



# Air Curtains

## 2017



# 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)

Bulgar	<a href="http://www.vazdushnizavesi.com">www.vazdushnizavesi.com</a>	Latvian	<a href="http://www.gaisaaizkari.com">www.gaisaaizkari.com</a>
Catalan	<a href="http://www.cortinesaire.com">www.cortinesaire.com</a>	Lithuanian	<a href="http://www.oruzuolaidos.com">www.oruzuolaidos.com</a>
Czech	<a href="http://www.vzduchoveclony.com">www.vzduchoveclony.com</a>	Norwegian	<a href="http://www.luftporter.com">www.luftporter.com</a>
Danish	<a href="http://www.lufttaepper.com">www.lufttaepper.com</a>	Polish	<a href="http://www.kurtynapowietrzna.com">www.kurtynapowietrzna.com</a>
Dutch	<a href="http://www.luchtgordijnen.com">www.luchtgordijnen.com</a>	Portuguese	<a href="http://www.cortinadeaer.com">www.cortinadeaer.com</a>
English	<a href="http://www.dooraircurtain.com">www.dooraircurtain.com</a>	Romanian	<a href="http://www.perdeledeaer.com">www.perdeledeaer.com</a>
Finnish	<a href="http://www.ilmaverho.com">www.ilmaverho.com</a>	Russian	<a href="http://www.vozdushnyezavesy.com">www.vozdushnyezavesy.com</a>
French	<a href="http://www.rideauxdair.com">www.rideauxdair.com</a>	Serbian	<a href="http://www.vazdusnezavesec.com">www.vazdusnezavesec.com</a>
German	<a href="http://www.luftschieieranlagen.net">www.luftschieieranlagen.net</a>	Slovenian	<a href="http://www.zracnezavesec.com">www.zracnezavesec.com</a>
Greek	<a href="http://www.aerokourtines.com">www.aerokourtines.com</a>	Spanish	<a href="http://www.cortinasdeaire.es">www.cortinasdeaire.es</a>
Hungary	<a href="http://www.legfuggonyok.com">www.legfuggonyok.com</a>	Swedish	<a href="http://www.luftridaer.com">www.luftridaer.com</a>
Italian	<a href="http://www.barrieradaria.com">www.barrieradaria.com</a>	Turkish	<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.

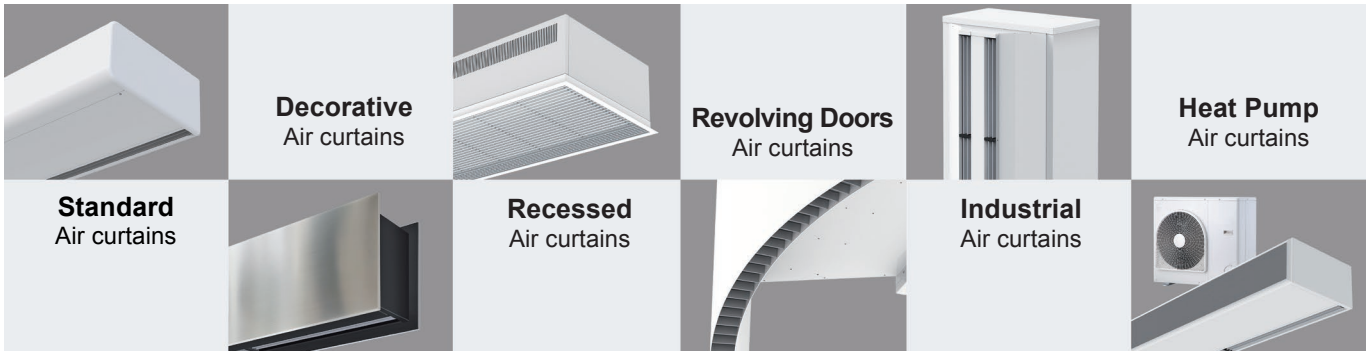
Airtècnics air curtains create an air stream layer over the doorway and act as an invisible barrier which efficiently divides the inside environment from the outside one. Therefore, it substantially reduces heating and cooling costs up to 80%, while increasing employees and clients comfort.

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



**SMART**

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

16-17



**MINIBEL**

*Economical for openings up to 1,8 m*

7



**ZEN**

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

18-19



**OPTIMA WIRELESS**

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

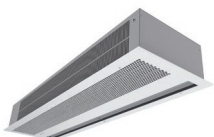
8



**RUND**

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

20-21



**RECESSED OPTIMA WIRELESS**

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

9



**DECO**

*Decorative with aluminium profiles  
for commercial doors 2,5 - 4,2 m*

22-23



**OPTIMA**

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

10



**DAM**

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

24-25



**RECESSED OPTIMA**

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

11



**RECESSED DAM**

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

26-27



**WINDBOX M,G**

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

12-13



**HEAT PUMP AIR CURTAINS**

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

28-35



**RECESSED WINDBOX**

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

14-15











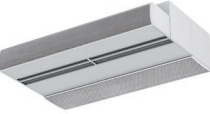






**WINDBOX L,XL**

*High pressure for commercial and  
large industrial doors 4 - 7 m*

36-37



	<p><b>INVISAIR</b> Recessed in column or bulkhead vertical or horizontal 2,5 - 4,2 m</p>	38-39		<p><b>ACCESSORIES</b> <b>SPECIAL OPTIONS</b> Supports, valves, sensors, etc.</p>	48
	<p><b>ROTOWIND</b> Tailor made for revolving doors 2,5 - 4,2 m</p>	40-41		<p><b>POWER COEFFICIENTS</b> Water heated air curtains at different water temperatures</p>	49
	<p><b>VARIWIND</b> Tailor made variable length VP or VW construction 2,5 - 4,2 m</p>	42		<p><b>EC TECHNOLOGY</b> Centrifugal EC fans with very low consumption technology</p>	50
	<p><b>RECESSED COMPACT</b> Air only compact recessed for commercial and industrial doors 2,5 - 4,2 m</p>	43		<p><b>REGULATION</b> Basic regulation: standard controls Advanced regulation: Clever control</p>	51-53
	<p><b>KOOL</b> High velocity for cold store and freezer doors 2,5 - 4,2 m</p>	44		<p><b>GALLERY</b> Installation pictures</p>	54-55
	<p><b>TRIOJET SYSTEM</b> Combination system with multijets for large cold stores 2 - 3 m</p>	45		<p><b>REFERENCES</b> Clients brand names</p>	56-59
	<p><b>MAXWELL</b> Large industrial doors vertical or horizontal 4 - 6 m</p>	46		<p><b>DISTRIBUTORS</b> Worldwide distributors</p>	60-61
	<p><b>MAX</b> Large industrial doors vertical or horizontal 4 - 6 m</p>	47			



## Applications

Model	Kind	Recommended Installation Height (*)	Heating			Common Applications
			A	E	P	
Minibel		Up to 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 Recessed Optima Wireless		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.
Optima Recessed Optima						
Windbox Recessed Windbox Smart Zen Rund Deco Dam	M, ECM	2,5 - 3,5 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.
Recessed Dam Windbox DX Invisair Rotowind Variwind Recessed Compact (A) Kool (A)						
Triojet		2 - 3 m		•		Industrial doors for large cold rooms and freezers with very low temperatures or problems with ice production.
Windbox	L	4 - 5 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.
	XL	5 - 7 m	•	•	•	
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.

(A) Air Only, (E) Electrical Heating, (P) Water Coil Heating LPHW.



**Characteristics**

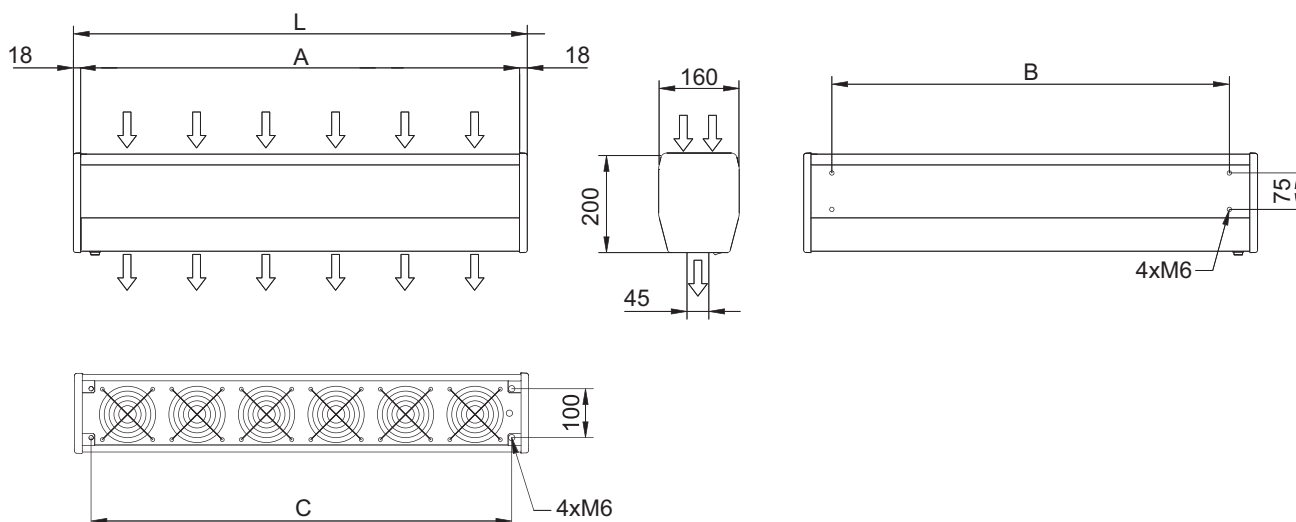


- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours are available on request.
- Anodized aluminium outlet vanes, airfoil shaped.
- Compact axial fans, low noise level.
- “E” type with electrical 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 (5 m) 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 Heating 230V-50Hz W	Current Fans Heating 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
OPT W 1000 E	1500	4/6	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

	L	A	B
OPT W 1000	1050	940	-
OPT W 1500	1550	1440	-
OPT W 2000	2050	1940	970

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





## 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.

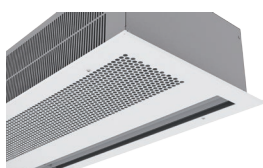
## Specifications

AIR ONLY					
Model	Airflow m <sup>3</sup> /h	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5 m) 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

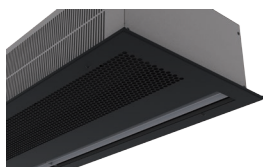
ELECTRICAL HEATED								
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
RO W 1000 E	1700	4/6	400Vx3	8,7	80	0,41	35/50	25
RO W 1000 E230	1700	3,8/5,6	230Vx1	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.

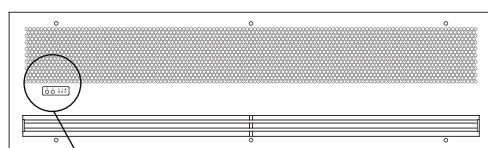
## Dimensions and Finishes



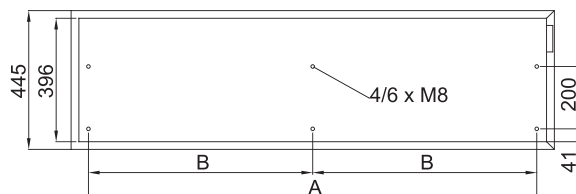
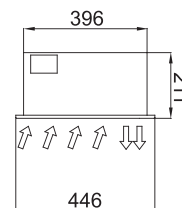
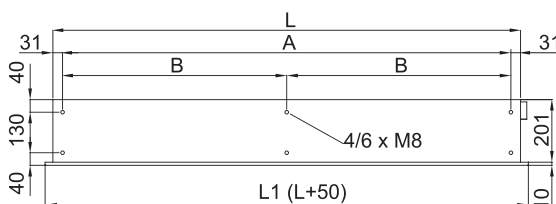
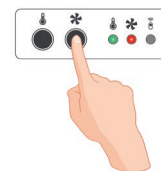
White Finish  
RAL 9016



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 (5 m) 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 P86**

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 (5 m) 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**

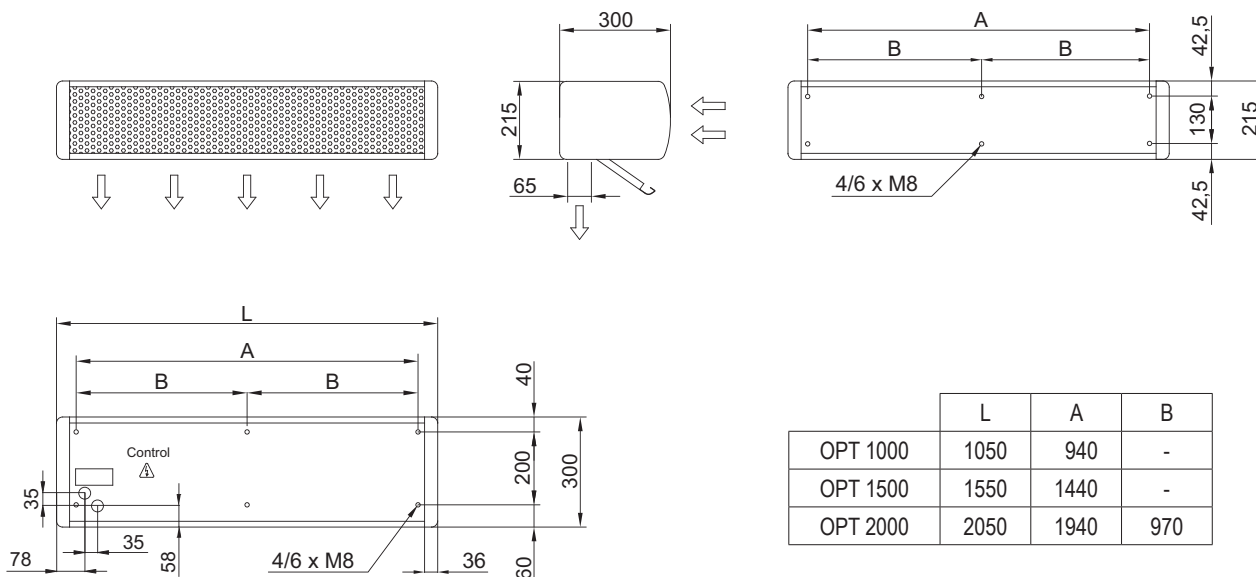
Model	Airflow m³/h	Electrical Heating Capacity (*) kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
OPT 1000 E	1500	4/6	400Vx3	8,7	80	0,41	35/50	20,5
OPT 1000 E-9	1500	6/9	400Vx3	13,0	80	0,41	35/50	21,5
OPT 1000 E230	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.

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

(\*\*) 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 (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 (5 m) 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 P86

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 (5 m) 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

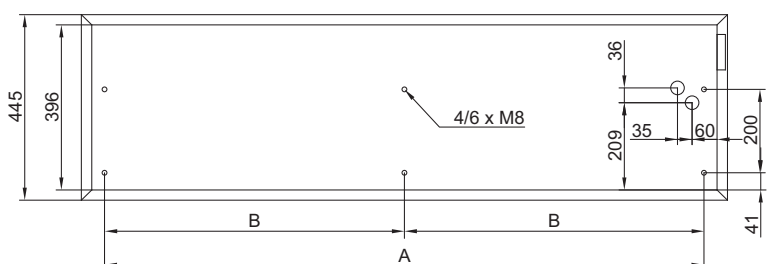
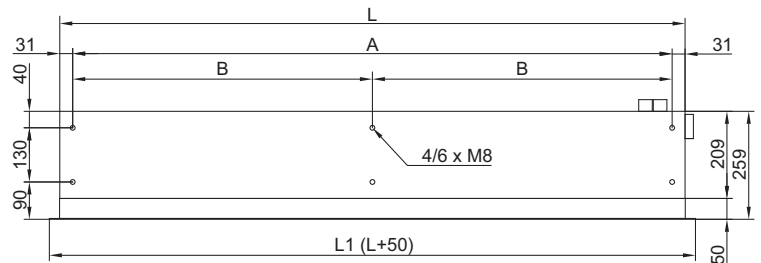
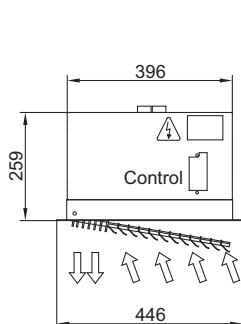
Model	Airflow m <sup>3</sup> /h	Electrical Heating Capacity (*) kW	Power Supply	Maximum Electrical Heating Current A	Power Fans 230V-50Hz W	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
RO 1000 E	1700	4/6	400Vx3	8,7	80	0,41	35/50	26
RO 1000 E-9	1700	6/9	400Vx3	13,0	80	0,41	35/50	27
RO 1000 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.

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

(\*\*) 2 separated power supplies.

