



cooling

EVAPORATIVE COOLING MEDIA AND COOLING SYSTEMS FOR AGRICULTURE AND INDUSTRY

since
1967



 **TERMOTECNICA®**
PERICOLI

EVAPORATIVE COOLING PAD



A unique water distribution system pours the water into the evaporative panel in order to impregnate uniformly its special honeycomb structure. At this point the air passing through the panel partially transfers its heat to the water, causing its evaporation. The air is then cooled and humidified naturally and economically.



The distributor panel guarantees a uniform pads wetting and higher performances



Entirely produced in Italy in our fully automated PERIcool® division



Honeycomb structure specifically developed to achieve high performances



A wide range of geometries is available for different applications

The panel is treated with special odourless resins, which guarantee a highly rigid structure and optimal water absorption capacity



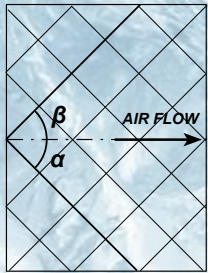


Outside temperature °C	Outside relative humidity (%)										
	5	10	15	20	25	30	35	40	45	50	55
	Temperature °C / humidity % after evaporative panel										
15	5.2° 81.3%	5.8° 82.9%	6.4° 84.3%	7° 85.7%	7.6° 87%	8.1° 88.2%	8.7° 89.4%	9.2° 90.5%	9.8° 91.5%	10.3° 92.5%	10.3° 93.4%
20	8.3° 80.1%	9° 81.9%	9.8° 83.6%	10.5° 85.1%	11.2° 86.5%	11.9° 87.8%	12.6° 89.1%	13.2° 90.2%	13.9° 91.3%	14.5° 92.3%	15.1° 93.3%
25	11.2° 79%	12.1° 81%	13° 82.8%	13.9° 84.5%	14.8° 86%	15.6° 87.5%	16.4° 88.8%	17.2° 90%	17.9° 91.1%	18.7° 92.2%	19.4° 93.2%
30	13.9° 77.8%	15.1° 80.1%	16.2° 82.1%	17.3° 84%	18.3° 85.6%	19.3° 87.1%	20.3° 88.5%	21.2° 89.8%	22° 91%	22.9° 92.1%	23.7° 93.1%
35	16.6° 76.7%	18° 79.2%	19.4° 81.5%	20.7° 83.5%	21.9° 85.3%	23° 86.9%	24.1° 88.3%	25.2° 89.6%	26.2° 90.9%	27.1° 92%	28° 93%
40	19.2° 75.6%	20.9° 78.4%	22.5° 80.9%	24° 83%	25.4° 84.9%	26.7° 86.6%	28° 88.1%	29.2° 89.5%	30.3° 90.8%	31.4° 91.9%	32.4° 93%
45	21.8° 74.5%	23.8° 77.7%	25.7° 80.4%	27.4° 82.7%	29° 84.7%	30.5° 86.4%	31.9° 88%	33.2° 89.4%	34.5° 90.7%	35.7° 91.9%	36.8° 93%
50	24.3° 73.5%	26.7° 77%	28.8° 79.9%	30.8° 82.3%	32.6° 84.4%	34.3° 86.3%	35.9° 87.9%	37.3° 89.3%	38.7° 90.6%	40° 91.8%	41.2° 92.9%

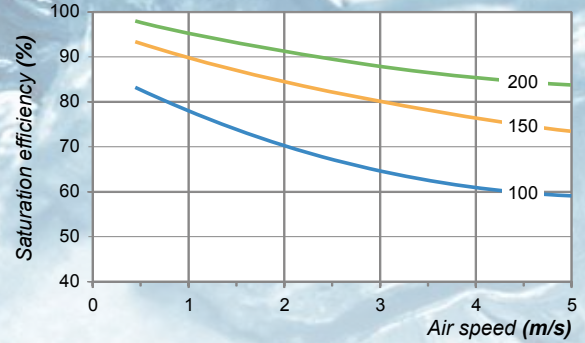
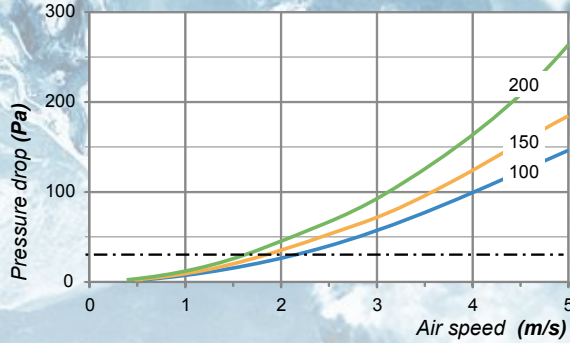
Note: The table refers to the model 4545/7, thickness 150mm with an air crossing speed of 1,5 m/s.

