

OmniaRadiant



INVERTER
TECHNOLOGY



Variable Multi Flow®

VMF

FANCOIL - TECHNICAL

FAN COILS

- VERTICAL INSTALLATION
- VENTILATED HEATING
- LOW TEMPERATURE IRRADIATION
- COOLING / DEHUMIDIFICATION
- LOW TEMPERATURE OF EXERCISE

Omnia UL_R-UL_RI

EN



Dear Customer,

Thank you for choosing an AERMEC product. This product is the result of many years of experience and in-depth engineering research, and it is built using top quality materials and advanced technologies.

In addition, the CE mark guarantees that our appliances fully comply with the requirements of the European Machinery Directive in terms of safety. We constantly monitor the quality level, and as a result AERMEC products are synonymous with Safety, Quality, and Reliability.

The data may be subject to modifications deemed necessary for improving the product at any time and without forewarning.

Thank you again.
AERMEC S.p.A

Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.



Omnia UL_R-UL_RI

AERMEC S.p.A.

I-37040 Bevilacqua (VR) Italia – Via Roma, 996
Tel. (+39) 0442 633111
Telefax (+39) 0442 93730 – (+39) 0442 93566



DICHIARAZIONE DI CONFORMITÀ CE

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità, che il prodotto:

VENTILCONVETTORE

serie Omnia UL_R - UL_RI

al quale questa dichiarazione si riferisce è conforme alle seguenti norme armonizzate:

- CEI EN 60335-2-40
- CEI EN 55014-1
- CEI EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

soddisfando così i requisiti essenziali delle seguenti direttive:

- Direttiva LVD 2006/95/CE
- Direttiva compatibilità elettromagnetica EMC2004/108/CE
- Direttiva Macchine: 2006/42/CE

OMNIA UL_R - UL_RI CON ACCESSORI

E' fatto divieto di mettere in servizio il prodotto dotato di accessori non di fornitura Aermec.

CERTIFICAT DE CONFORMITÉ CE

Nous soussignés déclarons sous notre exclusive responsabilité que le produit:

VENTILO-CONVECTEURS

série OMNIA UL_R - UL_RI

auquel cette déclaration fait référence, est conforme aux normes harmonisées suivantes:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

satisfaisant ainsi aux conditions essentielles des directives suivantes:

- Directive LVD 2006/95/CE
- Directive compatibilité électromagnétique EMC2004/108/CE
- Directive Machines: 2006/42/CE

OMNIA UL_R - UL_RI PLUS ACCESSOIRES

Il est interdit de faire fonctionner l'appareil avec des accessoires qui ne sont pas fournis de Aermec.

DECLARACIÓN DE CONFORMIDAD CE

Los que suscriben la presente declaran bajo la propia y exclusiva responsabilidad que el conjunto en objeto, definido como sigue:

FAN COIL

serie Omnia OMNIA UL_R - UL_RI

al que esta declaración se refiere, está en conformidad a las siguientes normas armonizadas:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4
- EN 61000-6-3

al que esta declaración se refiere, está en conformidad a las siguientes normas armonizadas:

- Directiva LVD 2006/95/CE
- Directiva compatibilidad electromagnética EMC2004/108/CE
- Directiva Máquinas: 2006/42/CE

OMNIA UL_R - UL_RI CON ACCESORIOS

Está prohibido poner en marcha el producto con accesorios no suministrados por Aermec.

CE CONFORMITY DECLARATION

We the undersigned declare, under our own exclusive responsibility, that the product:

FAN COIL

OMNIA UL_R - UL_RI series

to which this declaration refers, complies with the following standardised regulations:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

thus meeting the essential requisites of the following directives:

- Directive LVD 2006/95/CE
- EMC Electromagnetic Compatibility Directive 2004/108/CE
- Machinery Directive: 2006/42/EC

OMNIA UL_R - UL_RI WITH ACCESSORIES

It is not allowed to use the unit equipped with accessories not supplied by Aermec.

CE KONFORMITÄTSERKLÄRUNG

Wir, die hier Unterzeichnenden, erklären auf unsere ausschließliche Verantwortung, dass das Produkt:

GEBLÄSEKONVEKTOR

der Serie OMNIA UL_R - UL_RI

auf das sich diese Erklärung bezieht, den folgenden harmonisierten Normen entspricht:

- EN 60335-2-40
- EN 55014-1
- EN 55014-2
- CEI EN 61000-6-1
- CEI EN 61000-6-2
- CEI EN 61000-6-3
- CEI EN 61000-6-4

womit die grundlegenden Anforderungen folgender Richtlinien erfüllt werden:

- Richtlinie LVD 2006/95/CE
- Richtlinie zur elektromagnetischen Verträglichkeit EMC2004/108/CE
- Maschinenrichtlinie: 2006/42/EG

OMNIA UL_R - UL_RI + ZUBEHÖR

Falls das Gerät mit Zubehörteilen ausgerüstet wird, die nicht von Aermec geliefert werden, ist dessen Inbetriebnahme solange untersagt.

Bevilacqua, 01/06/2013


La Direzione Commerciale – Sales and Marketing Director


Luigi Zucchi

1.	Description of the unit	6
1.1.	Versions available.....	6
1.2.	The four different working modes of Omnia radiant annual functioning	6
2.	Main description.....	7
2.1.	Radiant plate.....	7
2.2.	Heat exchange coil.....	7
2.3.	Cabinet.....	7
2.4.	Electrostatically precharged air filter	7
2.5.	Electric fan assembly.....	7
2.6.	Electric motor	7
2.7.	Load-bearing structure	7
2.8.	Head with adjustable fins.....	7
2.9.	Condensate drain	7
2.10.	Diverting valve	7
3.	Accessories	8
4.	Technical Data.....	9
5.	Technical data and operating limits	11
6.	Heating mode	12
7.	Cooling mode.....	13
8.	Pressure drop	17
9.	Correction factor in cooling with glycol-water	18
10.	Correction factor in heating with glycol-water	19
11.	Sound power	20
12.	Accessories data	21
12.1.	Gu - exhaust grille	21
12.2.	Zu - wedges for floor mount	21
12.3.	Pcu - rear closing panel	21


IMPORTANT INFORMATION

 **WARNING: OMNIA fan coils are designed for indoor use.**

 **WARNING: the fan coil is connected to power supply and water circuit. Operations performed by persons without the required technical skills can lead to personal injury to the operator or damage to the unit and surrounding objects.**

 **WARNING: components sensitive to static electricity may be destroyed by discharge notably lower than those at the human perception threshold. These discharges form when you touch a component or electric contact of a unit, without first discharging accumulated static electricity from your body. The damage caused to the unit by an overvoltage is not immediately evident - it only appears after a certain period of operation.**

STATIC ELECTRICITY ACCUMULATION

 Any person not connected in a conductive manner with the electronic potential of his surrounding environment can accumulate electrostatic charges.

STANDARD PROTECTION AGAINST ELECTROSTATIC CHARGES

Earthing quality


When working with units sensitive to electrostatic electricity, ensure that people, workplaces and unit casings are correctly earthed. This will prevent the formation of electrostatic charges.

Avoid direct contact

Only touch the element exposed to electrostatic risk when absolutely essential (e.g. for maintenance).

Touch the element without coming into contact with either the contact pins or the wire guides. If you follow this rule, the energy of the electrostatic charges cannot reach or damage the sensitive parts.

Before taking measurements on the unit, it is necessary to discharge all electrostatic charges from your body: to do this, just touch an earthed metal object. Only use earthed measuring instruments.

 **POWER THE FAN COIL ONLY WITH 230V, SINGLE-PHASE VOLTAGE**

Any other type of power supply could permanently damage the fan coil.

 **DO NOT USE THE FAN COIL IMPROPERLY**

Do not use the fan coil for animal husbandry applications (e.g. incubation).

 **AIR THE ROOM**

Periodically air the room in which the fan coil has been installed. This is particularly important if the room is occupied by many people, or if gas appliances or sources of odours are present.

 **ADJUST TEMPERATURE ADEQUATELY**

The room temperature should be adjusted in order to provide maximum comfort to the people in the room, especially if they are elderly, children or sick people; avoid differences over 7°C between the outdoor temperature and the temperature inside the room in summer.

In summer, a temperature that is too low causes higher electrical consumption.

 **CORRECTLY ADJUST THE AIR JET**

Air coming out from the fan coil must not reach people directly; in fact, even if the air is warmer than the room temperature, it could cause a cold sensation and result in discomfort.

 **DURING OPERATION**

Always leave the filter fitted on the fan coil during operation (otherwise dust in the air could soil the coil surface area).

 **WHAT IS NORMAL**

In the cooling operation, water vapour may be present in the air delivery of the fan coil.

In the heating operation, a slight hiss might be heard close to the fan coil. Sometimes the fan coil might give off unpleasant smells due to the accumulation of substances present in the air of the room (clean the filter more often, especially if the room is not ventilated regularly).

While the unit is functioning, there could be noises and creaks inside the device due to the vari-

ous thermal expansions of the elements (plastic and metal), but this does not indicate any malfunction and does not damage the unit unless the maximum input water temperature is exceeded.

 **MALFUNCTIONING**

In the event of a malfunction, cut off power supply to the unit, then restore the power and start the unit again. If the problem occurs again, call the local After-Sales Service immediately.

