

## Air conditioning fan heaters with BLDC motor

# AREO i 14 - 118 kW



### Reliability and energy efficiency at the top of its category

The new AREOi series combines the reliability and sturdiness of the on/off version with the innovation of EBM-PAPST GreenTech® technology. The AREOi series is equipped with brushless inverters (BLDC) integrated with the motor, which guarantees accurate adjustment of the rotation speed and maximum adaptability to real-time thermal load.

Innovative GreenTech® technology makes it possible to achieve an exceptional degree of aeraulic efficiency and a consequent reduction in seasonal power consumption of up to 50% in comparison to the traditional version with AC motor.

The rounded shape of the cabinet gives the product an especially unique design.

The AREOi range consists of 18 models to be wall mounted. AREOi is ideal for both heating and cooling due to an innovative system for collecting condensate and additional insulation inside the cabinet.

The range includes 6 different construction sizes that are also available with 4-row heat exchangers to allow proper operation with hot water produced by the heat pump.



Brushless motor



Vertical installation



2-pipe system



Heating



Cooling

### PLUS

- ✓ Low noise levels
- ✓ Wide operating range (up to 70 °C intake air)
- ✓ Axial fan with blades with an aerodynamic profile (HyBlade® technology)
- ✓ Electric motor, class F, approved for continuous operation
- ✓ Fan and motor are integrated to provide considerably increased reliability



### ACCESSORIES

#### CONTROL PANELS

<b>MCLE</b>	MYCOMFORT LARGE electronic controller with display
<b>DIST</b>	MYCOMFORT controller spacer for wall mounting
<b>MCSWE</b>	Water sensor for microprocessor controllers
<b>CSD</b>	Wall-mounted potentiometer for opening and closing the PAE MM motor driven louver

#### MOUNTING BOARDS

<b>DFP</b>	Wall mounting board
<b>DFC</b>	Column mounting board
<b>DFO</b>	Adjustable wall/column mounting board

#### PROTECTIVE GRILLE

<b>R</b>	Protective grille
----------	-------------------

#### DIFFUSERS

<b>DO</b>	Two-row fin diffuser
<b>LA</b>	Air curtain diffuser

#### EXTERNAL AIR INTAKE

<b>PAE</b>	External air intake
<b>PAEM</b>	Manual mixing louver
<b>PAEMM</b>	Motor driven mixer louver, modulating motor, power supply 24V, spring return

#### EXTERNAL AIR INTAKE RAIN PROTECTION GRILLE

<b>GR</b>	External air intake rain protection grille
-----------	--



## MAIN COMPONENTS

### Fan drive assembly

The electric fan and BLDC motor are a single integrated unit optimized to achieve maximum aeraulic efficiency. In fact, conformity to ERP2015 is guaranteed, even for the versions with single-phase power supply.

#### Electric motor

Tropicalized motor directly coupled to an external rotor, standard, with the following features:

- equipped with internal thermal protection
- windings in class F
- protection rating IP54
- maintenance-free ball bearings

#### Axial fan

With blades with an optimized aerodynamic profile (HyBlade® technology), statically balanced, inserted in a housing that enhances aeraulic performance and minimizes noise.



### Microprocessor controller

The advanced microprocessor control unit adjusts the fan speed of the brushless motor between 0 and 100%, so that in all partial load conditions the indoor unit will operate at a reduced speed with considerably reduced noise emissions and power consumption.



### Cabinet

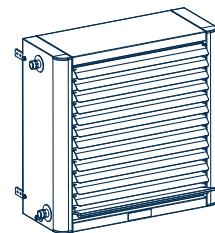
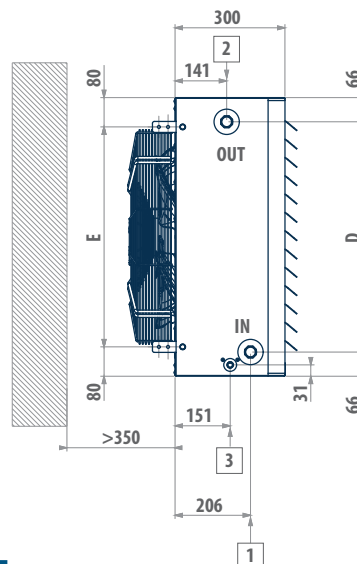
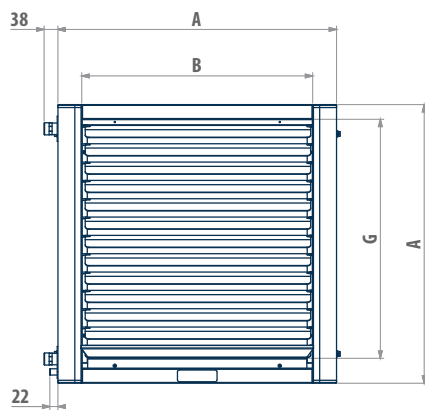
Pre-painted steel sheet cabinet complete with ABS corner trims, adjustable aluminium louvers (spring-operated) placed on the air outlet which enable an optimal distribution of air within the room to be heated.

### Heat exchanger

High conductivity heat exchanger made with copper piping and aluminium fins assuring higher heat exchange than standard iron piping exchangers.