Type 4545/7

Suitable for application conditions where a good balance between humidification efficiency and pressure drop is required.

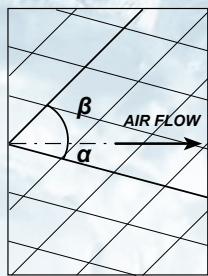


$\alpha = 45$ $\beta = 45$

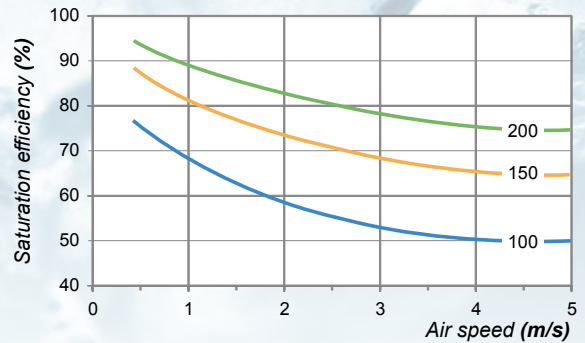
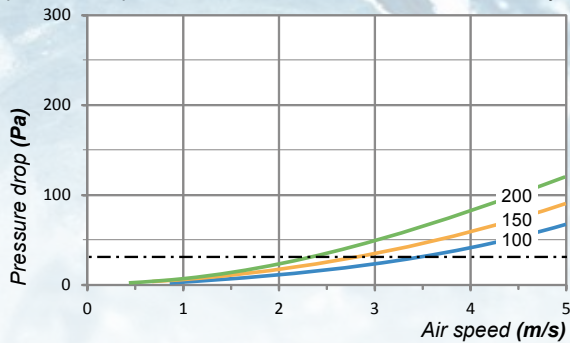


Type 1545/7

Particularly suitable where low pressure drop as well as reasonable humidification efficiency are required.

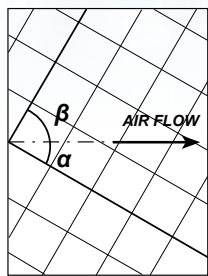


$\alpha = 15$ $\beta = 45$

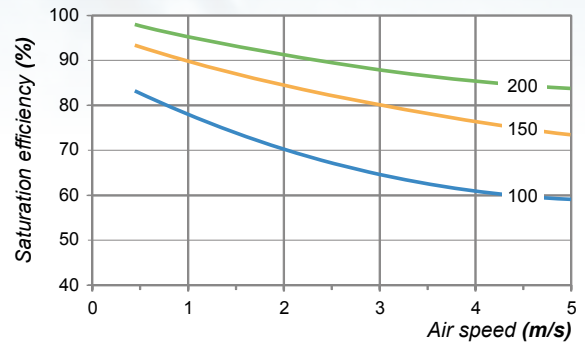
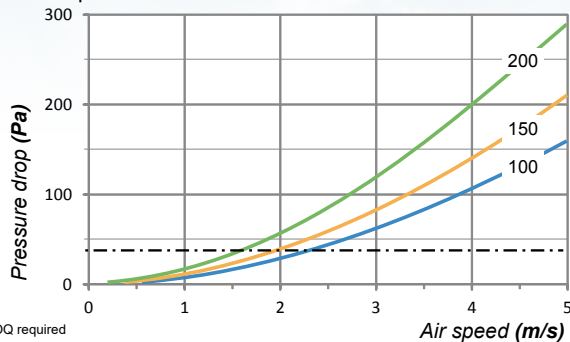


Type 3060/7*

Ideal for air conditioning applications where air crossing speeds are usually higher, it has been designed to avoid the release of water droplets, whilst maintaining good efficiency and reasonable pressure drop.



$\alpha = 30$ $\beta = 60$



*This model is available only upon request. MOQ required

Note: the dashed line in the diagrams shows the maximum recommended level of pressure drop.