## Dimensions



	L	L1	A	B
RO 1000	1000	1050	938	-
RO 1500	1500	1550	1438	-
RO 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 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 assembled 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 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 (5 m) dB(A)	Weight kg
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	0,132	1,14	56	31
ECM 1500 A	2760	0,198	1,71	57	46
ECM 2000 A	3680	0,264	2,28	58	58
ECM 2500 A	4600	0,330	2,85	59	72
ECM 3000 A	5520	0,396	3,42	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	0,225	1,95	61	43
ECG 1500 A	3600	0,300	2,60	62	51
ECG 2000 A	5400	0,450	3,90	63	80
ECG 2500 A	6300	0,525	4,55	64	84
ECG 3000 A	7200	0,600	5,20	65	95

### ELECTRICAL HEATED

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
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	0,132	1,14	56	37
ECM 1500 E	2760	4/8/12	0,198	1,71	57	57
ECM 2000 E	3680	6/12/18	0,264	2,28	58	75
ECM 2500 E	4600	6/12/18	0,330	2,85	59	94
ECM 3000 E	5520	8/16/24	0,396	3,42	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	0,225	1,95	61	52
ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	63
ECG 2000 E	5400	10/20/30	0,450	3,90	63	100
ECG 2500 E	6300	10/20/30	0,525	4,55	64	106
ECG 3000 E	7200	10/20/30	0,600	5,20	65	120

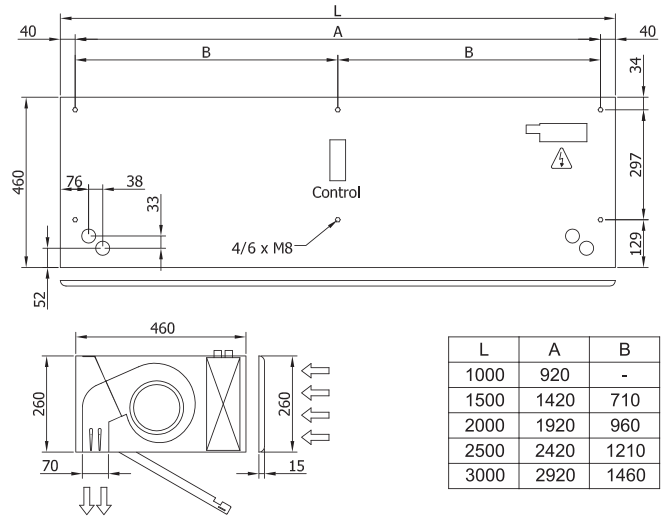
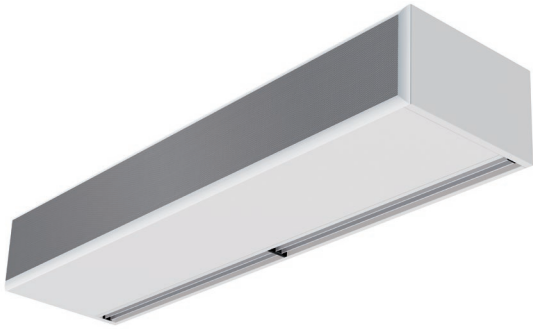
### WATER HEATED

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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	0,132	1,14	56	35
ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,198	1,71	57	53
ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,264	2,28	58	69
ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,330	2,85	59	86
ECM 3000 P	5160	40,00	6860	29,05	7050	30,54	5920	0,396	3,42	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	0,225	1,95	61	50
ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	59
ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	92
ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	64	96
ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,600	5,20	65	109

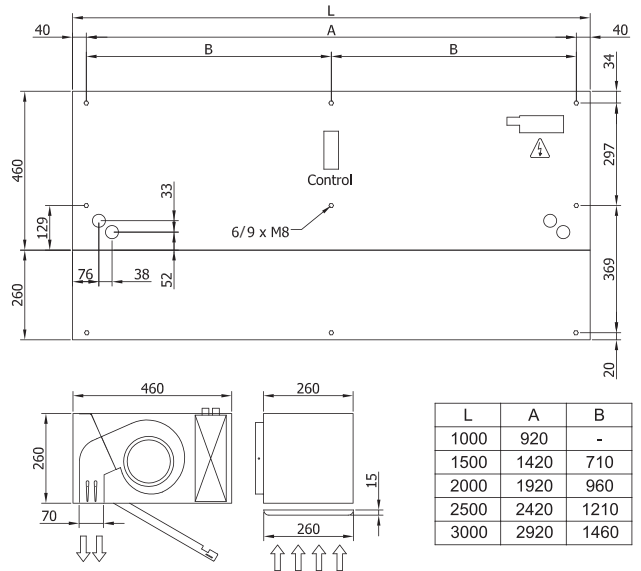
Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



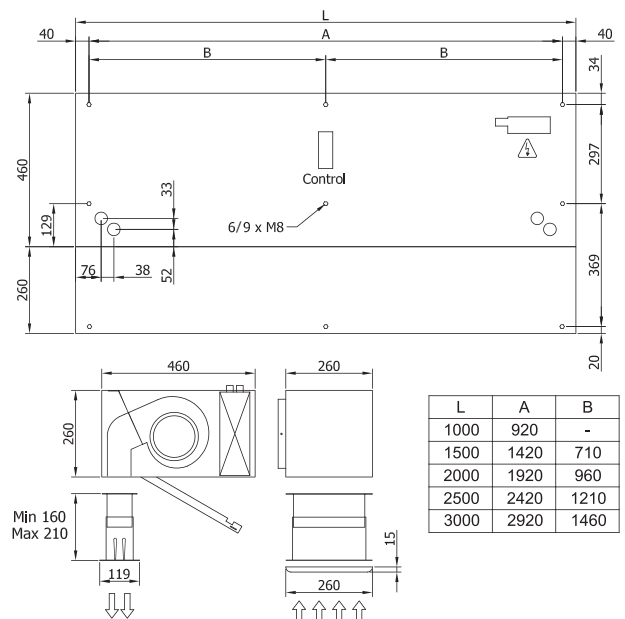
Layouts and dimensions



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 assembled 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 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 (5 m) dB(A)	Weight kg
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	0,132	1,14	56	57
RECM 1500 A	2760	0,198	1,71	57	85
RECM 2000 A	3680	0,264	2,28	58	109
RECM 2500 A	4600	0,330	2,85	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	0,225	1,95	61	61
RECG 1500 A	3600	0,300	2,60	62	90
RECG 2000 A	5400	0,450	3,90	63	118
RECG 2500 A	6300	0,525	4,55	64	145

### 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 (5 m) dB(A)	Weight kg
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	0,132	1,14	56	65
RECM 1500 E	2760	4/8/12	0,198	1,71	57	98
RECM 2000 E	3680	6/12/18	0,264	2,28	58	130
RECM 2500 E	4600	6/12/18	0,330	2,85	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	0,225	1,95	61	70
RECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	104
RECG 2000 E	5400	10/20/30	0,450	3,90	63	140
RECG 2500 E	6300	10/20/30	0,525	4,55	64	172

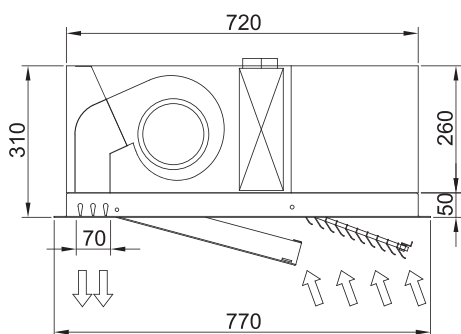
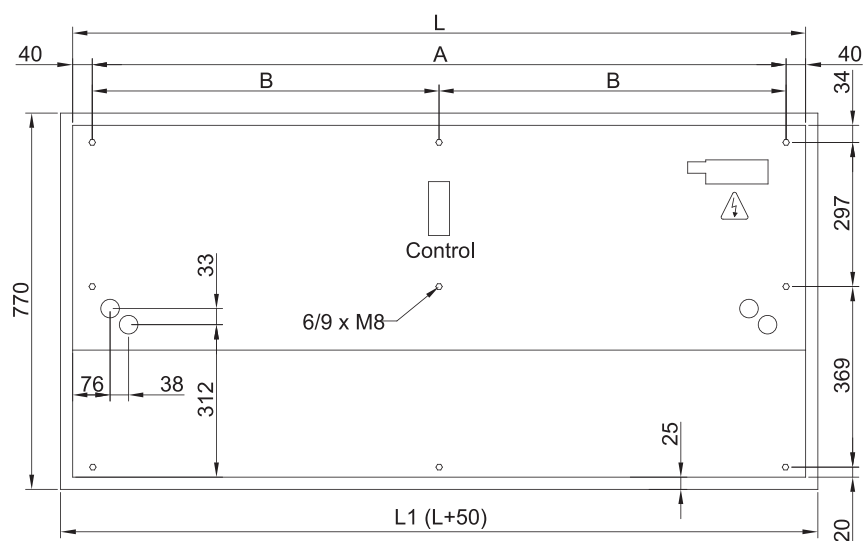
### WATER HEATED

Model	Airflow m <sup>3</sup> /h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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	0,132	1,14	56	63
RECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,198	1,71	57	93
RECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,264	2,28	58	122
RECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,330	2,85	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	0,225	1,95	61	67
RECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	98
RECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	131
RECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	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
Recessed Windbox 1000	1000	1050	920	-
Recessed Windbox 1500	1500	1550	1420	710
Recessed Windbox 2000	2000	2050	1920	960
Recessed Windbox 2500	2500	2550	2420	1210



**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 assembled 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 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 (5 m) dB(A)	Weight kg
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	0,132	1,14	54	34
SMART ECM 1500 A	2760	0,198	1,71	55	50
SMART ECM 2000 A	3680	0,264	2,28	56	62
SMART ECM 2500 A	4600	0,330	2,85	57	66
SMART ECM 3000 A	5520	0,396	3,42	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	0,225	1,95	59	38
SMART ECG 1500 A	3600	0,300	2,60	60	55
SMART ECG 2000 A	5400	0,450	3,90	61	72
SMART ECG 2500 A	6300	0,525	4,55	62	76
SMART ECG 3000 A	7200	0,600	5,20	63	86

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
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	0,132	1,14	54	41
SMART ECM 1500 E	2760	4/8/12	0,198	1,71	55	62
SMART ECM 2000 E	3680	6/12/18	0,264	2,28	56	80
SMART ECM 2500 E	4600	6/12/18	0,330	2,85	57	86
SMART ECM 3000 E	5520	8/16/24	0,396	3,42	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	0,225	1,95	59	46
SMART ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	60	68
SMART ECG 2000 E	5400	10/20/30	0,450	3,90	61	90
SMART ECG 2500 E	6300	10/20/30	0,525	4,55	62	96
SMART ECG 3000 E	7200	10/20/30	0,600	5,20	63	109

**WATER HEATED**

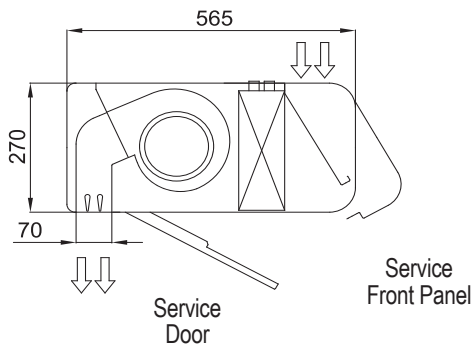
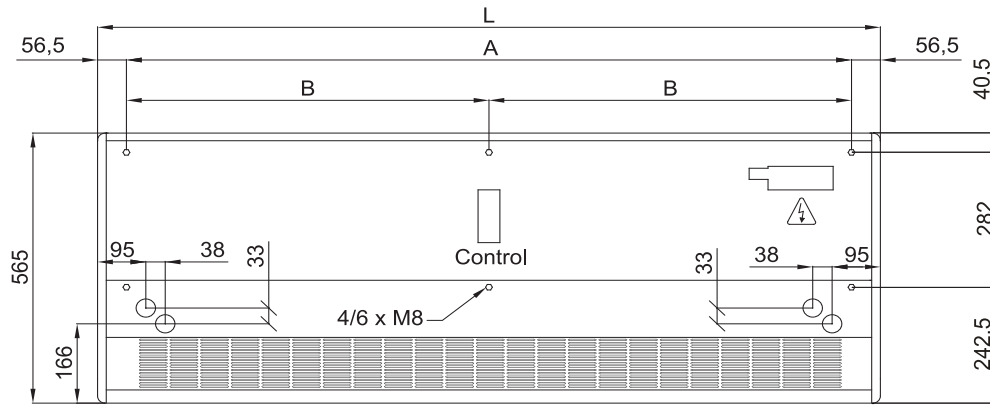
Model	Airflow m³/h	P86			P64		P54			Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa						
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	0,132	1,14	54	39		
SMART ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,198	1,71	55	58		
SMART ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,264	2,28	56	73		
SMART ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,330	2,85	57	79		
SMART ECM 3000 P	5160	40,00	6860	29,05	7050	30,54	5920	0,396	3,42	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	0,225	1,95	59	44		
SMART ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	60	64		
SMART ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	61	83		
SMART ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	62	87		
SMART ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,600	5,20	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 assembled 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 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 (5 m) dB(A)	Weight kg
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	0,225	1,95	61	36
ZEN ECG 1500 A	3600	0,300	2,60	62	50
ZEN ECG 2000 A	5400	0,450	3,90	63	69
ZEN ECG 2500 A	6300	0,525	4,55	64	83

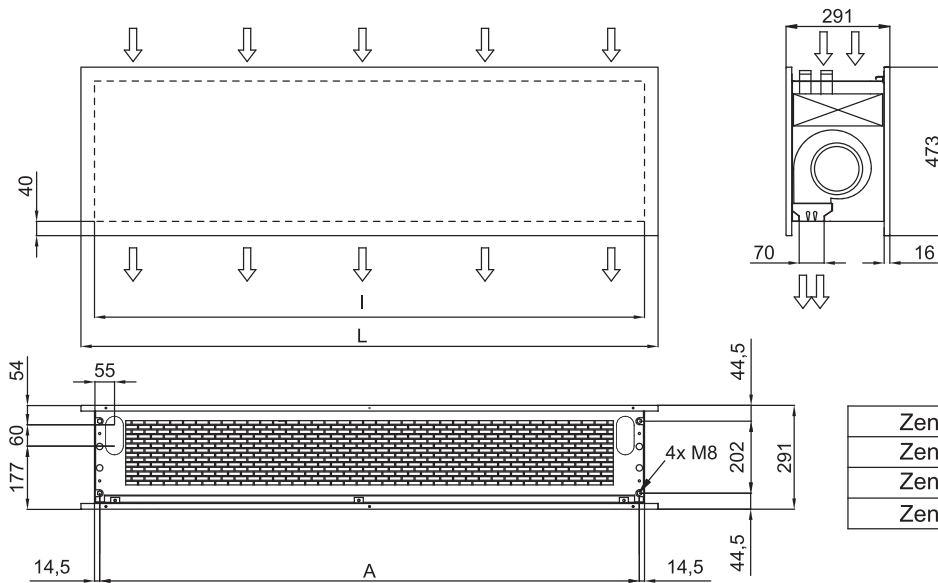
ELECTRICAL HEATED						
Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
ZEN M 1000 E	1980	3/6/9	0,318	1,41	55	40
ZEN M 1500 E	2640	4/8/12	0,424	1,88	56	58
ZEN M 2000 E	3960	6/12/18	0,636	2,82	57	77
ZEN M 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	0,225	1,95	61	43
ZEN ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	62
ZEN ECG 2000 E	5400	10/20/30	0,450	3,90	63	85
ZEN ECG 2500 E	6300	10/20/30	0,525	4,55	64	103

WATER HEATED											
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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	0,225	1,95	61	40
ZEN ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	57
ZEN ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	78
ZEN ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	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



	standard / painted
	decorative metals
	crocco / leather
	screen
	floral
	wood
	logos / signage

Examples of customized front panels, to meet client needs



- 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 assembled 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 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	Noise Level	Weight kg
		230V-50Hz kW	230V-50Hz A	(5 m) dB(A)	
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	0,225	1,95	61	46
RUND ECG 1500 A	3600	0,300	2,60	62	68
RUND ECG 2000 A	5400	0,450	3,90	63	89
RUND ECG 2500 A	6300	0,525	4,55	64	98
RUND ECG 3000 A	7200	0,600	5,20	65	108

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating Capacity	Power Fans	Current Fans	Noise Level	Weight kg
		400Vx3-50Hz kW	230V-50Hz kW	230V-50Hz A	(5 m) dB(A)	
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	0,225	1,95	61	54
RUND ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	81
RUND ECG 2000 E	5400	10/20/30	0,450	3,90	63	107
RUND ECG 2500 E	6300	10/20/30	0,525	4,55	64	118
RUND ECG 3000 E	7200	10/20/30	0,600	5,20	65	128

**WATER HEATED**

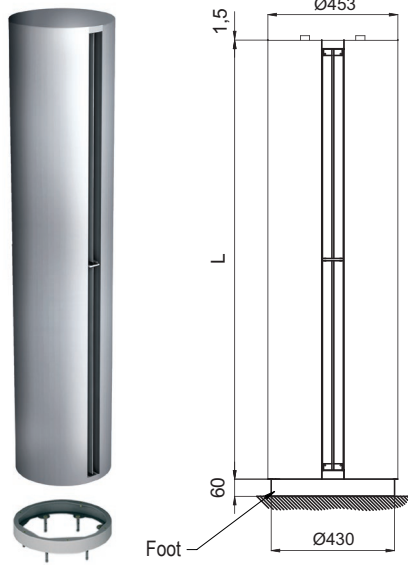
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 50/40°C Pa				
		RUND M 1000 P	1860	9,84	1000	9,22	4990				
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	0,225	1,95	61	52
RUND ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	77
RUND ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	100
RUND ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	64	109
RUND ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,600	5,20	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.

