Air conditioning fan heaters with EC motor

AREO i 11 - 118 kW

Inverter Technology

EC Motor | 2 pipes systems | Vertical installation | Heating | Cooling

Reliability and energy efficiency at the top of its category

The new AREO i series combines the reliability and sturdiness of the on/off version with the innovation of Inverter technology. The AREO i series is equipped with brushless inverters (EC) integrated with the motor, which guarantees accurate adjustment of the rotation speed and maximum adaptability to real-time thermal load.
Innovative Inverter 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 AREO i range consists of 22 models to be wall mounted. AREO i 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.

PLUS

- Low sound levels
- Wide operating range (up to 65 °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

Electronic microprocessor control panels with display	
DIST	MY COMFORT controller spacer for wall mounting
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSWE	Water sensor for MYCOMFORT and EVO controllers
Power interface and regulating louver controllers	
CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver
Accessories	
VA	Auxiliary tray for collecting condensate
Fixation templates	
DFC	Template for column installation
DFO	Adjustable template for wall/column installation
DFP	Template for wall installation
Protective grill for gyms (ball shield)	
R	Protective net for gyms
Diffusors	
DO	Two-row adjustable fin diffuser
External air intake	
PAE	External air intake
PAEM	Manual mixing louver
PAEMM	Motor driven mixer louver, 24 V power supply with spring return
External air intake rain protection grille	
GR	Air intake grille with subframe

MAIN COMPONENTS

Fan drive assembly
The electric fan and EC motor are a single integrated unit optimized to achieve maximum aeraulic efficiency. In fact, conformity to ERP 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.

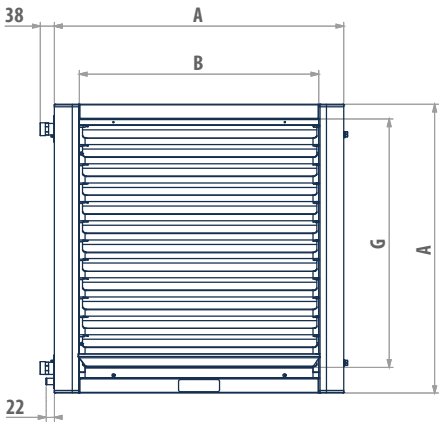
Microprocessor controller (accessory)
The advanced microprocessor control unit adjusts the fan speed of the brushless motor between 0 and 100%, so that in all partial load conditions the indoor unit will operate at a reduced speed with considerably reduced noise emissions and power consumption.

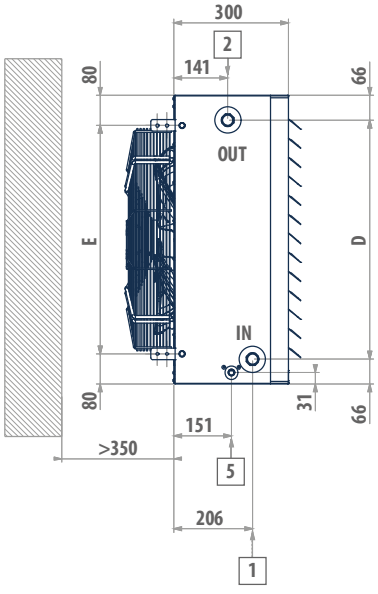
Cabinet
Pre-painted steel sheet cabinet complete with ABS corner trims, adjustable aluminium louvers (spring-operated) placed on the air outlet which enable an optimal distribution of air within the room to be heated.

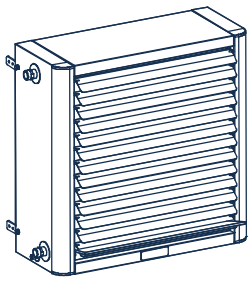
Heat exchanger
High conductivity heat exchanger made with copper piping and aluminium fins assuring higher heat exchange than standard iron piping exchangers.

DIMENSIONAL DRAWINGS

AREO i







AREO i	A mm	B mm	D mm	E mm	G mm	1 "	2 "	kg
12MEC - 13MEC - 14MEC	460	330	328	300	380	3/4	3/4	19-19-20
22MEC - 23MEC - 24MEC	560	430	428	400	480	3/4	3/4	25-26-27
32MEC - 33MEC - 34MEC - 33MDF - 34MDF	660	530	528	500	580	1	1	33-34-36
42MEC - 43MEC - 44MEC - 43MDF - 43TDC	760	630	628	600	680	1	1	39-41-42
52MEC - 53MEC - 54MEC	860	730	728	700	780	1 1/4	1 1/4	50-53-54
62MEC - 63MEC - 64MEC - 63MDF - 63TDF - 63MDC - 63TDC	960	830	828	800	880	1 1/4	1 1/4	58-61-63