Installation

- Follow the product installation manual for correct installation
- Keep the water tank away from direct sun light
- Minimize the exposure of the evaporative panels to sunlight

Water characteristics

- Be sure to have $6 < \text{pH} < 8$
- Do not use hot water (water at room temperature only)
- Max CaCO_3 250 ppm
- Do not add any chemicals to the water

Cleaning

- Do not wash with water under high pressure
- Do not use products that contain chlorine, weed killers or any other chemical products
- Use only clean water and a dry soft brush

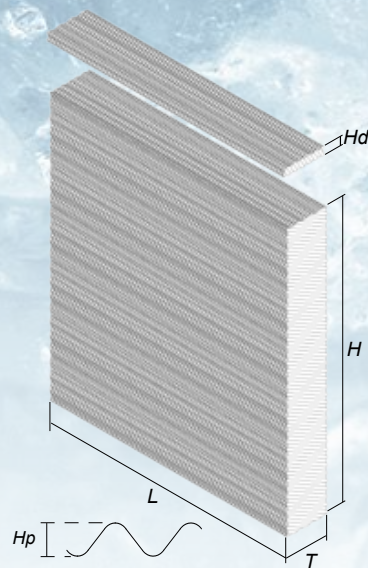
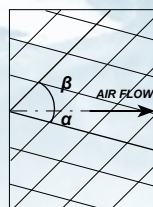
Maintenance

- Dry completely once every 24 hours
- Minimize frequent wetting and drying cycles
- During the operating season change the water weekly by removing the entire contents of the tank
- Maintain the mineral discharge ratio at minimum 5% (or higher depending on water quality)
- Clean the water filters once a week (do not operate without filters)
- Avoid contamination with weed killers, dust or any other chemical products
- In case of long non-operating period remove the water completely from the evaporative panel and the tank

Dimensions and loading possibilities

Dimensions	
Length - L - (mm)	600
Height - H - (mm)	1000, 1200, 1500, 1800, 2000
Thickness - T - (mm)	50, 100, 150, 200
Angle with respect to airflow direction - α - (°)	45, 15
Angle with respect to water direction - β - (°)	45
Distribution panel height - Hd - (mm)	30
Wave height - Hp - (mm)	7

Note: Other measures, thicknesses and angles are upon request

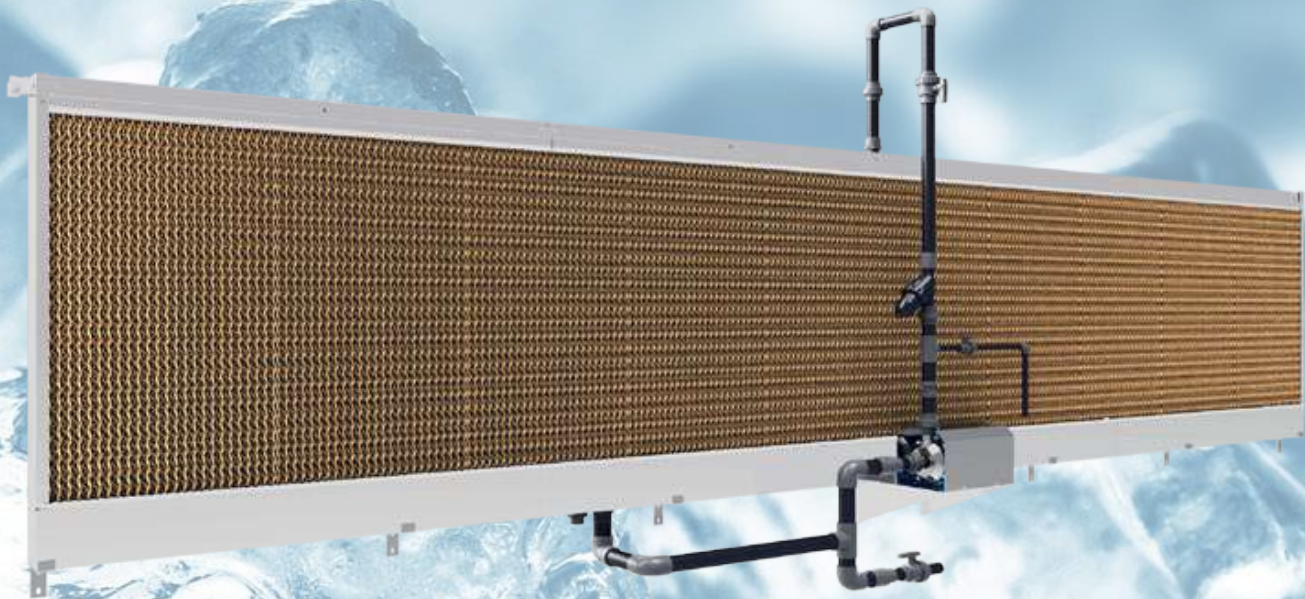


Dimensions of evaporative panel boxes																				
Model	1000x600x				1200x600x				1500x600x				1800x600x				2000x600x			
	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
Measurements	1020x620x1120				1220x620x1120				1520x620x1120				1820x620x1120				2020x620x1120			
Nr of panels	22	11	7	5	22	11	7	5	22	11	7	5	22	11	7	5	22	11	7	5