 **DO NOT TUG THE ELECTRIC CABLE**

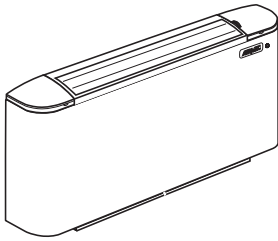
It is very dangerous to pull, tread on or crush the electric power cable, or fix it with nails or drawing pins.

A damaged power cable can cause short circuits and injure people.

 **DO NOT OBSTRUCT THE AIR OUTLETS BY PLACING OBJECTS INTO THEM**

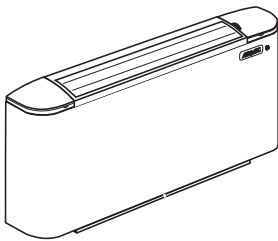
Do not put anything in the air outlet slots. This could injure people and damage the fan.

1. DESCRIPTION OF THE UNIT



Omnia Radiant (Omnia UL_R).

	Cabinet	RAL 9002
	heatboard	RAL 7044
	Feet	RAL 7044 (accessory ZU)



Omnia Radiant Plus (Omnia UL_RI).

	Cabinet	RAL 9002
	heatboard	RAL 7044
	Feet	RAL 7044 (accessory ZU)

Omnia Radiant and Omnia Radiant Plus Aermec innovative solutions

In this particular worldwide market evolution, we are pleased to present to you OMNIA Radiant, which represents the innovation of the OMNIA AERMEC series, fan coils especially designed for residential comfort.

1.1. VERSIONS AVAILABLE

1. Omnia Radiant (Omnia UL_R).

inherits all the advantages of the OMNIA UL series, and is characterized by the introduction of the frontal plate for radiant heating.

- OMNIA Radiant Plus** is provided with the DC Brushless electric engine, equipped with the latest Inverter technology, granting the highest energy efficiency and able to regulate the air flow through the continuous fan speed modulation. This allows to achieve up to 60% in energy saving when compared to the traditional On-Off fan system, in both air conditioning and heating

OMNIA Radiant e Radiant Plus (Omnia UL_RI)

OMNIA Radiant and Radiant Plus offer the following advantages when compared to the traditional systems:

- the radiant plate combination – the finned coil allows the best winter comfort with the lower energy consumption because it provides heating with lower water temperature: only 45°C against the about 65°C needed for the traditional radiator. This not only increases the comfort for the user, but also significantly increases the overall efficiency in case of heat pumps usage;
- the fan system allows to quickly reach the desired temperature, meeting the requirement of a fast start-up;
- the unit can be combined other than the boiler, also to energy saving heat pumps: air to water, water to water and geothermic type;
- the electrostatic charge filter standard supplied, provides pure and clean air;
- during summer Omnia Radiant and Radiant Plus provide air conditioning and dehumidification in a fast and efficient way in every room.

1.2. THE FOUR DIFFERENT WORKING MODES OF OMNIA RADIANT ANNUAL FUNCTIONING

Radiant:

Heating through radiation, comfortable and noiseless, is granted by the radiant plate placed on the front of the fan coil cover; if necessary, the triple-fins delivery head can be closed to increase the heating of the plate, thus maximizing the radiant effect.

Radiant + Natural Convection

With the triple-fins open, heating through natural convection, obtained thanks to the bigger coil exchange surface, is added to the radiant heating.

As for the radiant-only mode (see above), the fan groups are in off mode. This results in acoustic comfort and energy saving.

Radiant + Forced Convection

The electronic regulation, precise and reliable, continuously compares the effective indoor temperature

with the desired temperature: whenever the difference between the two should prove to be too high (e.g. during the heating system start-up) the software will lead the fan system start-up. Start-up is fast and efficient and grants significant energy savings especially in rooms that are occasionally used..

Omnia Radiant during summer provides air conditioning and dehumidification:

Forced Convection

During summer, Omnia Radiant and Radiant Plus provide air conditioning and dehumidification for each room of the house in a fast and efficient way. Efficiency and quietness benefit from the quality that has always characterized the Omnia series.



2. MAIN DESCRIPTION

- 1 Radiant plate
- 2 Switching valve
- 3 Water probe
- 4 Condensate storage container, hydraulic hoses



Note:
The coil had hydraulic hoses on the left and is not reversible.



2.1. RADIANT PLATE

Realized in copper and plate tube to maximize the radiant surface.

2.2. HEAT EXCHANGE COIL

coil with copper pipe and aluminium fins, held in place by means of the mechanical expansion of the pipes

Please note:

The coil cannot be revolved on site. The attachments are only left.

2.3. CABINET

Casing in RAL9002

The casing is made of galvanised steel, varnished with polyester powders to guarantee high resistance to rust and corrosion.

The feet (optional) are in plastic, colour RAL7044.

2.4. ELECTROSTATICALLY PRECHARGED AIR FILTER

Fire resistance Class 2 (UL 900).

Easily extractible, it is supplied with the fan coil in a sealed box which should be opened only upon use. The electrostatically pre-charged filter combines the normal mechanical filtering of the air that passes through the filter, with an electrostatic attraction of powder that increases its filtering considerably.

2.5. ELECTRIC FAN ASSEMBLY

Applied directly to the frame, it consists of extremely quiet, compact, double suction centrifugal fans. The electrical motor, protected against overloading, has three speeds with the running capacitor always on, directly coupled with the fans and cushioned with flexible supports. The fan shrouds can be inspected (an operation that can only be carried out by personnel with the specific technical skills), which also means the

inner parts can be accurately cleaned.

2.6. ELECTRIC MOTOR

2.6.1. Omnia Radiant (UL_R)

Electric motor, protect against overcharges, it has three speeds, with always switched run capacitor, directly coupled to fans and cushioned with flexible mountings.

2.6.2. Omnia Radiant Plus (UL_RI)

The electric motor "brushless with probes of Hall" and the control system used in the fan coils arise from the fusion of the most sophisticated technologies in the field of mechanics and electronics, entirely developed inside the industrial group. It is a motor with permanent magnets, with low inrush current and easy to regulate in speed. It is not interested from electromagnetic disorders.

The fact that it is without brushes permits less frictions and a reduced wear.

Through a dedicated inverter device it is possible to control the speed and the rotor couple in a continuous way, simply operating on the stator currents.

The electric motor is amortized with elastic supports and the steel shaft is mounted on bushings, the resistance to salt spray is tested according to the standards ASTM B117/64.

The electric motor presents enormous advantages, compared to traditional motors with alternative current and with hybrid and inverter motors (without Hall probes) normally used on other modulating fan coils:

- Reduced wear
- Possibility of regulating rotation speed in a precise and continuous way (0-100%)
- Higher energy efficiency
- Higher reliability and duration
- Low magnetic noise
- Continuous control of rotor position; this

means higher efficiency and guaranteed and controlled starting.

- Guaranteed minimum speed 90 rpm (for thermodynamic reasons this limit has been carried to 200 rpm).

2.7. LOAD-BEARING STRUCTURE

Made of sheet metal of an adequate thickness, and galvanised to protect against oxidation. Equipped with closed cell thermal insulation with Class 1 fire resistance. Holes in the back for wall mounting.

2.8. HEAD WITH ADJUSTABLE FINS

Colour RAL7044

With the deflector fin fully closed, the tripping of the microswitch stops ventilation thereby interrupting any further heat exchange with the environment.

The control panel is also housed in the head, and is protected by a flap

2.9. CONDENSATE DRAIN

Each device is equipped with condensate drain.

2.10. DIVERTING VALVE

On the inlet water side there is an ON -OFF diverting valve controlled with electric servocontrol.



WARNING
VMF-E4 is REQUIRED because for the temperature control in the environment must be made through the probe to the edge of the same panellino

3. ACCESSORIES

- **PCU:** Rear closing panel.
- **ZU:** Wedges for floor mount.
- **GU:** Exhaust grille: covers the front space of the wedges and does not interfere with the air filter. Must be combined with ZU wedges.

control of functions via a capacitive touch keypad with LCD display.

WARNING
It's COMPULSORY choose to adjust the room temperature with the probe panel on board.

• **VMF-E4**
 with frontal gray
 PANTONE COOL GRAY 1C

• **VMF-E4D:**
 with frontal gray
 PANTONE 425C (METAL)

The accessory combined with Omnia Radiant / Radiant Plus allows you to control:

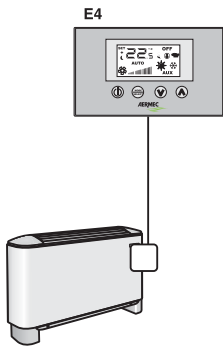
1. Control of a single terminal
2. Control of a micro-area (a maximum of 5 terminals and terminal MASTER SLAVE)

VMF: Variable Multi Flow system.