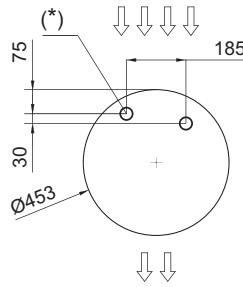


Layouts and dimensions

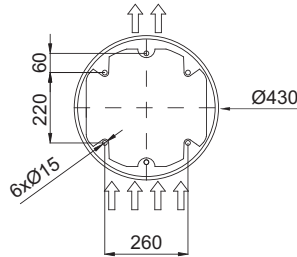
Vertical installation



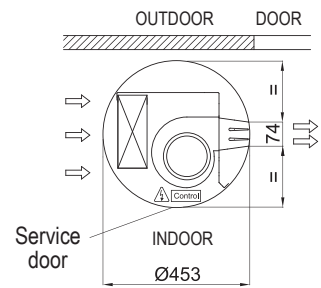
Water pipes top entrance



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**



- Structure made of aluminium profiles and galvanized plated steel panels, finished in structural epoxy-polyester white RAL 9016 or silver grey RAL 9006 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, 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 assembled 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.
- 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 (5 m) dB(A)	Weight kg
DM 1000 A	1800	0,212	0,94	55	51
DM 1500 A	2700	0,318	1,41	56	75
DM 2000 A	3600	0,424	1,88	57	96
DM 2500 A	4500	0,530	2,35	58	108
DECM 1000 A	1840	0,132	1,14	56	51
DECM 1500 A	2760	0,198	1,71	57	75
DECM 2000 A	3680	0,264	2,28	58	96
DECM 2500 A	4600	0,330	2,85	59	108
DG 1000 A	2400	0,642	2,85	57	55
DG 1500 A	3200	0,856	3,80	58	80
DG 2000 A	4800	1,284	5,70	59	106
DG 2500 A	5600	1,498	6,65	60	118
DECG 1000 A	2700	0,225	1,95	61	55
DECG 1500 A	3600	0,300	2,60	62	80
DECG 2000 A	5400	0,450	3,90	63	106
DECG 2500 A	6300	0,525	4,55	64	118

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
DM 1000 E	1800	3/6/9	0,212	0,94	55	58
DM 1500 E	2700	4/8/12	0,318	1,41	56	87
DM 2000 E	3600	6/12/18	0,424	1,88	57	114
DM 2500 E	4500	6/12/18	0,530	2,35	58	128
DECM 1000 E	1840	3/6/9	0,132	1,14	56	58
DECM 1500 E	2760	4/8/12	0,198	1,71	57	87
DECM 2000 E	3680	6/12/18	0,264	2,28	58	114
DECM 2500 E	4600	6/12/18	0,330	2,85	59	128
DG 1000 E	2400	5/10/15	0,642	2,85	57	63
DG 1500 E	3200	7,5/15/22,5	0,856	3,80	58	93
DG 2000 E	4800	10/20/30	1,284	5,70	59	124
DG 2500 E	5600	10/20/30	1,498	6,65	60	138
DECG 1000 E	2700	5/10/15	0,225	1,95	61	63
DECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	93
DECG 2000 E	5400	10/20/30	0,450	3,90	63	124
DECG 2500 E	6300	10/20/30	0,525	4,55	64	138

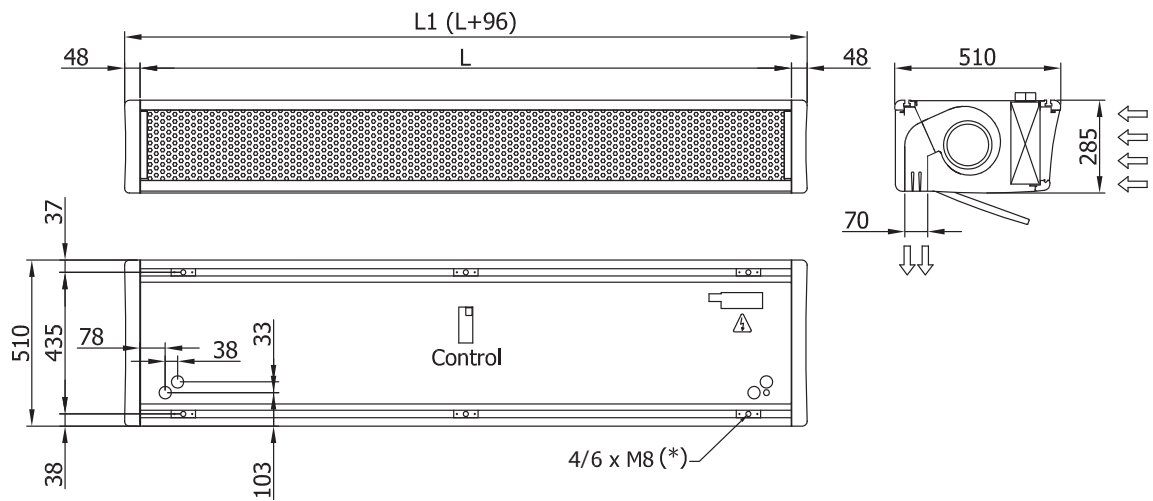
**WATER HEATED**

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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				
DM 1000 P	1660	9,17	880	8,56	4370	8,52	1220	0,428	1,90	56	56
DM 1500 P	2490	14,26	760	13,69	6460	14,34	4480	0,642	2,85	57	83
DM 2000 P	3320	20,65	1930	18,26	4790	18,65	2060	0,856	3,80	58	107
DM 2500 P	4150	26,92	3810	22,12	3850	24,32	4040	1,070	4,75	59	121
DECM 1000 P	1720	9,38	920	8,77	4560	8,74	1280	0,132	1,14	56	56
DECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,198	1,71	57	83
DECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,264	2,28	58	107
DECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,330	2,85	59	121
DG 1000 P	2250	11,04	1230	10,42	6190	10,56	1790	0,642	2,85	57	61
DG 1500 P	3000	16,02	940	15,47	8020	16,37	5670	0,856	3,80	58	89
DG 2000 P	4500	24,92	2700	22,29	6810	23,15	3030	1,284	5,70	59	117
DG 2500 P	5250	31,16	4930	26,61	5060	28,76	5450	1,498	6,65	60	129
DECG 1000 P	2550	11,89	1400	11,27	7110	11,50	2090	0,225	1,95	61	61
DECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	89
DECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	117
DECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	64	129

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**

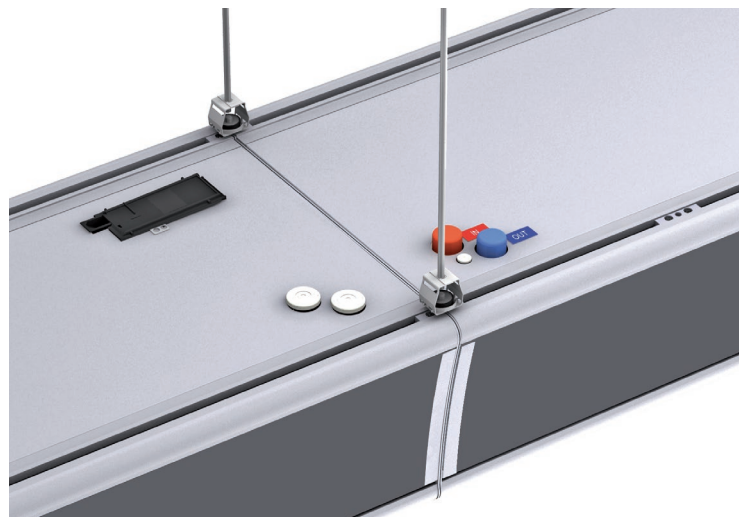


	L	L1
Deco 1000	1000	1096
Deco 1500	1500	1596
Deco 2000	2000	2096
Deco 2500	2500	2596

**Details**



Different colour finishes



Joining two units



(\*) Adjustable fixing points through guide rail



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 personalized 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 assembled 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 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 (5 m) dB(A)	Weight kg
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	0,132	1,14	56	38
DAM ECM 1500 A	2760	0,198	1,71	57	56
DAM ECM 2000 A	3680	0,264	2,28	58	70
DAM ECM 2500 A	4600	0,330	2,85	59	76
DAM ECM 3000 A	5520	0,396	3,42	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	0,225	1,95	61	42
DAM ECG 1500 A	3600	0,300	2,60	62	61
DAM ECG 2000 A	5400	0,450	3,90	63	80
DAM ECG 2500 A	6300	0,525	4,55	64	86
DAM ECG 3000 A	7200	0,600	5,20	65	98

ELECTRICAL HEATED						
Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
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	0,132	1,14	56	45
DAM ECM 1500 E	2760	4/8/12	0,198	1,71	57	68
DAM ECM 2000 E	3680	6/12/18	0,264	2,28	58	88
DAM ECM 2500 E	4600	6/12/18	0,330	2,85	59	96
DAM ECM 3000 E	5520	8/16/24	0,396	3,42	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	0,225	1,95	61	50
DAM ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	74
DAM ECG 2000 E	5400	10/20/30	0,450	3,90	63	98
DAM ECG 2500 E	6300	10/20/30	0,525	4,55	64	106
DAM ECG 3000 E	7200	10/20/30	0,600	5,20	65	121

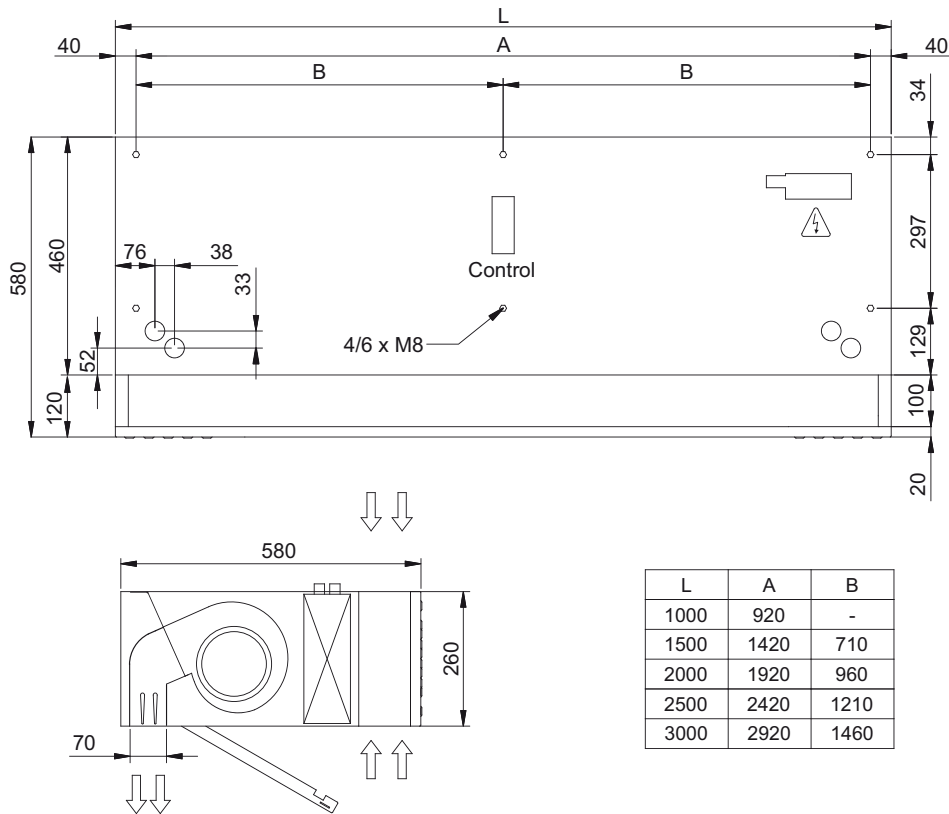
WATER HEATED											
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
		Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Heating Capacity 60/40°C kW	Water Drop Pressure 60/40°C Pa	Heating Capacity 50/40°C kW	Water Drop Pressure 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	0,132	1,14	56	43
DAM ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,198	1,71	57	64
DAM ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,264	2,28	58	81
DAM ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,330	2,85	59	89
DAM ECM 3000 P	5160	40,00	6860	29,05	7050	30,54	5920	0,396	3,42	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	0,225	1,95	61	48
DAM ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	70
DAM ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	91
DAM ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	64	97
DAM ECG 3000 P	6800	40,34	9290	34,81	9710	37,16	8400	0,600	5,20	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**



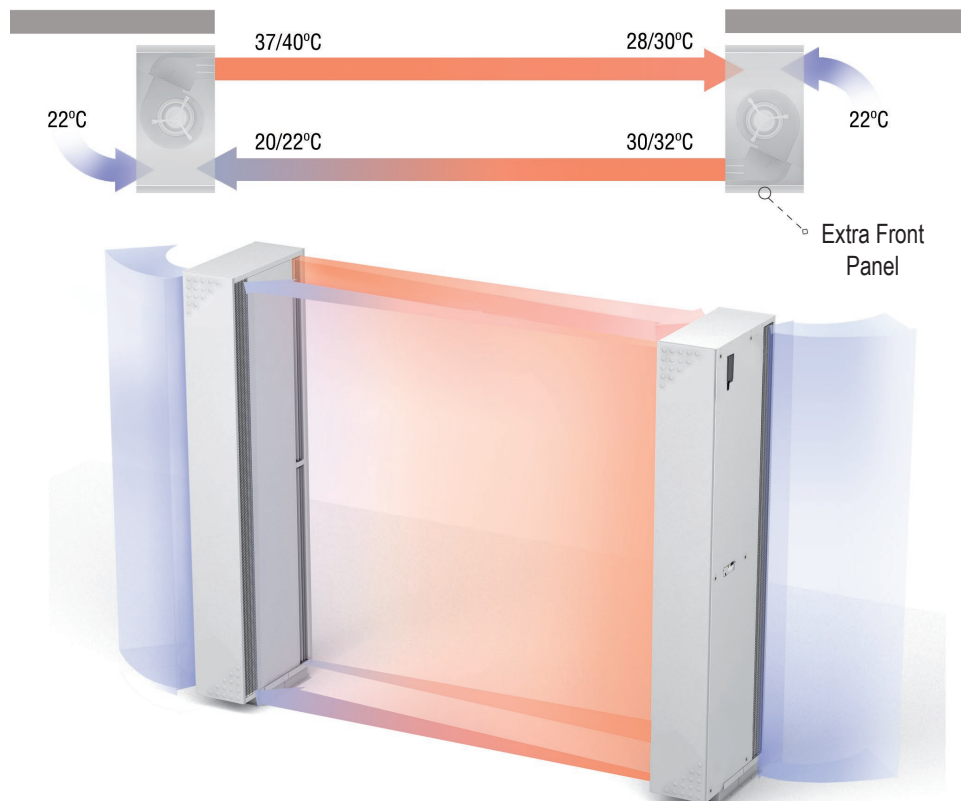
**Dam Twin System**

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 assembled 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 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 (5 m) dB(A)	Weight kg
RDAM M 1000 A	1800	0,212	0,94	55	45
RDAM M 1500 A	2700	0,318	1,41	56	66
RDAM M 2000 A	3600	0,424	1,88	57	84
RDAM M 2500 A	4500	0,530	2,35	58	93
RDAM ECM 1000 A	1840	0,132	1,14	56	45
RDAM ECM 1500 A	2760	0,198	1,71	57	66
RDAM ECM 2000 A	3680	0,264	2,28	58	84
RDAM ECM 2500 A	4600	0,330	2,85	59	93
RDAM G 1000 A	2400	0,642	2,85	57	49
RDAM G 1500 A	3200	0,856	3,80	58	71
RDAM G 2000 A	4800	1,284	5,70	59	94
RDAM G 2500 A	5600	1,498	6,65	60	103
RDAM ECG 1000 A	2700	0,225	1,95	61	49
RDAM ECG 1500 A	3600	0,300	2,60	62	71
RDAM ECG 2000 A	5400	0,450	3,90	63	94
RDAM ECG 2500 A	6300	0,525	4,55	64	103