Loading possibilities of evaporation cooling media with distribution panel (without pallet)																				
Model	1000x600x				1200x600x*				1500x600x				1800x600x				2000x600x			
	50*	100	150	200	50*	100	150	200	50*	100	150	200	50*	100	150	200	50*	100	150	200
Container 20ft	858	429	273	195	682	341	217	155	572	286	182	130	462	231	147	105	396	198	126	90
Container 40ft	1782	891	567	405	1452	726	462	330	1188	594	378	270	968	484	308	220	902	451	287	205
Container 40ft HC	2156	1045	672	480	1672	803	518	370	1408	693	441	315	1100	550	350	250	1078	528	336	240

*This model is available only upon request. MOQ required

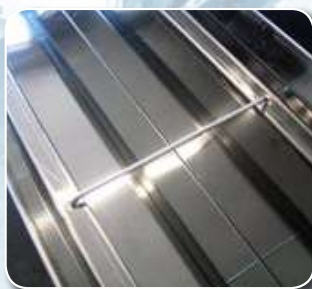
METAL FRAME SYSTEM WITH TANK-GUTTER



This product is made up by stainless steel gutter frames, without any additional external water storage thanks to a special lower gutter, which serves as a tank. This improved new system is easy to install, permits to avoid all costs related to external tank with additional pipes. The new lower gutter, although with the same design of the traditional one, has become deeper in order to contain the correct amount of water required by the system to operate. This product is appreciated not only by customers, but also by installers, maintenance workers and end-users for the simplicity and flexibility that distinguish it.



Central water adduction for easy installation of continuous cooling walls and for a constant and uniform water flow



The lower gutter has a unique border, which allows the water to fully drain from the inside, and it is reinforced to guarantee a rigid and sturdy structure



Filter for water impurity



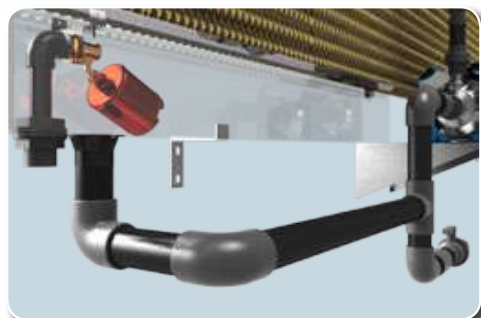
Mineral discharge valve



Deeper gutter frame in AISI 304 stainless steel. 100% recyclable material



System discharge valve



Water feeding with practical nipple M/F and level float



Centrifugal pump with protective cap

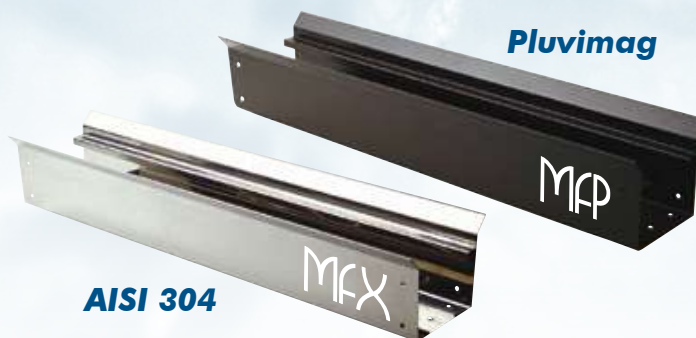
CLASSIC GUTTER FRAME SYSTEM



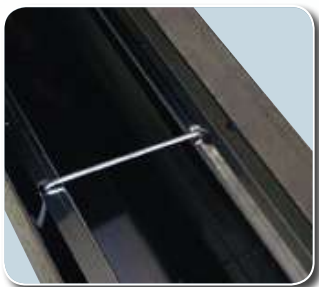
This gutter frame system for evaporative cooling pads is made in prepainted galvanized steel "Pluvimag" or in stainless steel particularly suitable for installation in highly corrosive environments. One of the main features of this product is its simplicity and flexibility really appreciated by the customers and it is especially developed for its usage in a wide range of applications.



