EXV-10.0E2	0,497	4,34	64	96
ECG 3000 VRF29-HI	5840	EXV-10.0E2	0,568	5,96	65	109

(\*) Includes direct expansion valve.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

### HITACHI VRF Outdoor Units

Utopia ES / Utopia IXV Confort

VRF Centrifugal

Utopia IXV Premium / Set Free Mini / Front Flow

Set Free



When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires LG DX Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to LG Inverter outdoor heat pump unit (R410A / R32) with expansion valve, not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Outdoor Unit (*)		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230Vx1	400Vx3				
ECM 1000 DX8-LG	1640	UU30W U44	-	0,142	1,24	56	35
ECM 1500 DX11-LG	2460	UU36W UO2	UU37W UO2	0,213	1,86	57	53
ECM 2000 DX15-LG	3280	UU48W U32	UU49W U32	0,284	2,48	58	69
ECM 2000 DX17-LG	3280	UU60W U32	UU61W U32	0,284	2,48	58	69
ECM 2500 DX22-LG	4100	-	UU70W U34	0,355	3,10	59	86
ECM 3000 DX27-LG	4920	-	UU85W U74	0,426	3,72	60	103
ECG 1000 DX9-LG	2190	UU30W U44	-	0,213	1,86	61	50
ECG 1500 DX15-LG	2920	UU48W U32	UU49W U32	0,284	2,48	62	59
ECG 2000 DX22-LG	4380	-	UU70W U34	0,426	3,72	63	92
ECG 2500 DX22-LG	5110	-	UU70W U34	0,497	4,34	64	96
ECG 2500 DX27-LG	5110	-	UU85W U74	0,497	4,34	64	96
ECG 3000 DX27-LG	5840	-	UU85W U74	0,568	5,96	65	109

(\*) Includes direct expansion valve.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
 ECG - Zen, Rund, Invisair, Rotowind

LG Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP / COP	Cooling Capacity kW	Cooling Power kW	SEER / EER	Power Supply	Pipes		Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
								Gas	Liquid			
								inch				
UU30W U44	9,0	2,62	4,00	7,8	2,41	6,10	230Vx1	5/8	3/8	5	50	30
UU36W UO2	11,2	3,19	3,81	10,0	3,12	5,11	230Vx1	5/8	3/8	5	50	30
UU37W UO2	11,2	3,19	3,81	10,0	3,12	5,11	400Vx3	5/8	3/8	5	50	30
UU48W U32	15,4	4,39	3,50	14,0	4,10	3,41	230Vx1	5/8	3/8	5	75	30
UU49W U32	15,4	4,39	3,50	14,0	4,10	3,41	400Vx3	5/8	3/8	5	75	30
UU60W U32	16,8	4,79	3,51	14,8	4,53	3,31	230Vx1	5/8	3/8	5	75	30
UU61W U32	16,8	4,79	3,51	14,8	4,53	3,31	400Vx3	5/8	3/8	5	75	30
UU70W U34	22,4	6,40	3,50	19,0	6,69	2,84	400Vx3	1	3/8	5	75	30
UU85W U74	27,0	8,31	3,25	23,0	8,19	2,81	400Vx3	7/8	1/2	5	75	30

Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.

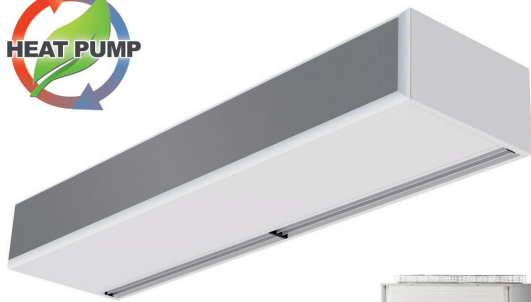
Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.

(\*) Also compatible with outdoor units with R32 gas: UU30WR U40, UU36/37/48/49/60/61 WR U30



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires LG VRF Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to LG VRF outdoor heat pump unit (R410A) and expansion valve not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	LG Direct Expansion Valve	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
ECM 1000 VRF8-LG	1640	PRLK048A0	0,142	1,24	56	35
ECM 1500 VRF13-LG	2460	PRLK048A0	0,213	1,86	57	53
ECM 2000 VRF16-LG	3280	PRLK048A0	0,284	2,48	58	69
ECM 2000 VRF19-LG	3280	PRLK048A0	0,284	2,48	58	69
ECM 2500 VRF21-LG	4100	PRLK048A0	0,355	3,10	59	86
ECM 2500 VRF24-LG	4100	PRLK048A0	0,355	3,10	59	86
ECM 3000 VRF26-LG	4920	PRLK048A0	0,426	3,72	60	103
ECM 3000 VRF30-LG	4920	PRLK048A0	0,426	3,72	60	103
ECG 1000 VRF10-LG	2190	PRLK048A0	0,213	1,86	61	50
ECG 1500 VRF15-LG	2920	PRLK048A0	0,284	2,48	62	59
ECG 2000 VRF24-LG	4380	PRLK048A0	0,426	3,72	63	92
ECG 2500 VRF25-LG	5110	PRLK048A0	0,497	4,34	64	96
ECG 2500 VRF29-LG	5110	PRLK048A0	0,497	4,34	64	96
ECG 3000 VRF29-LG	5840	PRLK048A0	0,568	5,96	65	109
ECG 3000 VRF34-LG	5840	PRLK96A0	0,568	5,96	65	109

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

### LG VRF Outdoor Units (Heat Pump or Heat Recovery depending on Tonnage)

Multi V S

Multi V 5

Multi V IV



When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO2 emissions (heating mode).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. Internal prefilter included.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires DX Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to MIDEA Inverter outdoor heat pump unit (R410A) with expansion valve, not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Outdoor Unit (*)		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		230Vx1	400Vx3				
ECM 1000 DX7-MD	1640	MOCA30U-24HFN1-QRD0	-	0,142	1,24	56	35
ECM 1500 DX11-MD	2460	MOD30U-36HFN1-QRD0	MOD30U-36HFN1-RRD0	0,213	1,86	57	53
ECM 2000 DX16-MD	3280	MOE30U-48HFN1-QRD0	MOE30U-48HFN1-RRD0	0,284	2,48	58	69
ECG 1000 DX10-MD	2190	MOD30U-36HFN1-QRD0	MOD30U-36HFN1-RRD0	0,213	1,86	61	50
ECG 1500 DX15-MD	2920	MOE30U-48HFN1-QRD0	MOE30U-48HFN1-RRD0	0,284	2,48	62	59
ECG 2000 DX18-MD	4380	-	MOE30U-55HFN1-RRD0	0,426	3,72	63	92
ECG 2000 DX22/2-MD	4380	2x MOD30U-36HFN1-QRD0	2x MOD30U-36HFN1-RRD0	0,426	3,72	63	92
ECG 2500 DX29/2-MD	5110	2x MOE30U-48HFN1-QRD0	2x MOE30U-48HFN1-RRD0	0,497	4,34	64	96
ECG 3000 DX32/2-MD	5840	2x MOE30U-48HFN1-QRD0	2x MOE30U-48HFN1-RRD0	0,568	5,96	65	109

22/2 Double circuit and two outdoor units of 11kW. 29/2 and 32/2 Double circuit and two outdoor units of 16kW.

(\*) Includes direct expansion valve.

Version available for models:

ECM, ECG - Recessed Windbox, Smart, Dam, Recessed Dam

ECG - Zen, Rund, Invisair, Rotowind

MIDEA Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP / COP W/W	Cooling Capacity kW	Cooling Power kW	SEER / EER W/W	Power Supply	Pipes		Pipes Maximum Length m	Pipes Maximum Height m
								Gas inch	Liquid inch		
MOCA30U-24HFN1-QRD0	7,6	1,8	4,22	7,0	2,13	3,28	230Vx1	5/8	3/8	50	25
MOD30U-36HFN1-QRD0	11,1	2,9	3,82	10,5	3,95	2,65	230Vx1	5/8	3/8	65	30
MOD30U-36HFN1-RRD0	11,1	2,9	3,82	10,5	3,95	2,65	400Vx3	5/8	3/8	65	30
MOE30U-48HFN1-QRD0	16,1	4,4	3,65	14,1	5,10	2,76	230Vx1	5/8	3/8	65	30
MOE30U-48HFN1-RRD0	16,1	4,4	3,65	14,1	5,10	2,76	400Vx3	5/8	3/8	65	30
MOE30U-55HFN1-RRD0	17,6	5,5	3,20	16,1	6,30	2,55	400Vx3	5/8	3/8	65	30

Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.

Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.



## Characteristics



- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Micro-perforated inlet grille with filter functions and easy service. It does not need prefilter.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- “P” type with water heated coil. “E” type with electrical shielded elements, three stages with integrated regulation. “A” type without heating, air only. Optional “DX” with direct expansion coil.
- Includes Advanced Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...) with Plug&Play control and 7m RJ11 cable.

## Specifications

AIR ONLY					
Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
BB 1000 A	4.020	0,873	3,87	66	38
BB 1500 A	5.360	1,164	5,16	67	55
BB 2000 A	8.040	1,746	7,74	68	77
BB 2500 A	9.380	2,037	9,03	69	93
BB 3000 A	10.720	2,328	10,32	70	110

ELECTRICAL HEATED						
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
BB 1000 E	4.020	6/15/21	0,873	3,87	66	49
BB 1500 E	5.360	8/19/27	1,164	5,16	67	71
BB 2000 E	8.040	12/30/42 (*)	1,746	7,74	68	98
BB 2500 E	9.380	16/30/46 (*)	2,037	9,03	69	119
BB 3000 E	10.720	20/30/50 (*)	2,328	10,32	70	141

(\*) 2 separated power supplies.

WATER HEATED											
Model	Airflow m <sup>3</sup> /h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
BB 1000 P	3.750	16,48	12180	15,16	16190	18,21	15190	0,873	3,87	65	47
BB 1500 P	5.000	24,15	15260	21,87	10990	26,46	10420	1,164	5,16	66	67
BB 2000 P	7.500	35,04	12680	31,13	7350	38,44	10260	1,746	7,74	67	93
BB 2500 P	8.750	42,12	11880	38,96	13420	46,38	9110	2,037	9,03	68	115
BB 3000 P	10.000	48,68	8090	45,49	11230	49,27	10920	2,328	10,32	69	135

Water heated:

P86, P64 2x1", P54 1000-2000 2x1" and 2500-3000 2x1¼".

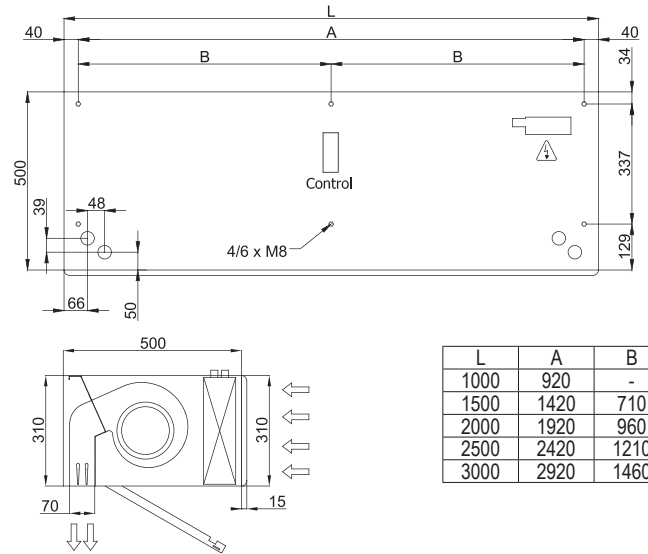
Connection pipes P86, P64 and P54 are female (male if lateral pipes).

P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.