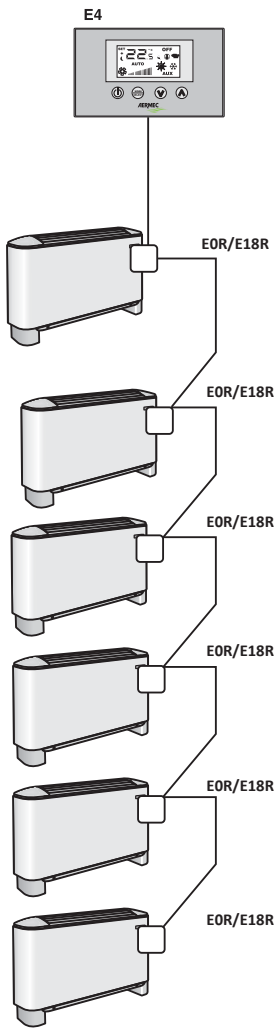
Management and control system of hydronic systems for the conditioning, heating and production of domestic hot water. The VMF system allows complete control of every component of a hydronic system both locally and centrally and, communicating between the various components of the system, manages the performance without ever neglecting the end user's request of comfort, but reaching it as efficiently as possible with energy saving.

• **VMF-E4/E4D (COMPULSORY ACCESSORY):** this is the wall mounted user interface Innovative design, extremely slim and inexpensive, allows

STAND ALONE APPLICATION:
 single terminal



ZONE CONTROL Application:
 max. 6 terminals



	Omnia radiant		Omnia Radiant plus	
	UL26R	UL36R	UL26RI	UL36RI
PCU	25	35	25	35
GU	25	35	25	35
ZU	•	•	•	•
VMF system				
VMF-E4 ¹	•	•	-	-
VMF-E4D ¹	•	•	-	-
VMF-E5B	-	-	•	•
VMF-E5N	-	-	•	•

1 Compulsory accessories

4. TECHNICAL DATA

Mod.			UL26R	UL36R
Heating capacity (70°C)	(1)	W (max.)	4620	5940
		W (med.)	3830	4870
		W (min.)	2890	3530
Heating capacity (50°C)	(2)	W (E)	2750	3540
Water flow rate		l/h	397	511
Water pressure drop		kPa	17	21
Static heating power (70°C)	(3)	W	650	750
Static heating power (50°C)	(4)	W	390	450
Static heating power (35°C)	(5)	W	200	230

Total cooling capacity	W (max.) (E)	2030	2830	
	W (med.)	1780	2310	
	W (min.)	1420	1730	
Sensible cooling capacity	W (max.) (E)	1640	2040	
	W (med.)	1370	1790	
	W (min.)	1050	1280	
Water flow rate		l/h	349	487
Water pressure drop		kPa (E)	18	22

CENTRIFUGAL FAN				
Air flow rate		m ³ /h (max.)	350	460
		m ³ /h (med.)	270	350
		m ³ /h (min.)	190	240
n° Fans		n.	2	2

SOUND DATA				
Sound pressure		dB (A) (max.)	39,5	39,5
		dB (A) (med.)	34,5	32,5
		dB (A) (min.)	26,5	25,5
Sound power		dB (A) (max.) (E)	48	50
		dB (A) (med.) (E)	43	41
		dB (A) (min.) (E)	35	34

ELECTRICAL DATA				
Power supply		V/ph/Hz	230V/1/50Hz	230V/1/50Hz
Max. motor power		W (E)	35	42
Max. input current		A	0,18	0,22

HYDRAULIC CHARACTERISTICS				
Water contents		l	0,8	1,1
Coil connections (in/out)		∅ (mm)	14	14

DIMENSIONS AND WEIGHT				
Height	A	(mm)	606	606
Width	B	(mm)	980	1200
Depth	C	(mm)	173	173
Height with ZU (Accessories)	D	(mm)	93	93
Wight ⁽¹⁾		(kg)	20	24

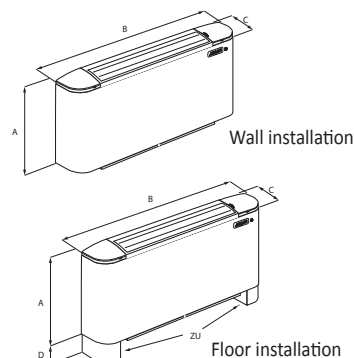
Cooling:

Room temperature 27°C b.s./19°C b.u.; Cold water (in/out) 7°C/12°C

Heating:

- (1) Room temperature 20°C b.s.; Hot water (in) 70°C; Δt 10°C
- (2) Room temperature 20°C b.s.; Hot water (in/*) 50°C/*°C (water flow same as in heating cycle)
- (3) Radiant power + natural convection; Hot water (in) 70°C (water flow same as in heating cycle)
- (4) Radiant power + natural convection; Hot water (in/*) 50°C/*°C (water flow same as in heating cycle)
- (5) Radiant power + natural convection; Hot water (in/*) 35°C/*°C (water flow same as in heating cycle)

Level of sound pressure (A-weighted) measured in the room with volume V = 85m³ ; reverberation time t = 0.5s; direction factor Q = 2; distance r = 2.5m



Mod.			UL26RI	UL36RI
Heating capacity (70°C)	(1)	W (max.)	4620	5940
		W (med.)	3830	4870
		W (min.)	2890	3530
Heating capacity (50°C)	(2)	W (E)	2750	3540
Water flow rate		l/h	397	511
Water pressure drop		kPa	17	21
Static heating power (70°C)	(3)	W	650	750
Static heating power (50°C)	(4)	W	390	450
Static heating power (35°C)	(5)	W	200	230

Total cooling capacity	W (max.) (E)	2030	2830	
	W (med.)	1780	2310	
	W (min.)	1420	1730	
Sensible cooling capacity	W (max.) (E)	1640	2040	
	W (med.)	1370	1790	
	W (min.)	1050	1280	
Water flow rate		l/h	349	487
Water pressure drop		kPa (E)	18	22

CENTRIFUGAL FAN				
Air flow rate		m ³ /h (max.)	350	460
		m ³ /h (med.)	270	350
		m ³ /h (min.)	190	240
n° Fans		n.	2	2

SOUND DATA				
Sound pressure		dB (A) (max.)	39,5	39,5
		dB (A) (med.)	34,5	32,5
		dB (A) (min.)	26,5	25,5
Sound power		dB (A) (max.) (E)	48	50
		dB (A) (med.) (E)	43	41
		dB (A) (min.) (E)	35	34

ELECTRICAL DATA				
Power supply		V/ph/Hz	230V/1/50Hz	230V/1/50Hz
Max. motor power		W (E)	12	16
Max. input current		A	0,18	0,22

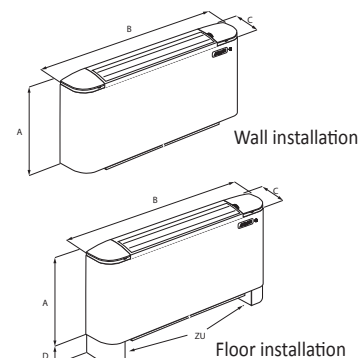
HYDRAULIC CHARACTERISTICS				
Water contents		l	0,8	1,1
Coil connections (in/out)		∅ (mm)	14	14

DIMENSIONS AND WEIGHT				
Height	A	(mm)	606	606
Width	B	(mm)	980	1200
Depth	C	(mm)	173	173
Height with ZU (Accessories)	D	(mm)	93	93
Wight ⁽¹⁾		(kg)	20	24

■ Cooling:
Room temperature 27°C b.s./19°C b.u.; Cold water (in/out) 7°C/12°C

■ Heating:
(1) Room temperature 20°C b.s.; Hot water (in) 70°C; Δt 10°C
(2) Room temperature 20°C b.s.; Hot water (in/*) 50°C/*°C (water flow same as in heating cycle)
(3) Radiant power + natural convection; Hot water (in) 70°C (water flow same as in heating cycle)
(4) Radiant power + natural convection; Hot water (in/*) 50°C/*°C (water flow same as in heating cycle)
(5) Radiant power + natural convection; Hot water (in/*) 35°C/*°C (water flow same as in heating cycle)

Level of sound pressure (A-weighted) measured in the room with volume V = 85m³ ; reverberation time t = 0.5s; direction factor Q = 2; distance r = 2.5m



**WARNING**

Minimum average water temperature

If the fan coil is working in continuous cooling mode in an environment where the relative humidity is high, condensate might form on the air delivery and on the outside of the device. This condensate might be deposited on any objects underneath and on the floor.

To avoid condensate on the external structure of the device while the fan is functioning, the average temperature of the water must not be lower than the limits shown in the table below, that depend on the thermohygrometric conditions of the air in the room.

These limits refer to unit operating with fan at minimum speed.