The lower gutter has a unique border, which allows the water to fully drain from the inside, and it is reinforced to guarantee a rigid and sturdy structure



Upper gutter can be easily removed for maintenance. Inside the upper gutter a perforated pipe pours the water into the distribution panel, enabling uniform water distribution in the evaporative panel



ID - water supply kit - the components of the water connection system to PERICOOL evaporative cooling media, including the water flow control valve

F - filter - it contains water impurities

BL - mineral discharge kit - by draining part of the water, the valve maintains a constant water hardness level and avoids damaging consequences such as calcification in the system

DOC - submersible pump - it allows the recirculation of the water from the tank to the evaporative panels. It is equipped with floater and thermal protection, which stops the system in case of a low water level or overheating

SC - water discharge kit - The components of the water discharge systems from the PERICOOL panels to the water tank

GTP - hydraulic controller - Water level control valve

TK - water tank - collects the excess water

Water tank model	Dimensions		
	Capacity (liters)	External diameter (mm)	Height with cover (mm)
TK 500	500	910	985
TK 1000	1000	1110	1390

Pump model	Voltage	Power		Q = capacity									
		kW	HP	l/min	0	25	50	75	100	125	150	175	225
H = total head in meters water column													
DOC3	230V 1~	0.25	0.33	6.9	6.3	5.6	4.7	3.7	2.5	1.2	---	---	---
DOC7	230V 1~	0.55	0.75	11.1	10.8	10.4	9.9	9.3	8.5	7.6	6.5	3.7	
DOC7T	400V 3~	0.55	0.75	7.2	6.8	6.4	6.0	5.5	4.8	4.1	3.1	---	

Dimensions

Dimensions		
	MDFX 100	MDFX 150
A	from 6 to 30	from 6 to 24
H	1000 / 1500 / 1800 / 2000	
D	H + 260	H + 294
C	135	185
S	100	150
X	min 500	
Y	min 260	

Dimensions			
Modules	MF10	MF20	MF30
Lenght - A - (m)	from 6 to 12	from 12.6 to 18	from 18.6 to 30
Total height - B - (mm)	1160 / 1660 / 1960 / 2160		
Evaporative panel height - C - (mm)	1000 / 1500 / 1800 / 2000		
Evaporative panel thickness - D - (mm)	100 / 150		
Total thickness - E - (mm)	135 / 185		
Ø water discharge pipe - F - (mm)	63		
Ø water supply pipe - G - (mm)	50		
Brackets - SU -	To equip the end parts with, one per meter		

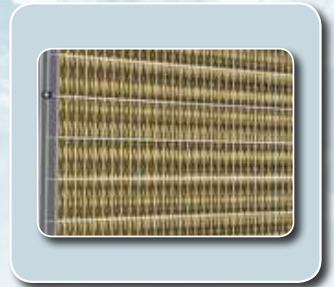
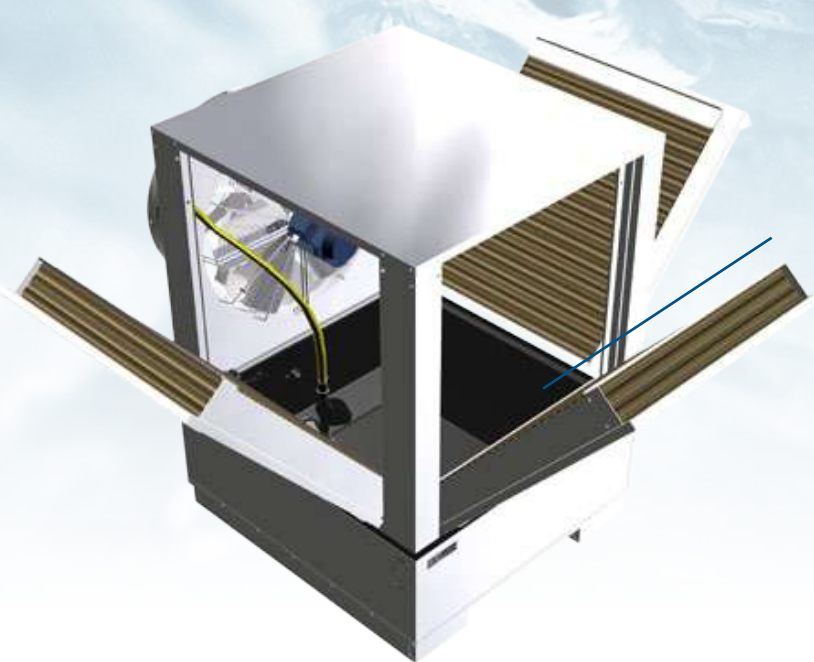
EVAPORATIVE COOLER