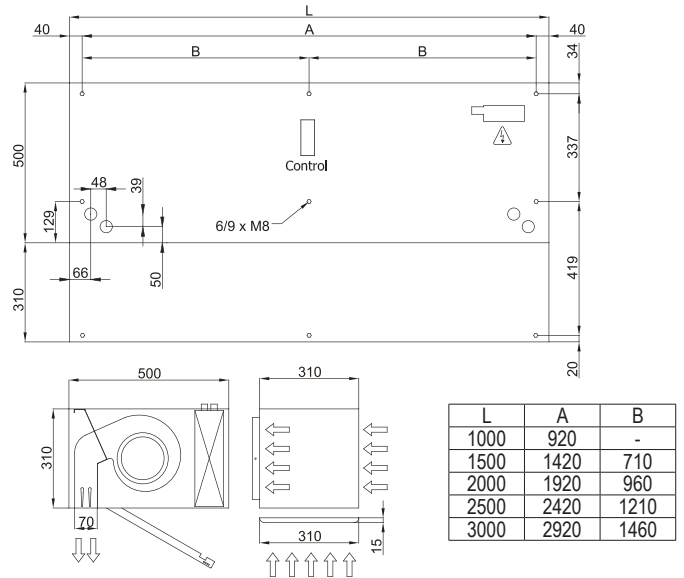




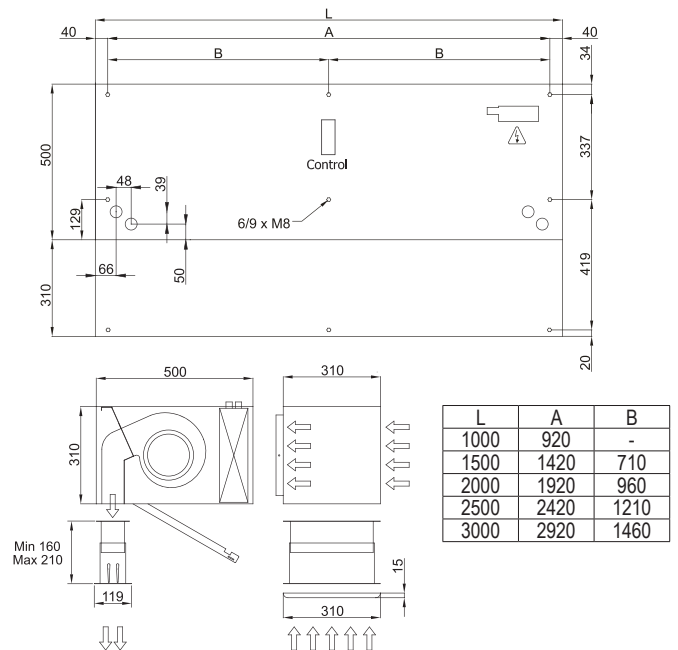
Layouts and dimensions



Free hanging mounting



Inside ceiling surface mounting



False ceiling invisible mounting



## Characteristics



- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille (free of maintenance) made with aluminium profiles and blow-out nozzle, integrated in a single white frame colour RAL 9016. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable in both directions.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Advanced Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...) with Plug&Play control and 7m RJ11 cable.

## Specifications

AIR ONLY					
Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RBB 1000 A	4.020	0,873	3,87	66	50
RBB 1500 A	5.360	1,164	5,16	67	75
RBB 2000 A	8.040	1,746	7,74	68	100
RBB 2500 A	9.380	2,037	9,03	69	125

ELECTRICAL HEATED						
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
RBB 1000 E	4.020	6/15/21	0,873	3,87	66	60
RBB 1500 E	5.360	8/19/27	1,164	5,16	67	91
RBB 2000 E	8.040	12/30/42 (*)	1,746	7,74	68	121
RBB 2500 E	9.380	16/30/46 (*)	2,037	9,03	69	151

(\*) 2 separated power supplies.

WATER HEATED											
Model	Airflow m <sup>3</sup> /h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
RBB 1000 P	3.750	16,48	12180	15,16	16190	18,21	15190	0,873	3,87	65	58
RBB 1500 P	5.000	24,15	15260	21,87	10990	26,46	10420	1,164	5,16	66	88
RBB 2000 P	7.500	35,04	12680	31,13	7350	38,44	10260	1,746	7,74	67	117
RBB 2500 P	8.750	42,12	11880	38,96	13420	46,38	9110	2,037	9,03	68	146

Water heated:

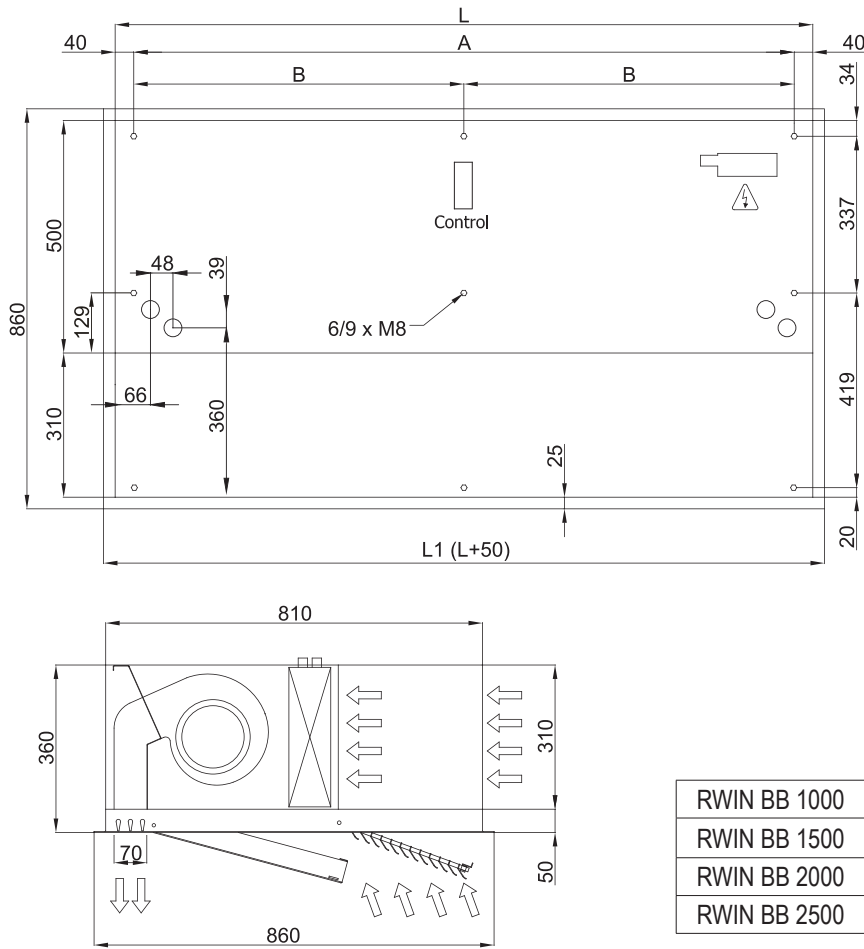
P86, P64 2x1", P54 1000-2000 2x1" and 2500 2x1¼".

Connection pipes P86, P64 and P54 are female (male if lateral pipes).

P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



**Dimensions**



	L	L1	A	B
RWIN BB 1000	1000	1050	920	-
RWIN BB 1500	1500	1550	1420	710
RWIN BB 2000	2000	2050	1920	960
RWIN BB 2500	2500	2550	2420	1210

**Finishes and details**



Detail of the upper area of the air curtain



Customizable inlet grille in RAL color optionally



Characteristics



- Decorative air curtain in contemporary architectural style. Its minimalist and smart design integrates in any environment and offers infinite options to customize.
- Can include personalized logotypes, signs or graphic designs. It can even incorporate clocks or lighting.
- Front anodized aluminium panels. Optionally manufactured in brushed or mirror polished stainless steel. Other materials are possible, such as wood, metal, etc.
- Central structure made of galvanized steel finished in black forge as standard. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable in both directions.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficiency fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional expansion DX coil.
- Includes Advanced Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...) with Plug&Play control and 7m RJ11 cable.

Specifications

AIR ONLY						
Model	Airflow m <sup>3</sup> /h	Power Fans		Noise Level (5m) dB(A)	Weight kg	
		230V-50Hz kW	230V-50Hz A			
ZEN BB 1000 A	4.020	0,873	3,87	66	39	
ZEN BB 1500 A	5.360	1,164	5,16	67	55,5	
ZEN BB 2000 A	8.040	1,746	7,74	68	78	
ZEN BB 2500 A	9.380	2,037	9,03	69	94	

ELECTRICAL HEATED						
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity		Noise Level (5m) dB(A)	Weight kg	
		400Vx3-50Hz kW	230V-50Hz kW			
ZEN BB 1000 E	4.020	6/15/21	0,873	66	49,5	
ZEN BB 1500 E	5.360	8/19/27	1,164	67	71,5	
ZEN BB 2000 E	8.040	12/30/42 (*)	1,746	68	99	
ZEN BB 2500 E	9.380	16/30/46 (*)	2,037	69	120	

(\*) 2 separated power supplies.

WATER HEATED											
Model	Airflow m <sup>3</sup> /h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
ZEN BB 1000 P	3.750	16,48	12180	15,16	16190	18,21	15190	0,873	3,87	65	47,5
ZEN BB 1500 P	5.000	24,15	15260	21,87	10990	26,46	10420	1,164	5,16	66	68,5
ZEN BB 2000 P	7.500	35,04	12680	31,13	7350	38,44	10260	1,746	7,74	67	95
ZEN BB 2500 P	8.750	42,12	11880	38,96	13420	46,38	9110	2,037	9,03	68	115

Water heated:

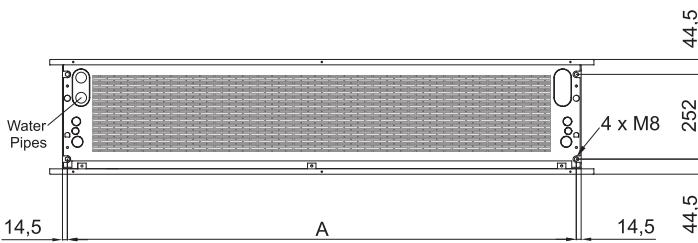
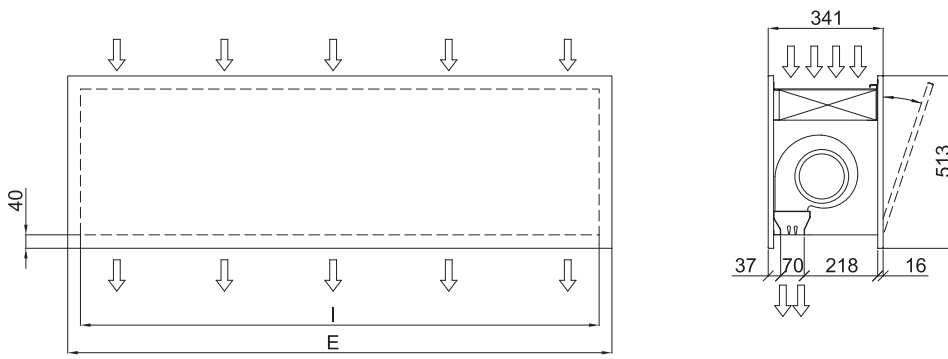
P86, P64 2x1", P54 1000-2000 2x1" and 2500 2x1½".

Connection pipes P86, P64 and P54 are female (male if lateral pipes).

P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.

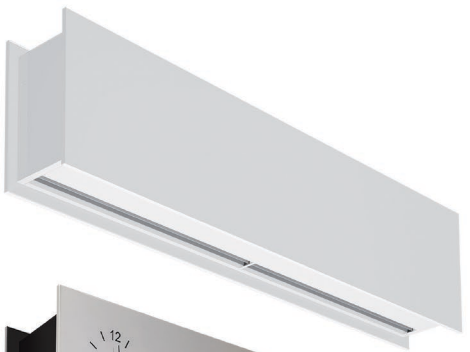


Dimensions



	E	I	A
ZEN BB 1000	1220	1140	1115
ZEN BB 1500	1620	1544	1515
ZEN BB 2000	2120	2044	2015
ZEN BB 2500	2620	2544	2515

Finishes



Vertical installation



- Painted any RAL colour or metal
- Different materials: aluminium, stainless steel AISI 304 (brushed or polished), wood, glass, PVC/PES, etc.
- Logos, lights, clocks, signs, vinyls, patterns, etc.



## Characteristics



Industrial Grille



Decorative Grille

- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Two frontal grille options. Industrial perforated by default (free of maintenance) or micro-perforated decorative with filter functions.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector.
- “P” type with water heated coil. “E” type with electrical shielded elements, three stages with integrated regulation. “A” type without heating, air only. Optional “DX” with direct expansion coil.
- Includes Plug&Play control with 10m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

## Specifications

### AIR ONLY

Model	Airflow m³/h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
L 1000 A	4000	1,04	4,40	63	72
L 1500 A	6000	1,56	6,60	64	108
L 2000 A	8000	2,08	8,80	65	145
L 2500 A	10000	2,60	11,00	66	177
L 3000 A	12000	3,12	13,20	67	213
XL 1000 A	5300	1,40	6,00	65	78
XL 1500 A	7950	2,10	9,00	66	117
XL 2000 A	10600	2,80	12,00	67	157
XL 2500 A	13250	3,50	15,00	68	192
XL 3000 A	15900	4,20	18,00	69	231

### ELECTRICAL HEATED

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
L 1000 E	4000	6/13/19	1,04	4,40	63	90
L 1000 E-25	4000	10/15/25	1,04	4,40	63	90
L 1500 E	6000	8/22,5/30,5	1,56	6,60	64	135
L 1500 E-37,5	6000	15/22,5/37,5 (*)	1,56	6,60	64	135
L 2000 E	8000	12/30/42 (*)	2,08	8,80	65	180
L 2000 E-50	8000	20/30/50 (*)	2,08	8,80	65	180
L 2500 E	10000	20/30/50 (*)	2,60	11,00	66	225
L 2500 E-60	10000	20/40/60 (**)	2,60	11,00	66	225
L 3000 E	12000	20/40/60 (**)	3,12	13,20	67	270
L 3000 E-70	12000	20/50/70 (**)	3,12	13,20	67	270
XL 1000 E	5300	10/15/25	1,40	6,00	65	95
XL 1000 E-35	5300	10/25/35 (*)	1,40	6,00	65	96
XL 1500 E	7950	15/22,5/37,5 (*)	2,10	9,00	66	144
XL 1500 E-52	7950	15/37,5/52,5 (*)	2,10	9,00	66	150
XL 2000 E	10600	20/30/50 (*)	2,80	12,00	67	192
XL 2000 E-70	10600	20/50/70 (**)	2,80	12,00	67	200
XL 2500 E	13250	20/40/60 (**)	3,50	15,00	68	240
XL 2500 E-70	13250	20/50/70 (**)	3,50	15,00	68	250
XL 3000 E	15900	20/50/70 (**)	4,20	18,00	69	288
XL 3000 E-80	15900	30/50/80 (**)	4,20	18,00	69	300

(\*) 2 separated power supplies.