### 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 (5 m) dB(A)	Weight kg
RDAM M 1000 E	1800	3/6/9	0,212	0,94	55	52
RDAM M 1500 E	2700	4/8/12	0,318	1,41	56	78
RDAM M 2000 E	3600	6/12/18	0,424	1,88	57	102
RDAM M 2500 E	4500	6/12/18	0,530	2,35	58	113
RDAM ECM 1000 E	1840	3/6/9	0,132	1,14	56	52
RDAM ECM 1500 E	2760	4/8/12	0,198	1,71	57	78
RDAM ECM 2000 E	3680	6/12/18	0,264	2,28	58	102
RDAM ECM 2500 E	4600	6/12/18	0,330	2,85	59	113
RDAM G 1000 E	2400	5/10/15	0,642	2,85	57	57
RDAM G 1500 E	3200	7,5/15/22,5	0,856	3,80	58	84
RDAM G 2000 E	4800	10/20/30	1,284	5,70	59	112
RDAM G 2500 E	5600	10/20/30	1,498	6,65	60	123
RDAM ECG 1000 E	2700	5/10/15	0,225	1,95	61	57
RDAM ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	84
RDAM ECG 2000 E	5400	10/20/30	0,450	3,90	63	112
RDAM ECG 2500 E	6300	10/20/30	0,525	4,55	64	123

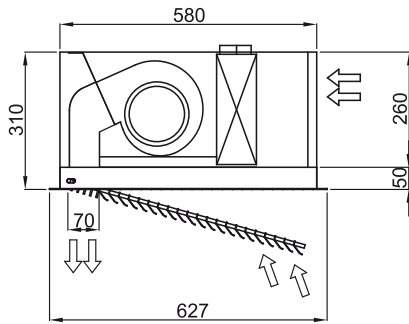
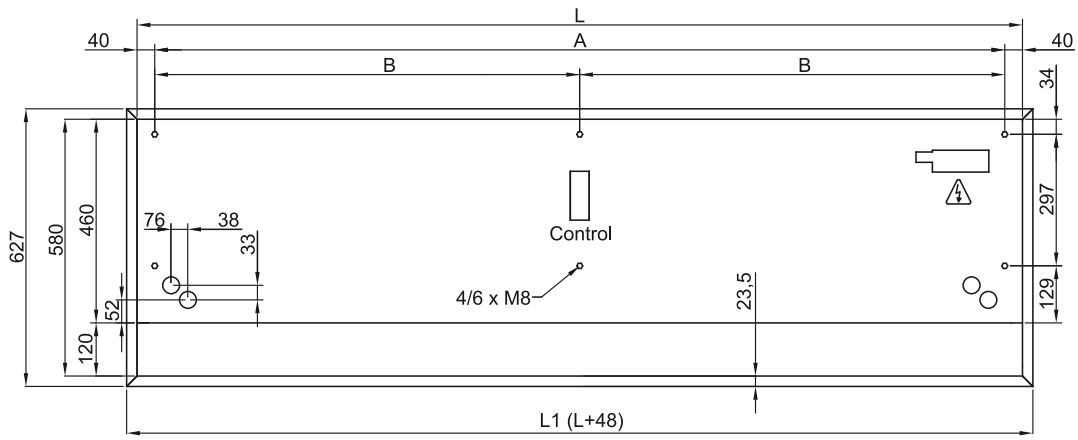
### WATER HEATED

Model	Airflow m <sup>3</sup> /h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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	0,132	1,14	56	50
RDAM ECM 1500 P	2580	14,58	790	14,02	6730	14,71	4690	0,198	1,71	57	74
RDAM ECM 2000 P	3440	21,12	2010	18,70	4990	19,13	2150	0,264	2,28	58	95
RDAM ECM 2500 P	4300	27,53	3960	23,33	4010	24,95	4230	0,330	2,85	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	0,225	1,95	61	55
RDAM ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	80
RDAM ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	105
RDAM ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	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**

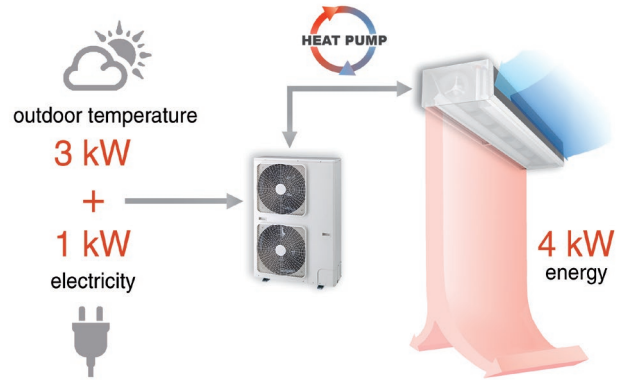


	L	L1	A	B
Recessed Dam 1000	1000	1048	920	-
Recessed Dam 1500	1500	1548	1420	710
Recessed Dam 2000	2000	2048	1920	960
Recessed Dam 2500	2500	2548	2420	1210



## Heat Pump Technology

Heat pump is a device that uses a small amount of energy to move heat from one location to another. This system is extremely efficient because it simply transfers heat, rather than burn fuel to create it. It consists of a closed circuit through which a special fluid (refrigerant) flows. This fluid takes on a liquid or gaseous state according to temperature and pressure conditions. The circuit is composed by: compressor, condenser, expansion valve and evaporator.



## Advantages and Benefits

The new Airtecnic Heat Pump Air curtains are absolutely efficient reducing the heating cost and CO<sub>2</sub> emissions up to 70%.

- Very 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 as uses such low amounts of energy

Available Airtecnic Heat Pump Air Curtains:

- Heating/Cooling: Windbox M-G, Dam, Recessed Windbox, Smart, Recessed Dam and Windbox L-XL.
- Only Heating: Rund, Zen, Rotowind and Invisair.

## Heat Pump vs Electrical Air Curtain - Energy Saving Example

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

Example:

Door dimension: 2 m width by 3 m height

Running time: 12 hours/day, 6 days/week,  
26 weeks (~ 1/2 year)

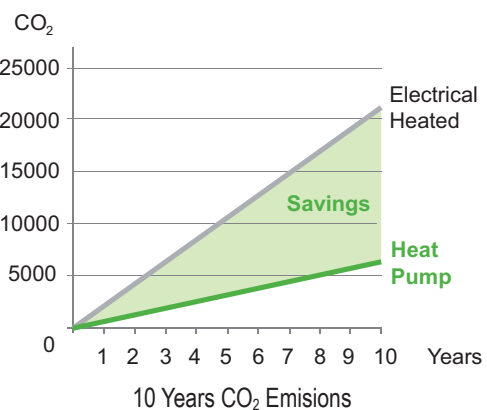
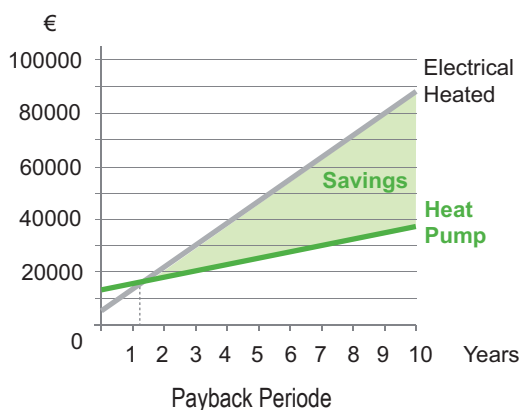
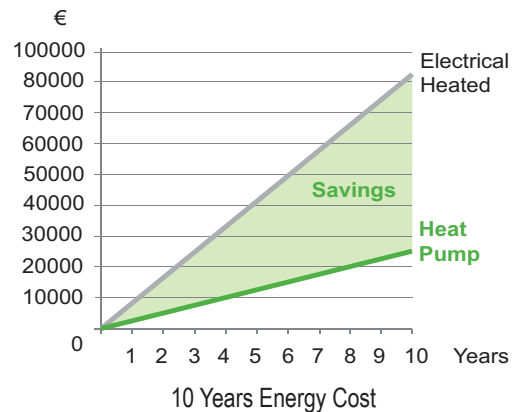
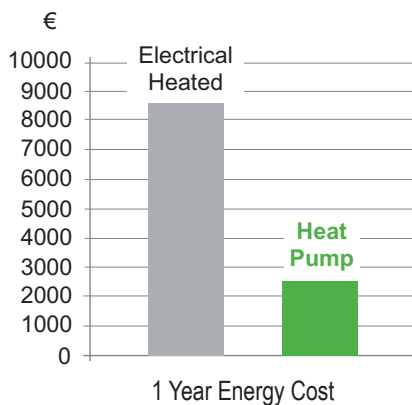
Energy cost: 0,17 €/kW/h (EU-27 average cost)

Selected unit: G 2000, 27kW

COP: 3,31 (Coefficient of Performance)

	Electrical Air Curtain		Heat Pump Air Curtain		Difference
Total Heating Power	27	kW	27	kW	0 kW
Air Curtain Price	3.828	€/unit	10.987	€/unit	+ 7.159 €
Energy Consumption	50.544	kW/h	15.270	kW/h	- 35.274 kW/h
Energy Cost	8.592	€	2.596	€	- 5.996 €
CO <sub>2</sub> Emissions	20.218	kg	6.108	kg	- 14.110 kg

Result: The payback periode is 1,2 years. We recover the price increase of Heat Pump air curtain in nearly 14 months and then we start saving money. From the beginning we save energy and reduce CO<sub>2</sub> emissions to the environment.





## Characteristics



**TOSHIBA**



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- TOSHIBA DX Interface KIT and programmable control included.
- Ready to connect to TOSHIBA Inverter outdoor heat pump unit (R410A) with expansion valve.

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Outdoor Unit (**)		Power Fans 230V-50Hz	Current Fans 230V-50Hz	Noise Level (5 m)	Weight kg
		230Vx1	400Vx3	kW	A	dB(A)	
M 1500 DX11-TO	2160	RAV-SM1104ATP-E	RAV-SP1104AT8-E	0,642	2,85	57	53
M 2000 DX16-TO	2880	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,856	3,80	58	69
M 2500 DX22-TO	3600	-	RAV-SM2244AT8-E	1,070	4,75	59	86
M 3000 DX27-TO	4320	-	RAV-SM2804AT8-E	1,280	5,70	60	103
ECM 1000 DX8-TO	1640	RAV-SM804ATP-E	-	0,132	1,14	56	35
ECM 1500 DX11-TO	2460	RAV-SM1104ATP-E	RAV-SP1104AT8-E	0,198	1,71	57	53
ECM 2000 DX16-TO	3280	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,264	2,28	58	69
ECM 2500 DX22-TO	4100	-	RAV-SM2244AT8-E	0,330	2,85	59	86
ECM 3000 DX27-TO	4920	-	RAV-SM2804AT8-E	0,396	3,42	60	103
G 1000 DX11-TO	2100	RAV-SM1104ATP-E	RAV-SP1104AT8-E	0,642	2,85	57	50
G 1500 DX16-TO	2800	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,856	3,80	58	59
G 2000 DX22-TO	4200	-	RAV-SM2244AT8-E	1,284	5,70	59	92
G 2000 DX27-TO	4200	-	RAV-SM2804AT8-E	1,284	5,70	59	92
G 2500 DX27-TO	4900	-	RAV-SM2804AT8-E	1,498	6,65	60	96
G 3000 DX27-TO	5600	-	RAV-SM2804AT8-E	1,712	7,60	61	109
G 3000 DX32/2-TO	5600	2x RAV-SM1603AT-E	2x RAV-SP1604AT8-E	1,712	7,60	61	109
ECG 1000 DX11-TO	2190	RAV-SM1104ATP-E	RAV-SP1104AT8-E	0,225	1,95	61	50
ECG 1500 DX16-TO	2920	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,300	2,60	62	59
ECG 2000 DX22-TO	4380	-	RAV-SM2244AT8-E	0,450	3,90	63	92
ECG 2000 DX27-TO	4380	-	RAV-SM2804AT8-E	0,450	3,90	63	92
ECG 2500 DX27-TO	5110	-	RAV-SM2804AT8-E	0,525	4,55	64	96
ECG 3000 DX27-TO	5840	-	RAV-SM2804AT8-E	0,600	5,20	65	109
ECG 3000 DX32/2-TO	5840	2x RAV-SM1603AT-E	2x RAV-SP1604AT8-E	0,600	5,20	65	109

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

32/2 Coil with double circuit and two outdoor units of 16kW.

(\*\*) Heating capacity of Outdoor Unit can decrease due to stronger weather conditions, so please check with heat pump distributor to select it properly.

TOSHIBA Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP or COP (*) W/W	Cooling Capacity kW	Cooling Power kW	SEER or EER (*) W/W	Power Supply	Pipes Gas Liquid inch	Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
RAV-SM804ATP-E	8,0	2,21	4,02	6,7	2,09	5,63	230Vx1	5/8 3/8	5	30	30
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-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 and SEER seasonal ratio under 12kW and COP and EER over 12kW.

Outdoor unit heating capacity values at standard conditions: indoor dry-bulb temperature 20°C, outdoor dry-bulb temperature 7°C.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- MITSUBISHI ELECTRIC DX Interface KIT and programmable control included.
- Ready to connect to MITSUBISHI ELECTRIC Inverter outdoor heat pump unit (R410A) with expansion valve.

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Outdoor Unit (**) 230Vx1	Outdoor Unit (**) 400Vx3	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
M 1500 DX11-ME	2160	PUHZ-ZRP100VKA	PUHZ-ZRP100YKA	0,642	2,85	57	53
M 2000 DX14-ME	2880	PUHZ-ZRP125VKA	PUHZ-ZRP125YKA	0,856	3,80	58	69
M 2000 DX16-ME	2880	PUHZ-ZRP140VKA	PUHZ-ZRP140YKA	0,856	3,80	58	69
M 2500 DX22-ME	3600	-	PUHZ-ZRP200YKA	1,070	4,75	59	86
M 3000 DX27-ME	4320	-	PUHZ-ZRP250YKA	1,280	5,70	60	103
ECM 1000 DX8-ME	1640	PUHZ-ZRP71VHA	-	0,132	1,14	56	35
ECM 1500 DX11-ME	2460	PUHZ-ZRP100VKA	PUHZ-ZRP100YKA	0,198	1,71	57	53
ECM 1500 DX14-ME	2460	PUHZ-ZRP125VKA	PUHZ-ZRP125YKA	0,198	1,71	57	53
ECM 2000 DX16-ME	3280	PUHZ-ZRP140VKA	PUHZ-ZRP140YKA	0,264	2,28	58	69
ECM 2500 DX22-ME	4100	-	PUHZ-ZRP200YKA	0,330	2,85	59	86
ECM 3000 DX27-ME	4920	-	PUHZ-ZRP250YKA	0,396	3,42	60	103
G 1000 DX8-ME	2100	PUHZ-ZRP71VHA	-	0,642	2,85	57	50
G 1500 DX14-ME	2800	PUHZ-ZRP125VKA	PUHZ-ZRP125YKA	0,856	3,80	58	59
G 2000 DX22-ME	4200	-	PUHZ-ZRP200YKA	1,284	5,70	59	92
G 2500 DX27-ME	4900	-	PUHZ-ZRP250YKA	1,498	6,65	60	96
G 3000 DX27-ME	5600	-	PUHZ-ZRP250YKA	1,712	7,60	61	109
G 3000 DX32/2-ME	5600	2xPUHZ-ZRP140VKA	2xPUHZ-ZRP140YKA	1,712	7,60	61	109
ECG 1000 DX8-ME	2190	PUHZ-ZRP71VHA	-	0,225	1,95	61	50
ECG 1500 DX16-ME	2920	PUHZ-ZRP140VKA	PUHZ-ZRP140YKA	0,300	2,60	62	59
ECG 2000 DX22-ME	4380	-	PUHZ-ZRP200YKA	0,450	3,90	63	92
ECG 2500 DX27-ME	5110	-	PUHZ-ZRP250YKA	0,525	4,55	64	96
ECG 3000 DX27-ME	5840	-	PUHZ-ZRP250YKA	0,600	5,20	65	109
ECG 3000 DX32/2-ME	5840	2xPUHZ-ZRP140VKA	2xPUHZ-ZRP140YKA	0,600	5,20	65	109

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

3/2 Coil with double circuit and two outdoor units of 16kW.

(\*\*) Heating capacity of Outdoor Unit can decrease due to stronger weather conditions, so please check with heat pump distributor to select it properly.