5. TECHNICAL DATA AND OPERATING LIMITS

OPERATIONAL LIMITS		UL26R	UL36R	UL26RI	UL36RI
Maximum water inlet temperature	°C			80°C	
Maximum operating pressure	bar			8bar	

FLOW LIMITS		UL26R	UL36R	UL26RI	UL36RI
Flow rate (min)	l/h	100	150	100	150
Flow rate (max)	l/h	700	1050	700	1050

Minimum average water temperature [°C]	Temperature of the air in the room with dry bulb					
	21	23	25	27	29	31
Temperature with wet bulb of the air in the room	15	3	3	3	3	3
	17	3	3	3	3	3
	19	3	3	3	3	3
	21	6	5	4	3	3
	23	-	8	7	6	5

6. HEATING MODE

UL26R/UL26RI

Heating capacity figures refer to maximum fan speed. Performance for other fan speeds can be obtained by multiplying these figures by the following correction factors:

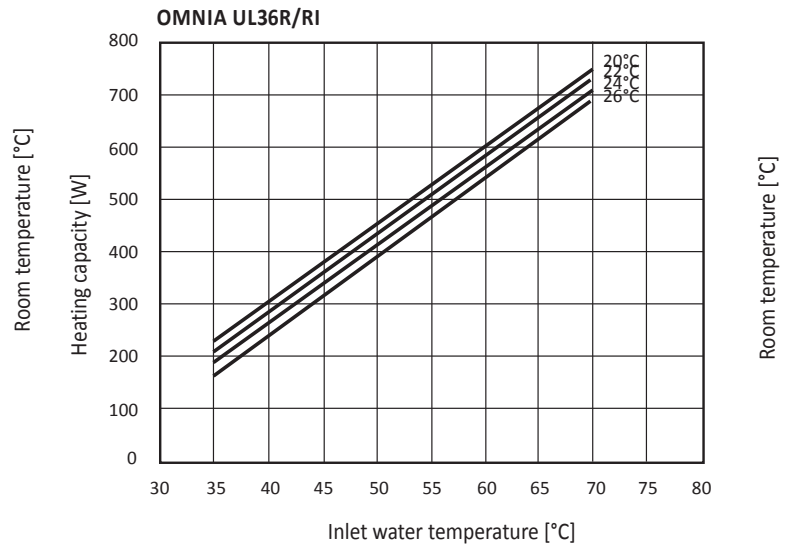
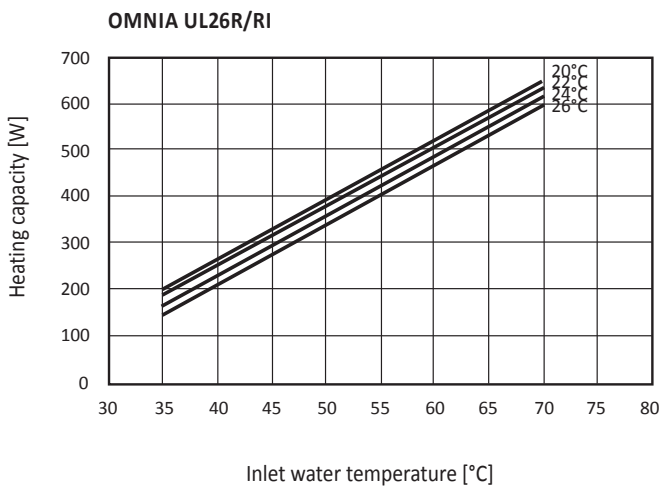
MOD. UL26R/UL26RI	
Medium fan speed	0,83
Minimum fan speed	0,63

UL36R/UL36RI

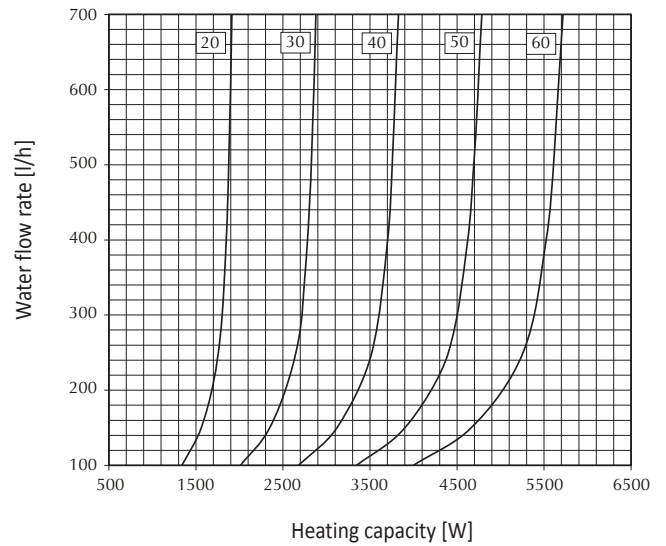
Heating capacity figures refer to maximum fan speed. Performance for other fan speeds can be obtained by multiplying these figures by the following correction factors:

MOD. UL36R/UL36RI	
Medium fan speed	0,82
Minimum fan speed	0,59

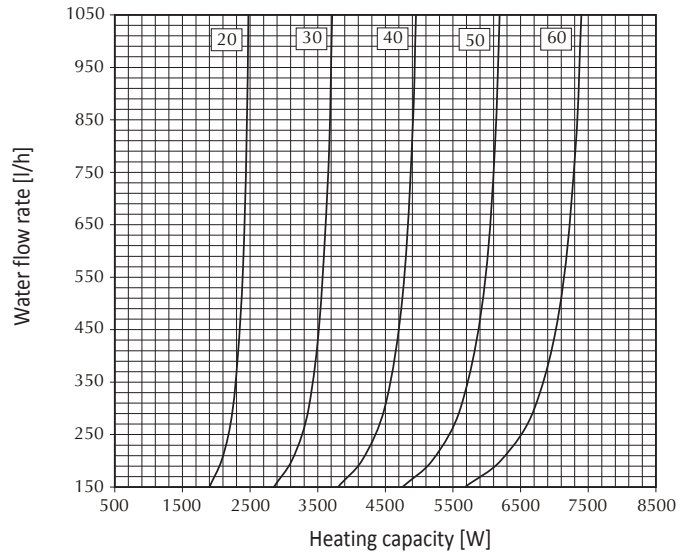
THERMIC POWER WITH FAN OFF



Δt °C (temperature entering water - temperature entering air)



Δt °C (temperature entering water - temperature entering air)



7. COOLING MODE

Omnia Radiant (UL26R)/Omnia Radiant Plus (UL26RI)															
TW (°C)	Δt	Ta b.u. (°C)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	
		21°C Ta b.s.		23°C Ta b.s.		25°C Ta b.s.		27°C Ta b.s.		29°C Ta b.s.		31°C Ta b.s.			
5	3	15	1481	1162	1997	1752	2177	2000	2440	2241	2698	2478	2957	2716	
		17	2648	1507	2621	1743	2625	1988	2676	2239	2759	2484	2962	2721	
		19	3437	1529	3424	1748	3410	1984	3397	2225	3377	2462	3383	2702	
		21	-	-	4263	1772	4242	1978	4229	2210	4209	2448	4195	2686	
		23	-	-	-	-	5128	1999	5108	2200	5088	2424	5075	2662	
	5	5	15	1282	1151	1469	1350	1707	1568	2030	1864	2325	2136	2608	2396
			17	1564	1055	1633	1304	1822	1588	2053	1870	2330	2140	2611	2398
			19	2621	1180	2602	1406	2574	1639	2593	1884	2667	2139	2796	2404
			21	-	-	3558	1469	3541	1687	3524	1921	3504	2157	3484	2391
			23	-	-	-	-	4497	1730	4468	1934	4457	2166	4444	2404
	7	7	15	1112	1019	1314	1207	1517	1393	1721	1580	1928	1771	2136	1962
			17	1282	933	1389	1174	1536	1397	1725	1585	1928	1771	2140	1966
			19	1716	829	1707	1062	1753	1303	1855	1544	1979	1767	2145	1970
			21	-	-	2335	997	2316	1228	2288	1457	2344	1704	2482	1973
			23	-	-	-	-	3598	1378	3585	1599	3571	1835	3530	2062
7	3	15	1423	1251	1638	1505	1918	1762	2187	2009	2445	2246	2704	2483	
		17	2071	1263	2058	1501	2127	1758	2235	2010	2450	2250	2708	2487	
		19	2884	1287	2870	1513	2861	1755	2832	1989	2851	2233	2921	2490	
		21	-	-	3719	1536	3766	1752	3685	1986	3665	2222	3652	2460	
		23	-	-	-	-	4591	1769	4578	2014	4558	2207	4538	2443	
	5	5	15	1054	968	1259	1157	1467	1347	1758	1614	2067	1898	2358	2165
			17	1195	899	1310	1139	1472	1352	1762	1619	2071	1903	2362	2170
			19	1864	882	1827	1108	1892	1366	2030	1640	2196	1910	2390	2151
			21	-	-	2925	1217	2916	1445	2898	1681	2879	1915	2907	2158
			23	-	-	-	-	3001	1153	3880	1707	3867	1941	3846	2176
	7	7	15	902	828	1107	1017	1312	1205	1515	1392	1721	1580	1924	1767
			17	966	788	1126	1016	1315	1208	1518	1394	1721	1580	1926	1769
			19	1282	670	1325	914	1425	1157	1559	1384	1725	1584	1928	1771
			21	-	-	1790	806	1781	1040	1818	1280	1901	1517	2021	1751
			23	-	-	-	-	2832	1101	2814	1328	2787	1561	2796	1800
9	3	15	1077	989	1379	1267	1661	1525	1928	1771	2191	2013	2450	2250	
		17	1412	996	1513	1261	1691	1528	1933	1775	2196	2017	2455	2255	
		19	2279	1041	2265	1274	2242	1511	2275	1757	2362	2013	2496	2100	
		21	-	-	3128	1294	3115	1519	3101	1758	3081	1993	3075	2233	
		23	-	-	-	-	4014	1535	4014	1481	3981	1984	3967	2223	
	5	5	15	944	867	1052	966	1257	1155	1485	1364	1804	1657	2099	1928
			17	888	753	1052	966	1259	1157	1485	1364	1808	1661	2103	1931
			19	1204	641	1236	883	1340	1124	1518	1371	1813	1665	2108	1936
			21	-	-	2196	946	2184	1182	2168	1413	2242	1669	2362	1931
			23	-	-	-	-	3242	1245	3222	1468	3209	1705	3189	1939
	7	7	15	-	-	-	-	-	-	-	-	-	-	-	-
			17	705	634	902	828	1107	1017	1312	1205	1515	1392	1721	1580
			19	877	523	989	773	1137	1005	1315	1208	1518	1394	1721	1580
			21	-	-	1335	653	1370	894	1462	1136	1592	1370	1744	1583
			23	-	-	-	-	1882	787	1868	1022	1910	1265	2002	1511

Key

Tw	Inlet water temperature °C
Ta b.u.	Inlet wet bulbe air temperature
Ta b.s.	Dry bulbe air temperature
Pc	Total cooling capacity
Ps	Sensible cooling capacity

Note:

Values of capacity in bold face refer to nominal value.
 Values of sensible capacity higher than values of total capacity mean that cooling is without dehumidification. In this case consider only the values of sensible capacity.