(\*\*) 3 separated power supplies.

### WATER HEATED

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
L 1000 P	3800	19,68	1730	16,18	2570	17,18	1560	1,04	4,40	62	89
L 1500 P	5700	29,64	950	25,92	3210	29,04	5710	1,56	6,60	63	128
L 2000 P	7600	43,01	2390	35,58	3680	38,93	4330	2,08	8,80	64	171
L 2500 P	9500	56,01	4670	45,55	4750	49,36	4990	2,60	11,00	65	214
L 3000 P	11400	69,27	8090	56,78	8350	59,96	5770	3,12	13,20	66	260
XL 1000 P	4900	22,68	2250	18,98	3410	20,43	2120	1,40	6,00	64	94
XL 1500 P	7350	34,52	1240	30,45	4270	34,55	7780	2,10	9,00	65	137
XL 2000 P	9800	50,10	3140	41,83	4910	46,36	5910	2,80	12,00	66	183
XL 2500 P	12250	65,29	6130	53,56	6330	58,81	6810	3,50	15,00	67	227
XL 3000 P	14700	80,79	10640	66,78	11140	71,47	7890	4,20	18,00	68	278

Water heated:

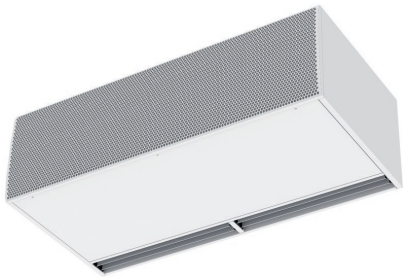
2x1" for 1000 and 1500, 2x1¼" for 2000 and 2500, 2x1½" for 3000.

Connection pipes P86, P64 and P54 are female (male if lateral pipes).

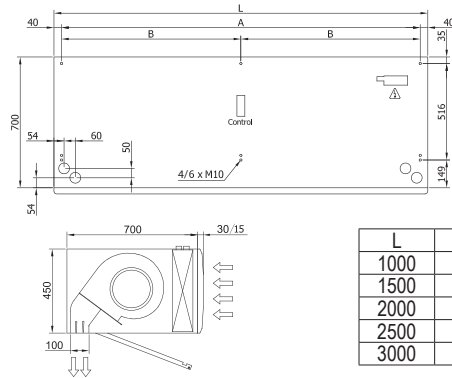
P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



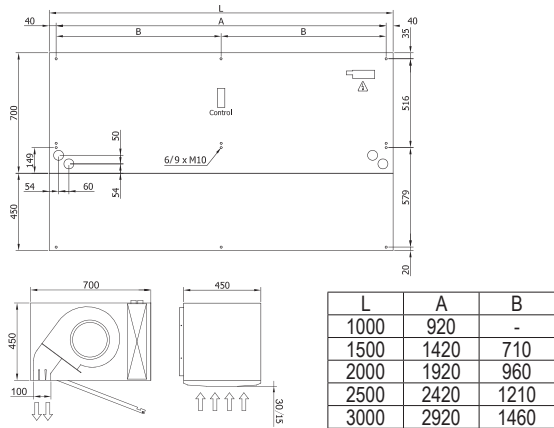
**Layouts and dimensions**



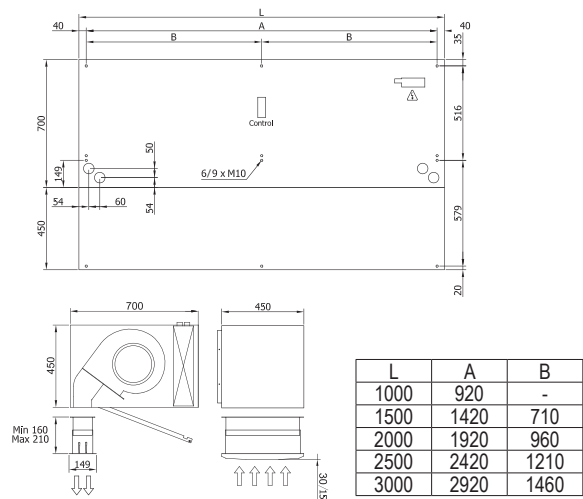
Free hanging mounting



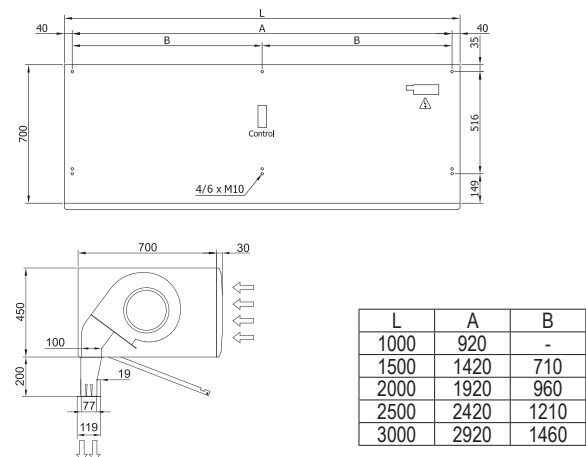
Inside ceiling surface mounting



False ceiling invisible mounting



Insects outlet kit mounting





**Characteristics**



- Specially designed for applications where the body of the air curtain is to be installed inside a column or bulkhead for architectural reasons. It can be vertically or horizontally mounted.
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- The air flow of Invisair follows a straight line from the air inlet grille to the discharge. Inlet area inside a bulkhead or column should be designed with suitable grille provided by others.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

AIR ONLY					
Model	Airflow m³/h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
IM 1500 A	2640	0,424	1,88	56	55
IM 2000 A	3960	0,636	2,82	57	68
IM 2500 A	4620	0,742	3,29	58	73
IG 1500 A	3200	0,856	3,80	58	60
IG 2000 A	4800	1,284	5,70	59	78
IG 2500 A	5600	1,498	6,65	60	83
IECG 1500 A	3600	0,284	2,48	62	60
IECG 2000 A	5400	0,426	3,72	63	78
IECG 2500 A	6300	0,497	4,34	64	83

ELECTRICAL HEATED						
Model	Airflow m³/h	Electrical Heating		Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW			
IM 1500 E	2640	4/8/12	0,424	1,88	56	67
IM 2000 E	3960	6/12/18	0,636	2,82	57	86
IM 2500 E	4620	6/12/18	0,742	3,29	58	93
IG 1500 E	3200	7,5/15/22,5	0,856	3,80	58	73
IG 2000 E	4800	10/20/30	1,284	5,70	59	96
IG 2500 E	5600	10/20/30	1,498	6,65	60	103
IECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	73
IECG 2000 E	5400	10/20/30	0,426	3,72	63	96
IECG 2500 E	6300	10/20/30	0,497	4,34	64	103

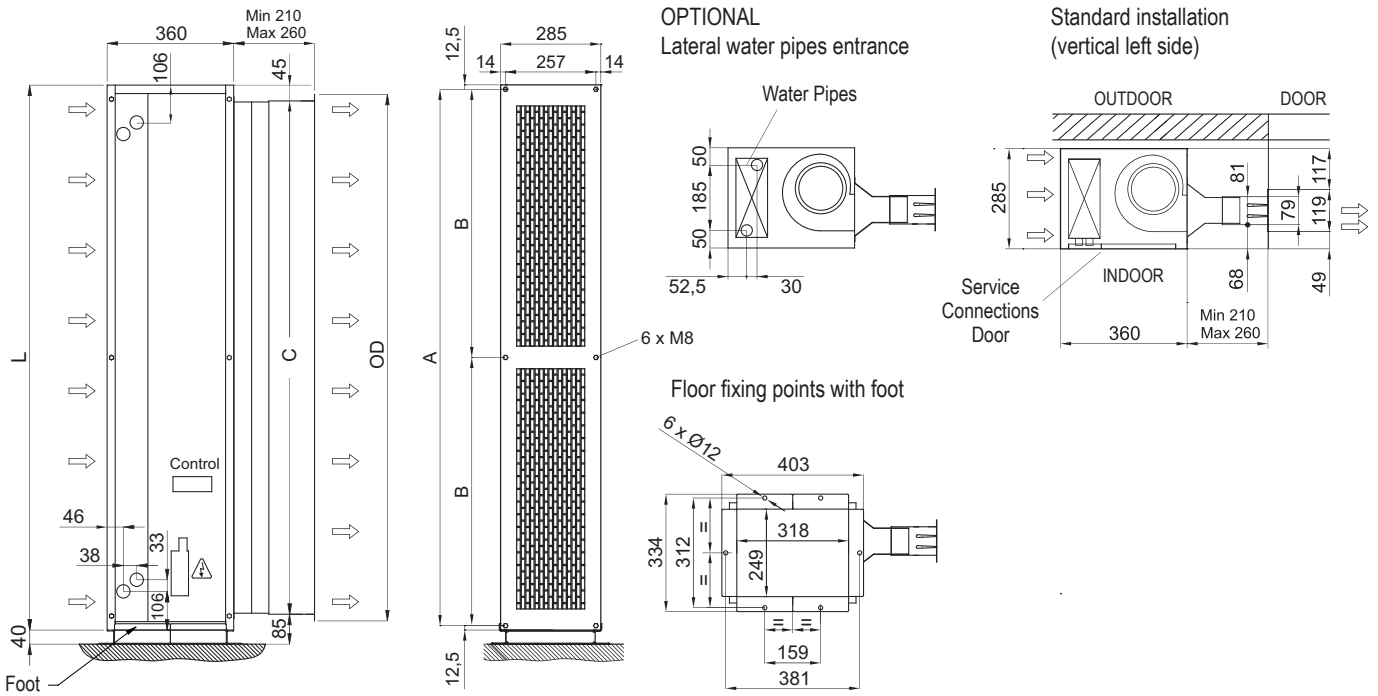
WATER HEATED											
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
IM 1500 P	2480	14,23	760	13,65	6430	-	-	0,424	1,88	56	63
IM 2000 P	3720	22,17	2190	19,70	5470	-	-	0,636	2,82	57	78
IM 2500 P	4340	27,69	4000	23,48	4060	-	-	0,742	3,29	58	86
IG 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	69
IG 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	89
IG 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	94
IECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	69
IECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	89
IECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	94

Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



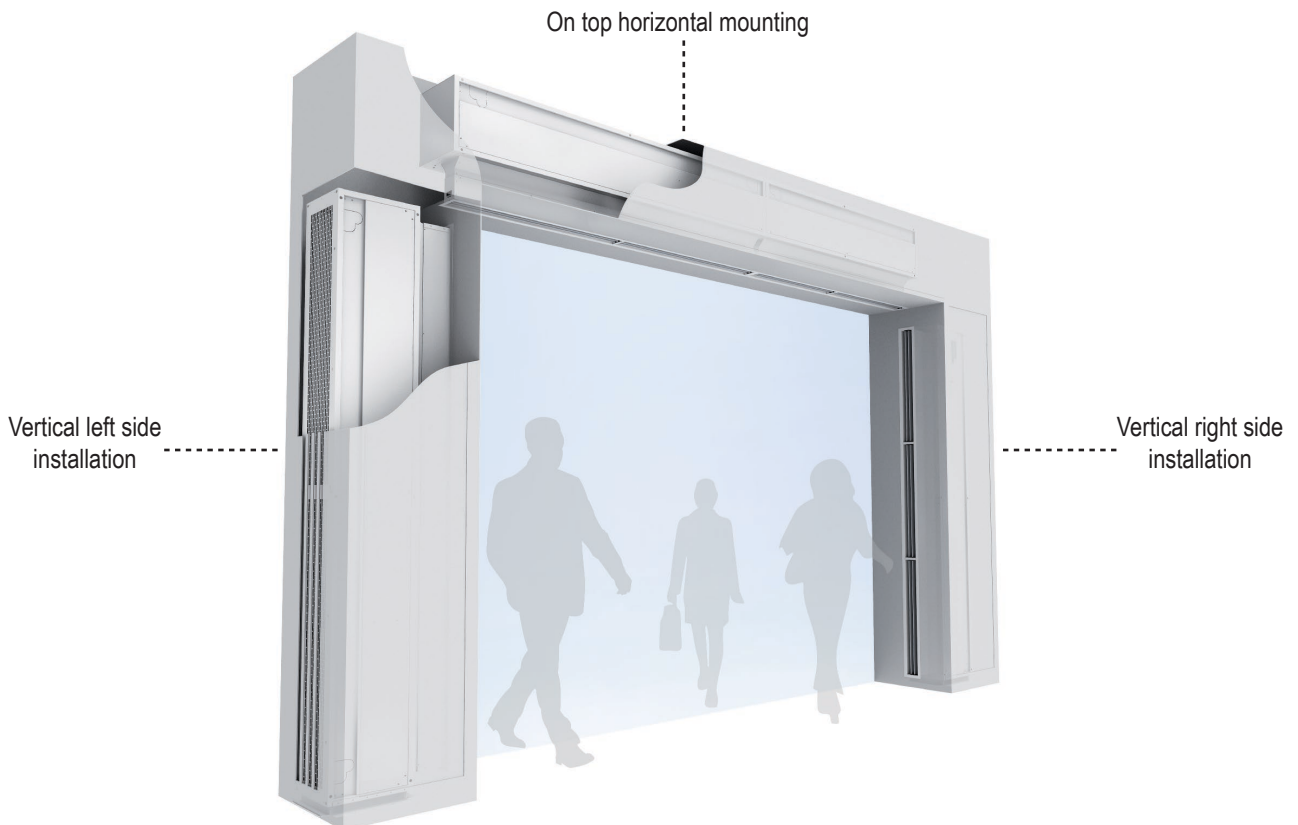


**Layouts and dimensions**



	L	A	B	C	OD
INVISAIR 1500	1550	1525	762,5	1461	1498
INVISAIR 2000	2055	2030	1015	1961	1998
INVISAIR 2500	2555	2530	1265	2461	2498