MITSUBISHI Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP or COP (*) W/W	Cooling Capacity kW	Cooling Power kW	SEER or EER (*) W/W	Power Supply	Pipes Gas Liquid inch	Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
PUHZ-ZRP71VHA	8,0	2,03	3,90	7,1	2,01	5,60	230Vx1	5/8 3/8	-	50	30
PUHZ-ZRP100VKA	11,2	2,06	4,20	10,0	2,63	5,60	230Vx1	5/8 3/8	-	75	30
PUHZ-ZRP100YKA	11,2	2,06	4,20	10,0	2,63	5,50	400Vx3	5/8 3/8	-	75	30
PUHZ-ZRP125VKA	14,0	3,63	3,86	12,5	4,05	3,09	230Vx1	5/8 3/8	-	75	30
PUHZ-ZRP125YKA	14,0	3,63	3,86	12,5	4,05	3,09	400Vx3	5/8 3/8	-	75	30
PUHZ-ZRP140VKA	16,0	4,20	3,81	13,4	4,36	3,07	230Vx1	5/8 3/8	-	75	30
PUHZ-ZRP140YKA	16,0	4,20	3,81	13,4	4,36	3,07	400Vx3	5/8 3/8	-	75	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

(\*) Energy efficiency: SCOP and SEER seasonal ratio under 12kW and COP and EER over 12kW.

Outdoor unit heating capacity values at standard conditions: indoor dry-bulb temperature 20°C, outdoor dry-bulb temperature 7°C.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
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- 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 assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- MITSUBISHI ELECTRIC VRF Interface KIT and programmable control included.
- Ready to connect to MITSUBISHI ELECTRIC VRF heat pump unit (R410A) with expansion valve.

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Power Fans	Current Fans	Noise Level	Weight kg	Mitsubishi Electric Interface DX-kit (**)
		230V-50Hz kW	230V-50Hz A	(5 m) dB(A)		
M 1500 VRF12-ME	2160	0,642	2,85	57	53	PAC-AH125M-J
M 2000 VRF16-ME	2880	0,856	3,80	58	69	PAC-AH125M-J
M 2500 VRF22-ME	3600	1,070	4,75	59	86	PAC-AH250M-J
M 3000 VRF27-ME	4320	1,280	5,70	60	103	PAC-AH250M-J
ECM 1500 VRF12-ME	2460	0,198	1,71	57	53	PAC-AH125M-J
ECM 1500 VRF14-ME	2460	0,198	1,71	57	53	PAC-AH125M-J
ECM 2000 VRF16-ME	3280	0,264	2,28	58	69	PAC-AH125M-J
ECM 2500 VRF24-ME	4100	0,330	2,85	59	86	PAC-AH250M-J
ECM 3000 VRF30-ME	4920	0,396	3,42	60	103	PAC-AH250M-J
G 1000 VRF10-ME	2100	0,642	2,85	57	50	PAC-AH125M-J
G 1500 VRF15-ME	2800	0,856	3,80	58	59	PAC-AH125M-J
G 2000 VRF23-ME	4200	1,284	5,70	59	92	PAC-AH250M-J
G 2500 VRF28-ME	4900	1,498	6,65	60	96	PAC-AH250M-J
G 3000 VRF29-ME	5600	1,712	7,60	61	109	PAC-AH250M-J
G 3000 VRF32-ME	5600	1,712	7,60	61	109	PAC-AH250M-J
ECG 1000 VRF10-ME	2190	0,225	1,95	61	50	PAC-AH125M-J
ECG 1500 VRF16-ME	2920	0,300	2,60	62	59	PAC-AH125M-J
ECG 2000 VRF24-ME	4380	0,450	3,90	63	92	PAC-AH250M-J
ECG 2500 VRF29-ME	5110	0,525	4,55	64	96	PAC-AH250M-J
ECG 3000 VRF30-ME	5840	0,600	5,20	65	109	PAC-AH250M-J
ECG 3000 VRF32-ME	5840	0,600	5,20	65	109	PAC-AH250M-J

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

(\*\*) Includes expansion valve.

MITSUBISHI ELECTRIC VRF compatible Outdoor Units	
Gamma	Series
City Multi	S/Y (Heat Pump)
City Multi	R2 (Heat Recovery)
Mr. Slim	Standard Inverter
Mr. Slim	Power Inverter
Mr. Slim	Zubadan
Industrial	Standard Inverter
Industrial	Power Inverter



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- DAIKIN DX Interface KIT and programmable controller included.
- Ready to connect to DAIKIN Inverter outdoor heat pump unit (R410A) and expansion valve kit.

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Outdoor Unit (**)		Expansion Valve Kit	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
		230Vx1	400Vx3					
M 1500 DX12-DA	2160	ERQ 100 AV1	-	EKEXV 100	0,642	2,85	57	53
M 2000 DX15-DA	2880	ERQ 125 AV1	ERQ 125 AW1	EKEXV 125	0,856	3,80	58	69
M 2000 DX17-DA	2880	ERQ 140 AV1	-	EKEXV 125	0,856	3,80	58	69
M 2500 DX22-DA	3600	-	ERQ 200 AW1	EKEXV 200	1,070	4,75	59	86
M 3000 DX24-DA	4320	-	ERQ 200 AW1	EKEXV 200	1,280	5,70	60	103
M 3000 DX27-DA	4320	-	ERQ 250 AW1	EKEXV 200	1,280	5,70	60	103
ECM 1500 DX12-DA	2460	ERQ 100 AV1	-	EKEXV 100	0,198	1,71	57	53
ECM 2000 DX19-DA	3280	-	ERQ 200 AW1	EKEXV 140	0,264	2,28	58	69
ECM 2500 DX24-DA	4100	-	ERQ 200 AW1	EKEXV 200	0,330	2,85	59	86
ECM 3000 DX30-DA	4920	-	ERQ 250 AW1	EKEXV 250	0,396	3,42	60	103
G 1000 DX10-DA	2100	ERQ 100 AV1	-	EKEXV 80	0,642	2,85	57	50
G 1500 DX15-DA	2800	ERQ 125 AV1	ERQ 125 AW1	EKEXV 125	0,856	3,80	58	59
G 2000 DX23-DA	4200	-	ERQ 200 AW1	EKEXV 200	1,284	5,70	59	92
G 2500 DX24-DA	4900	-	ERQ 200 AW1	EKEXV 200	1,498	6,65	60	96
G 2500 DX28-DA	4900	-	ERQ 250 AW1	EKEXV 250	1,498	6,65	60	96
G 3000 DX29-DA	5600	-	ERQ 250 AW1	EKEXV 250	1,712	7,60	61	109
ECG 1000 DX10-DA	2190	ERQ 100 AV1	-	EKEXV 80	0,225	1,95	61	50
ECG 1500 DX15-DA	2920	ERQ 125 AV1	ERQ 125 AW1	EKEXV 125	0,300	2,60	62	59
ECG 2000 DX24-DA	4380	-	ERQ 200 AW1	EKEXV 200	0,450	3,90	63	92
ECG 2500 DX29-DA	5110	-	ERQ 250 AW1	EKEXV 250	0,525	4,55	64	96
ECG 3000 DX29-DA	5840	-	ERQ 250 AW1	EKEXV 250	0,600	5,20	65	109

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

(\*\*) Heating capacity of Outdoor Unit can decrease due to stronger weather conditions, so please check with heat pump distributor to select it properly.

DAIKIN Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP or COP (*) W/W	Cooling Capacity kW	Cooling Power kW	SEER or EER (*) W/W	Power Supply	Pipes		Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
								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 and SEER seasonal ratio under 12kW and COP and EER over 12kW.

Outdoor unit heating capacity values at standard conditions: indoor dry-bulb temperature 20°C, outdoor dry-bulb temperature 7°C.





## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- DAIKIN VRV Interface KIT and programmable controller included.
- Ready to connect to DAIKIN VRV heat pump unit (R410A) and expansion valve kit.

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Expansion Valve Kit	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
M 1000 VRV7-DA	1440	EKEXV 63	0,428	1,90	56	35
M 1500 VRV12-DA	2160	EKEXV 100	0,642	2,85	57	53
M 2000 VRV15-DA	2880	EKEXV 125	0,856	3,80	58	69
M 2000 VRV17-DA	2880	EKEXV 125	0,856	3,80	58	69
M 2500 VRV22-DA	3600	EKEXV 200	1,070	4,75	59	86
M 3000 VRV24-DA	4320	EKEXV 200	1,280	5,70	60	103
M 3000 VRV27-DA	4320	EKEXV 200	1,280	5,70	60	103
ECM 1000 VRV8-DA	1640	EKEXV 63	0,132	1,14	56	35
ECM 1500 VRV12-DA	2460	EKEXV 100	0,198	1,71	57	53
ECM 2000 VRV19-DA	3280	EKEXV 140	0,264	2,28	58	69
ECM 2500 VRV24-DA	4100	EKEXV 200	0,330	2,85	59	86
ECM 3000 VRV26-DA	4920	EKEXV 200	0,396	3,42	60	103
ECM 3000 VRV30-DA	4920	EKEXV 250	0,396	3,42	60	103
G 1000 VRV10-DA	2100	EKEXV 80	0,642	2,85	57	50
G 1500 VRV15-DA	2800	EKEXV 125	0,856	3,80	58	59
G 2000 VRV23-DA	4200	EKEXV 200	1,284	5,70	59	92
G 2500 VRV24-DA	4900	EKEXV 200	1,498	6,65	60	96
G 2500 VRV28-DA	4900	EKEXV 250	1,498	6,65	60	96
G 3000 VRV29-DA	5600	EKEXV 250	1,712	7,60	61	109
G 3000 VRV33-DA	5600	EKEXV 250	1,712	7,60	61	109
ECG 1000 VRV10-DA	2190	EKEXV 80	0,225	1,95	61	50
ECG 1500 VRV15-DA	2920	EKEXV 125	0,300	2,60	62	59
ECG 2000 VRV24-DA	4380	EKEXV 200	0,450	3,90	63	92
ECG 2500 VRV29-DA	5110	EKEXV 250	0,525	4,55	64	96
ECG 3000 VRV29-DA	5840	EKEXV 250	0,600	5,20	65	109
ECG 3000 VRV34-DA	5840	EKEXV 250	0,600	5,20	65	109

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

### DAIKIN VRV Outdoor Units

VRV IV HP (Heat Pump)

VRV IV HR (Heat Recovery)





## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- LG DX Interface KIT and programmable control included.
- Ready to connect to LG Inverter outdoor heat pump unit (R410A) with expansion valve.

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Outdoor Unit (**)		Power Fans 230V-50Hz	Current Fans 230V-50Hz	Noise Level (5 m)	Weight kg
		230Vx1	400Vx3	kW	A	dB(A)	
M 1000 DX9-LG	1440	UU30W U44	-	0,428	1,90	56	35
M 1500 DX11-LG	2160	UU36W UO2	UU37W UO2	0,642	2,85	57	53
M 1500 DX14-LG	2160	UU42W U32	UU43W U32	0,642	2,85	57	53
M 2000 DX15-LG	2880	UU48W U32	UU49W U32	0,856	3,80	58	69
M 2500 DX22-LG	3600	-	UU70W U34	1,070	4,75	59	86
M 3000 DX27-LG	4320	-	UU85W U74	1,280	5,70	60	103
ECM 1000 DX9-LG	1640	UU30W U44	-	0,132	1,14	56	35
ECM 1500 DX15-LG	2460	UU48W U32	UU49W U32	0,198	1,71	57	53
ECM 2000 DX15-LG	3280	UU48W U32	UU49W U32	0,264	2,28	58	69
ECM 2000 DX22-LG	3280	-	UU70W U34	0,264	2,28	58	69
ECM 2500 DX22-LG	4100	-	UU70W U34	0,330	2,85	59	86
ECM 2500 DX27-LG	4100	-	UU85W U74	0,330	2,85	59	86
ECM 3000 DX27-LG	4920	-	UU85W U74	0,396	3,42	60	103
G 1000 DX9-LG	2100	UU30W U44	-	0,642	2,85	57	50
G 1500 DX15-LG	2800	UU48W U32	UU49W U32	0,856	3,80	58	59
G 2000 DX27-LG	4200	-	UU85W U74	1,284	5,70	59	92
G 2500 DX27-LG	4900	-	UU85W U74	1,498	6,65	60	96
G 3000 DX27-LG	5600	-	UU85W U74	1,712	7,60	61	109
ECG 1500 DX15-LG	2920	UU48W U32	UU49W U32	0,300	2,60	62	59
ECG 2000 DX27-LG	4380	-	UU85W U74	0,450	3,90	63	92
ECG 2500 DX27-LG	5110	-	UU85W U74	0,525	4,55	64	96
ECG 3000 DX27-LG	5840	-	UU85W U74	0,600	5,20	65	109

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

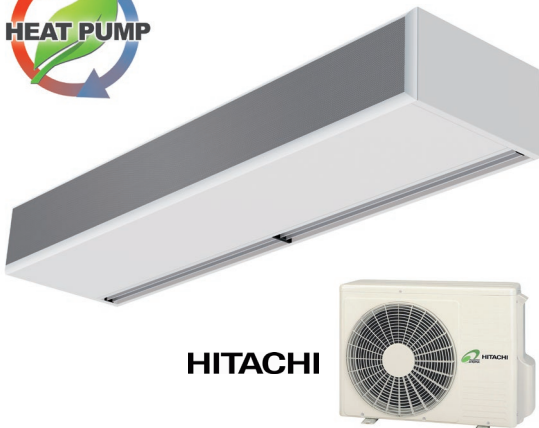
(\*\*) Heating capacity of Outdoor Unit can decrease due to stronger weather conditions, so please check with heat pump distributor to select it properly.

LG Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP or COP (*) W/W	Cooling Capacity kW	Cooling Power kW	SEER or EER (*) W/W	Power Supply	Pipes		Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
								Gas	Liquid			
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
UU42W U32	14,0	3,86	3,63	12,1	3,76	3,22	230Vx1	5/8	3/8	5	75	30
UU43W U32	14,0	3,86	3,63	12,5	3,76	3,22	400Vx3	5/8	3/8	5	75	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
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 and SEER seasonal ratio under 12kW and COP and EER over 12kW.  
Outdoor unit heating capacity values at standard conditions: indoor dry-bulb temperature 20°C, outdoor dry-bulb temperature 7°C.



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> 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.
- Double-inlet centrifugal fans driven by an external rotor motor and low noise level. 5-speed selector. "EC" models assembled with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- Plug&Play control panel, infrared remote IR and 7m telephone cable included.
- HITACHI DX Interface KIT with expansion valve and programmable control included.
- Ready to connect to HITACHI Inverter outdoor heat pump unit (R410A).

## Specifications

Model (*)	Airflow m <sup>3</sup> /h	Outdoor Unit (**)		Power Fans 230V-50Hz	Current Fans 230V-50Hz	Noise Level (5 m)	Weight kg
		230Vx1	400Vx3	kW	A	dB(A)	
M 1500 DX11-HI	2160	RAS-4H(V)NCE	RAS-4H(V)NCE	0,642	2,85	57	53
M 2500 DX22-HI	3600	-	RAS-8HNCE	1,070	4,75	59	86
ECM 1500 DX11-HI	2460	RAS-4H(V)NCE	RAS-4H(V)NCE	0,198	1,71	57	53
ECM 2500 DX22-HI	4100	-	RAS-8HNCE	0,330	2,85	59	86
ECM 3000 DX28-HI	4920	-	RAS-10HNCE	0,396	3,42	60	103
G 1000 DX8-HI	2100	RAS-3HVNC	-	0,642	2,85	57	50
G 1500 DX16-HI	2800	RAS-6H(V)NCE	RAS-6H(V)NCE	0,856	3,80	58	59
G 2000 DX22-HI	4200	-	RAS-8HNCE	1,284	5,70	59	92
G 2500 DX22-HI	4900	-	RAS-8HNCE	1,498	6,65	60	96
G 2500 DX28-HI	4900	-	RAS-10HNCE	1,498	6,65	60	96
G 3000 DX28-HI	5600	-	RAS-10HNCE	1,712	7,60	61	109
ECG 1000 DX8-HI	2190	RAS-3HVNC	-	0,225	1,95	61	50
ECG 1000 DX11-HI	2190	RAS-4H(V)NCE	RAS-4H(V)NCE	0,225	1,95	61	50
ECG 1500 DX14-HI	2920	RAS-5H(V)NCE	RAS-5H(V)NCE	0,300	2,60	62	59
ECG 1500 DX16-HI	2920	RAS-6H(V)NCE	RAS-6H(V)NCE	0,300	2,60	62	59
ECG 2000 DX22-HI	4380	-	RAS-8HNCE	0,450	3,90	63	92
ECG 2500 DX22-HI	5110	-	RAS-8HNCE	0,525	4,55	64	96
ECG 2500 DX28-HI	5110	-	RAS-10HNCE	0,525	4,55	64	96
ECG 3000 DX28-HI	5840	-	RAS-10HNCE	0,600	5,20	65	109

(\*) Also valid for Models: M,ECM,G,ECG - Recessed Windbox, Smart, Dam, Recessed Dam  
G,ECG - Rund, Zen, Rotowind, Invisair

(\*\*) Heating capacity of Outdoor Unit can decrease due to stronger weather conditions, so please check with heat pump distributor to select it properly.