A unique water distribution system pours the water into the evaporative pads in order to evenly impregnate uniformly its special honeycomb structure. At this point, the air passing through the panel partially transfers its heat to the water causing its evaporation. The air is then naturally and economically cooled and humidified. The sturdy and enduring frame of PERICOOLER is produced in zinc/aluminum with magnesium coating for the maximum corrosion resistance. The cooling pads can be easily removed to ensure an easy maintenance and cleaning of the machine. Its water tank has a great capacity (290 litres) in order to guarantee long continuous operation hours. Available also in unassembled version (KD).



SK kit (optional)
safety net for propeller, round air diffuser outlet preset for installation of polyethylene duct



Kit NT3 (optional)
installation of safety nets possible for all three panels

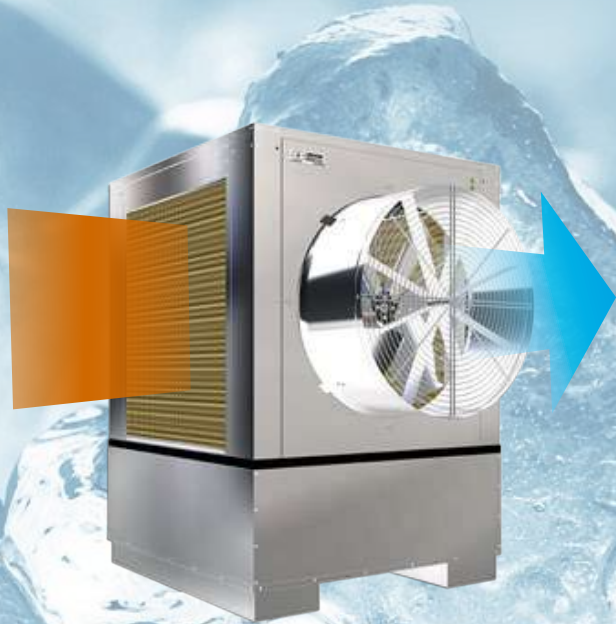


CXF-PC2 EXT - Electrical panel (optional)

- Safety motor magnetothermic switch
- Built-in socket with phase inverter
- Manual switch for water tank emptying
- Machine can be controlled by thermostat or by humidistat