**Installation examples**





**Characteristics**



- Specially designed to be installed in all type of revolving doors. Two possible layouts, tailored dimensions: standard (on top mounting) or inverted (false ceiling mounting).
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Large perforated inlet grille avoiding intensive maintenance.
- Circular anodized aluminium outlet vanes, airfoil shaped.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only. Optional "DX" with direct expansion coil.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

**AIR ONLY**

Model	Airflow m³/h	Power Fans		Current Fans A	Noise Level (5m) dB(A)	Weight kg
		230V-50Hz kW	230V-50Hz			
ROTO G 1000 A	2400	0,642	2,85	57	-	
ROTO G 1500 A	3200	0,856	3,80	58	-	
ROTO G 2000 A	4800	1,284	5,70	59	-	
ROTO G 2500 A	5600	1,498	6,65	60	-	
ROTO ECG 1000 A	2700	0,213	1,86	61	-	
ROTO ECG 1500 A	3600	0,284	2,48	62	-	
ROTO ECG 2000 A	5400	0,426	3,72	63	-	
ROTO ECG 2500 A	6300	0,497	4,34	64	-	

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW	230V-50Hz				
ROTO G 1000 E	2400	5/10/15	0,642	2,85	57	-	
ROTO G 1500 E	3200	7,5/15/22,5	0,856	3,80	58	-	
ROTO G 2000 E	4800	10/20/30	1,284	5,70	59	-	
ROTO G 2500 E	5600	10/20/30	1,498	6,65	60	-	
ROTO ECG 1000 E	2700	5/10/15	0,213	1,86	61	-	
ROTO ECG 1500 E	3600	7,5/15/22,5	0,284	2,48	62	-	
ROTO ECG 2000 E	5400	10/20/30	0,426	3,72	63	-	
ROTO ECG 2500 E	6300	10/20/30	0,497	4,34	64	-	

**WATER HEATED**

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
ROTO G 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	-
ROTO G 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	-
ROTO G 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	-
ROTO G 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	-
ROTO ECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,213	1,86	61	-
ROTO ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,284	2,48	62	-
ROTO ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,426	3,72	63	-
ROTO ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,497	4,34	64	-

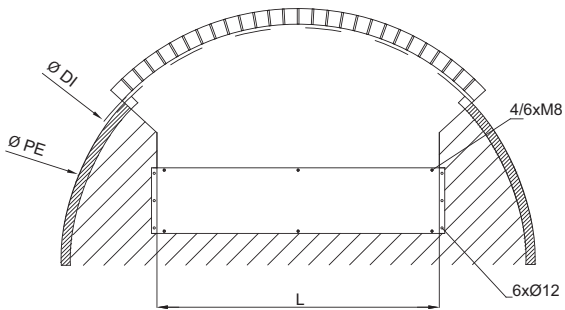
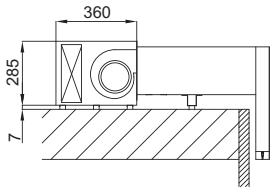
Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



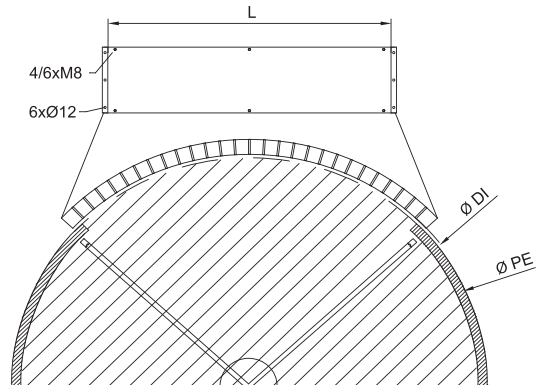
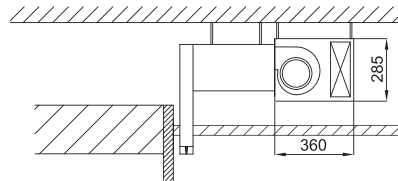
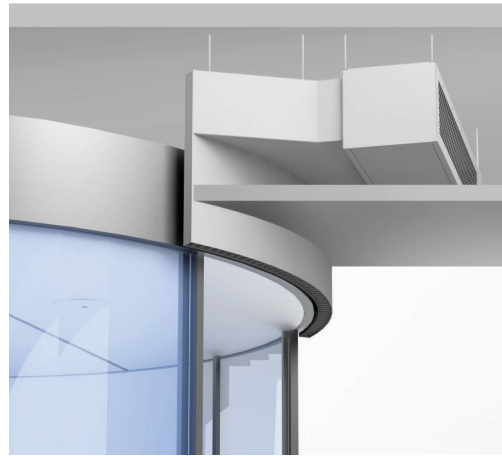
**Layouts and dimensions**

Rotowind air curtains are tailor-made for any kind of revolving door according to the following layouts:

Standard: On top mounting



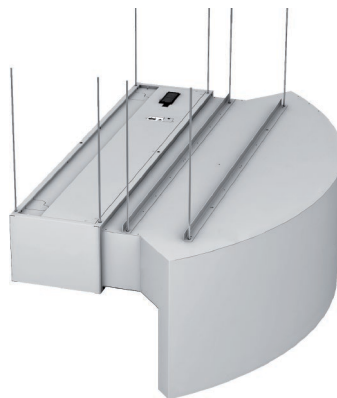
Inverted: False ceiling mounting



Fixation system



Fixed onto the door



Hanging from the ceiling

Optional decorative front cover



RAL 9016 (standard), optional:

- Colour from RAL palette
- Stainless steel AISI 304

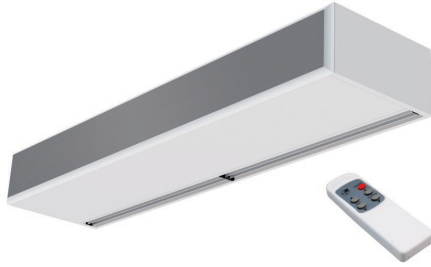


**Characteristics**

**VP (with profiles)**



**VW (Windbox construction)**



- Designed to be tailor-made, adaptable to any customer's needs.
- Option VP: Structure made of aluminium profiles and galvanized steel panels, finished white RAL 9016 as standard. Other colours are available on request. VP construction allow the service from the top and the bottom. Large perforated inlet grille avoiding intensive maintenance.
- Option VW: Same construction as Windbox M-G. Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request. Micro-perforated inlet grille with filter functions and easy service. It does not need prefilter.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "P" type with water heated coil. "E" type with electrical shielded elements, three stages with integrated regulation. "A" type without heating, air only.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

The performance of Variwind air curtains is the same as Windbox M,G. Models M, ECM, G and ECG from 1000 to 3000 mm length. It's available unheated, water heated, electrical heated or with heat pump.

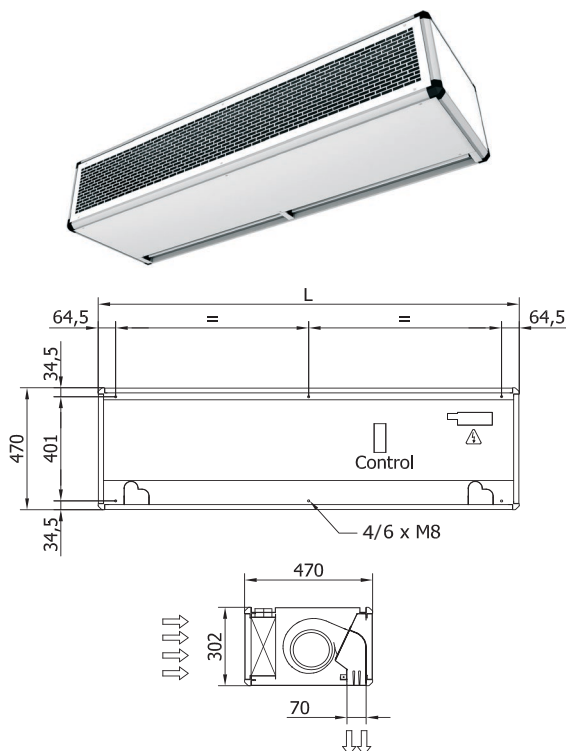
**Layouts and dimensions**

Variwind air curtains can be tailor-made at the request of the customers in any length from 1045 mm to 3000 mm.

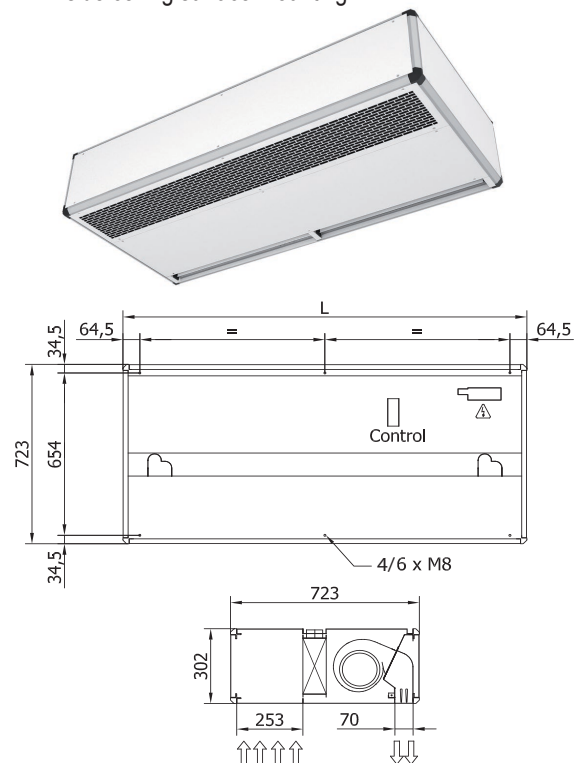
Example: Standard Variwind 1500 will have similar performance as Windbox 1500 (air volume, heating, consumption, etc.). If the customized length is 400 mm or more than the nominal length, you can add a fan and/or put the electric shielded element of the higher measurement.

