URX-CF

Heat recovery unit with refrigerant circuit

Air flow 750 ÷ 3300 m³/h

- **Heat pump refrigerant circuit with scroll compressors of high output and low noise.**

The URX_CF series is the mono-bloc solution designed for the installation requirements typical for public spaces like bars, restaurants, offices, meeting rooms.
The URX_CF units combine in one mono-bloc unit, besides the fan, filter, and heat recovery sections, a **heat pump refrigerant circuit with scroll compressors of high output and low noise.**
The supply air is heated or cooled, based on the season, through the heat pump refrigerant circuit located within the unit and charged with refrigerant R410A. All this allows to have a complete unit, with the automatic operation in each season and capable of combining the required space ventilation requirements with efficient heat recovery.
The careful design of the machine combines very compact dimensions, which permit easy installation in false ceilings, with an excellent accessibility for maintaining all the internal components.

VERSIONS
Standard horizontal configuration
5 sizes complete with temperature controller and ready for installation.

PANELS:
Self-supporting sandwich panel 20 mm thick in galvanised steel for internal and external surfaces with injected polyurethane insulation (density 40 kg/m3).

HEAT RECOVERY
Cross flow plate heat exchanger in aluminium with outputs over 50% in winter conditions.

FILTERS
Class G3, 80% gravimetric efficiency, according to EN 779, thickness 48 mm, located before the heat recovery both in the supply and return air flow.

CENTRIFUGAL FANS
Double inlet forward curved blades with direct drive motor. Single phase 230V-50Hz single speed motor. The air flow is controlled, within +/- 15% of the nominal, through an electronic speed controller supplied as standard.

REFRIGERANT CIRCUIT
Heat pump complete with high efficiency low noise scroll compressors, 4 way refrigerant cycle reversing valve, evaporator coil, condenser coil, liquid receiver, liquid separator, double thermostatic expansion valve, liquid sight glass (only for models 150, 210, 330), filter drier, high/low pressure pressostats.

ELECTRICAL PANEL
The unit is provided with an electrical panel complete with power and control section (included the control for the 3 way valve for the supplementary hot water coil and associated actuators), ensuring the control of all the refrigerant circuit functions. Included are: NTC return air temperature sensor, external air temperature sensor, dampers and actuators in the free-cooling version, pressure switch in the supply air filter. Supplied loose is a remote mounted control terminal for automatic control of the unit and an outlet to power and control a light to conform with the current regulation for smoking zones.

CONDENSATE DRAIN TRAY
Condensate drain tray in aluminium.

ACCESSIBILITY
From below for the heat recovery, the filters, the condensate drain tray and the fans.

ACCESSORIES
MBC: Casing with 2 row hot water coil to install on the supply air. Includes the three way valve and on-off actuator.
FCE: Free-cooling complete with controls to be added to the existing. Free-cooling operation only works in the summer mode, if the external air temperature is at least 10K lower than the internal air temperature and if the compressor safeties permit it.
FGC: Circular flanges. Each accessory consists of a flange to be connected to each unit's rectangular connection.
G4F: Filter efficiency G4

MBX: Casing with single stage electrical heater with shrouded finned elements, with double safety thermostat of manual and automatic reset type, to install on the supply air.

SUF: Silencer splitter module, in appropriate casing. The accessory consists of two modules: one for the supply and one for the return.
RS485: Board RS485