Kit WSK (optional)
Wheels for mobile installation

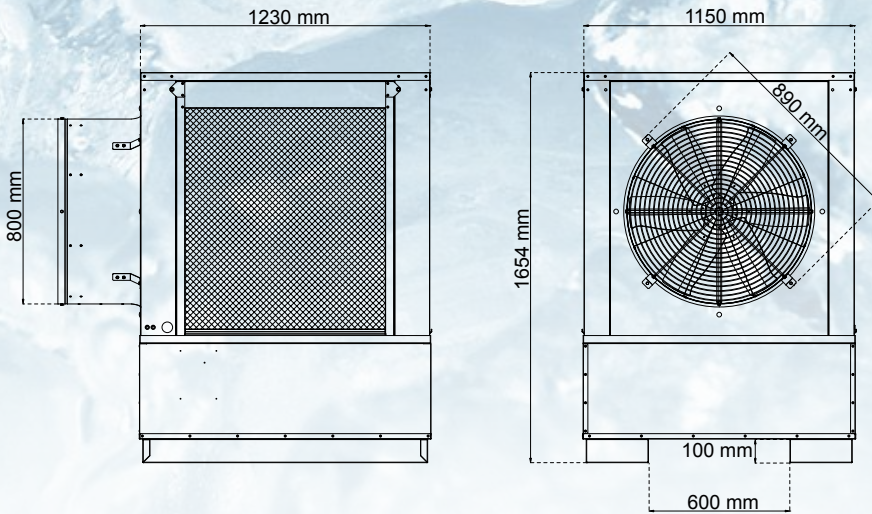




		Outside relative humidity (%)								
		15	20	25	30	35	40	45	50	55
Outside temperature °C	Temperature C/Humidity % at machine outlet / water consumption / operating time									
	30	16.8°C 77.4% 2.3 l/min 1h 50'	17.8°C 79.6% 2.1 l/min 2h	18.8°C 81.7% 2 l/min 2h 5'	19.7°C 83.6% 1.8 l/min 2h 20'	20.7°C 85.3% 1.7 l/min 2h 30'	21.5°C 86.9% 1.5 l/min 2h 45'	22.4°C 88.4% 1.4 l/min 2h 55'	23.2°C 89.8% 1.2 l/min 3h 25'	24°C 91.1% 1.1 l/min 3h 50'
	35	20°C 76.6% 2.6 l/min 1h 35'	21.2°C 79% 2.4 l/min 1h 45'	22.3°C 82.1% 2.2 l/min 1h 55'	23.5°C 83.3% 2 l/min 2h 5'	24.6°C 85.1% 1.9 l/min 2h 10'	25.6°C 86.8% 1.7 l/min 2h 30'	26.5°C 88.3% 1.5 l/min 2h 45'	27.4°C 89.7% 1.4 l/min 2h 55'	28.3°C 91.1% 1.2 l/min 3h 25'
	40	23.2°C 75.9% 2.9 l/min 1h 25'	24.7°C 78.5% 2.7 l/min 1h 30'	26°C 80.9% 2.5 l/min 1h 40'	27.3°C 83% 2.3 l/min 1h 50'	28.5°C 84.9% 2.1 l/min 2h	29.6°C 86.6% 1.9 l/min 2h 10'	30.7°C 88.2% 1.7 l/min 2h 30'	31.7°C 89.6% 1.5 l/min 2h 45'	32.7°C 91% 1.3 l/min 3h 10'
	45	26.5°C 75.7% 3.3 l/min 1h 15'	28.1°C 78.1% 3 l/min 1h 20'	29.7°C 80.5% 2.7 l/min 1h 30'	31.1°C 82.7% 2.5 l/min 1h 40'	32.4°C 84.7% 2.3 l/min 1h 50'	33.7°C 86.5% 2 l/min 2h 5'	34.9°C 88.1% 1.8 l/min 2h 20'	36°C 89.6% 1.6 l/min 2h 35'	37.1°C 91% 1.4 l/min 2h 55'
	50	29.7°C 74.7% 3.6 l/min 1h 10'	31.6°C 77.7% 3.3 l/min 1h 15'	33.3°C 80.3% 3 l/min 1h 20'	34.9°C 82.5% 2.7 l/min 1h 30'	36.4°C 84.6% 2.5 l/min 1h 40'	37.8°C 86.4% 2.2 l/min 1h 55'	39.2°C 88% 2 l/min 2h 5'	40.4°C 89.5% 1.8 l/min 2h 20'	41.6°C 90.9% 1.6 l/min 2h 35'

Above performance refers to PERICOOLER at full speed with air flow of 22000 m³/h, crossing speed of around 2.2 m/s and 250 liters of water in the tank.

Dimensions and loading possibilities



Characteristics	
Net weight	180 kg
Weight at full load	470 kg
Water tank capacity	290 l
Fan air displacement	22.000 m ³ /h
Propeller diameter	30 inch / 760 mm
Fan electric power	1,1 kW
Pump electric power	0,3 kW
Voltage*	230/400 V
Frequency	50/60 Hz
Sound pressure level Lpa** [dB]	66 db (A)

* Single-phase motors available upon request; all three-phase motors can be controlled by inverter.

** Measurement surface according to UNI EN ISO 3744.

Loading possibilities

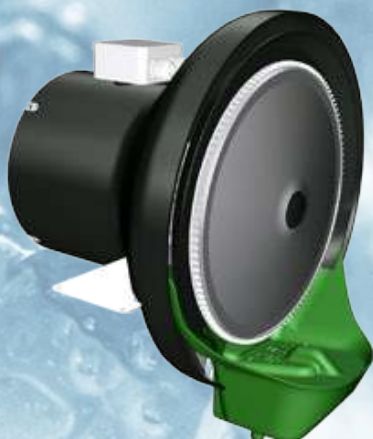
	assembled (FA)*	Unassembled (KD)
Container 20ft	8	32
Container 40ft	16	64
Container 40ft HC	---	80

*To optimize loading possibilities some parts can be supplied unassembled.