Omnia Radiant (UL26R)/Omnia Radiant Plus (UL26RI)															
TW (°C)	Δt	Ta b.u. (°C)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	
		21°C Ta b.s.		23°C Ta b.s.		25°C Ta b.s.		27°C Ta b.s.		29°C Ta b.s.		31°C Ta b.s.			
11	3	15	791	726	1100	1010	1393	1280	1669	1533	1935	1778	2196	2017	
		17	814	721	1102	1013	1398	1284	1672	1536	1938	1780	2201	2021	
		19	1592	780	1569	1014	1642	1271	1762	1530	1942	1784	2205	2026	
		21	-	-	2487	1050	2473	1282	2459	2198	2454	1759	2501	2004	
		23	-	-	-	-	3390	1297	3377	1521	3356	1757	3343	1993	
	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	639	587	846	777	1052	966	1257	1155	1527	1403	1841	1691	
		19	793	495	906	741	1061	965	1259	1157	1532	1407	1845	1695	
		21	-	-	1259	627	1282	866	1393	1117	1637	1404	1896	1700	
		23	-	-	-	-	2491	984	2473	1214	2445	1446	2491	1695	
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	537	390	711	628	904	830	1107	1017	1312	1205	1515	1392	
		21	-	-	904	510	1013	758	1158	994	1319	1204	1518	1394	
		23	-	-	-	-	1398	637	1421	876	1504	1116	1624	1350	
13	3	15	-	-	-	-	-	-	-	-	-	-	-	-	
		17	577	530	796	731	1121	1029	1407	1292	1679	1542	1942	1784	
		19	714	468	876	737	1144	1034	1412	1297	1684	1547	1947	1788	
		21	-	-	1767	796	1744	1029	1781	1277	1878	1533	2021	1790	
		23	-	-	-	-	2713	1058	2694	1287	2681	1524	2667	1758	
	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	464	361	642	539	846	777	1052	966	1259	1157	1573	1445	
		21	-	-	823	484	927	728	1077	958	1262	1159	1578	1449	
		23	-	-	-	-	1449	651	1458	890	1595	1146	1827	1451	
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	-	-	546	380	722	620	904	830	1107	1017	1312	1205	
		23	-	-	-	-	936	497	1038	742	1176	978	1338	1199	
15	3	15	-	-	-	-	-	-	-	-	-	-	-	-	
		17	-	-	-	-	-	-	-	-	-	-	-	-	
		19	390	331	582	535	823	756	1139	1047	1421	1305	1688	1551	
		21	-	-	752	462	978	759	1199	1042	1423	1307	1693	1555	
		23	-	-	-	-	1947	805	1938	1042	1938	1280	2007	1530	
	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	-	-	473	354	648	583	846	777	1052	966	1278	1174	
		23	-	-	-	-	849	471	950	715	1093	947	1296	1183	
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	-	-	-	-	-	-	-	-	-	-	-	-	-
		23	-	-	-	-	556	371	731	611	911	827	1107	1017	

Key

Tw	Inlet water temperature °C
Ta b.u.	Inlet wet bulbe air temperature
Ta b.s.	Dry bulbe air temperature
Pc	Total cooling capacity
Ps	Sensible cooling capacity

Note:

Values of capacity in bold face refer to nominal value.
 Values of sensible capacity higher than values of total capacity mean that cooling is without dehumidification In this case consider only the values of sensible capacity

Omnia Radiant (UL36R)/Omnia Radiant Plus (UL36RI)															
TW (°C)	Δt	Ta b.u. (°C)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	
		21°C Ta b.s.		23°C Ta b.s.		25°C Ta b.s.		27°C Ta b.s.		29°C Ta b.s.		31°C Ta b.s.			
5	3	15	2064	1446	2785	2180	3035	2487	3401	2787	3762	3083	4123	3379	
		17	3692	1875	3653	2168	3660	2472	3731	2785	3846	3090	4129	3384	
		19	4792	1903	4773	2174	4754	2468	4735	2767	4707	3063	4717	3361	
		21	-	-	5942	2204	5914	2461	5896	2749	5868	3045	5849	3341	
		23	-	-	-	-	7150	2487	7121	2737	7093	3015	7075	3312	
	5	5	15	1787	1432	2048	1679	2380	1950	2830	2319	3242	2657	3636	2980
			17	2180	1312	2277	1622	2541	1975	2862	2326	3248	2662	3640	2983
			19	3653	1467	3628	1749	3589	2039	3615	2343	3718	2661	3898	2990
			21	-	-	4960	1828	4936	2099	4913	2390	4885	2683	4857	2975
			23	-	-	-	-	6270	2152	6228	2406	6213	2694	6195	2990
	7	7	15	1550	1267	1832	1501	2115	1733	2399	1966	2688	2203	2978	2440
			17	1787	1160	1936	1461	2142	1737	2405	1971	2688	2203	2983	2445
			19	2393	1031	2380	1321	2444	1620	2586	1921	2759	2198	2990	2451
			21	-	-	3255	1240	3229	1527	3190	1812	3267	2120	3460	2454
			23	-	-	-	-	5016	1715	4997	1989	4979	2282	4922	2564
7	3	15	1984	1556	2284	1872	2674	2192	3049	2498	3409	2794	3769	3089	
		17	2888	1571	2869	1867	2965	2186	3116	2500	3415	2799	3776	3094	
		19	4020	1601	4001	1882	3988	2183	3948	2474	3975	2778	4072	3097	
		21	-	-	5184	1910	5250	2180	5138	2471	5110	2765	5091	3060	
		23	-	-	-	-	6401	2201	6382	2505	6354	2745	6326	3039	
	5	5	15	1469	1204	1756	1439	2045	1676	2450	2008	2881	2361	3287	2694
			17	1666	1119	1826	1417	2052	1681	2457	2013	2888	2367	3293	2699
			19	2598	1097	2547	1379	2637	1699	2830	2040	3062	2376	3332	2676
			21	-	-	4078	1513	4065	1797	4039	2091	4014	2382	4052	2685
			23	-	-	-	-	4184	1434	5409	2123	5390	2414	5362	2707
	7	7	15	1257	1030	1543	1265	1830	1499	2113	1731	2399	1966	2682	2198
			17	1347	980	1569	1264	1833	1502	2116	1734	2399	1966	2685	2201
			19	1788	833	1847	1138	1987	1439	2174	1722	2405	1971	2688	2203
			21	-	-	2495	1002	2483	1294	2534	1592	2650	1887	2817	2178
			23	-	-	-	-	3948	1370	3924	1652	3885	1941	3898	2239
9	3	15	1501	1231	1923	1576	2315	1898	2688	2203	3055	2504	3415	2799	
		17	1968	1239	2109	1568	2357	1901	2695	2208	3062	2509	3423	2805	
		19	3177	1295	3158	1585	3126	1879	3171	2186	3293	2504	3480	2613	
		21	-	-	4361	1610	4342	1889	4324	2187	4296	2479	4286	2777	
		23	-	-	-	-	5596	1910	5596	807	5549	2468	5531	2765	
	5	5	15	1315	1078	1466	1202	1752	1436	2071	1697	2515	2061	2926	2398
			17	1238	937	1466	1202	1756	1439	2071	1697	2521	2066	2932	2403
			19	1678	798	1723	1098	1868	1398	2116	1705	2528	2071	2938	2408
			21	-	-	3062	1177	3045	1470	3023	1758	3126	2076	3293	2402
			23	-	-	-	-	4520	1549	4492	1826	4473	2120	4445	2412
	7	7	15	-	-	-	-	-	-	-	-	-	-	-	
			17	983	788	1257	1030	1543	1265	1830	1499	2113	1731	2399	1966
			19	1222	651	1379	962	1585	1250	1833	1502	2116	1734	2399	1966
			21	-	-	1862	812	1910	1112	2039	1414	2219	1704	2431	1970
			23	-	-	-	-	2624	979	2605	1271	2663	1574	2791	1879

Key

Tw	Inlet water temperature °C
Ta b.u.	Inlet wet bulbe air temperature
Ta b.s.	Dry bulbe air temperature
Pc	Total cooling capacity
Ps	Sensible cooling capacity

Note:

Values of capacity in bold face refer to nominal value.
 Values of sensible capacity higher than values of total capacity mean that cooling is without dehumidification. In this case consider only the values of sensible capacity.