HITACHI Inverter Outdoor Units	Heating Capacity	Heating Power	SCOP or COP (*)	Cooling Capacity	Cooling Power	SEER or EER (*)	Power Supply	Pipes		Pipes Maximum Length	Pipes Maximum Height
	kW	kW	W/W	kW	kW	W/W		Gas	Liquid	m	m
RAS-3HVNC	8,0	1,90	4,21	7,1	1,94	3,66	230Vx1	5/8	3/8	50	30
RAS-4H(V)NCE	11,2	2,54	4,41	10,0	2,44	4,10	230Vx1/400Vx3	5/8	3/8	70	30
RAS-5H(V)NCE	14,0	3,39	4,12	12,5	3,53	3,54	230Vx1/400Vx3	5/8	3/8	75	30
RAS-6H(V)NCE	16,0	4,23	3,78	14,0	4,25	3,29	230Vx1/400Vx3	5/8	3/8	75	30
RAS-8HNCE	22,4	5,28	4,24	20,0	5,95	3,36	400Vx3	1	3/8	100	30
RAS-10HNCE	28,0	7,12	3,93	25,0	7,81	3,20	400Vx3	1	1/2	100	30

(\*) Energy efficiency: SCOP and SEER seasonal ratio under 12kW and COP and EER over 12kW.

Outdoor unit heating capacity values at standard conditions: indoor dry-bulb temperature 20°C, outdoor dry-bulb temperature 7°C.



## 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.
- Two frontal grille options. Industrial perforated by default.
- 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 expansion DX 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	Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) 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	211

### ELECTRICAL HEATED

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
L 1000 E	4000	10/15/25	1,04	4,40	63	90
L 1500 E	6000	15/22,5/37,5	1,56	6,60	64	135
L 2000 E	8000	20/30/50 (*)	2,08	8,80	65	180
L 2500 E	10000	20/40/60 (*)	2,60	11,00	66	225
L 3000 E	12000	20/40/60 (*)	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	20/40/60 (*)	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		Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) 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: P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.

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

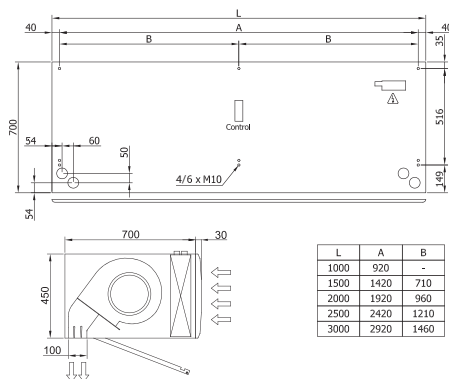
Connection pipes P86, P64 and P54 are female (male if lateral pipes).



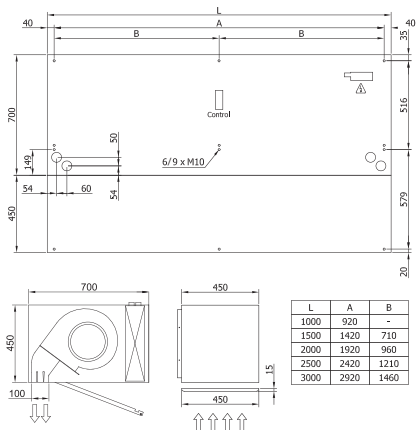
## Layouts and dimensions



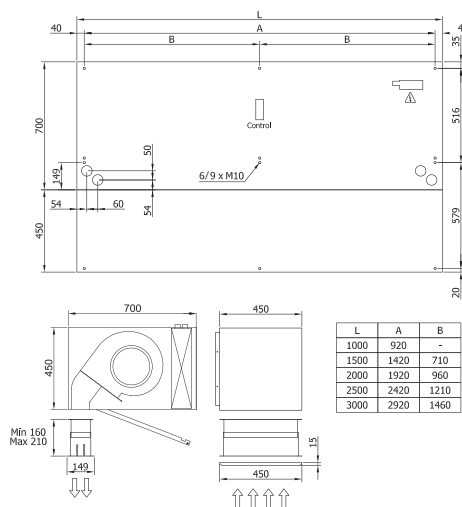
Free hanging mounting



Inside ceiling surface mounting

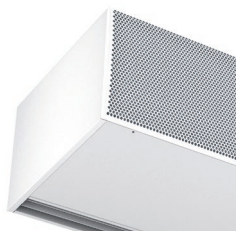


False ceiling invisible mounting

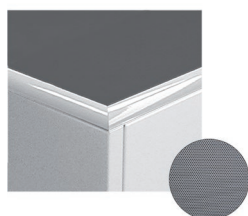


## Grille finishes

Industrial



Decorative





**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 assembled 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 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 (5 m) 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	0,300	2,60	62	60
IECG 2000 A	5400	0,450	3,90	63	78
IECG 2500 A	6300	0,525	4,55	64	83

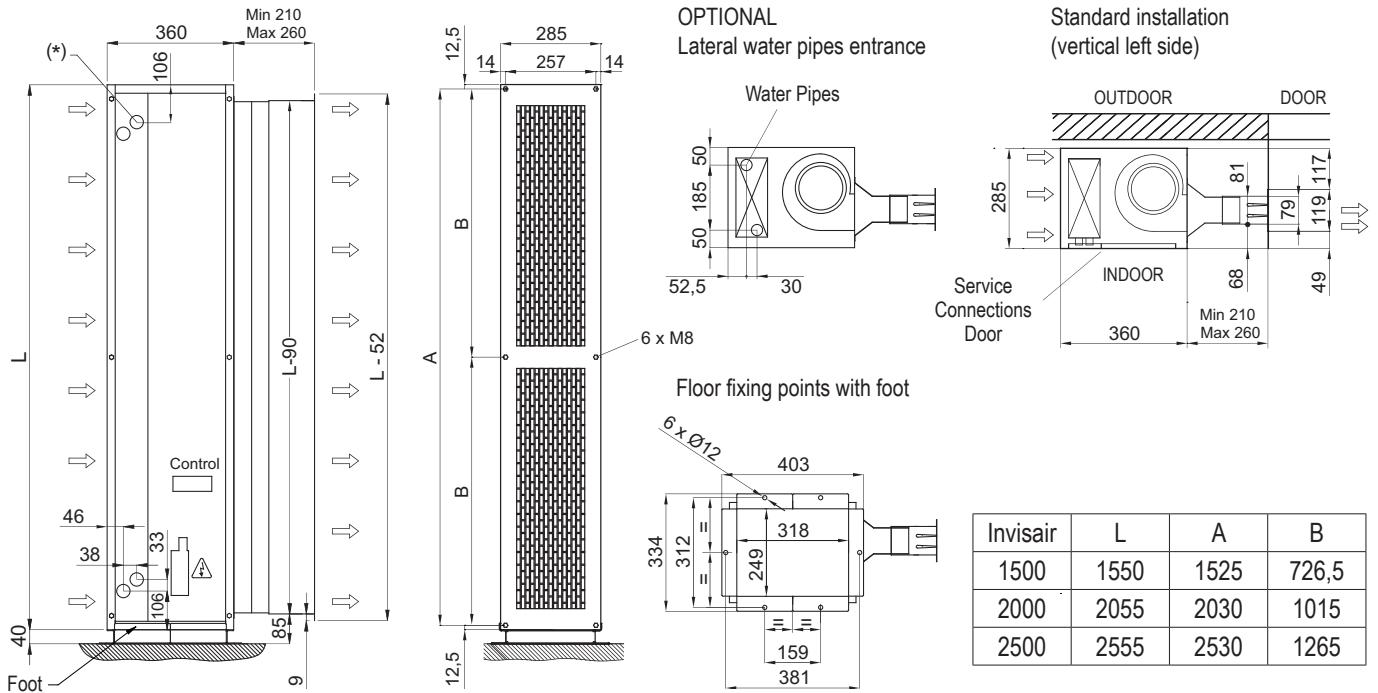
ELECTRICAL HEATED						
Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
IM 1500 E	2640	4/8/12	0,424	1,88	56	67
IM 2000 E	3960	6/12/18	0,636	2,82	57	86
IM 2500 E	4620	6/12/18	0,742	3,29	58	93
IG 1500 E	3200	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	0,300	2,60	62	73
IECG 2000 E	5400	10/20/30	0,450	3,90	63	96
IECG 2500 E	6300	10/20/30	0,525	4,55	64	103

WATER HEATED											
Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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	0,300	2,60	62	69
IECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	89
IECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	64	94

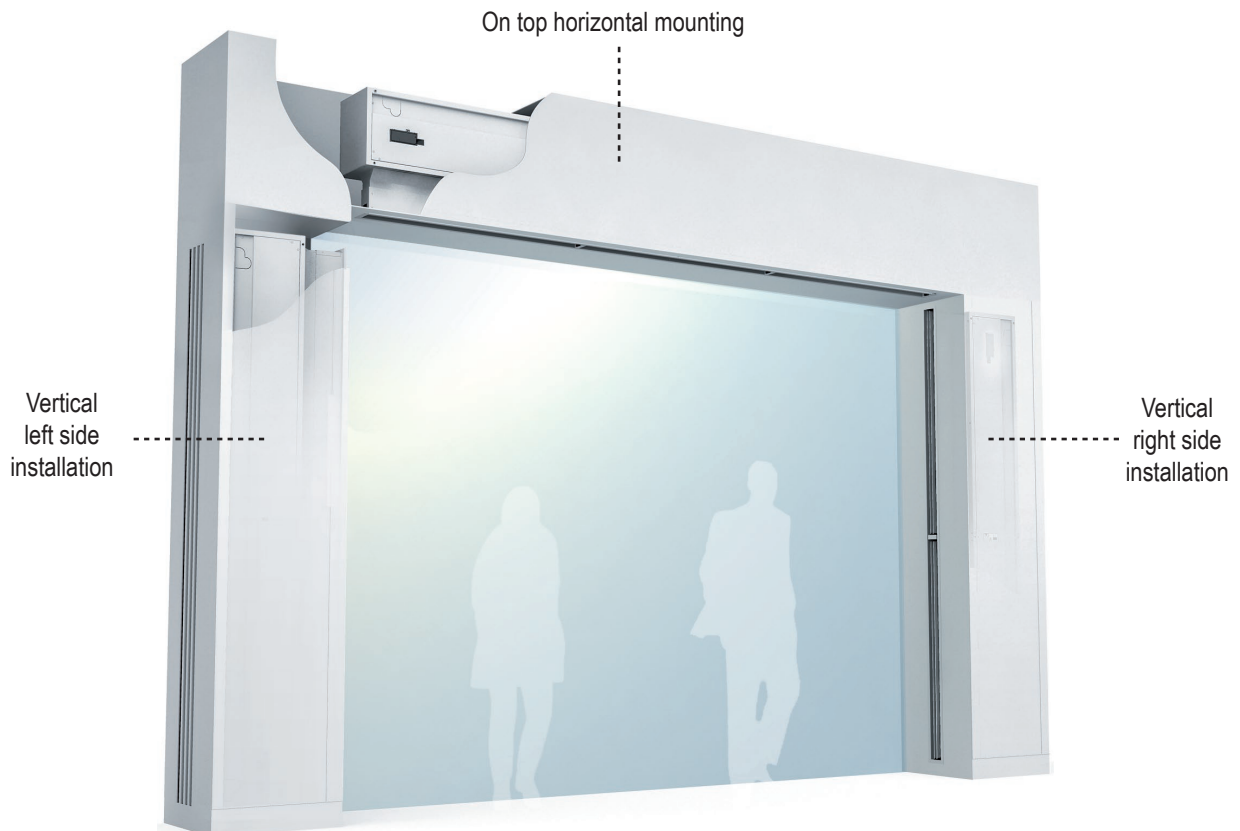
Water heated: connection pipes P86 and P64 are 2x3/4" female (male if lateral pipes), P54 2x1" male. P86 2 rows coil, P64 3 rows coil, P54 4 rows coil.



Layouts and dimensions



Installation examples





**Characteristics**



- Specially designed to be installed in all type of revolving doors. Two possible layouts, tailored dimensions.
- 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 assembled 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 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 (5 m) dB(A)	Weight kg
ROTO M 1000 A	1980	0,318	1,41	55	-
ROTO M 1500 A	2640	0,424	1,88	56	-
ROTO M 2000 A	3960	0,636	2,82	57	-
ROTO M 2500 A	4620	0,742	3,29	58	-
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	0,225	1,95	61	-
ROTO ECG 1500 A	3600	0,300	2,60	62	-
ROTO ECG 2000 A	5400	0,450	3,90	63	-
ROTO ECG 2500 A	6300	0,525	4,55	64	-

**ELECTRICAL HEATED**

Model	Airflow m³/h	Electrical Heating Capacity 400Vx3-50Hz kW	Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
ROTO M 1000 E	1980	3/6/9	0,318	1,41	55	-
ROTO M 1500 E	2640	4/8/12	0,424	1,88	56	-
ROTO M 2000 E	3960	6/12/18	0,636	2,82	57	-
ROTO M 2500 E	4620	6/12/18	0,742	3,29	58	-
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	0,225	1,95	61	-
ROTO ECG 1500 E	3600	7,5/15/22,5	0,300	2,60	62	-
ROTO ECG 2000 E	5400	10/20/30	0,450	3,90	63	-
ROTO ECG 2500 E	6300	10/20/30	0,525	4,55	64	-

**WATER HEATED**

Model	Airflow m³/h	P86		P64		P54		Power Fans 230V-50Hz kW	Current Fans 230V-50Hz A	Noise Level (5 m) 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 M 1000 P	1860	9,84	1000	9,22	4990	-	-	0,318	1,41	55	-
ROTO M 1500 P	2480	14,23	760	13,65	6430	-	-	0,424	1,88	56	-
ROTO M 2000 P	3720	22,17	2190	19,70	5470	-	-	0,636	2,82	57	-
ROTO M 2500 P	4340	27,69	4000	23,48	4060	-	-	0,742	3,29	58	-
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	0,225	1,95	61	-
ROTO ECG 1500 P	3400	17,29	1070	16,77	9240	17,86	6620	0,300	2,60	62	-
ROTO ECG 2000 P	5100	26,86	3080	24,14	7850	25,24	3530	0,450	3,90	63	-
ROTO ECG 2500 P	5950	33,63	5650	28,84	5840	31,38	6360	0,525	4,55	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.

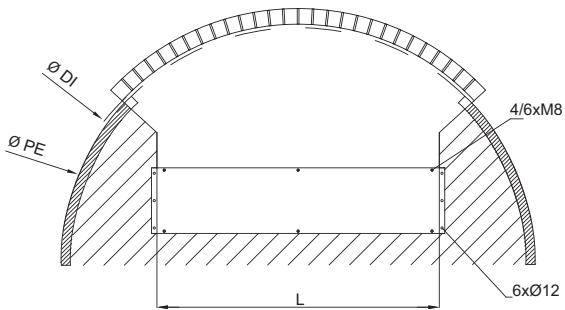
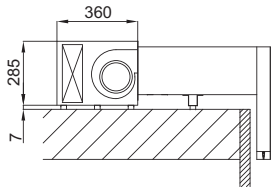




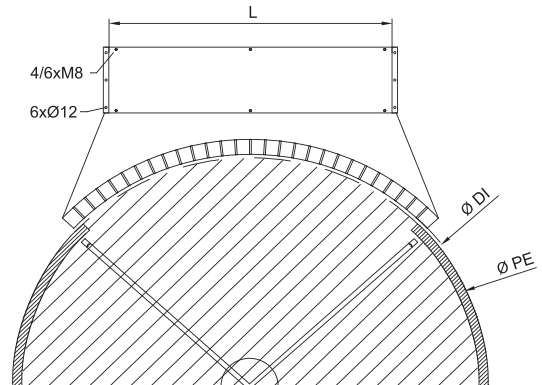
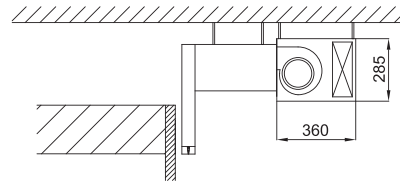
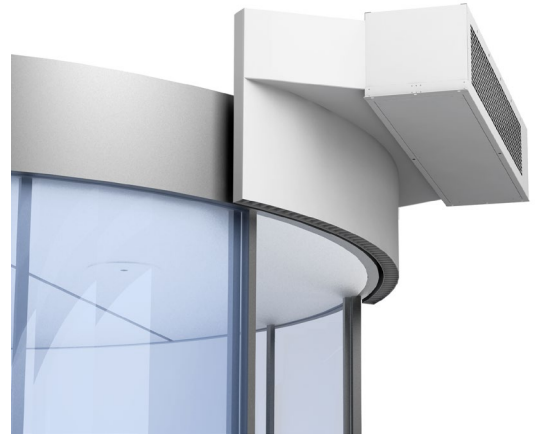
**Layouts and dimensions**

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

On top mounting



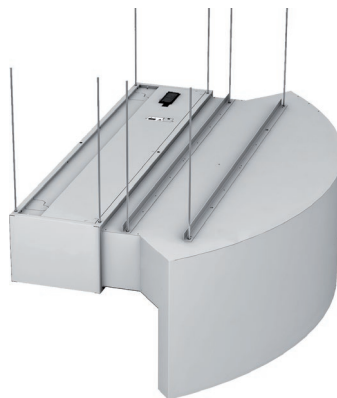
False ceiling mounting



Fixation system



Fixed onto the door



Hanging from the ceiling

Optional decorative front cover



1. RAL 9016 standard
2. Colour from RAL palette
3. Stainless steel AISI 304

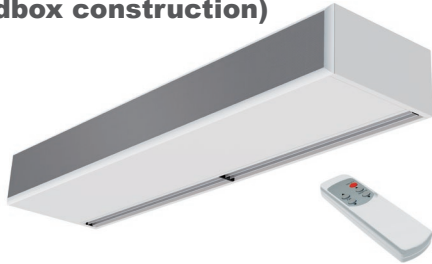


**Characteristics**

**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 assembled 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.
- 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.  
There all types from 1000 to 3000 mm length. It’s available unheated, water heated, electrical heated or with heat pump.