ACCESSORIES COMPATIBILITY

Hot water coil

Size	07	10	15	21	33
	MBC07	MBC10	MBC15	MBC21	MBC33

Free-cooling

Size	07	10	15	21	33
	FCE07	FCE10	FCE15	FCE21	FCE33

Circular flanges

Size	07	10	15	21	33
	FGC07	FGC10	FGC15	FGC21	-

Filter

Size	07	10	15	21	33
	G4F07	G4F10	G4F15	G4F21	G4F33

Electric heating coil

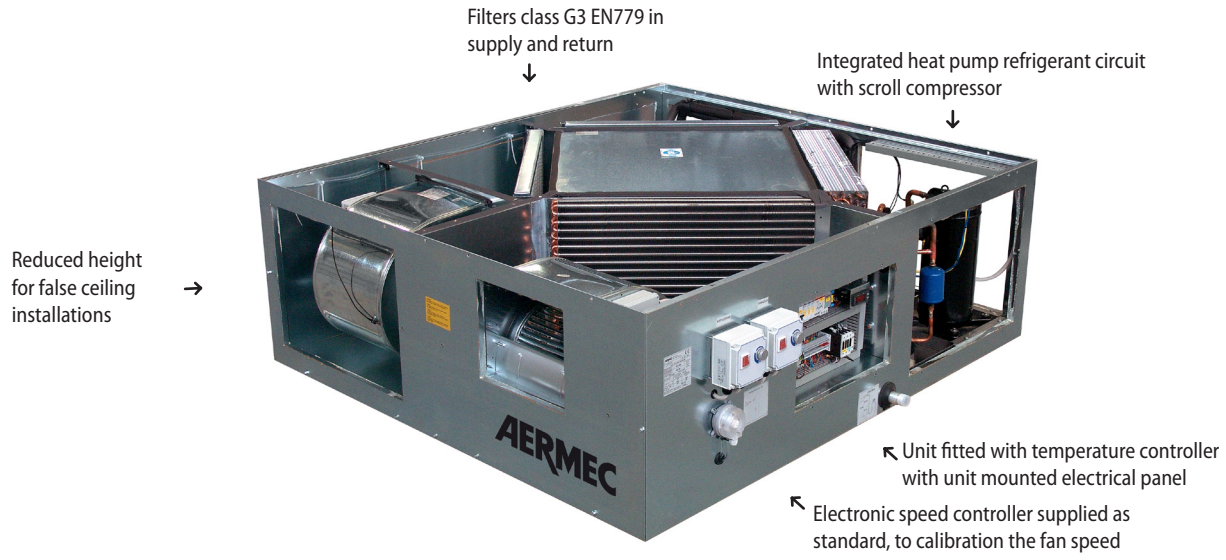
Size	07	10	15	21	33
	MBX07	MBX10	MBX15	MBX21	MBX33