Omnia Radiant (UL36R)/Omnia Radiant Plus (UL36RI)															
TW (°C)	Δt	Ta b.u. (°C)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	Pc (W)	Ps (W)	
		21°C Ta b.s.		23°C Ta b.s.		25°C Ta b.s.		27°C Ta b.s.		29°C Ta b.s.		31°C Ta b.s.			
11	3	15	1103	904	1534	1257	1942	1592	2327	1907	2698	2211	3062	2509	
		17	1135	897	1537	1260	1949	1597	2331	1911	2701	2214	3068	2514	
		19	2219	970	2187	1261	2290	1581	2457	1904	2708	2219	3074	2520	
		21	-	-	3467	1307	3448	1595	3428	2734	3422	2188	3486	2493	
		23	-	-	-	-	4726	1614	4707	1891	4679	2185	4660	2480	
	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	890	730	1180	967	1466	1202	1752	1436	2129	1745	2566	2103	
		19	1106	615	1264	922	1479	1200	1756	1439	2135	1750	2573	2108	
		21	-	-	1756	780	1788	1077	1942	1389	2282	1746	2644	2115	
		23	-	-	-	-	3473	1224	3448	1510	3409	1799	3473	2108	
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	748	485	992	781	1260	1033	1543	1265	1830	1499	2113	1731	
		21	-	-	1260	634	1412	943	1614	1236	1839	1498	2116	1734	
		23	-	-	-	-	1949	793	1981	1089	2097	1389	2264	1679	
13	3	15	-	-	-	-	-	-	-	-	-	-	-	-	
		17	805	659	1109	909	1563	1281	1962	1608	2341	1919	2708	2219	
		19	995	582	1222	916	1595	1286	1968	1613	2348	1924	2714	2224	
		21	-	-	2463	990	2431	1280	2483	1588	2618	1907	2817	2226	
		23	-	-	-	-	3782	1316	3756	1601	3737	1896	3718	2187	
	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	647	449	895	670	1180	967	1466	1202	1756	1439	2193	1797	
		21	-	-	1147	602	1292	905	1501	1191	1759	1441	2199	1802	
		23	-	-	-	-	2019	810	2032	1108	2223	1426	2547	1805	
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	-	-	761	473	1006	771	1260	1033	1543	1265	1830	1499	
		23	-	-	-	-	1305	618	1447	923	1640	1216	1865	1491	
15	3	15	-	-	-	-	-	-	-	-	-	-	-	-	
		17	-	-	-	-	-	-	-	-	-	-	-	-	
		19	543	411	811	665	1148	941	1588	1302	1981	1623	2354	1929	
		21	-	-	1048	574	1363	944	1672	1296	1984	1626	2360	1934	
		23	-	-	-	-	2714	1002	2701	1296	2701	1592	2798	1903	
	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	-	-	659	440	903	726	1180	967	1466	1202	1781	1460	
		23	-	-	-	-	1183	586	1325	889	1524	1178	1807	1472	
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	-
		17	-	-	-	-	-	-	-	-	-	-	-	-	-
		19	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	-	-	-	-	-	-	-	-	-	-	-	-	-
		23	-	-	-	-	776	461	1019	760	1270	1028	1543	1265	

Key

TW	Inlet water temperature °C
Ta b.u.	Inlet wet bulbe air temperature
Ta b.s.	Dry bulbe air temperature
Pc	Total cooling capacity
Ps	Sensible cooling capacity

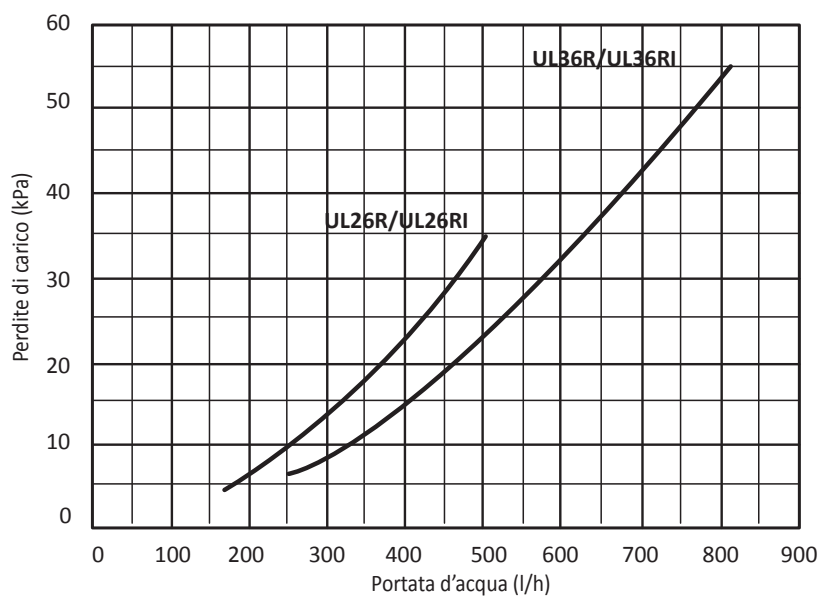
Note:

Values of capacity in bold face refer to nominal value.
 Values of sensible capacity higher than values of total capacity mean that cooling is without dehumidification In this case consider only the values of sensible capacity

8. PRESSURE DROP

water temperature °C (in/out) 7°C/ 12°C
 Average water temperature 10° C

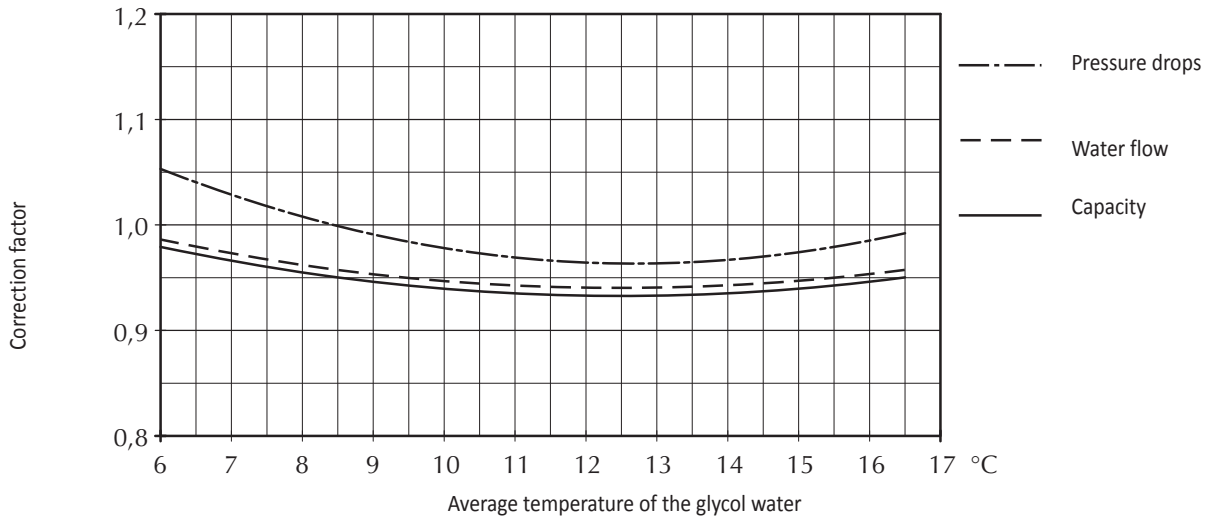
The pressure drops in the charts above refer to an average water temperature of 10 °C. The following table shows the corrections to apply to the pressure drops with a variation in average water temperature



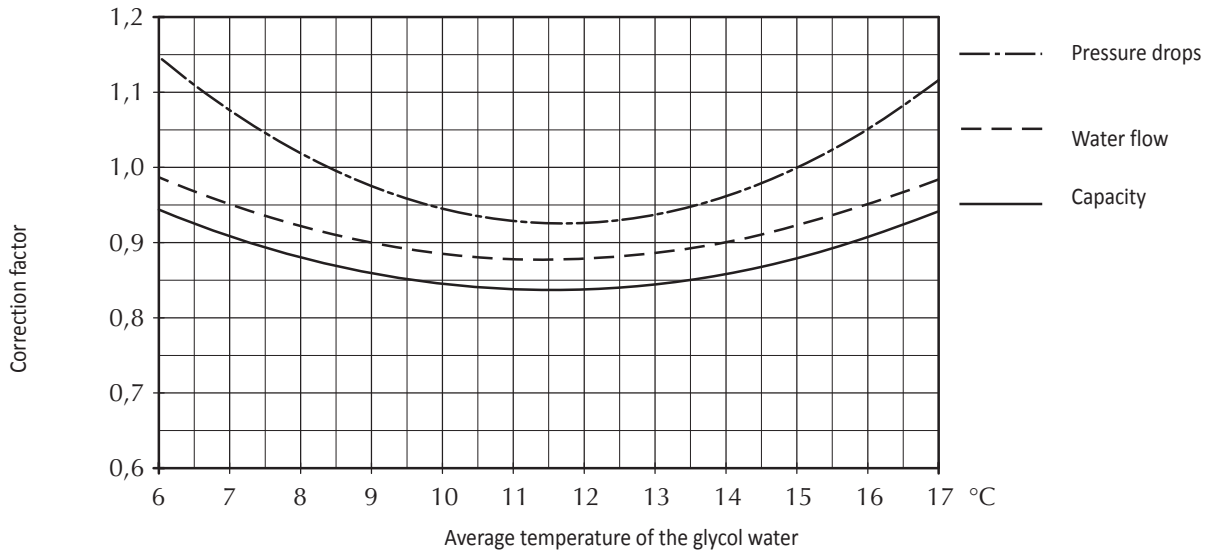
Average water temperature	5	10	15	20	50	60	70
Correction factor	1,03	1,00	0,96	0,91	0,78	0,75	0,72

