

COLD OR HOT WATER AIR HEAT PUMP

MUAT-FBC Series

MUND[®]CLIMA

APPLICATIONS

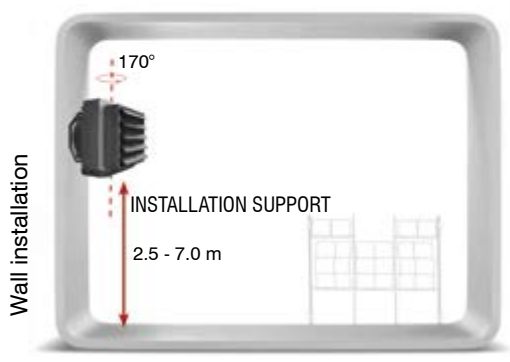
The air heat pump is suitable for industrial warehouses, stores, factories, production lines, sports centers, churches, showrooms, etc.
The main function of the air heat pump is to heat or cool the room through a large cold or warm air flow.

TBOX Protocol

INSTALLATION

The MUAT-FBC air heat pump also incorporate threaded rod holders in the 4 corners.

Ceiling installation

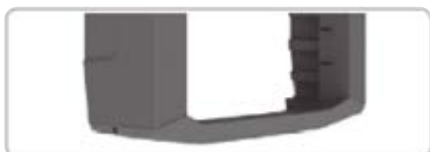


FEATURES



FAN

Equipped with a 3-speed fan, which makes it possible to control the operation and effectiveness of the air heat pump.



EPP CASE

Modern design with expandable polypropylene (EPP) casing, strong and lightweight.



AIR DEFLECTORS

The air outlet is equipped with adjustable defectors to direct the air where needed.



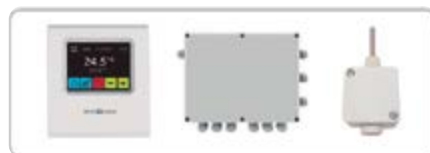
MUAT-FBC TRAY

Equipped with a droplet separator to prevent droplets from escaping with the air. The water in the condensate tray is removed by gravity.



ROTATIONAL SUPPORT

Allows the air heat pump to be installed on the wall. It is also possible to rotate the equipment at 170° from the support fixing points.

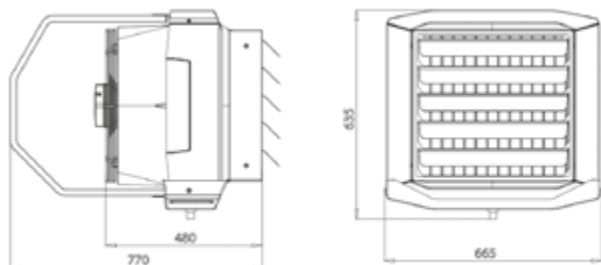


MULTIPLE OPTIONS

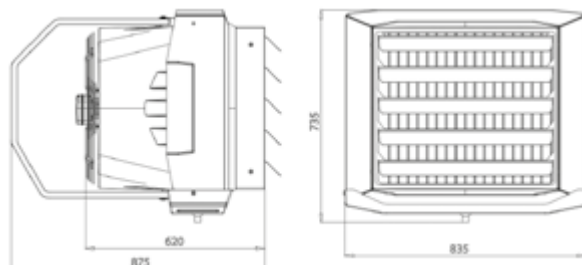
Possibility of integrating the air heater into a centralized control system and even combining its operation with MUD-DT destratifiers.

DIMENSIONS

MUAT-10-FBC



MUAT-20-FBC



TECHNICAL SPECIFICATIONS

Model			MUAT-10-FBC			MUAT-20-FBC		
Code			CL05208			CL05209		
Speed			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
Air flow rate	m³/h		1,150	2,050	2,900	2,000	3,350	4,200
Maximum consumption	W		120	240	340	270	370	550
Max. current	A		0.6	1.2	1.5	1.4	1.8	2.4
Sound pressure level 1m ⁽¹⁾	dB(A)		47.5	59.9	69.5	58.1	66.5	72.9
Sound pressure level 5m ⁽²⁾	dB(A)		42.1	54.5	64.1	52.3	61.1	67.5
Heating rated capacity ⁽³⁾	kW		23.1			47.4		
Cooling rated capacity ⁽⁴⁾	°C		9.7			21.8		
Max. water inlet temperature		°C	70					
Max. working pressure		MPa	1.6					
Air distribution range	Horizontal ⁽⁵⁾	m	7.1	12.7	18.0	9.7	16.3	20.5
Installation height	On the wall	m	2.5 - 7.0					
Connection		inches	3/4"					
Power supply		V / Hz	230 / 50					
Protection degree			IP 54					
Color			Gray / Black					
Casing material			EPP (Expanded Polypropylene)					
Dimensions (W x H x D)	mm		665 x 635 x 480			835 x 735 x 620		
Empty weight	kg		23.1			36.0		