Silencer splitter module

Size	07	10	15	21	33
	SUF07	SUF10	SUF15	SUF21	SUF33

Board RS485

Size	07	10	15	21	33
RS485	•	•	•	•	•



TECHNICAL DATA

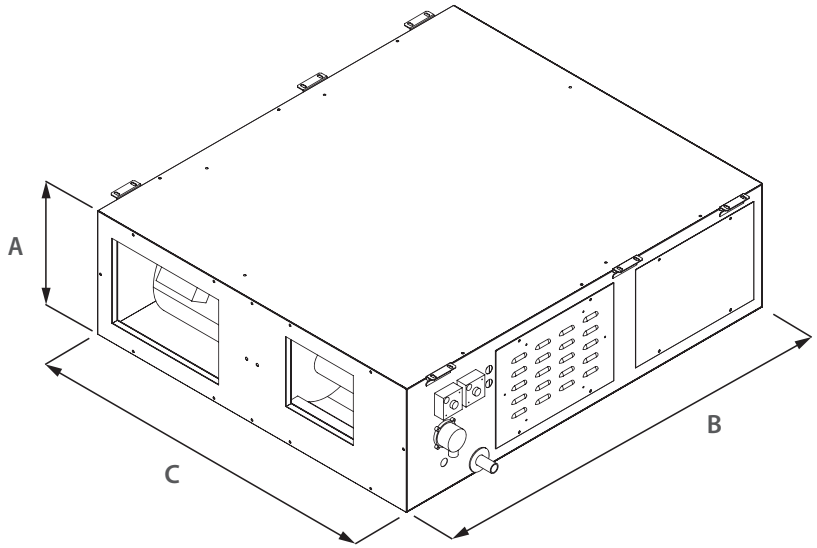
Size			07	10	15	21	33
Air flow nominal supply and extract		m^3/h	750	1000	1500	2100	3300
Air flow minimum			640	850	1275	1785	2800
Available supply static pressure (max)	(1)	Pa	278	250	218	174	287
Available extract static pressure (max)	(1)	Pa	229	206	162	124	175
Heating capacity total (heat recovery + refrigerant circuit)		kW	8,8	10,8	15,8	22,8	33,3
Total cooling capacity (heat recovery + refrigerant circuit)		kW	6,1	7,3	10,2	15,0	23,0
Heating capacity available		kW	2,4	2,3	3,0	4,8	5,2
Cooling capacity available		kW	1,4	1,7	2,2	3,4	5,1
Efficiency heat recovery		%	46,2	51,2	53,2	53,6	53,6
Fans							
Total fans nominal power input		kW	0,92	0,92	0,92	0,92	1,5
Total fans maximum current input		A	4,20	4,20	4,20	4,20	6,80
N°		n°	2	2	2	2	2
Compressors							
Gas			R410A	R410A	R410A	R410A	R410A
Quantity		kg	2,4	2,85	3	3,7	4,5
Compressor power input winter condition		kW	1,3	1,3	1,8	2,5	3,0
Compressor power input summer condition		kW	1,8	2,1	2,3	3,5	4,4
Maximum compressor current input		A	8,2	12,5	7	11,1	19,7
Total power input winter condition		kW	2,0	2,0	3,3	4	5,5
Total power input summer condition		kW	2,6	2,8	3,8	5	6,9
Sound pressure level at 1 m		db(A)	53	55	57	59	62
Power supply			230V/1/50Hz	230V/1/50Hz	400V/3N/50Hz	400V/3N/50Hz	400V/3N/50Hz
MBC - Hot water coil (accessory)							
Number of rows		n°	2	2	2	2	2
Air side pressure drop (nominal air flow)		Pa	11	18	23	42	78
Heating capacity	(2)	kW	5	6	8,7	10,3	16,8
Heating capacity	(3)	kW	1,9	2,2	3,4	3,7	7,5
Water flow rate at nominal conditions	(2)	l/h	442	523	763	902	1475
Water pressure drop (nominal conditions)	(2)	kPa	16	22	9	12	31
Water flow rate at nominal conditions	(3)	(/h	336	382	584	638	1306
Water pressure drop (nominal conditions)	(3)	kPa	11	14	6	7	28
MBX - Electric heating coil (accessory)							
Power supply					400V/3/50Hz (separate power supply to the unit)		
Heating capacity		kW	3	4,5	6	9	12
Air side pressure drop (nominal air flow)		Pa	10	10	10	10	10
Number of stages		n°	1	1	1	1	1
Electric heater current input		A	4,6	6,8	9,1	13,7	18,2
Connection diameters							
Drain pan condensate discharge diameter		in	1"	1"	1"	1"	1"
Water coil connection diameter		in	3/4"	3/4"	3/4"	3/4"	3/4"

Heating: fresh air flow equal to the exhaust air flow; external air temperature (in) -5°C 80% r.h.; room air temperature 20°C, 50% r.h.
Cooling: fresh air flow equal to the exhaust air flow; external air temperature (in) 34°C 50% r.h.; room air temperature 26°C, 50% r.h.

(1) Fan power supply 230V; nominal air flow rate without accessories
(2) Water temperature (in/out) 70/60°C; operating as in heating mode; with compressor operating
(3) Water temperature (in/out) 45/40°C; operating as in heating mode; with compressor operating

Sound pressure: at 1 m in free field with ducted vents

DIMENSIONS



Size		07	10	15	21	33
Dimensions and weights						
A	mm	450	450	550	550	600
B	mm	1300	1300	1500	1500	1600
C	mm	1500	1500	1800	1800	1800
Weight	kg	205	218	272	298	328

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