Nominal length	Customized length	
	VP	VW
VARIWIND 1000	1045-1399	1000-1399
VARIWIND 1500	1400-1999	1400-1999
VARIWIND 2000	2000-2399	2000-2399
VARIWIND 2500	2400-3000	2400-3000

VP Free hanging mounting



VP Inside ceiling surface mounting



VW Construction: see Windbox M-G dimensions



### Characteristics

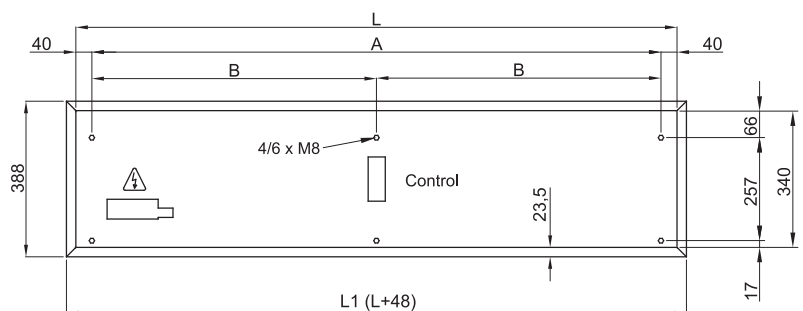
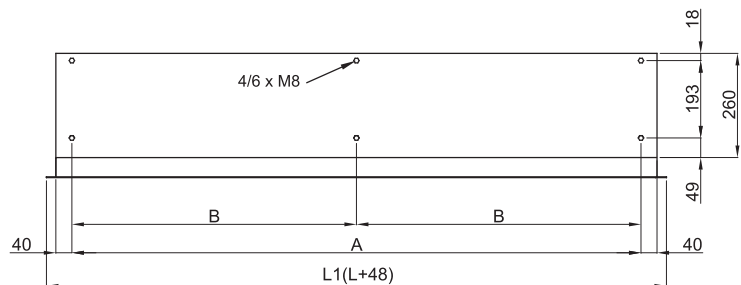
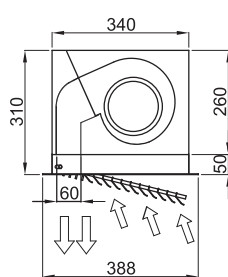


- Compact and low profile air only recessed air curtain, with full grille view, specially designed for applications without heating.
- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille (free of maintenance) made with aluminium profiles and blow-out nozzle, integrated in a single white frame colour RAL 9016. Other colours are available on request.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "A" type without heating, air only.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

### Specifications

AIR ONLY					
Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
CR M 1000 A	1800	0,212	0,94	55	33
CR M 1500 A	2700	0,318	1,41	56	50
CR M 2000 A	3600	0,424	1,88	57	61
CR M 2500 A	4500	0,530	2,35	58	68
CR ECM 1000 A	1840	0,142	1,24	56	33
CR ECM 1500 A	2760	0,213	1,86	57	50
CR ECM 2000 A	3680	0,284	2,48	58	61
CR ECM 2500 A	4600	0,355	3,10	59	68
CR G 1000 A	2400	0,642	2,85	57	37
CR G 1500 A	3200	0,856	3,80	58	55
CR G 2000 A	4800	1,284	5,70	59	71
CR G 2500 A	5600	1,498	6,65	60	78
CR ECG 1000 A	2700	0,213	1,86	61	37
CR ECG 1500 A	3600	0,284	2,48	62	56
CR ECG 2000 A	5400	0,426	3,72	63	71
CR ECG 2500 A	6300	0,497	4,34	64	78

### Dimensions



	L	L1	A	B
CR 1000	1000	1048	920	-
CR 1500	1500	1548	1420	710
CR 2000	2000	2048	1920	960
CR 2500	2500	2548	2420	1210



**Characteristics**

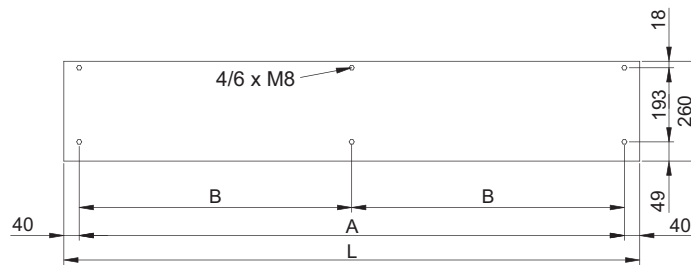
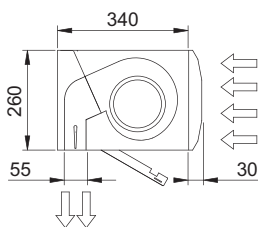


- Specially designed to be installed in doors of cold stores and freezers.
- In option, "IP" version under request.
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Large perforated inlet grille avoiding intensive maintenance. Also available with flat micro-perforated inlet grille, more elegant for commercial doors where heating is not needed.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models with very low consumption efficient fans.
- "A" type without heating, air only.
- Includes Plug&Play control with 7m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

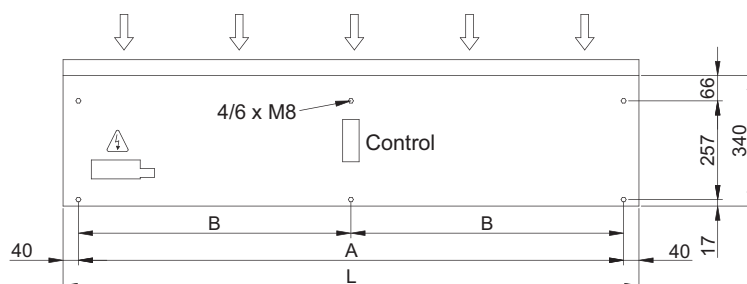
**Specifications**

AIR ONLY					
Model	Airflow m³/h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
KM 1000 A	1800	0,212	0,94	55	29
KM 1500 A	2700	0,318	1,41	56	44
KM 2000 A	3600	0,424	1,88	57	53
KM 2500 A	4500	0,530	2,35	58	58
KM 3000 A	5400	0,636	2,82	59	76
KECM 1000 A	1840	0,142	1,24	56	33
KECM 1500 A	2760	0,213	1,86	57	50
KECM 2000 A	3680	0,284	2,48	58	61
KECM 2500 A	4600	0,355	3,10	59	68
KECM 3000 A	5520	0,426	3,72	60	76
KG 1000 A	2400	0,642	2,85	57	37
KG 1500 A	3200	0,856	3,80	58	55
KG 2000 A	4800	1,284	5,70	59	71
KG 2500 A	5600	1,498	6,65	60	78
KG 3000 A	6400	1,712	7,60	61	86
KECG 1000 A	2700	0,213	1,86	61	37
KECG 1500 A	3600	0,284	2,48	62	56
KECG 2000 A	5400	0,426	3,72	63	71
KECG 2500 A	6300	0,497	4,34	64	78
KECG 3000 A	7200	0,568	5,96	65	86

**Dimensions**

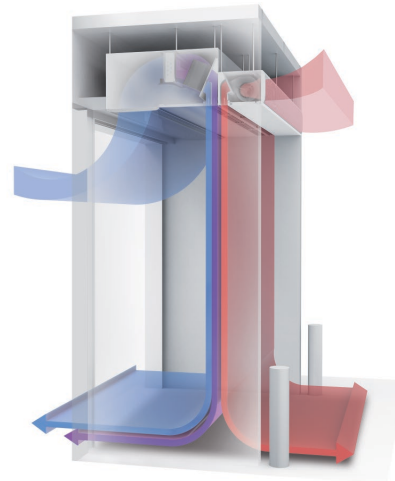


	L	A	B
KOOL 1000	1000	920	-
KOOL 1500	1500	1420	710
KOOL 2000	2000	1920	960
KOOL 2500	2500	2420	1210
KOOL 3000	3000	2920	1460





## Characteristics

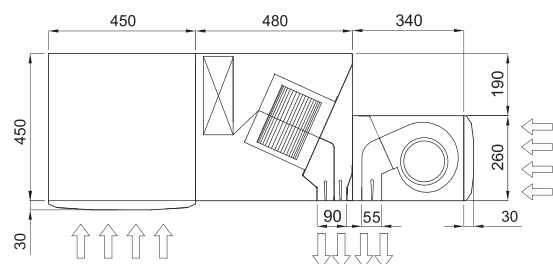
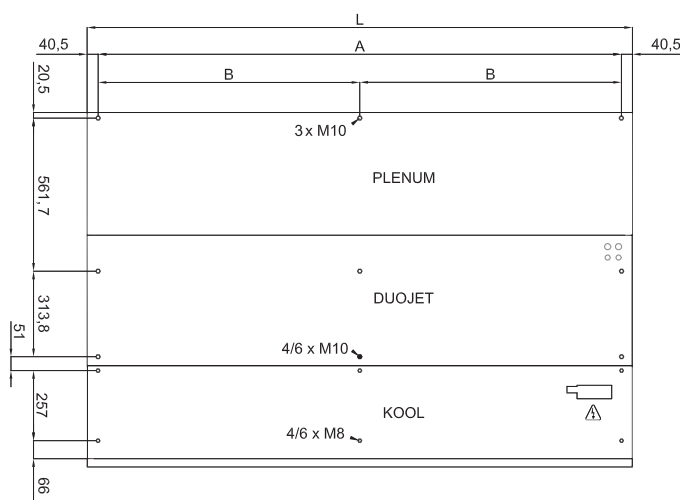


- Specially designed to be installed on doors of industrial cold stores and freezers with big temperature differences.
- Reduces mist, snow and ice decreasing risk of accidents.
- System composed by two air curtains: special Duojet air curtain with plenum and Kool air curtain. The result is a combination system of 3 jets at different temperatures and different speeds.
- High efficiency barrier against big amount of thermal losses due to a big temperature difference (shorter payback).
- A lateral enclosure structure is required to cover 100% of the opening up to 3 jets, not included.
- Self-supporting casing construction made of stainless steel plate. Galvanized steel structural epoxy-polyester painting white RAL9016 or other colors under request.
- Large perforated inlet grille avoiding intensive maintenance.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- Duojet with IP55 AC centrifugal fans and Kool with EC fans (both double inlet, external rotor motors and built-in thermal protection contact). All provided with 5-speed selection, very low noise level.
- Includes electrical shielded element of 3 power stages with integrated regulation.
- Triojet is automatically fully controlled by Clever control. Electronics and controller protected inside IP65 boxes. Plug & Play connections.
- Ready for BMS connection via Modbus RTU.

## Specifications

Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Electrical Heating Capacity 400Vx3-50Hz kW	Noise Level (5m) dB(A)	Weight kg
TRIOJET SYSTEM 1000 INOX	5900	1,08	5,75	3/6/9	62	125
TRIOJET SYSTEM 1500 INOX	8400	1,58	8,30	4/8/12	63	182
TRIOJET SYSTEM 2000 INOX	11800	2,16	11,50	6/12/18	64	234
TRIOJET SYSTEM 2500 INOX	14300	2,66	14,05	6/12/18	65	275
TRIOJET SYSTEM 3000 INOX	16800	3,17	16,60	8/16/24	66	314

## Dimensions



	L	A	B
TRIOJET 1000	1000	920	-
TRIOJET 1500	1500	1420	710
TRIOJET 2000	2000	1920	960
TRIOJET 2500	2500	2420	1210
TRIOJET 3000	3000	2920	1460



**Characteristics**



- High performance industrial air curtains for vertical or horizontal installations for large industrial doors. Available in 1.5, 2.0, 2.5, 3.0 and 3.5 meters length. Easy dockable modules to reach large dimensions.
- Heavy self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Double outlet with Coanda effect to achieve larger and efficient air jet. Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- High efficiency and low noise axial fans, driven with external rotor motor single phase 230V. Optionally three phase 400V. Maintenance free.
- “P” type with water heated coil. “A” type without heating, air only. “E” type with electrical shielded elements with contactors included.
- Regulation not included. Optional: Basic regulation with Plug&Play control panel provided with 5-speed selection, 10m RJ45 cable and remote control. Advanced regulation with Clever (automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

**AIR ONLY**

Model	Airflow m³/h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
MXW 1500 A	7000	0,68	2,96	60	79
MXW 2000 A	10500	1,02	4,44	61	103
MXW 2500 A	14000	1,36	5,92	62	126
MXW 3000 A	17500	1,70	7,40	63	150
MXW 3500 A	20800	2,04	8,88	64	173

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
MXW 1500 E	7000	15/22,5/37,5 (*)	0,68	2,96	60	96
MXW 2000 E	10500	20/30/50 (*)	1,02	4,44	61	133
MXW 2500 E	14000	30/40/70 (**)	1,36	5,92	62	167
MXW 3000 E	17500	30/50/80 (**)	1,70	7,40	63	201
MXW 3500 E	20800	30/60/90 (**)	2,04	8,88	64	231

(\*) 2 separated power supplies.

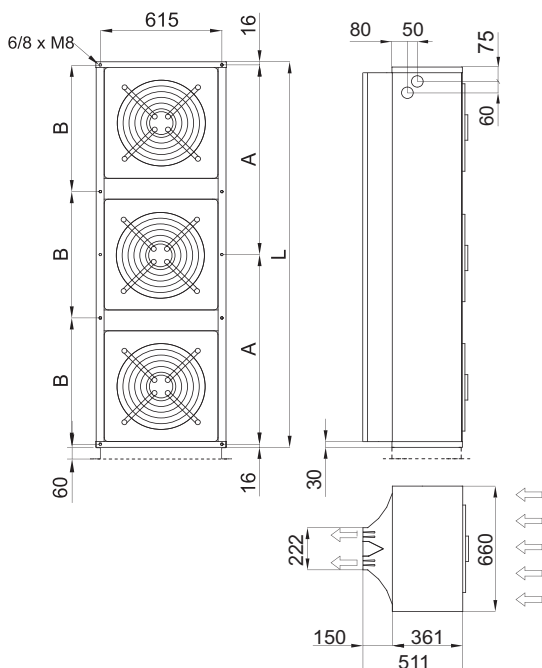
(\*\*) 3 separated power supplies.

**WATER HEATED**

Model	Airflow m³/h	Heating Capacity 80/60°C kW	P86		P64			Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
			Water Drop Pressure 80/60°C Pa	Water Connections 80/60°C	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Water Connections 60/40°C				
MXW 1500 P	6800	35,69	730	2x1¼"	34,09	12620	2x1¼"	0,68	2,96	59	95
MXW 2000 P	10200	56,29	2180	2x1¼"	50,16	13660	2x1¼"	1,02	4,44	60	126
MXW 2500 P	13600	76,97	4730	2x1¼"	66,19	14600	2x1¼"	1,36	5,92	61	158
MXW 3000 P	17000	97,77	8640	2x1¼"	82,22	14560	2x1¼"	1,70	7,40	62	189
MXW 3500 P	20300	118,28	14080	2x1¼"	97,92	14910	2x1¼"	2,04	8,88	63	221

Water heated: P86 2 rows coil, P64 3 rows coil.