## Dimensional drawings

### AREO i



AREO i	A	B	D	E	G	1	2
12 - 13 - 14	460	330	300	380	380	3/4"	3/4"
22 - 23 - 24	560	430	400	480	480	3/4"	3/4"
32 - 33 - 34	660	530	500	580	580	1"	1"
42 - 43 - 44	760	630	600	680	680	1"	1"
52 - 53 - 54	860	730	700	780	780	1" 1/4	1" 1/4
62 - 63 - 64	960	830	800	880	880	1" 1/4	1" 1/4

#### AREO i LEGEND

1	Water inlet connection, male gas
2	Water outlet connection, male gas
3	Drain outlet, Ø 17 mm

## Rated technical data

AREO i		12	13	14	22	23	24	32	33	34
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Speed rotor	% del max	100	100	100	100	100	100	100	100	100
Air flow	m <sup>3</sup> /h	1626	1375	1250	2700	2350	2300	3100	2850	2770
Heating capacity (1)	kW	11,2	14,0	16,0	18,7	23,9	26,8	28,7	31,5	35,4
Water pressure drop (1)	kPa	37	27	21	21	26	17	13	12	19
Sound power level (2)	dB(A)	68	69	70	71	69	69	64	64	64
Power input	W	80	79	81	139	132	146	105	108	108

AREO i		42	42	43	43	44	44
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Speed rotor	% del max	100	100	100	100	100	100
Air flow	m <sup>3</sup> /h	5800	8200	5400	7800	5350	7749
Heating capacity (1)	kW	48,5	59,0	53,9	67,0	61,0	76,6
Water pressure drop (1)	kPa	31	44	30	44	20	30
Sound power level (2)	dB(A)	71	81	72	81	72	82
Power input	W	318	844	334	840	344	850

AREO i		52	52	53	53	54	54
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Speed rotor	% del max	100	100	100	100	100	100
Air flow	m <sup>3</sup> /h	8800	9500	8450	9150	8100	8850
Heating capacity (1)	kW	58,2	60,7	73,2	76,6	80,6	85,0
Water pressure drop (1)	kPa	24	25	27	29	29	32
Sound power level (2)	dB(A)	80	80	82	80	82	81
Power input	W	715	859	766	876	776	875

AREO i		62	62	63	63	64	64
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Speed rotor	% del max	100	100	100	100	100	100
Air flow	m <sup>3</sup> /h	7200	11200	6700	10500	6200	9750
Heating capacity (1)	kW	77,0	100	88,2	118	87,8	118
Water pressure drop (1)	kPa	18	28	24	39	23	39
Sound power level (2)	dB(A)	69	78	70	79	71	79
Power input	W	248	845	259	864	266	875

(1) Water temperature 85/75 °C, air temperature 15 °C

(2) Sound power measured according to standards ISO 3741 and ISO 3742



## Rated technical data

AREO i		12	13	14	22	23	24	32	33	34
Power supply	V-ph-Hz	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50
Speed rotor	% del max	45	45	45	45	45	45	45	45	45
Air flow	m <sup>3</sup> /h	779	723	705	1221	1398	844	1307	1284	1318
Heating capacity (1)	kW	7,34	9,31	10,9	11,8	17,3	13,6	16,8	18,7	21,3
Water pressure drop (1)	kPa	18	13	10	9	15	5	5	5	8
Total cooling capacity (2)	kW	2,10	2,66	3,10	2,96	4,97	3,41	3,25	4,01	6,15
Sensible cooling capacity (2)	kW	1,66	2,09	2,42	2,54	3,89	2,85	3,25	3,71	4,74
Water pressure drop (2)	kPa	9	6	5	4	7	2	1	1	4
Sound power level (3)	dB(A)	44	45	45	53	56	51	46	46	46
Power input	W	32	32	32	14	25	14	11	11	11

AREO i		42	42	43	43	44	44
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Speed rotor	% del max	45	45	45	45	45	45
Air flow	m <sup>3</sup> /h	1429	3399	1542	3278	1208	3282
Heating capacity (1)	kW	20,2	35,3	23,8	39,5	21,8	44,5
Water pressure drop (1)	kPa	7	4	7	4	3	4
Total cooling capacity (2)	kW	4,88	9,77	6,58	11,8	5,61	12,7
Sensible cooling capacity (2)	kW	4,20	7,88	5,21	9,03	4,57	9,93
Water pressure drop (2)	kPa	2	8	3	9	1	6
Sound power level (3)	dB(A)	53	64	55	64	55	63
Power input	W	31	69	32	73	32	76

AREO i		52	52	53	53	54	54
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Speed rotor	% del max	45	45	45	45	45	45
Air flow	m <sup>3</sup> /h	3884	4088	3708	3870	3444	3958
Heating capacity (1)	kW	36,5	37,6	44,3	45,6	46,9	51,4
Water pressure drop (1)	kPa	10	5	11	4	11	4
Total cooling capacity (2)	kW	9,30	9,68	12,5	12,9	14,1	15,6
Sensible cooling capacity (2)	kW	7,89	8,17	9,88	10,2	10,7	11,8
Water pressure drop (2)	kPa	4	4	5	6	6	7
Sound power level (3)	dB(A)	61	61	62	62	62	63
Power input	W	49	65	54	68	53	71

AREO i		62	62	63	63	64	64
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Speed rotor	% del max	45	45	45	45	45	45
Air flow	m <sup>3</sup> /h	3606	4890	2812	4438	2748	4431
Heating capacity (1)	kW	49,4	60,3	48,1	66,7	49,0	69,5
Water pressure drop (1)	kPa	8	5	8	5	8	5
Total cooling capacity (2)	kW	10,6	14,6	13,3	19,6	14,7	21,7
Sensible cooling capacity (2)	kW	9,89	12,7	10,5	15,6	11,1	16,1
Water pressure drop (2)	kPa	2	4	4	7	4	9
Sound power level (3)	dB(A)	50	56	49	56	49	58
Power input	W	26	83	29	84	30	89

(1) Water temperature 85/75 °C, air temperature 15 °C

(2) Water temperature 7/12°C, air temperature D.B. 27°C, W.B. 19°C (47% relative humidity)

(3) Sound power measured according to standards ISO 3741 and ISO 3742