9. CORRECTION FACTOR IN COOLING WITH GLYCOL-WATER

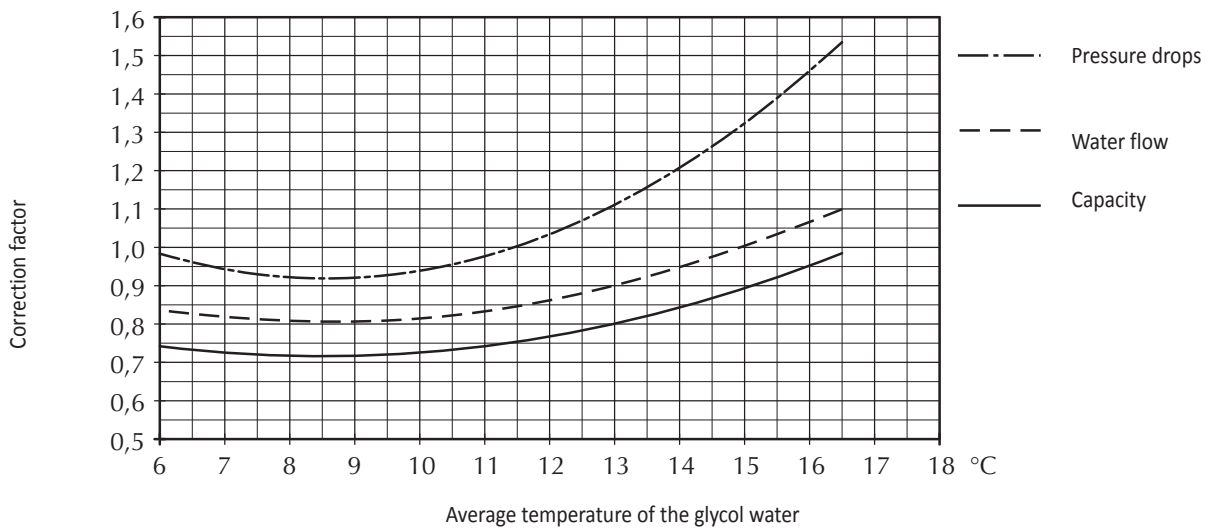
GLYCOL WATER AT 10%



GLYCOL WATER AT 20%

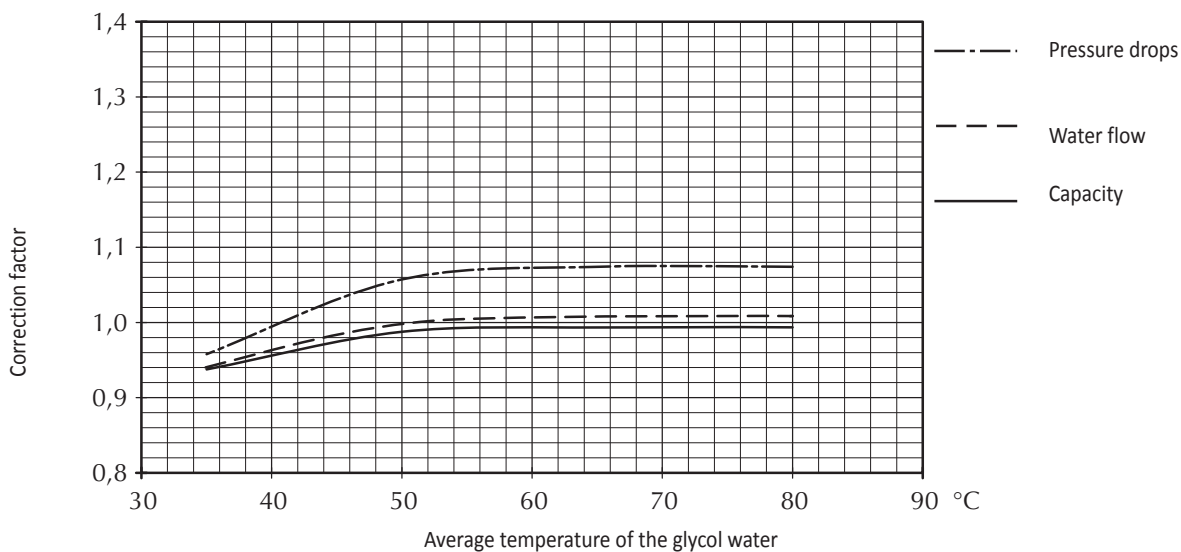


GLYCOL WATER AT 35%

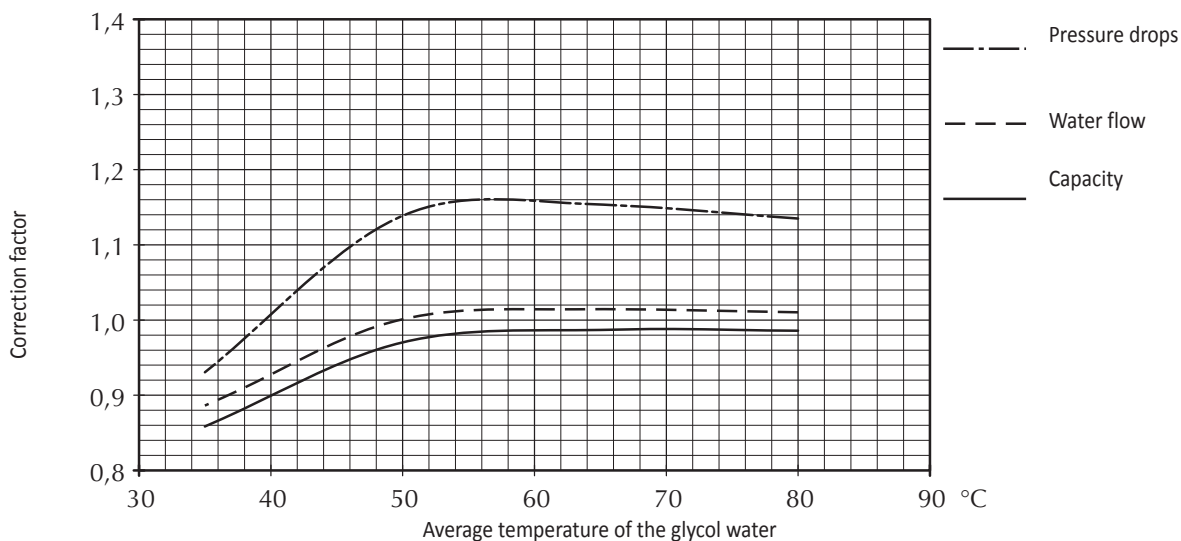


10. CORRECTION FACTOR IN HEATING WITH GLYCOL-WATER

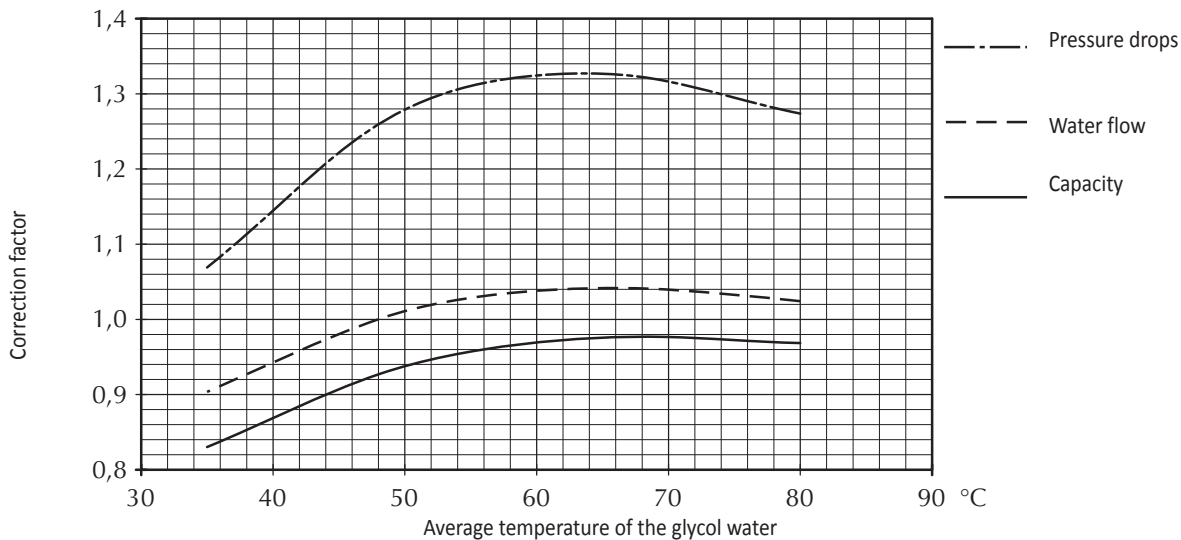
GLYCOL WATER AT 10%



GLYCOL WATER AT 20%



GLYCOL WATER AT 35%



11. SOUND POWER

Level of sound pressure (A-weighted) measured in the room with volume $V = 85\text{m}^3$; reverberation time $t = 0.5\text{s}$; direction factor $Q = 2$; distance $r = 2.5\text{m}$