LEGEND	
1	Water inlet connection, male gas
2	Water outlet connection, male gas
3	Condensate discharge Ø 17 mm

RATED TECHNICAL DATA - HEATING MODE

AREO i			12MEC	13MEC	14MEC	22MEC	23MEC	24MEC	32MEC	33MEC	34MEC
Power supply		V-ph-Hz	230-1-50								
Air flow rate max heating		m^3/h	1427	1240	1152	2700	2350	2300	3100	2850	2770
Heating capacity	(1)	kW	6,99	8,83	10,3	12,5	16,1	18,1	19,1	21,2	24,1
Water flow	(1)	l/h	612	773	901	1094	1411	1585	1674	1852	2107
Water pressure drop	(1)	kPa	17	13	10	11	14	9	7	6	10
Sound power level	(2)	dB(A)	65	66	67	71	69	69	64	64	64
Power input	(3)	W	67	66	68	139	132	146	105	108	108

(1) Water temperature 65°C / 55°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed
(3) Referred to maximum speed

AREO i			42MEC	42TEC	43MEC	43TEC	44MEC	44TEC	52MEC	52TEC	53MEC	53TEC
Power supply		V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Air flow rate max heating		m^3/h	5800	7248	5400	7800	5350	6663	8800	9500	8450	9150
Heating capacity	(1)	kW	32,4	36,8	36,4	41,5	41,2	47,2	38,9	40,6	49,3	51,6
Water flow	(1)	l/h	2839	3220	3184	3633	3611	4129	3405	3550	4315	4515
Water pressure drop	(1)	kPa	16	20	16	20	11	13	12	13	14	15
Sound power level	(2)	dB(A)	71	78	72	78	72	79	80	80	82	80
Power input	(3)	W	318	563	334	566	344	576	715	859	766	876

(1) Water temperature 65°C / 55°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed
(3) Referred to maximum speed

AREO i			54MEC	54TEC	62MEC	62TEC	63MEC	63TEC	64MEC	64TEC
Power supply		V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Air flow rate max heating		m^3/h	8100	8850	7200	11200	6700	10500	6200	9750
Heating capacity	(1)	kW	54,6	57,6	51,5	66,8	59,8	79,4	59,9	80,3
Water flow	(1)	l/h	4781	5040	4506	5852	5234	6951	5241	7035
Water pressure drop	(1)	kPa	15	17	9	14	13	21	12	21
Sound power level	(2)	dB(A)	82	81	69	78	70	79	71	79
Power input	(3)	W	776	875	248	845	259	864	266	875

(1) Water temperature 65°C / 55°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed
(3) Referred to maximum speed

AREO i			33MDF	34MDF	43MDF	43TDC	63MDC	63MDF	63TDC	63TDF
Power supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	400-3-50	230-1-50	230-1-50	400-3-50	400-3-50
Air flow rate max heating		m^3/h	3400	3255	5575	7606	9006	7449	10734	8282
Heating capacity	(1)	kW	19,0	22,3	31,0	36,4	59,9	56,2	68,6	62,2
Water flow	(1)	l/h	1664	1954	2719	3183	5249	4921	6005	5448
Water pressure drop	(1)	kPa	5	9	12	16	13	11	16	13
Sound power level	(2)	dB(A)	80	79	76	80	78	75	87	83
Power input	(3)	W	189	193	388	918	693	414	1001	655

(1) Water temperature 65°C / 55°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed
(3) Referred to maximum speed

RATED TECHNICAL DATA - COOLING MODE

AREO i			12MEC	13MEC	14MEC	22MEC	23MEC	24MEC	32MEC	33MEC	34MEC
Power supply		V-ph-Hz	230-1-50								
Air flow rate max cooling		m^3/h	865	936	899	1538	1616	1570	2409	2362	2412
Heating capacity	(1)	kW	5,26	7,43	8,73	9,10	12,8	14,2	16,5	18,8	22,0
Water flow	(1)	l/h	460	651	764	797	1122	1243	1443	1649	1926
Water pressure drop	(1)	kPa	10	9	7	6	9	6	5	7	9
Total cooling capacity	(2)	kW	2,90	4,11	4,83	4,75	7,15	7,71	8,00	9,75	12,7
Sensible cooling capacity	(2)	kW	1,79	2,53	2,97	3,06	4,40	4,79	5,36	6,25	7,65
Water flow	(2)	l/h	505	714	834	819	1237	1333	1381	1684	1381
Water pressure drop	(2)	kPa	16	14	11	8	14	8	6	7	6
Sound power level	(3)	dB(A)	47	54	55	57	59	64	58	59	60
Power input	(4)	W	36	44	45	25	46	63	47	57	68

