

# CFR MICRO E

Heat recovery and air exchange unit with enthalpy exchanger



## Technical and construction characteristics

The air renewal units of the CFR MICRO E series are characterized by the adoption of a special enthalpy-type air/air exchanger.

This allows us to avoid, or in any case significantly reduce the use of replacement air post-treatment systems with what this entails in terms of energy and plant engineering. These units integrate optimally with traditional heating and air conditioning systems, whether they are located in series or in parallel.

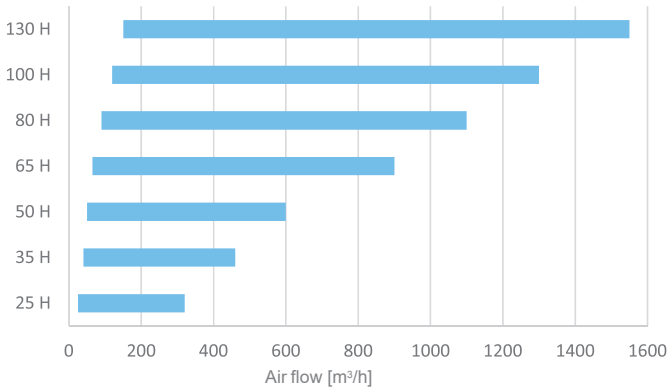
All models can be supplied in combination with an air ionization system called BIOXIGEN®.

This unique system of its kind has the purpose of sanitizing

or deodorize the air and the surfaces of the machine, of ducts and neighboring environments.

### MAIN SYSTEM FEATURES

- Self-supporting structure in internally insulated galvanized sheet metal and externally, accessibility through a side door;
- Air filtration in efficiency class ISO 16890 ePM2.5 95% (with pre-filter COARSE 50%) on the fresh air, filter COARSE 50% on the recovery flow;
- Integrated dirty filter warning pressure switch;
- Motorized by-pass system (free cooling) of the recuperator automatically implemented by the electronic control to guarantee free cooling with external air when convenient;
- Electric fans with high and low consumption EC motor performance and silence, possibility of managing 10 levels speed;
- Connections to the ducts with circular fittings in plastic material.
- Built-in electrical panel with electronic board for controlling the ventilation and free-cooling functions.



ERP 2018 COMPLIANT



OPTIONAL SYSTEM BIOXIGEN



DUCTED UNIT



AIR FILTRATION



AIR RENEWAL



EC INVERTER FANS



ENTHALPY EXCHANGER



HIGH EFFICIENCY HEAT RECOVERY



ENERGY RECOVERY



COMPACT DIMENSIONS

Model	Air flow m³/h	Winter thermal efficiency	Code	€
CFR MICRO E 25H	250	73,0%	75800500	1.700,00
CFR MICRO E 35H	350	74,0%	75800511	2.180,00
CFR MICRO E 50H	500	76,0%	75800512	2.550,00
CFR MICRO E 65H	650	74,0%	75803300	3.200,00
CFR MICRO E 80H	800	76,0%	75800513	3.680,00
CFR MICRO E 100H	1000	76,0%	75800514	4.150,00
CFR MICRO E 130H	1300	74,0%	75800515	4.700,00