**Dimensions**



	L	A	B
MXW 1500	1500	734	-
MXW 2000	2000	984	-
MXW 2500	2500	1234	-
MXW 3000	3040	-	1002,5
MXW 3500	3620	-	1196





**Characteristics**



- High performance industrial air curtains for vertical or horizontal installations for large industrial doors. Easy dockable modules to reach large dimensions.
- Heavy casing made of double chamber aluminium profiles and galvanized plated steel panels, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Double outlet with Coanda effect to achieve larger and efficient air jet. Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- High efficiency and low noise axial fans, driven with external rotor motor single phase 230V. Optionally three phase 400V. Provided with 5-speed selection. Maintenance free.
- “P” type with water heated coil. “E” type with electrical shielded elements, three stages with integrated regulation. “A” type without heating, air only.
- Includes Plug&Play control with 10m RJ45 cable and infrared remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

AIR ONLY					
Model	Airflow m³/h	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
MAX 2 A	6600	0,68	2,96	62	59
MAX 3 A	9900	1,02	4,44	63	79
MAX 4 A	13200	1,36	5,92	64	103
MAX 5 A	16500	1,70	7,40	65	124
MAX 6 A	19800	2,04	8,88	66	151

ELECTRICAL HEATED							
Model	Airflow m³/h	Electrical Heating		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Capacity 400Vx3-50Hz kW					
MAX 2 E	6600	15/25/40		0,68	2,96	62	74
MAX 3 E	9900	22,5/37,5/60 (**)		1,02	4,44	63	100
MAX 4 E	13200	30/50/80 (**)		1,36	5,92	64	133
MAX 5 E	16500	30/60/90 (**)		1,70	7,40	65	159
MAX 6 E	19800	30/60/90 (**)		2,04	8,88	66	186

(\*) 2 separated power supplies.

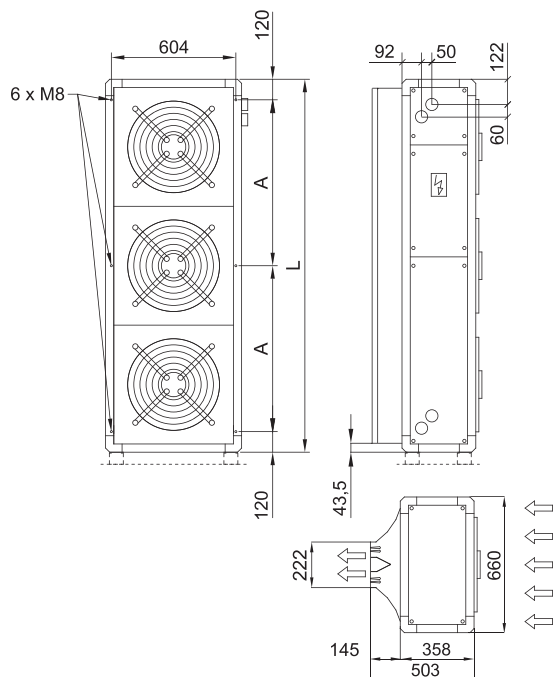
(\*\*) 3 separated power supplies.

**WATER HEATED**

Model	Airflow m³/h	P86			P64			Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Water Connections 80/60°C	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Water Connections 60/40°C				
MAX 2 P	6400	28,74	350	2x1¼"	29,71	8690	2x1¼"	0,68	2,96	61	75
MAX 3 P	9600	51,77	1440	2x1¼"	47,10	11930	2x1¼"	1,02	4,44	62	102
MAX 4 P	12800	74,15	2580	2x1¼"	63,30	9340	2x1¼"	1,36	5,92	63	135
MAX 5 P	16000	96,43	7070	2x1¼"	82,16	18450	2x1¼"	1,70	7,40	64	162
MAX 6 P	19200	118,69	12160	2x1¼"	91,92	3770	2x1¼"	2,04	8,88	65	189

Water heated: P86 2 rows coil, P64 3 rows coil.

**Dimensions**



	L	A
MAX 2	1234	498
MAX 3	1811	786
MAX 4	2388	1074
MAX 5	2965	1363
MAX 6	3542	1651



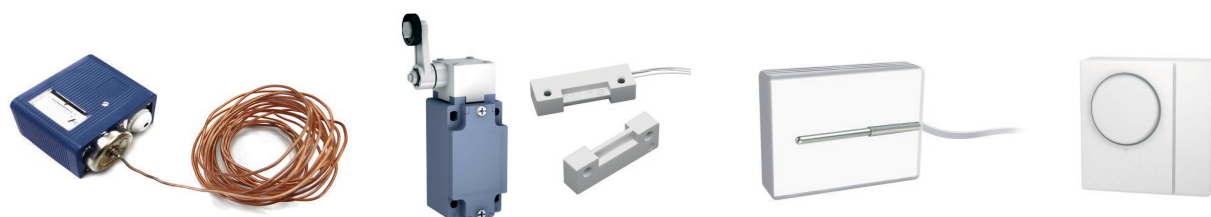
## Accessories



Feet, wall or ceiling supports, tailor made arms, vibration dampers...



Thermostatic valve, solenoid valve (ON/OFF), modulating valve...



Anti-freeze sensor, door contact, ambient thermostat, external temperature sensor...



Telephone cables: RJ45, RJ11, different lengths...

## Special Options

Airtecnicos, as an air curtains specialist, can produce units with special requirements under request.

Here there are some of the possibilities:

- External alarm signals as: unit working, heating ON, airflow detector, dirty grille sensor, electronic overheating signal, fans overheating thermo contact TK, electrical heating blocked, etc.
- Special water or steam coils for higher temperatures or different power than standard
- Tailor made electrical heating elements at desired heating power (kW) and electrical power supply (400Vx3 to 230Vx3 or 230Vx1)
- Dummies (empty air curtains) to combine with working units
- Industrial air curtains at 400Vx3 with the same advantages of electronic regulation 5 speed range
- Industrial MAX/MXW with higher volume (MAX/MXW L)
- Industrial MAX/MXW with explosion proof EX fans
- Stainless steel AISI-316 or other materials under request
- Special RAL colour with gloss or other finishes. Special BS (British Standard), Tiger Drylac, etc.
- Complete tailor made air curtain or our standard range customized according to client needs

Please consult us for further information or other options.



**Correction factors for water temperatures (M, ECM, G, ECG)**

The technical data tables give the nominal heat capacity for warm water coils supplied with water at 80/60°C, 60/40°C and 50/40°C with the air inlet temperature at 20°C.

These tables supply the corresponding factors for calculating the heat capacity with different air and water inlet temperatures.

Water			Air Inlet Temperature			Water			Air Inlet Temperature		
Coil	Difference	Temperatures	15°C	18°C	20°C	Coil	Difference	Temperatures	15°C	18°C	20°C
80/60 2 rows	20°C	100/80	1,58	1,53	1,46	50/40 4 rows	20°C	100/80	3,26	3,11	3,01
		90/70	1,35	1,27	1,22			90/70	2,79	2,64	2,54
		<b>80/60</b>	1,11	1,04	<b>1,00</b>			80/60	2,32	2,17	2,07
		70/50	0,89	0,82	0,78			70/50	1,83	1,69	1,59
		60/40	0,66	0,59	0,54			60/40	1,35	1,21	1,11
		55/35	0,54	0,47	0,42			50/30	0,85	0,68	0,58
	15°C	100/85	1,72	1,64	1,59	15°C	80/65	2,47	2,34	2,24	
		90/75	1,47	1,40	1,35		70/55	2,01	1,86	1,77	
		80/65	1,22	1,14	1,09		60/45	1,53	1,39	1,30	
		70/55	0,97	0,90	0,86		50/35	1,05	0,91	0,83	
		60/45	0,73	0,66	0,61		45/30	0,85	0,71	0,63	
		50/35	0,48	0,40	0,35		10°C	60/50	1,71	1,57	1,47
	10°C	80/70	-	1,28	1,20	<b>50/40</b>		1,24	1,10	<b>1,00</b>	
		70/60	1,09	1,02	0,97	40/30		0,77	0,62	0,53	
		60/50	0,84	0,77	0,72						
		50/40	0,59	0,52	0,48						
	40/30	0,35	0,27	0,22							
	60/40 3 rows	20°C	100/80	2,86	2,71	2,62					
90/70			2,45	2,30	2,21						
80/60			2,03	1,89	1,81						
70/50			1,61	1,48	1,40						
<b>60/40</b>			1,21	1,08	<b>1,00</b>						
50/30			0,80	0,67	0,59						
15°C		60/45	-	1,22	1,14						
		50/35	0,94	0,82	0,75						
10°C		40/30	0,69	0,57	0,49						

Example of heat capacity calculation:

Model M 2000 P 80/60°C

Air inlet temperature 15°C, Water temperature 90/70°C

$$\text{HEAT CAPACITY} = \text{Nominal Power (20,65 kW)} \times \text{Coefficient (1,35)} = 27,87 \text{ kW}$$



## EC Concept

EC technology (Electronically Commutated) consists of a direct current (DC) motor that incorporates a converter to be able to connect to alternating current (AC).

The static part of the fan (stator) includes an electronic board that transforms the AC to DC current and also allows regulating the fan speed proportionally from 0 to 100%.

EC motor have no slippage losses, thus increasing efficiency versus AC motor.

## EC Motor Principle

- DC motor with permanent magnets in the rotor
- An electronic board controls the electronic switches that replace the carbon brushes
- An electronic system recognizes the position and direction of rotation of the rotor (software, Hall effect sensors)
- Power supply with alternating current, valid for 50Hz or 60Hz indistinctly

## Advantages and Benefits

EC air curtains are absolutely efficient reducing the running cost of the ventilation up to 65% using EC instead of AC fans.

- Energy saving: high efficiency, reducing consumption compared to an AC
- Longer life because the motor works at a lower temperature than an equivalent AC
- Control: proportional fan speed 0-100% easily controllable with 0-10V regulation
- Simplicity: 50Hz or 60Hz indistinctly, electronic transformation and power are completely integrated in the motor

Available EC Air Curtains:

Windbox ECM-ECG, Smart, Kool, Recessed Windbox, Dam, Recessed Dam, Variwind, Recessed Compact, Rund, Zen, Rotowind, Invisair, Windbox BB, Recessed Windbox BB, Zen BB.

## EC vs AC Air Curtain - Energy Saving up to 65%

How much money can I save using an EC Air curtain?

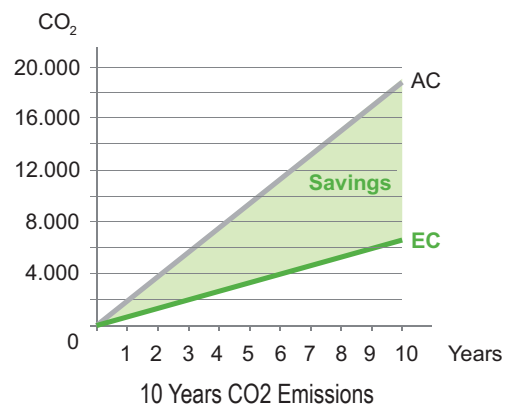
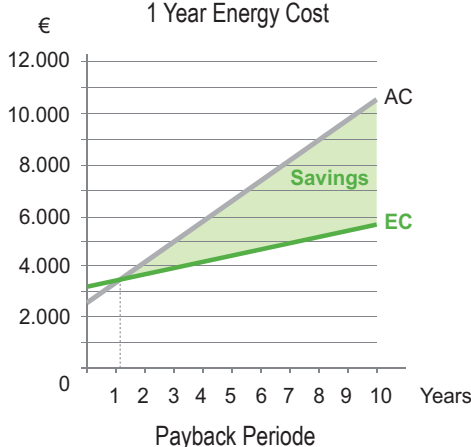
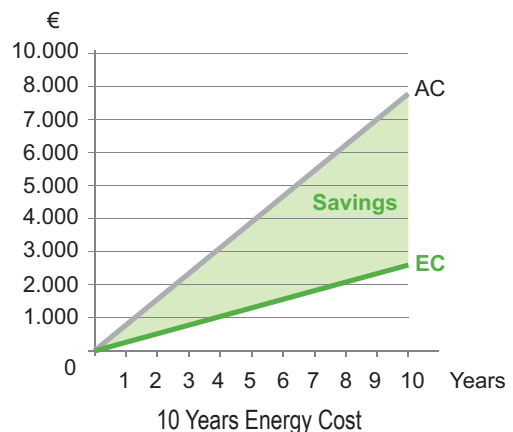
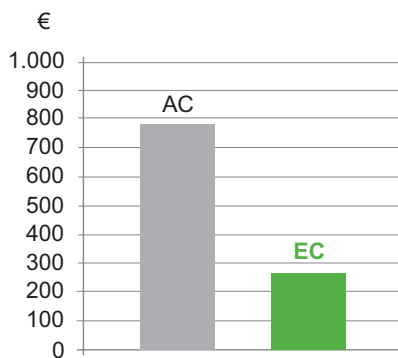
### Example:

Door dimension: 2 m width by 3,8 m height  
 Running time: 12 hours/day, 6 days/week, 50 weeks (~ 1 year)  
 Energy cost: 0,17 €/kW/h (EU-27 average cost)  
 Selected unit: AC: G 2000, EC: ECG 2000

	AC Air Curtain		EC Air Curtain		Difference
Total Fans Power	1,284	kW	0,450	kW	- 0,834 kW
Air Curtain Price	2.500	€/unit	3.127	€/unit	+ 627 €
Energy Consumption	4.622	kW/h	1.620	kW/h	- 3.002 kW/h
Energy Cost	786	€	275	€	- 510 €
CO2 Emissions	1.849	kg	648	kg	- 1.201 kg

### Result:

The payback periode is 1 year and 3 months. In addition, 65% of energy and CO2 emissions to the environment are saved every year.