WATER ATOMIZER



RWA



RWA TURBO



RWA TURBO-O



RWA TURBO-D

RWA is a water atomizer with rotating disc to be installed on a circulating fan. It is produced in plastic in order to optimize weight and corrosion resistance. Each model can work with water at standard pressure without any nozzles in order to avoid any possible problem caused by calcification and water impurities. The pictures show the quantity of atomized water (it can vary depending on the position of the water flow regulating valve). The water flow can be regulated according to the customer's needs.



Closed



Mid water flow



Completely open

RWA TURBO O/D are professional humidifiers with integrated propeller and humidified air outlet diffuser



The air outlet of the **RWA TURBO D** is built specifically for the easy connection of a round pipe $\varnothing 125\text{mm}$ (with maximum recommended length of 5 m)

RWA Turbo is a water atomizer with rotating disc and built-in propeller



SVG - RWA fixing bar on square fans
EOR-ERD-BKF

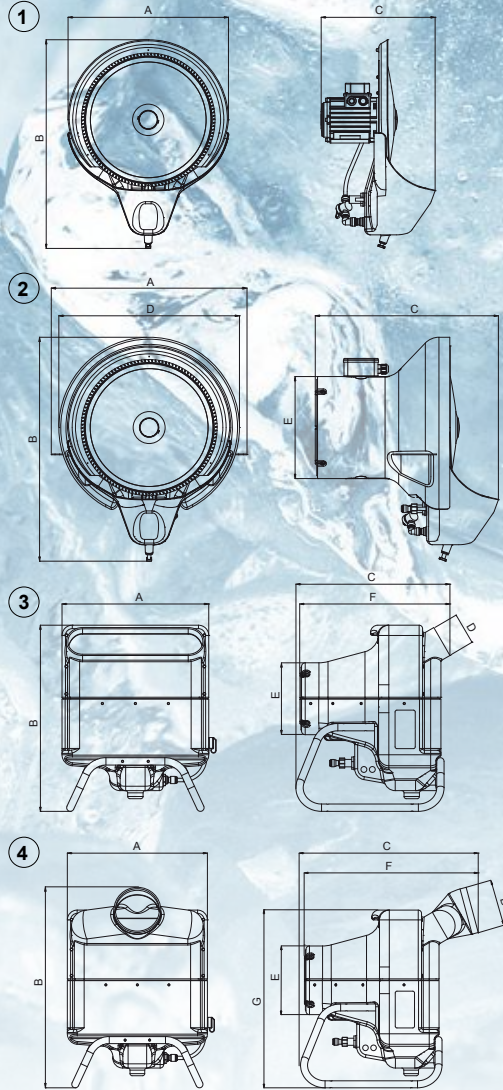


SVX - RWA fixing bar in stainless steel on square fans series EOR/ERD Aeternum

SAF - RWA fixing bar on circulation fans series ACF



Technical features, dimensions and loading possibilities



Dimensions							
Model	A	B	C	D Ø	E Ø	F	G Ø
1 RWA	432	562	307	---	---	---	---
2 RWA Turbo	518	593	485	478	270	---	---
3 RWA Turbo O	400	507	420	88	196	409	---
4 RWA Turbo D	400	572	507	133,5	196	496	507

Note: measures are given in millimeters

Technical characteristics						
Model	Atomizing capacity	Power supply	Protection grade	Weight	Air flow	Absorbed power
	lt/h		IP	kg	m ³ /h	W
RWA	15 - 55	1 Ph / 3 Ph + N	56	7,5	---	120
RWA Turbo	15	1 Ph	55	13	750	380
	20				1100	390
	25				1800	420
RWA Turbo O	7,5	≤ 7,5	1 Ph	55	13	280
RWA Turbo D		≤ 7	1 Ph	55	13	280

Note: 60Hz model available upon request

RWA loading possibilities		
Model	box	pallet
RWA	510x610x360mm - 1pc - 10kg	1200x1000x2000 - 20pcs - 220kg
RWA Turbo (O-D)	460x530x620mm - 1pc - 13kg	1200x800x2000 - 6pcs - 100kg

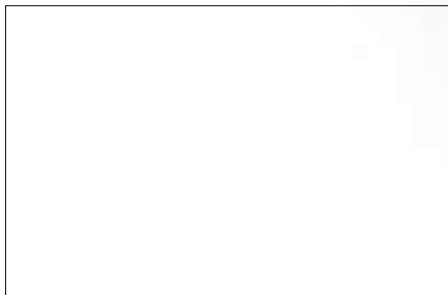
A wide variety of applications



All data in this catalogue are indicative and are subject to change without prior notice.



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