Notes:
(1) Sound pressure level according to EN 3741/2011.
(2) Sound pressure level measured at 5 m from the unit, in a room with average sound absorption capacity and a volume of 1500 m³.
(3) High speed, water temperature 70 / 50 °C, room temperature 16 °C (for other conditions refer to the CAPACITY TABLES or the installation manual).
(4) High speed, water temperature 7 / 12 °C, room temperature 26 °C and 55 % Relative Humidity (for other conditions refer to the CAPACITY TABLES or the installation manual).
(5) Isothermal horizontal flow range (speed limit is equal to 0,5 m/s).

OPTIONALS

More information on the options can be found in the "CONTROL SYSTEMS" section.

Thermostat



SE-3
(CO14653)

Ambient temperature sensor



PT-1000
(CL91187)

Area Valves



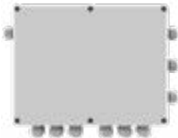
Valve	3/4"
2-way	C013252
3-way	C013255

Centralised control



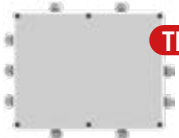
T-BOX
(CL91182)

Concentrator



RX
(CL91186)

Module



DRV-FBC
(CL09402)

CAPACITY TABLES (HEATING)

MUAT-10-FBC (Heating)								
Tw1/Tw2	70 / 50 °C				60 / 40 °C			
Tp1	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C
III: V = 2900 [m³/h]								
0	32.2	1409	8.0	36.5	25.9	1131	5.0	29.5
10	26.5	1161	6.0	40.0	20.2	879	4.0	33.0
15	23.7	1035	5.0	41.5	17.2	749	3.0	34.5
20	20.7	907	4.0	43.0	14.1	616	2.0	36.0
25	17.7	776	3.0	45.0	10.9	477	1.0	37.0
MUAT-20-FBC (Heating)								
Tw1/Tw2	70 / 50 °C				60 / 40 °C			
Tp1	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C
III: V = 2900 [m³/h]								
0	65.4	2862	8.0	50.5	53.1	2313	6.0	41.0
10	54.2	2373	6.0	51.5	41.8	1820	4.0	42.0
15	48.5	2123	5.0	52.0	35.9	1563	3.0	42.0
20	42.8	1871	4.0	52.0	29.8	1299	2.0	42.5
25	36.9	1612	3.0	53.0	23.4	1021	2.0	43.0

Note:
- High air speed values, for low and medium speed values please consult the installation manual.

- Legend
- PT → Heating capacity
- Tp1 → Air inlet temperature
- Tp2 → Air outlet temperature
- Tw1 → Water inlet temperature
- Tw2 → Water outlet temperature
- Qw → Water flow rate
- Δpw → Battery charge loss

CAPACITY TABLES (REFRIGERATION)

MUAT-10-FBC (Refrigeration)															
Tw1/Tw2		3 / 8 °C							5 / 10 °C						
Tp1	Fi1	PT	Qw	Δpw	Tp2	Fi2	W	SHR	PT	Qw	Δpw	Tp2	Fi2	W	SHR
°C	%	kW	l/h	kPa	°C	%	g/s	-	kW	l/h	kPa	°C	%	g/s	-
III: V = 2900 [m³/h]															
32	40	17.1	2931	36.0	19.5	66.0	2.3	0.66	15.4	2640	30.0	20.0	66.0	1.9	0.69
30	45	15.9	2721	32.0	18.5	70.0	2.3	0.64	14.2	2432	26.0	19.5	70.0	1.9	0.67
28	50	14.6	2494	27.0	18.0	73.0	2.2	0.69	12.9	2205	22.0	18.5	73.0	1.8	0.73
26	55	13.1	2251	23.0	17.0	76.0	2.0	0.61	11.4	1963	18.0	18.0	76.0	1.6	0.64
24	55	11.1	1905	17.0	16.0	77.0	1.5	0.66	9.4	1613	12.0	16.5	77.0	1.1	0.71