# BASIC REGULATION: Standard Controls



Two ranges of control panels, both designed for easy and quick Plug & Play connection, free of mistakes, by using a telephone cable with RJ45 connectors. The digital communication between the control panel and air curtain is a very reliable connection without information losses even at long distances. All control panels can be turned ON/OFF externally and have internal memory (if the power supply is cut off, the unit goes back to the selected state).

## 2 Speed Range Controls

Infrared remote control included. Suitable for air curtains: Optima, Recessed Optima, Aris.

### CA-2AO-IR

Only air, 2 fan speed



### CW-2EV-IR

Water heated, 2 fan speed and electro-valve switch



### CE-2AO-IR

Electrical heated, 2 fan speed, 2 heating stages



## 5 Speed Range Controls

Infrared remote control included (except CS). Suitable for air curtains:

Windbox M,G,BB,L,XL, Dam, Smart, Recessed Windbox, Recessed Dam, Recessed Compact, Kool, Zen, Rund, Rotowind, Invisair, Variwind, Max, Maxwell.

### CA-5AW-IR

Only air, 5 fan speed



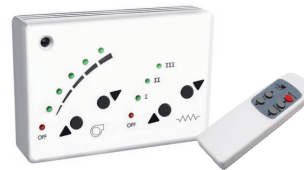
### CW-5AW-IR

Water heated, 5 fan speed and electro-valve switch



### CE-5AW-IR

Electrical heated, 5 fan speed and 3 heating stages



### CS-5DX-NE

Heat pump heated, 5 fan speed, door contact, cooling and defrost



## Optional Controls

### Hand Auto

Water heated: with manual and automatic operating.  
Auxiliary functions: anti-freezing sensor, door contact (with delay) and room thermostat.



CH-2HO-NE



CH-5HW-NE

### Digital Thermostat

Only electrical heated: modifies heat stages and fan speed depending on temperature and selected program.



TD-NE-II

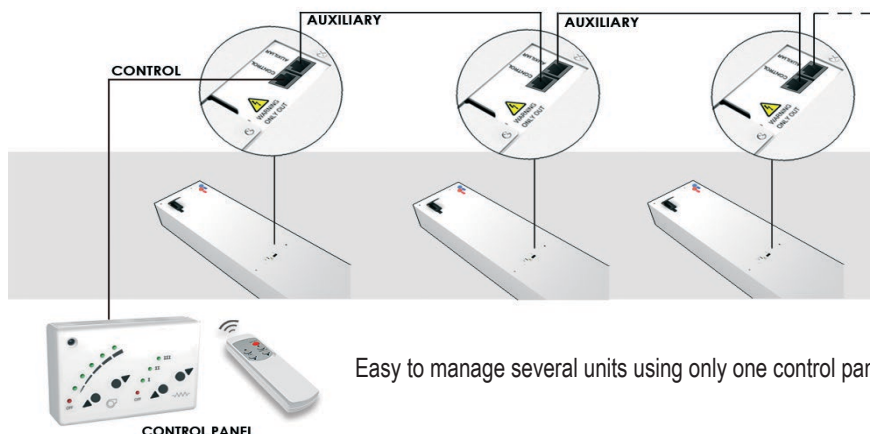
### Interface

Allows the connection to a centralized management system like BMS and also to standard controllers.



IN-NE-II

## Multiple air curtain connection



Easy to manage several units using only one control panel.

# ADVANCED REGULATION: Clever Control



The future is here with the new generation Clever control. Maximum control with maximum energy saving.

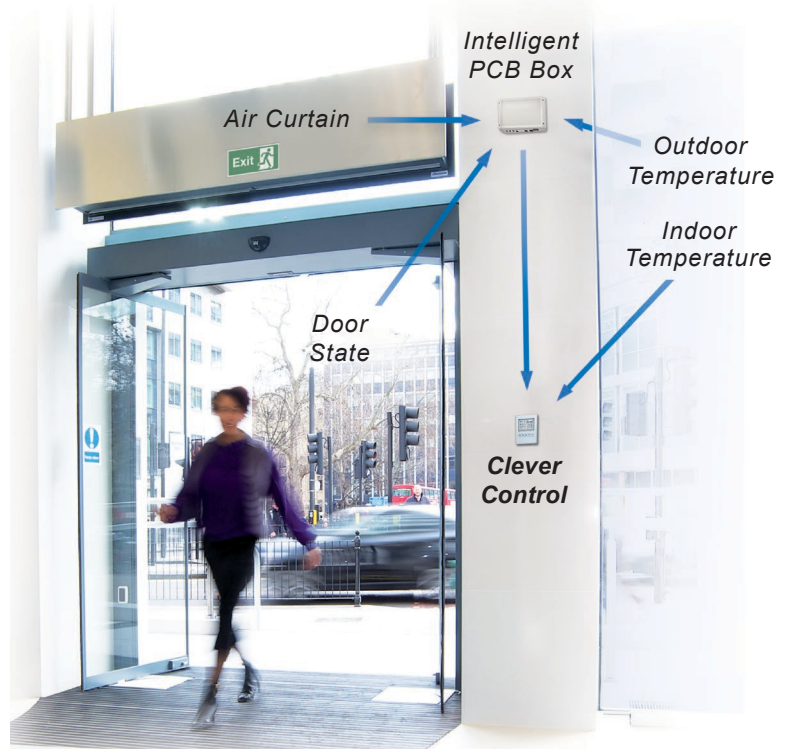
## What is Clever control?

Clever control automatically adapts the functioning of the air curtain to the entrance conditions, maintaining comfort while saving energy. It optimizes the ventilation and heating to make an efficient barrier for an optimal climate separation.



INTELLIGENT  
PROACTIVE  
REGULATION

It includes manual or automatic functioning with many different programs depending on heating type (water, electrical, heat pump or unheated) and installed temperature sensors.



## Clever kit includes:



### Clever Control

- Color TFT screen 2.8 inch
- 114 (h) x 85 (w) x 14 (d) mm
- Prepared for flush-mount installation



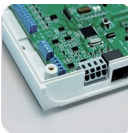
### PCB Power Supply

- Input: 100-240Vx1 50/60Hz (AC)
- Output: 24V 2A (DC)
- EU 2 pins / BS 3 pin plugs



### Outdoor Temperature Sensor

- Real-time temperature values
- IP65 Protection



### Intelligent PCB Box

- Electronic PCB Regulation
- 218 (w) x 140 (h) x 64 (d) mm
- Varnish Protection



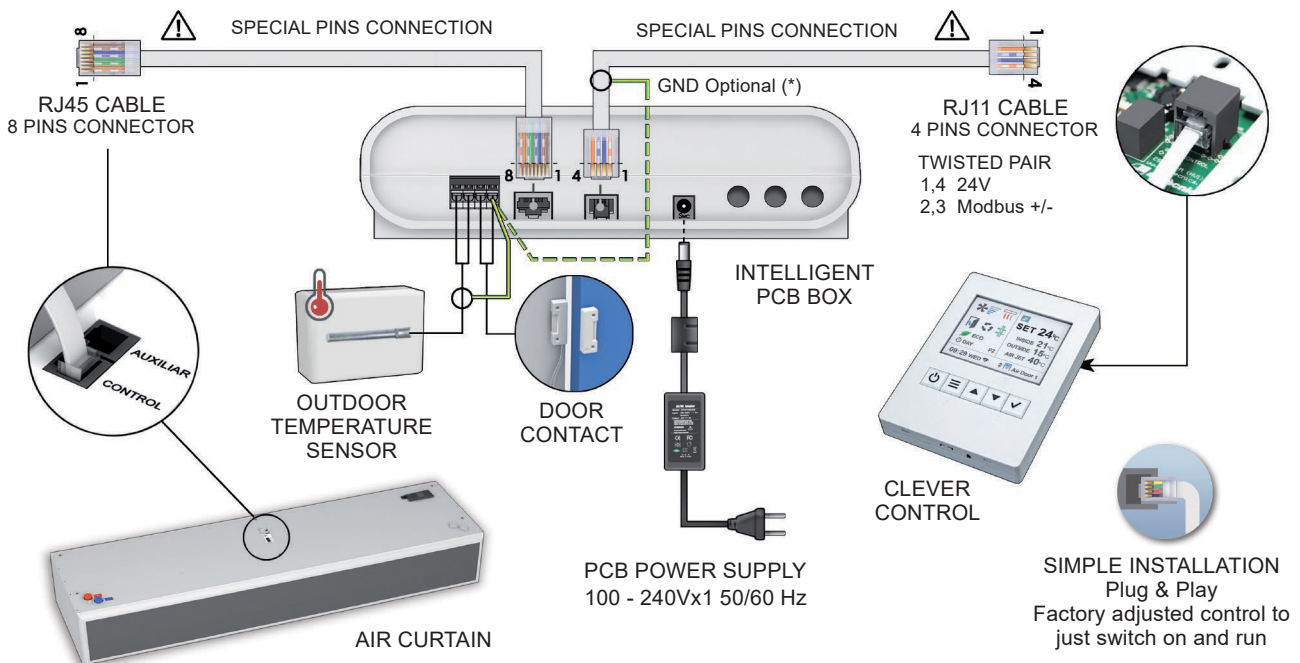
### RJ11 + RJ45 Cables

- Easy Plug & Play installation
- RJ11 (4 Pins), 7m length
- RJ45 (8 Pins), provided with the air curtain



### Door Contact

- Monitoring Door Status
- Magnetic contact

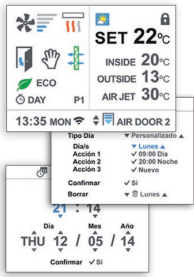


(\*) If there are communication issues (interferences), use shielded cable connected to GND



Clever control includes lots of advanced functions and extras to fulfill all client needs.

## Advanced functions:



### USER FRIENDLY DESIGN

Multilanguage and easy icons for fully understanding.  
Main state screen: ventilation speed, heating, temperatures, door state, working mode and program, filter state, day/hour, timer, etc. 3 different menu configurations depending on who is managing the equipment: user, basic or advanced.



### ENERGY SAVING

3 grades of comfort and energy efficiency: "Eco" uses the less energy possible without compromising too much the comfort. "Comfort" spends more ventilation/heating to maintain / achieve quicker the Set temperature. "Medium" is in between.



### ADAPTIVE DOOR DELAY

When the door closes, the air curtain remains working at door open conditions for certain time to be ready if it opens again.  
2 modes with two strength stages: "Fixed" where you define the duration "Flexible" which adapts automatically the time depending on how often the door is open.



### TIMER (DAY/NIGHT)

To turn ON DAY, ON NIGHT or OFF automatically the unit depending on each different day of the week or predefined groups of days.  
User can select between Day or Night modes with 2 different Set temperatures in order to save energy.



### COMPATIBLE

Android or Apple smartphone application with user functions connected via WIFI.  
BMS communication with Modbus RTU protocol or using digital and analogical IN/OUT to control or monitor directly the unit.  
Modbus TCP/Bluetooth optional modules. PC Windows program (RS485).



### FILTER ALARM

Indicates when filter needs replacing/cleaning. 2 options: by "Timer" of functioning hours or by "Pressure Sensor" switch.



### FULLY PROGRAMMABLE

All parameters can be configured at Basic or Advanced menu.  
Lots of extra functions to fulfill all clients applications. Editable device names for easy identification.



### MULTI-EQUIPMENT

Clever works with different types of units: air curtains, fan heater, AHU, etc.  
Once programmed, PCB can work by itself without any controller.  
One Clever TFT can manage up to 255 different units, each one with its own program.