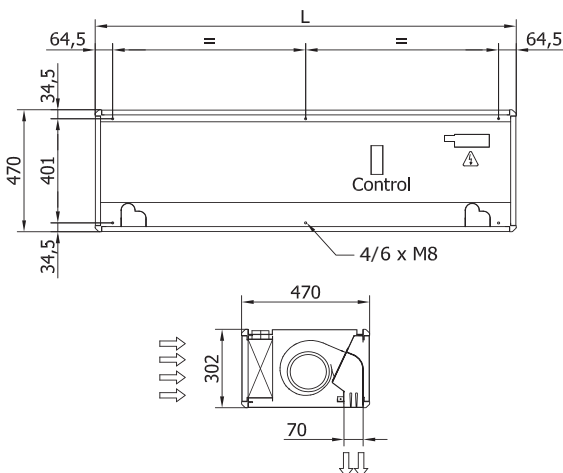
**Layouts and dimensions**

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

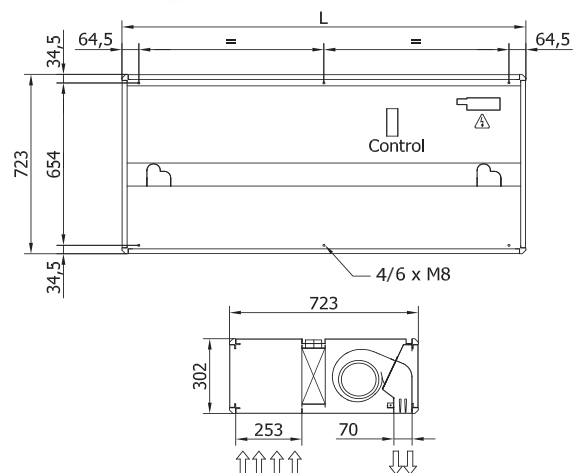
Example: Standard Variwind 1500 will have similar performance as Windbox 1500 (air volume, heating, consumption, etc.). Depending on how many mm we add to the nominal dimension 1500mm, we could put more fans and power heating if required (consult if possible).

	Customized length (mm)	
	VP	VW
Variwind 1000	1045-1544	1000-1499
Variwind 1500	1545-2049	1500-1999
Variwind 2000	2050-2549	2000-2499
Variwind 2500	2550-3000	2500-3000

VP Free hanging mounting



VP Inside ceiling surface mounting



VW Construction: see Windbox M-G dimensions



## Characteristics



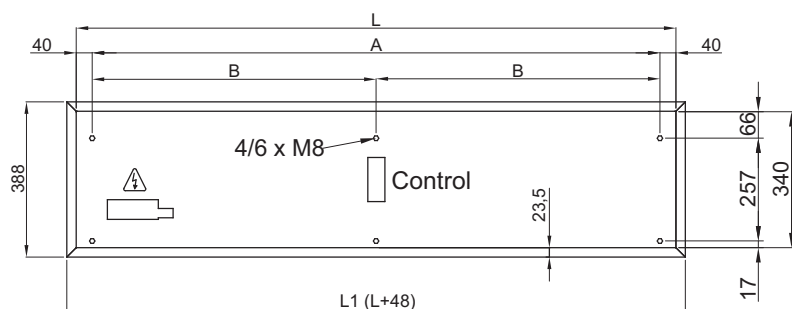
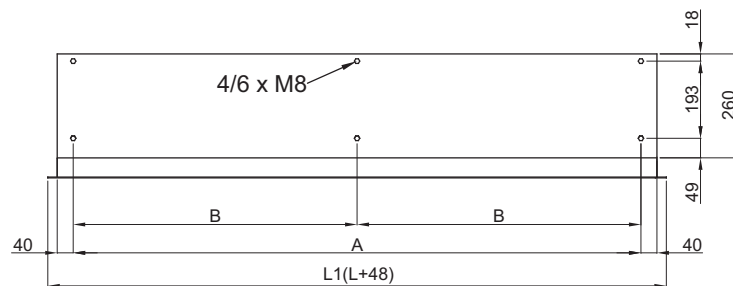
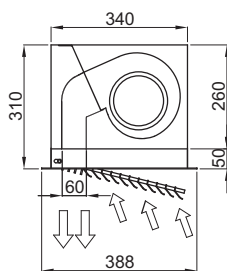
- Compact and low profile air only recessed air curtain, with full grille view, specially designed for applications without heating.
- Self-supporting casing construction made of galvanized steel plate, ready to be installed recessed in a false ceiling.
- Inlet grille (free of maintenance) made with aluminium profiles and blow-out nozzle, integrated in a single white frame colour RAL 9016. Other colours are available on request.
- 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 assembled with very low consumption efficiency 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 (5 m) dB(A)	Weight kg
RC M 1000 A	1800	0,212	0,94	55	33
RC M 1500 A	2700	0,318	1,41	56	50
RC M 2000 A	3600	0,424	1,88	57	61
RC M 2500 A	4500	0,530	2,35	58	68
RC ECM 1000 A	1840	0,132	1,14	56	33
RC ECM 1500 A	2760	0,198	1,71	57	50
RC ECM 2000 A	3680	0,264	2,28	58	61
RC ECM 2500 A	4600	0,330	2,85	59	68
RC G 1000 A	2400	0,642	2,85	57	37
RC G 1500 A	3200	0,856	3,80	58	55
RC G 2000 A	4800	1,284	5,70	59	71
RC G 2500 A	5600	1,498	6,65	60	78
RC ECG 1000 A	2700	0,225	1,95	61	37
RC ECG 1500 A	3600	0,300	2,60	62	56
RC ECG 2000 A	5400	0,450	3,90	63	71
RC ECG 2500 A	6300	0,525	4,55	64	78

## Dimensions



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



**Characteristics**

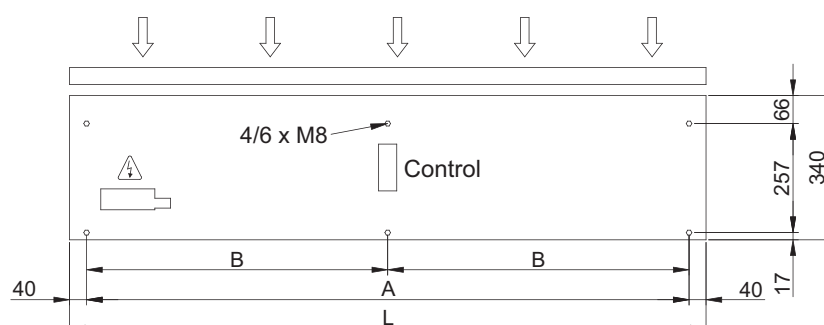
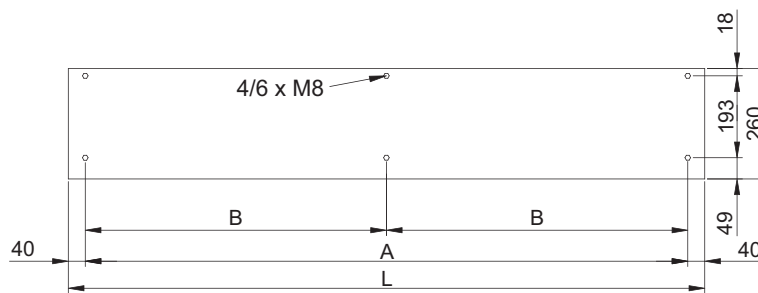
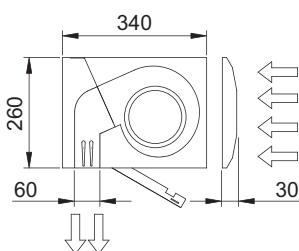


- Specially designed to be installed in doors of cold stores and freezers.
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- Large perforated 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 assembled with very low consumption efficiency 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 (5 m) 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	0,132	1,14	56	33
KECM 1500 A	2760	0,198	1,71	57	50
KECM 2000 A	3680	0,264	2,28	58	61
KECM 2500 A	4600	0,330	2,85	59	68
KECM 3000 A	5520	0,396	3,42	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	0,225	1,95	61	37
KECG 1500 A	3600	0,300	2,60	62	56
KECG 2000 A	5400	0,450	3,90	63	71
KECG 2500 A	6300	0,525	4,55	64	78
KECG 3000 A	7200	0,600	5,20	65	86

**Dimensions**



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



## Characteristics

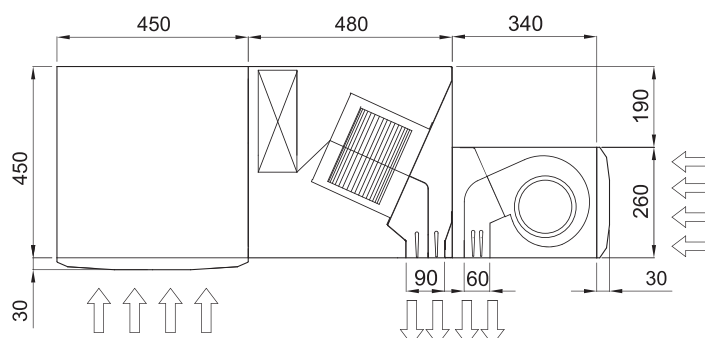


- Specially designed to be installed on doors of industrial cold stores and freezers with big temperature differences.
- Reduces mist, snow and ice decreasing risk of accidents.
- System composed by two air curtains: special Duojet air curtain with plenum and Kool air curtain. The result is a combination 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).
- Structure support with lateral walls to cover 100% of the opening with 3 jets should be provided by others.
- 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.
- 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	Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Electrical Heating Capacity 400Vx3-50Hz kW	Noise Level (5 m) dB(A)	Weight kg
TRIOJET SYSTEM 1000	5900	1,08	5,75	3/6/9	62	125
TRIOJET SYSTEM 1500	8400	1,58	8,30	4/8/12	63	182
TRIOJET SYSTEM 2000	11800	2,16	11,50	6/12/18	64	234
TRIOJET SYSTEM 2500	14300	2,66	14,05	6/12/18	65	275
TRIOJET SYSTEM 3000	16800	3,17	16,60	8/16/24	66	314

## Dimensions





**Characteristics**



- High performance industrial air curtains for vertical or horizontal installations for large industrial doors. Available in 1.5, 2.0 and 2.5 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.
- Regulation not included. Optional:  
Basic regulation with Plug&Play control panel, 10m RJ45 cable and remote control.  
Advanced regulation with Clever (automatic, intelligent, energy saving, Modbus RTU for BMS...).

**Specifications**

**AIR ONLY**

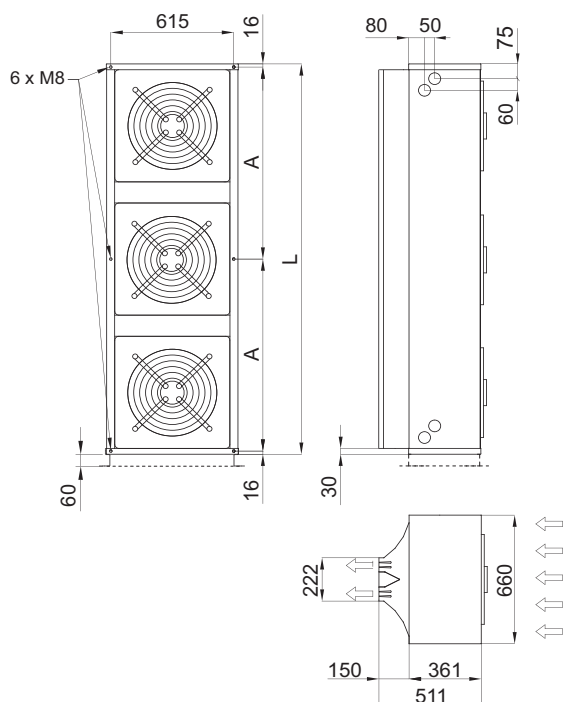
Model	Airflow m <sup>3</sup> /h	Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
MXW 1500 A	7000	0,68	2,96	60	79
MXW 2000 A	10500	1,02	4,44	61	103
MXW 2500 A	14000	1,36	5,92	62	126

**WATER HEATED**

Model	Airflow m <sup>3</sup> /h	P86		P64		Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg		
		Water Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Water Connections 80/60°C	Water Heating Capacity 60/40°C kW					Water Drop Pressure 60/40°C Pa	Water Connections 60/40°C
MXW 1500 P	6800	41,39	12040	2x1¼"	34,09	12620	2x1¼"	0,68	2,96	59	95
MXW 2000 P	10200	61,25	16920	2x1¼"	50,16	13660	2x1¼"	1,02	4,44	60	126
MXW 2500 P	13600	80,05	13940	2x1¼"	66,19	14600	2x1¼"	1,36	5,92	61	158

Water heated: P86 2 rows coil, P64 3 rows coil. Electrical heated models available on customer request. Let us know your needs.

**Dimensions**



	L	A
MXW 1500	1500	734
MXW 2000	2000	984
MXW 2500	2500	1234



**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	Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) 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 Capacity 400Vx3-50Hz kW	Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
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

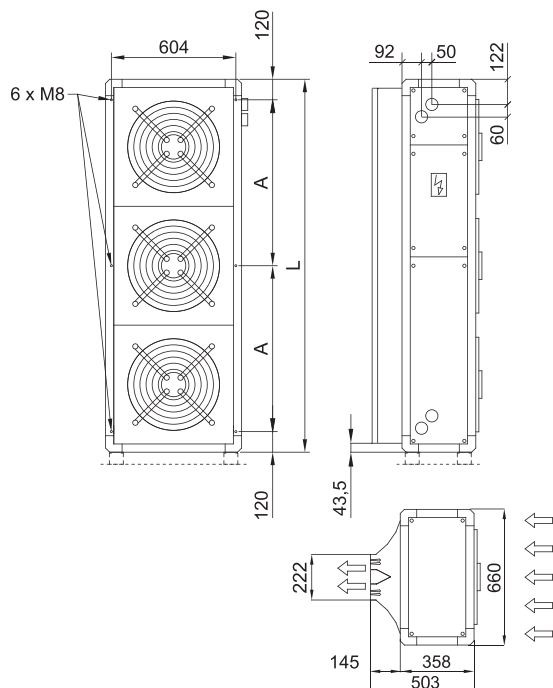
(\*) 2 separated power supplies. (\*\*) 3 separated power supplies.

**WATER HEATED**

Model	Airflow m³/h	P86			P64			Fans Power 230V-50Hz kW	Fans Current 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
		Water Heating Capacity 80/60°C kW	Water Drop Pressure 80/60°C Pa	Water Connections 80/60°C	Water 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**



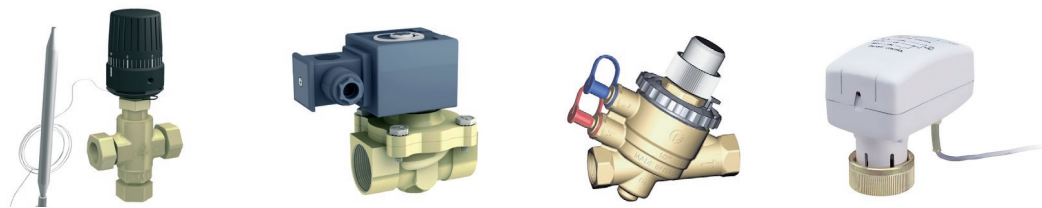
	L	A
MAX 2	1234	498
MAX 3	1811	786
MAX 4	2388	1074
MAX 5	2965	1363
MAX 6	3542	1651



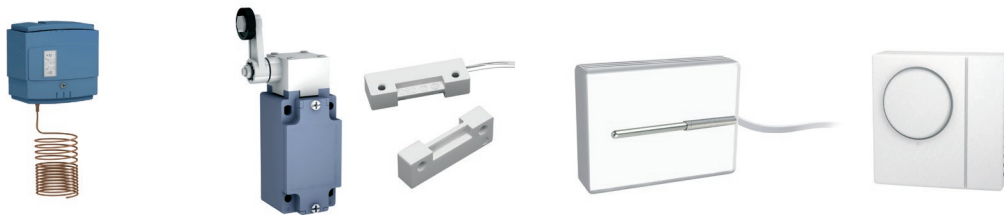
## Accessories



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



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



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



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

## Special Options

Airtecnics, 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 switch, dirty grille, 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 power and power supply
- Electrical heated air curtains from 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 with higher volume (MAX L)
- Industrial MAX 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

HEAT CAPACITY	=	Nominal Power (20,65 kW)	x	Coefficient (1,35)	=	27,87 kW
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## EC Concept

EC technology (Electronically Commutated) combines AC and DC voltages, bringing the best of both technologies: the motor runs on a DC voltage, but with a normal AC supply.