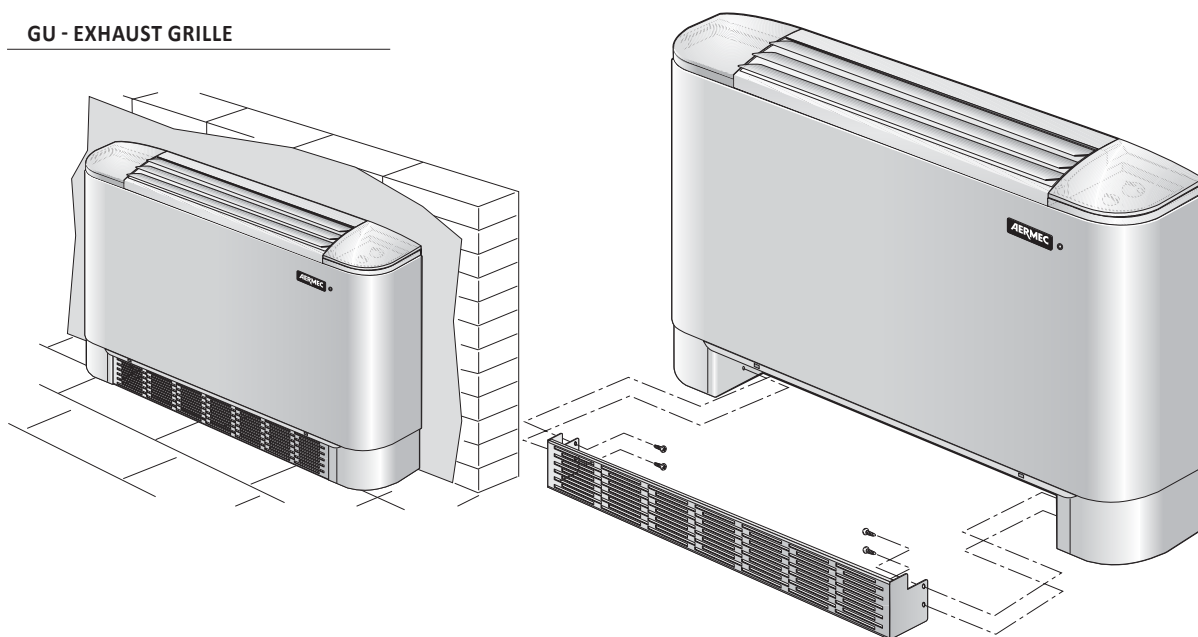
(E) Eurovent data



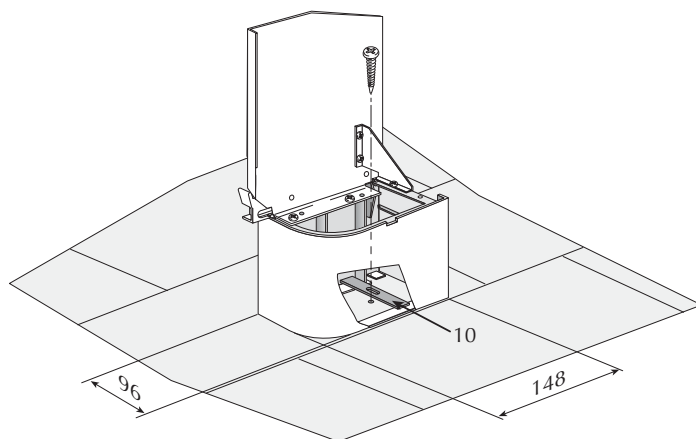
Mod	Speed	Band middle frequency (Hz)							Sound levels Total		
		125	250	500	1000	2000	4000	8000	POWER		PRESSURE
									dB	dB(A)	dB(A)
UL26R	Max	46,4	48,5	47,4	42,7	37,4	27,1	14,3	52,9	48,0 (E)	39,5
	Med	44,3	44,2	43,1	36,3	30,5	18,8	10,2	49	43,0 (E)	34,5
	Min	41,7	37,1	35,5	24,5	19	9,4	8,1	43,8	35,0 (E)	26,5
UL36R	Max	47,4	49,4	49,7	43,8	40,8	31,0	19,2	54,4	50,0 (E)	39,5
	Med	45	40,9	41,4	33,5	29,2	18,8	8,4	47,8	41,0 (E)	32,5
	Min	42,1	34,4	34,4	24,1	19,9	10,5	9,1	43,4	34,0 (E)	25,5
UL-26RI	Max	46,4	48,5	47,4	42,7	37,4	27,1	14,3	52,9	48,0 (E)	39,5
	Med	44,3	44,2	43,1	36,3	30,5	18,8	10,2	49	43,0 (E)	34,5
	Min	41,7	37,1	35,5	24,5	19	9,4	8,1	43,8	35,0 (E)	26,5
UL-36RI	Max	47,4	49,4	49,7	43,8	40,8	31,0	19,2	54,4	50,0 (E)	39,5
	Med	45	40,9	41,4	33,5	29,2	18,8	8,4	47,8	41,0 (E)	32,5
	Min	42,1	34,4	34,4	24,1	19,9	10,5	9,1	43,4	34,0 (E)	25,5

12. ACCESSORIES DATA

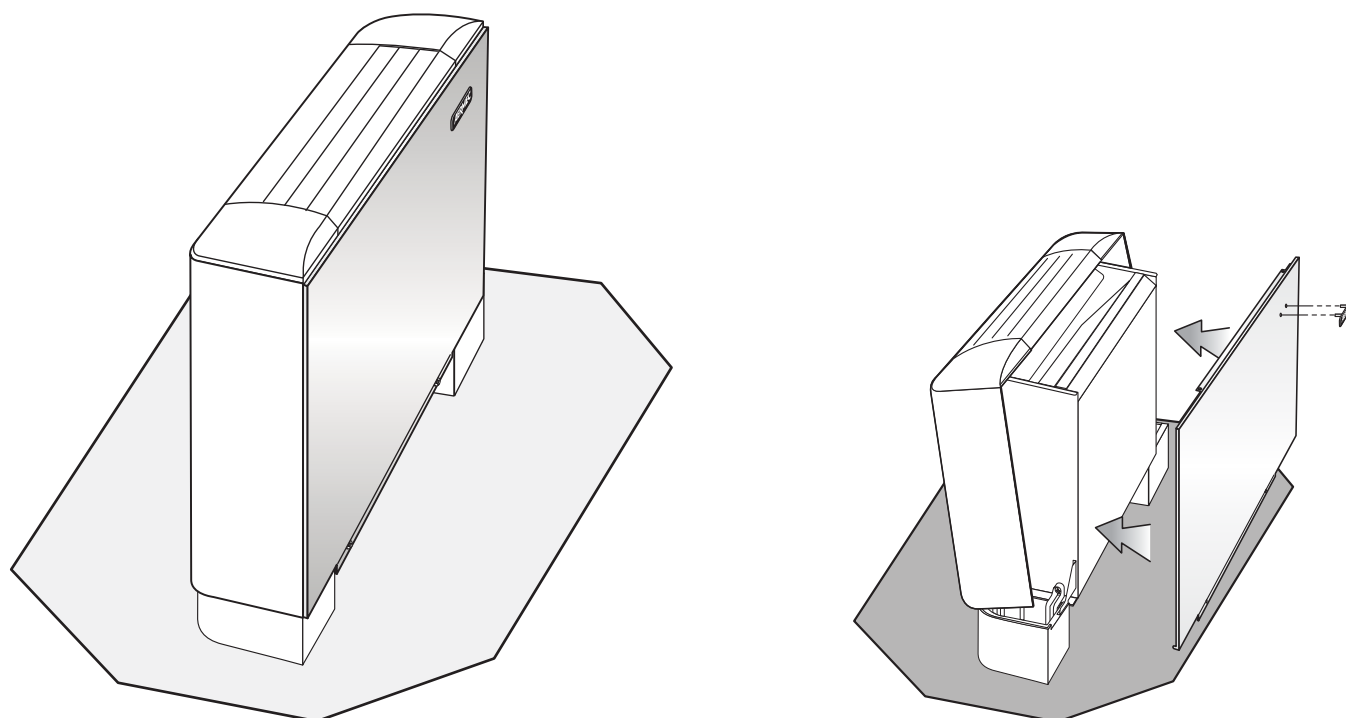
12.1. GU - EXHAUST GRILLE



12.2. ZU - WEDGES FOR FLOOR MOUNT



12.3. PCU - REAR CLOSING PANEL





AERMEC S.p.A.
37040 Bevilacqua (VR) Italia-Via Roma, 996
Tel. (+39) 0442 633111
Telefax 0442 93730-(+39) 0442 93566



Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.