## Other Characteristics:

- Clever is factory adjusted according to the device/s and client requirements
- Once installed, the system checks automatically all connected units and its temperature sensors
- Different integrated programs and functions for particular applications
- Different programs depending on installed temperature sensors: inside, outside and air jet
- Able to regulate by itself the ventilation and heating depending on: door state, temperature sensors, selected working mode, grade of energy saving, program and other parameters
- Alarms: general, filter state, anti freezing, overheating, fans overheating, airflow, fire, external, heating locked, etc.
- Security control buttons lock option by code
- Modulating valve for water heated (includes 24VDC power supply)
- Multiple functions: temporized door, excessive temperature of water return, cooling mode and others



**Minibel**

Ideal for small openings (service windows)



**Optima**

Installation in a shop entrance



**Windbox M,G**

In a chain restaurant



**Windbox M,G**

Invisible installation with false ceiling kit



**Dam**

With smooth customizable front panel in a fashion store



**Dam Twin**

System with two curtains for adverse situations





**Zen**  
Elegant with aluminum panels in an offices building



**Zen**  
Exclusive design with custom finishes



**Zen**  
With wood panels in a chain restaurant



**Rund**  
Rounded, vertical and in stainless steel design



**Rund**  
Tailor made-linear installation for large openings



**Rund**  
Installation with special goalposts supports



**Smart**  
Elegant and discreet design with hidden inlet grille



**Recessed Optima**  
Designed to install in false ceiling



**Recessed Windbox**  
Integration in false ceiling in a shopping center



**Recessed Dam**  
Model with exposed inlet grille



**Invisair**  
Fully invisible installation integrated in vertical bulkhead



**Rotowind**  
Tailor-made design for all types of revolving doors



## Rotowind

Special solution for glass revolving doors



## Windbox L,XL

Multiple installation of industrial curtains in a factory



## Kool

Cold chamber in a food factory



## Triojet System

Special for great cold chambers and freezers



## Maxwell

Jet with Coanda effect for industrial doors



## Max

Multiple modular towers on large industrial doors

# FEATURED REFERENCES



## Producing for Worldwide Brands





## Public Buildings



### Buildings

- Alhambra (Granada, Spain)
- Royal Courts of Justice (London, UK)
- Riffa King Palace (Manama, Bahrain)
- Fire Brigade headquarters (London, UK)
- O2 Space (Dublin, Ireland)
- Expo Georgia (Tbilisi, Georgia)
- Darwen Leisure Centre (Darwen, UK)
- Park Pavilion (London, UK)
- La Defense (Paris, France)
- Sagrada Família (Barcelona, Spain)
- Expo 2015 (Milan, Italy)
- National Audit Office (London, UK)
- Centre des Conventions (Oran, Algiers)
- Roca Gallery (London, UK)
- Expo Ourense (Ourense, Spain)
- Repsol Auditorio (Madrid, Spain)
- Palace of the United Nations (Geneva, Switzerland)
- Palacio de Ferias y Congresos (Málaga, Spain)
- Generalitat de Catalunya (Barcelona, Spain)
- Congreso de los Diputados (Madrid, Spain)
- Prefecture Des Yvelines (Versailles, France)
- Palacio Euskalduna Jauregia (Bilbao, Spain)
- Comissaria Mossos d'Esquadra (Amposta, Spain)
- Commissariat de Police (Aulnay-sous-Bois, France)



### Airports

- JFK (New York, USA)
- Gatwick (London, UK)
- El Prat (Barcelona, Spain)
- Heathrow (London, UK)
- Leonardo da Vinci (Roma, Italy)
- Hamad (Doha, Qatar)
- Malpensa (Milan, Italy)
- Vladivostok (Ayrton, Russia)
- Norman Manley (Kingston, Jamaica)
- Danylo Halytskyi (Lviv, Ukraine)
- José Martí (La Habana, Cuba)
- Queen Alia (Amman, Jordan)
- Jorge Newbery (Buenos Aires, Argentina)
- Ashgabat Airport (Ashgabat, Turkmenistan)
- Tirana International Airport (Tirana, Albania)



### Train Stations

- Central Station (Vienna, Austria)
- AVE (Lleida, Spain)
- Stratford (London, UK)
- Kings Cross (London, UK)
- Atocha (Madrid, Spain)
- Ebbsfleet (London, UK)
- Haramain Highspeed (Jeddah, Saudi Arabia)
- ADIF - Estació de Sants (Barcelona, Spain)
- FFCC Plaça Catalunya (Barcelona, Spain)



### Hospitals

- Barking (London, UK)
- CAP Rambla (Terrassa, Spain)
- Dexeus (Barcelona, Spain)
- Forth Valley (Larbert, Scotland)
- Hygeia (Athens, Greece)
- Mútua (Terrassa, Spain)
- Sant Joan de Déu (Barcelona, Spain)
- Virgen del Castillo (Yecla, Spain)
- Asepeyo (Sant Cugat del Vallès, Spain)
- St. Peters (Chertsey, UK)
- Bellvitge (Hospitalet de Llobregat, Spain)
- Parc Taulí (Sabadell, Spain)



### Colleges / Universities

- Hope (Liverpool, UK)
- Imperial (London, UK)
- Redbridge (Romford, UK)
- San Pablo CEU (Madrid, Spain)
- Blanquerna (Barcelona, Spain)
- Colegio Americano (Madrid, Spain)
- Evelyn Grace (London, UK)
- James Watt (Greenock, UK)
- National Physics Technology Science Centre (Vilnius, Lithuania)
- Liverpool University (Liverpool, UK)



### Museums

- Louvre (Paris, France)
- Picasso (Barcelona, Spain)
- MNAC (Barcelona, Spain)
- Victoria Gallery (Liverpool, UK)
- Palacio de Carlos V (Granada, Spain)
- People's History (Manchester, UK)
- Bob Marley (Kingston, Jamaica)
- Arts Santa Mónica (Barcelona, Spain)
- Palacio Real (Madrid, Spain)



### Theaters

- National Theatre (London, UK)
- Teatro de la Zarzuela (Madrid, Spain)
- Royal Albert Hall (London, UK)



## Chains



### Stores

- Apple headquarters (London, UK)
- Media Markt (Badajoz, Spain)
- Ikea (Växsjö, Sweden)
- Leroy Merlin (Valladolid, Spain)
- FNAC (Zaragoza, Spain)
- T Mobile (Schwäbisch Hall, Germany)
- Adidas (Barcelona, Spain)
- Vodafone (Galway, Ireland)
- Swarovski (Norwich, UK)
- Nike (Dublin, Ireland)
- Sephora (Milan, Italy)
- Kipling (La Roca del Vallès, Spain)
- Dior (Stuttgart, Germany)
- El Corte Inglés (Talavera de la Reina, Spain)
- Decathlon (Sainte-Suzanne, Reunion Island)
- Gillette (Reading, UK)
- Yves Rocher (Amsterdam, Netherlands)
- Alain Afflelou (Barcelona, Spain)



### Clothes

- Louis Vuitton (London, UK)
- Mango (Faro, Portugal)
- H&M (Amsterdam, Netherlands)
- Next (Manchester, UK)
- Primark (Madrid, Spain)
- Levi's (Barcelona, Spain)
- Napapijri (Oslo, Norway)
- Zara (Milan, Italy)
- Kiabi (Aubenas, France)
- Calzedonia (Badalona, Spain)
- Massimo Dutti (Berna, Switzerland)
- Le Coq Sportif (Barcelona, Spain)
- Hugo Boss (Dublin, Ireland)
- Marks & Spencer (Glasgow, Scotland)
- Lacoste (Amsterdam, Netherlands)
- Billabong (Barcelona, Spain)
- Desigual (Dublin, Ireland)
- Guess (Barcelona, Spain)
- Pepe Jeans (Amsterdam, Netherlands)
- Stradivarius (Sabadell, Spain)
- C&A (Schwäbisch Hall, Germany)



### Shoes

- Crocs (Amsterdam, Netherlands)
- Fila (Amsterdam, Netherlands)
- Fosco (Barcelona, Spain)
- Geox (Madrid, Spain)
- JD Sport King (Rotterdam, Netherlands)
- Foot Locker (Amsterdam, Netherlands)
- Vives (Vic, Spain)



### Supermarkets

- Carrefour (Lleida, Spain)
- Aldi (Collado Villalba, Spain)
- Intermarche (Polliat, France)
- Mercadona (Castellar del Vallès, Spain)
- Tesco (Cheltenham, UK)
- E.Leclerc (Loudun, France)
- Eroski (Sant Cugat del Vallès, Spain)
- Alcampo (A Coruña, Spain)



### Food

- McDonald's (Amsterdam, Netherlands)
- Starbucks (Warsaw, Poland)
- Nestlé (Halifax, UK)
- Pizza Hut (Frankfurt, Germany)
- Hard Rock Cafe (Venezia, Italy)
- KFC (Amsterdam, Netherlands)
- Viena (Zaragoza, Spain)
- Häagen-Dazs (Palma de Mallorca, Spain)
- Subway (Rotterdam, Netherlands)
- Fosters Hollywood (Sabadell, Spain)



### Cars

- Porsche (Stuttgart, Germany)
- Ford (Almussafes, Spain)
- BMW (Abrera, Spain)
- Nissan (Sunderland, UK)
- Ferrari (Las Rozas, Spain)
- Mercedes (Alcobendas, Spain)
- Citroen (Vigo, Spain)
- Toyota (Madrid, Spain)



## Companies



### Banks

- Barclays (Leeds, UK)
- Sabadell Atlántico (Palafrugell, Spain)
- Kutxa Bank (Getaria, Spain)
- BBVA Headquarters (Bilbao, Spain)
- La Caixa (Torelló, Spain)
- Lloyds TSB (Northampton, UK)
- Morabank (Andorra la Vella, Andorra)



### Factories

- Pepsi (Jeddah, Saudi Arabia)
- Atlas Copco (Köln, Germany)
- Bosch (Barcelona, Spain)
- Pirelli (Milan, Italy)
- Telefónica (Madrid, Spain)
- Tuko Logistics (Kerava, Finland)
- ABB HVDC (Ludvika, Sweden)
- Bristol-Myers Squibb (Paris, France)
- Procter & Gamble (Agbara, Nigeria)
- Würth (Kouvola, Finland)
- Bayer (Esplugues de Llobregat, Spain)
- Siemens Vdo (Abrera, Spain)
- Cadbury (Lagos, Nigeria)
- Basf (Milan, Italy)
- Siemens (Durham, USA)
- Allianz (Madrid, Spain)
- EAM Maliban Textile (Colombo, Sri Lanka)
- Bodega J. García Carrión (Daimiel, Spain)
- Vestas Technology Ltd (Isle of Wight, UK)
- Findus (Pamplona, Spain)



### Others

- American Naval Base (Juffar, Bahrain)
- US Army Camp Liberty (Baghdad, Iraq)
- Sarrià Market (Barcelona, Spain)
- Barfoots Ltd Farm (Bognor Regis, UK)
- BBC TV (Cardiff, Wales)
- BFI Imax Cinema (London, UK)
- The Reef Hotel Casino (Cairns, Australia)
- Gran Casino (Barcelona, Spain)
- Nuclear Plant (Saint-Laurent-Nouan, France)
- Ceccato Car Wash (Milan, Italy)
- Spine Tower Carrefour SA (Istanbul, Turkey)

## Leisure



### Malls / Shopping Centers

- Darinok (Kiev, Ukraine)
- Union Square (Aberdeen, UK)
- Les Arenes (Barcelona, Spain)
- Victoria (Nottingham, UK)
- Orjin Maslak (Istanbul, Turkey)
- Kingsway (Newport, UK)
- Peris XV (Paris, France)
- Albufera (Madrid, Spain)
- Esselunga (Casale Monferrato, Italy)
- El Bulevar (Ávila, Spain)
- Zorlu Center (Istanbul, Turkey)



### Hotels

- Hilton (Addis Ababa, Ethiopia)
- Indigo (New York, USA)
- NH (Madrid, Spain)
- Polaris (Ulaanbaatar, Mongolia)
- Novotel Paddington (London, UK)
- Crowne Plaza (Montpellier, France)
- Pegaso (Bergamo, Italy)
- Holiday Inn (Chessington, UK)
- Ritz (Almaty, Kazakhstan)
- NH Las Tablas (Madrid, Spain)
- Wyndham (Doha, Qatar)
- Le Jura (Dijon, France)
- Park Plaza (London, UK)
- Assila Rocco Forte (Jeddah, Saudi Arabia)



### Restaurants

- Kyochon (New York, USA)
- Lujó Ibérico (Sabadell, Spain)
- Panorama (Sofia, Bulgaria)
- Tagliatella (Alicante, Spain)
- Atresmedia Café (Madrid, Spain)
- Deserie (Barnet, UK)
- CalaBoca (Sabadell, Spain)
- Filadón (Madrid, Spain)
- Paul Bocuse (Collonges-au-Mont-d'Or, France)
- El Refugi Alpi (Andorra la Vella, Andorra)
- Hatay Medeniyetler Sofrasi (Istanbul, Turkey)
- La Esquina del Bernabéu (Madrid, Spain)



### Theme Parks / Sports

- Disneyland (Paris, France)
- Europapark (Rust, Germany)
- Port Aventura (Salou, Spain)
- Camp Nou (Barcelona, Spain)
- Santiago Bernabéu (Madrid, Spain)
- Olympic Village (Ashgabat, Turkmenistan)
- Meydan Horse Racing Club (Dubai, UAE)
- Circuit de Catalunya F1 (Montmeló, Spain)



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