The EC motor transforms the voltage within the motor. The non-rotating part of the motor (stator) includes an electronic PCB board which incorporates power transformation AC to DC, as well as the controls.

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

## EC Motor Principle

- Permanent-magnet brushless DC motor within the rotor
- The stator is driven by electronic switches (which replace the Carbon brushes), controlled by a microcontroller
- Electronic system (hall effect sensor or software is used to recognize the rotor position)
- AC operate 230Vx1 or 400Vx3, valid for 50/60Hz

## Advantages and Benefits

The new Airtecnicos EC Air curtains are fascinatingly efficient reducing the running cost of the ventilation up to 65% using EC instead of AC fans.

- Energy savings: minimum power consumption and better efficiency than AC equivalent
- Low motor temperature: for longer lifetime than AC equivalent
- Simplicity: electronic and power transformation are completely integrated within the motor
- High performance: speed can be driven up to 3600rpm

Available EC Air Curtains: Windbox ECM-ECG, Smart, Deco, Kool, Recessed Windbox, Dam, Recessed Dam, Duojet, Variwind, Recessed Compact, Rund, Zen, Rotowind and Invisair.

## EC vs AC Air Curtain - Energy Saving Example

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

Example:

Door dimension: 2 m width by 3,8 m height

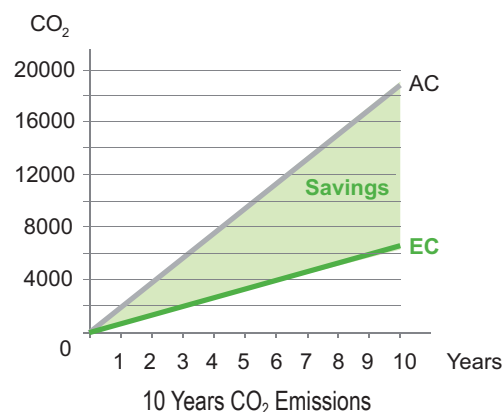
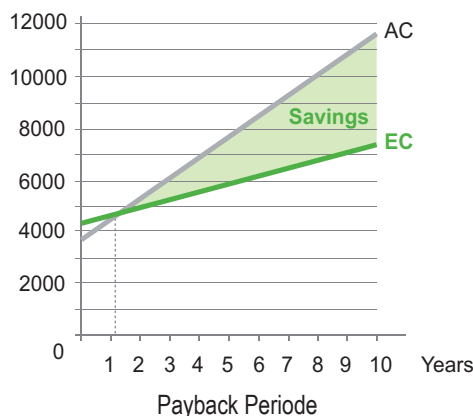
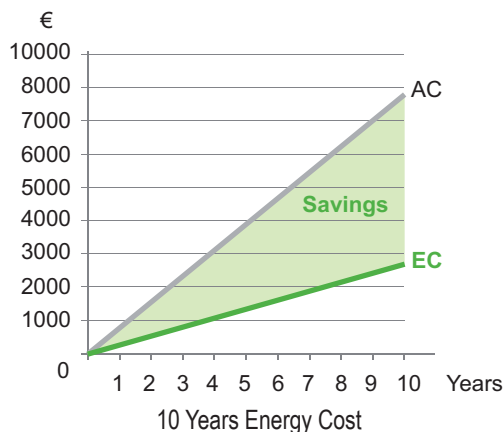
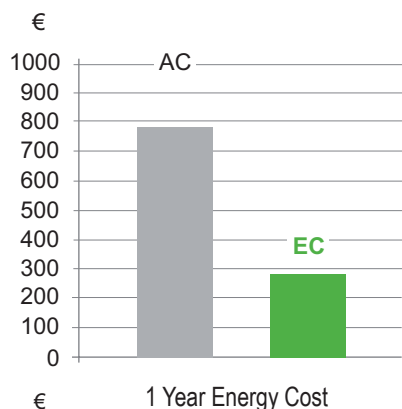
Running time: 12 hours/day, 6 days/week,  
50 weeks (~ 1 year)

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	3.828	€/unit	4.440	€/unit	+ 612 €
Energy Consumption	4.622	kW/h	1.620	kW/h	- 3.002 kW/h
Energy Cost	786	€	275	€	- 510 €
CO <sub>2</sub> Emissions	1.849	kg	648	kg	- 1.201 kg

Result: The payback periode is 1,2 years. We recover the price increase of EC air curtain in about 1 year and then we start saving money. From the beginning we save energy and reduce CO<sub>2</sub> emissions to the environment.



# 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).

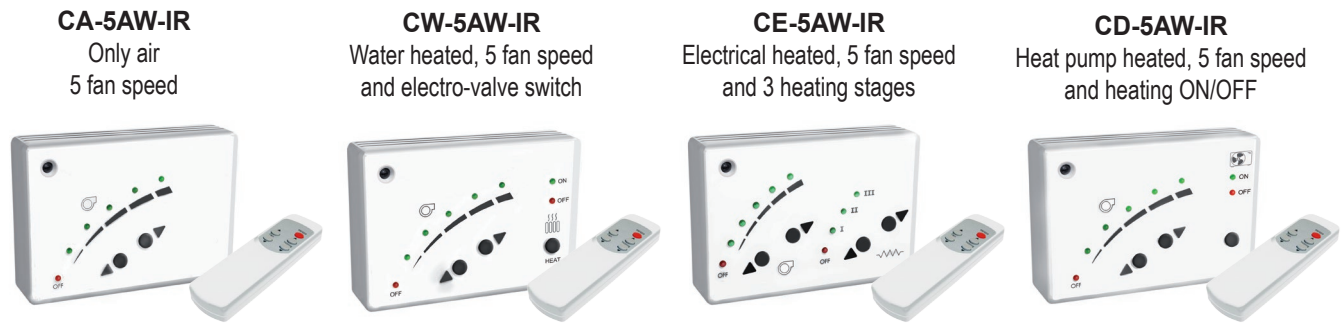
## 2 Speed Range Controls

Suitable for Optima and Recessed Optima air curtains. Infrared remote control included.



## 5 Speed Range Controls

Suitable for Windbox M,G,L,XL, Dam, Smart, Recessed Windbox, Recessed Dam, Recessed Compact, Kool, Zen, Rund, Deco, Rotowind, Invisair, Variwind, Max and Maxwell air curtains. Infrared remote control included.



## 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

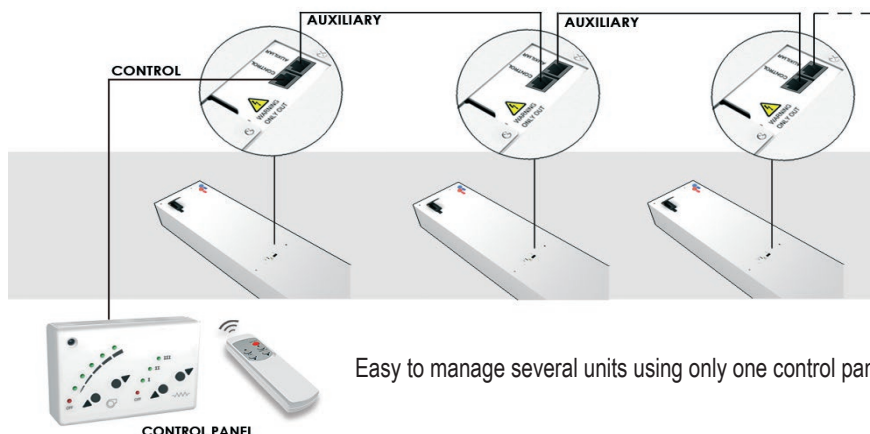
### Interface

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



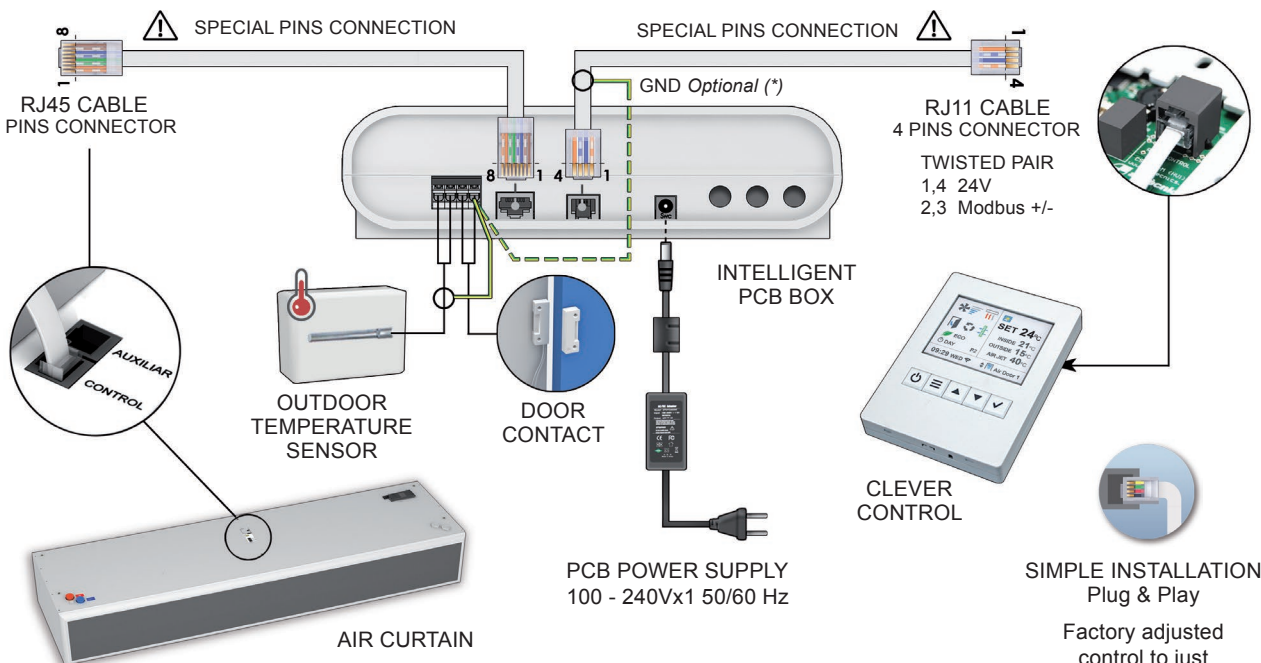
### RJ11 + RJ45 Cables

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



### Door Contact

- Monitoring Door Status
- Magnetic contact

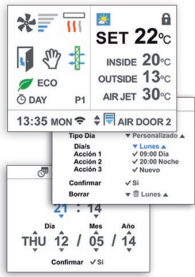


(\*) If there are communication issues (interferences), use shielded cable connected to GND



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



**Optima**  
Installation in  
a shop entrance



**Windbox**  
In a chain restaurant



**Dam**  
With smooth front panel  
in a shop



**Windbox**  
Invisible Installation  
with false ceiling kit



**Recessed Windbox**  
Designed to be installed  
in a false ceiling



**Invisair**  
Invisible inbuilt Column  
or bulkhead air curtain



**Zen**  
With aluminum panels  
in an office building



**Zen**  
Exclusive design and  
custom finishes



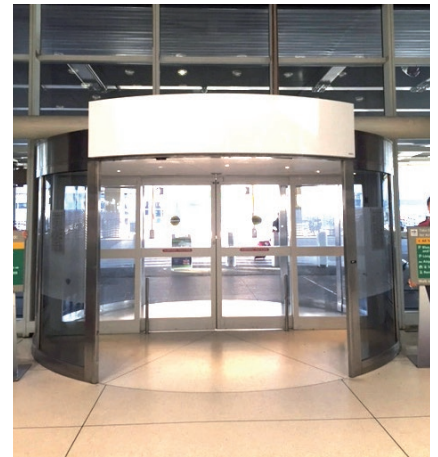
**Zen**  
With wood panels in  
a restaurant



**Rund**  
Vertical stainless steel  
in a big mall entrance



**Rund**  
Multiple installation  
covering long distances



**Rotowind**  
Revolving door  
in an international airport



**Rotowind**  
Tailor-made for any  
revolving door



**Kool**  
Cold chamber in a food factory



**Windbox L**  
Multiple installation  
in an industrial door

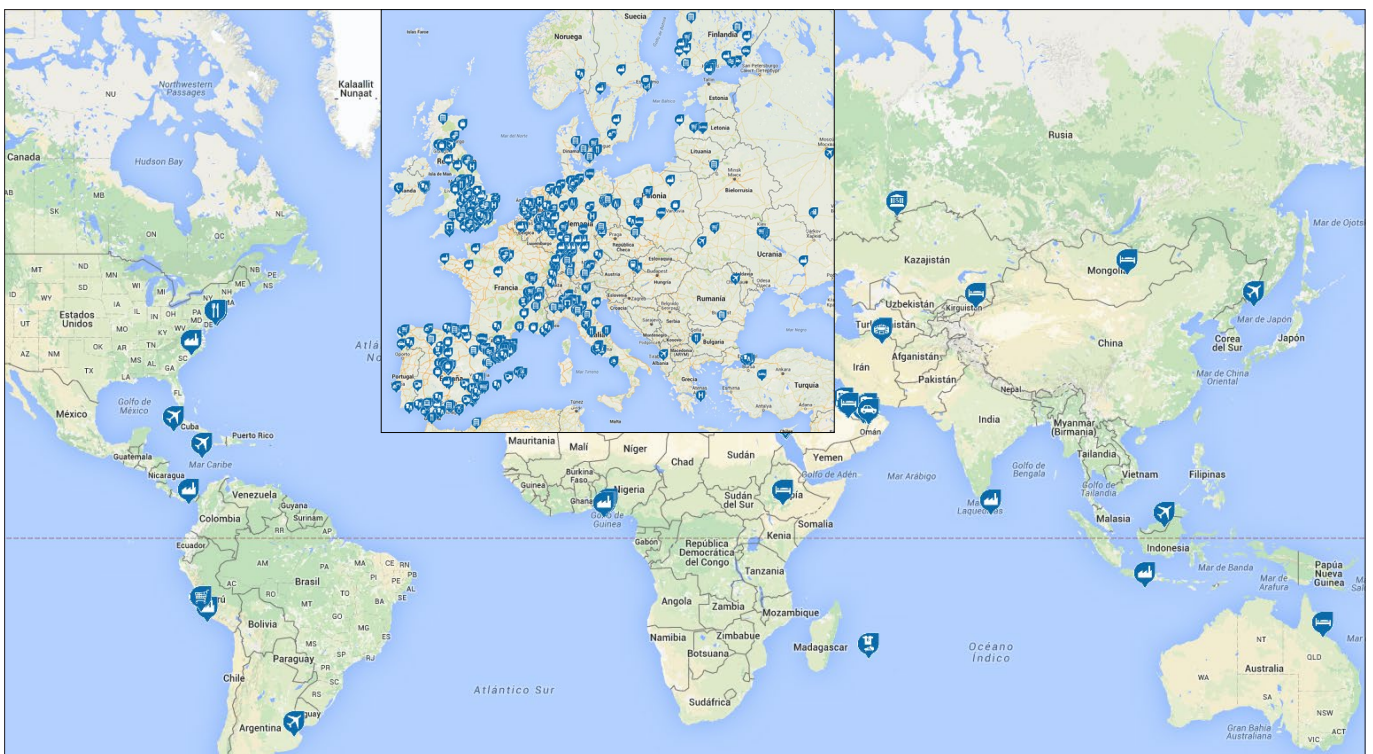


**Max**  
Modular towers on  
large industrial doors

# 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)
- Forum (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)
- RENFE Estació de França (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)
- Lidl (Bydgoszcz, Poland)
- 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)
- San Siro (Milan, Italy)
- Olympic Village (Ashgabat, Turkmenistan)
- Meydan Horse Racing Club (Dubai, UAE)
- Circuit de Catalunya F1 (Montmeló, Spain)



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