AREO i			42MEC	42TEC	43MEC	43TEC	44MEC	44TEC	52MEC	52TEC	53MEC	53TEC
Power supply		V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Air flow rate max cooling		m^3/h	3346	3399	3492	3278	3421	3282	4644	4536	4492	4365
Heating capacity	(1)	kW	23,5	23,7	27,9	26,8	31,0	30,2	27,2	26,8	33,9	33,3
Water flow	(1)	l/h	2058	2077	2440	2346	2716	2644	2382	2351	2965	2912
Water pressure drop	(1)	kPa	9	9	10	9	6	6	7	6	7	7
Total cooling capacity	(2)	kW	12,7	12,9	15,9	15,3	17,2	16,8	14,4	14,2	19,0	18,6
Sensible cooling capacity	(2)	kW	7,99	8,09	9,65	9,31	10,6	10,3	9,20	9,00	11,6	11,4
Water flow	(2)	l/h	2200	2221	2748	2637	2980	2892	2487	2452	3268	3206
Water pressure drop	(2)	kPa	13	14	16	15	10	9	9	9	11	11
Sound power level	(3)	dB(A)	61	64	63	64	63	63	64	63	64	64
Power input	(4)	W	91	69	118	73	120	76	97	92	105	96

AREO i			54MEC	54TEC	62MEC	62TEC	63MEC	63TEC	64MEC	64TEC
Power supply		V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Air flow rate max cooling		m^3/h	4706	4653	6011	5888	6005	5605	5861	5779
Heating capacity	(1)	kW	39,1	38,8	46,1	45,5	55,6	53,1	57,6	57,1
Water flow	(1)	l/h	3427	3401	4036	3982	4870	4651	5047	4999
Water pressure drop	(1)	kPa	9	8	8	7	11	10	12	11
Total cooling capacity	(2)	kW	22,8	22,6	23,5	23,2	31,7	30,2	34,1	33,8
Sensible cooling capacity	(2)	kW	13,7	13,6	15,3	15,1	19,3	18,4	20,3	20,2
Water flow	(2)	l/h	3936	3910	4064	4005	5465	5216	5900	5841
Water pressure drop	(2)	kPa	14	14	10	10	17	16	20	19
Sound power level	(3)	dB(A)	66	66	64	62	67	62	70	65
Power input	(4)	W	141	134	157	150	195	152	232	205

(1) Water temperature 65°C / 55°C, air temperature 15°C - max speed avaible in cooling mode
(2) Water temperature 7°C / 12°C, air temperature dry bulb 28°C, wet bulb 19°C (53% relative humidity) - max speed avaible in cooling mode
(3) Sound power measured according to standards ISO 3741 - max speed available in cooling mode
(4) Referred to max speed available in cooling mode

AREO i			33MDF	34MDF	43MDF	43TDC	63MDC	63MDF	63TDC	63TDF
Power supply		V-ph-Hz	230-1-50	230-1-50	230-1-50	400-3-50	230-1-50	230-1-50	400-3-50	400-3-50
Air flow rate max cooling		m^3/h	2601	2414	3848	4164	5746	4107	6173	4471
Heating capacity	(1)	kW	16,3	18,9	25,0	25,8	45,6	38,5	49,1	42,0
Water flow	(1)	l/h	1426	1653	2192	2261	3992	3367	4295	3675
Water pressure drop	(1)	kPa	4	7	8	9	8	6	9	7
Total cooling capacity	(2)	kW	5,83	9,65	12,2	13,4	21,1	19,4	25,9	23,9
Sensible cooling capacity	(2)	kW	4,63	6,66	8,32	9,14	13,7	12,7	17,1	15,7
Water flow	(2)	l/h	1016	1672	2120	2332	3661	3367	4509	4124
Water pressure drop	(2)	kPa	3	9	8	9	9	6	9	11
Sound power level	(3)	dB(A)	73	72	68	70	71	68	78	72
Power input	(4)	W	86	92	139	177	219	103	363	131

(1) Water temperature 65°C / 55°C, air temperature 15°C - max speed avaible in cooling mode
(2) Water temperature 7°C / 12°C, air temperature dry bulb 28°C, wet bulb 19°C (53% relative humidity) - max speed avaible in cooling mode
(3) Sound power measured according to standards ISO 3741 - max speed available in cooling mode
(4) Referred to max speed available in cooling mode