MUAT-10-FBC (Refrigeration)															
Tw1/Tw2		7 / 12 °C							10 / 15 °C						
Tp1	Fi1	PT	Qw	Δpw	Tp2	Fi2	W	SHR	PT	Qw	Δpw	Tp2	Fi2	W	SHR
°C	%	kW	l/h	kPa	°C	%	g/s	-	kW	l/h	kPa	°C	%	g/s	-
III: V = 2900 [m³/h]															
32	40	13.6	2333	24.0	21.0	67.0	1.4	0.74	10.8	1855.00	15.00	22.00	68.00	0.60	0.85
30	45	12.4	2126	20.0	20.0	70.0	1.4	0.71	9.6	1648.00	13.00	21.00	72.00	0.60	0.83
28	50	11.1	1900	16.0	19.5	73.0	1.3	0.80	8.3	1423.00	10.00	20.50	75.00	0.60	0.93
26	55	9.7	1658	13.0	18.5	76.0	1.2	0.69	6.9	1183.00	7.00	19.50	77.00	0.50	0.83
24	55	7.6	1307	9.0	17.0	77.0	0.6	0.79	5.0	867.00	4.00	18.50	76.00	0.10	0.97

MUAT-20-FBC (Refrigeration)															
Tw1/Tw2		3 / 8 °C							5 / 10 °C						
Tp1	Fi1	PT	Qw	Δpw	Tp2	Fi2	W	SHR	PT	Qw	Δpw	Tp2	Fi2	W	SHR
°C	%	kW	l/h	kPa	°C	%	g/s	-	kW	l/h	kPa	°C	%	g/s	-
III: V = 4200 [m³/h]															
32	40	37.4	6403	45.0	13.5	82.0	5.1	0.65	33.7	5777	37.0	14.5	82.0	4.3	0.68
30	45	35.0	5991	40.0	13.0	84.0	5.0	0.63	31.3	5366	32.0	14.5	84.0	4.3	0.65
28	50	32.3	5530	34.0	13.0	86.0	4.9	0.67	28.6	4905	27.0	14.0	86.0	4.1	0.71
26	55	29.4	5030	29.0	12.5	88.0	4.6	0.60	25.7	4405	23.0	14.0	87.0	3.8	0.62
24	55	24.9	4264	22.0	11.5	88.0	3.5	0.65	21.2	3633	16.0	13.0	88.0	2.6	0.69

MUAT-20-FBC (Refrigeration)															
Tw1/Tw2		7 / 12 °C							10 / 15 °C						
Tp1	Fi1	PT	Qw	Δpw	Tp2	Fi2	W	SHR	PT	Qw	Δpw	Tp2	Fi2	W	SHR
°C	%	kW	l/h	kPa	°C	%	g/s	-	kW	l/h	kPa	°C	%	g/s	-
III: V = 4200 [m³/h]															
32	40	29.8	5116	29.0	16.0	83.0	3.3	0.71	23.8	4087	19.0	17.5	84.0	1.8	0.78
30	45	27.4	4707	25.0	15.5	84.0	3.3	0.69	21.4	3674	16.0	17.5	85.0	1.8	0.78
28	50	24.7	4246	21.0	15.0	86.0	3.1	0.76	18.7	3213	13.0	17.0	87.0	1.7	0.88
26	55	21.8	3744	17.0	15.0	88.0	2.9	0.66	15.8	2713	9.0	16.5	88.0	1.4	0.78
24	55	17.3	2977	11.0	14.0	88.0	1.7	0.75	11.6	1990	5.0	16.0	88.0	0.4	0.91

Note:

- High air speed values, for low and medium speed values please consult the installation manual.

Legend

- PT → Heating capacity
- Tp1 → Air inlet temperature
- Tp2 → Air outlet temperature
- Fi1 → Relative humidity at air inlet
- Fi2 → Relative humidity at air outlet
- Tw1 → Water inlet temperature
- Tw2 → Water outlet temperature
- Qw → Water flow rate
- Δpw → attery charge loss
- SHR → Sensible Heat Ratio