## Accessories CFR MICRO E



Unit control panel Touch Screen

75801800

200,00



Wall-mounted CO2 probe

75802500

446,00



Wall-mounted humidity probe




75802600

228,00

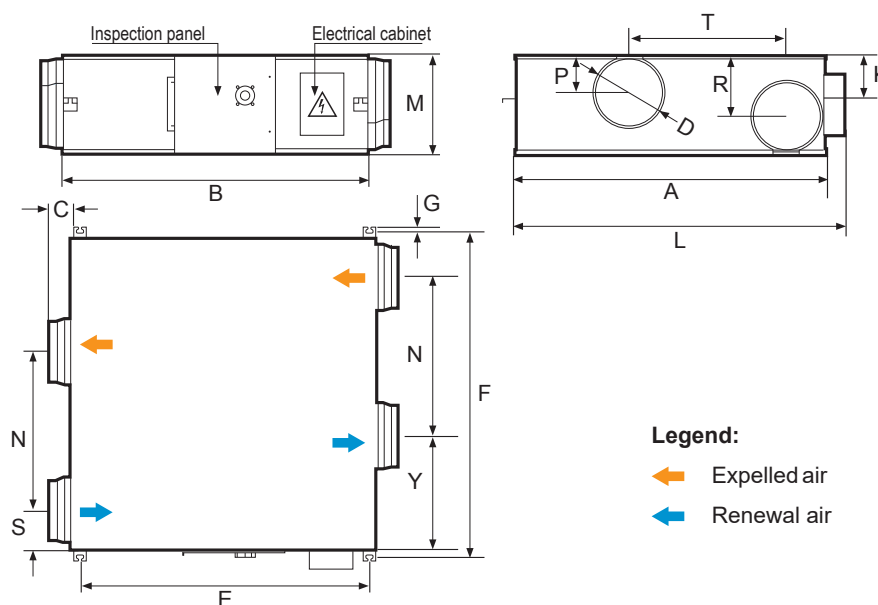
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## Accessories CFR MICRO E

		Code	€
 <p>PRE and POST electric duct heating section</p>	mod. PRE 25 - 35 (1,0 kW)	75802700	580,00
	mod. PRE 50 (1,5 kW)	75802800	732,00
	mod. PRE 65 - 130 (2,5 kW)	75802900	850,00
	mod. POST 25 - 35 (1,0 kW)	75803000	756,00
	mod. POST 50 (1,5 kW)	75803100	826,00
	mod. POST 65 - 130 (2,5 kW)	75803200	1.018,00
 <p>Circular duct silencer</p>	mod. 25 - 35	75801900	136,00
	mod. 50	75802000	154,00
	mod. 65 - 130	75802100	188,00
 <p>BIOXGEN® sanitization system with duct module</p>	mod. 25 - 35	75802200	722,00
	mod. 50	75802300	774,00
	mod. 65 - 130	75802400	872,00

## Dimensions CFR MICRO E



Model	U.M.	25H	35H	50H	65H	80H	100H	130H
A	mm	599	804	904	884	1134	1216	1216
B	mm	814	814	894	1186	1186	1199	1199
C	mm	100	100	107	85	85	85	85
D	mm	150	150	200	250	250	250	250
E	mm	675	675	754	1115	1115	1130	1130
F	mm	657	862	960	940	1190	1273	1273
G	mm	19	19	19	19	19	19	19
L	mm	650	855	955	945	1200	1290	1290
T	mm	315	480	500	428	678	621	621
K	mm	111	111	135	170	170	171	171
M	mm	270	270	270	388	388	388	388
N	mm	315	480	500	428	678	621	621
P	mm	111	111	135	170	170	146	146
R	mm	111	111	135	170	170	241	241
S	mm	142	162	202	228	228	151	151
Y	mm	142	162	202	228	228	442	442
Net/Gross Weight	Kg	30 / 33	37 / 41	43 / 47	65 / 70	71 / 76	83 / 88	83 / 88

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## Technical data table CFR MICRO E

Model	U.M.	25H	35H	50H	65H	80H	100H	130H
Nominal air flow	m <sup>3</sup> /h	250	350	500	650	800	1000	1300
Useful static pressure	Pa	90	140	110	100	140	140	135
Power supply		230V/1/50Hz						
Total nominal absorbed power	kW	0,11	0,14	0,15	0,27	0,33	0,49	0,63
Total nominal current absorption	A	0,5	0,6	0,6	1,2	1,4	2,1	2,7

### FUNCTIONAL LIMITS

Limit operating conditions		(-15 °C) ÷ (+40 °C) / (10%) ÷ (95%)						
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### FANS

Type motor		EC						
Speed	n.	10						
Ventilation Control (1)		Man - VDS						
Total nominal absorbed power	kW	0,08	0,13	0,15	0,23	0,32	0,39	0,49
Total nominal current absorption	A	0,35	0,55	0,65	0,97	1,36	1,65	2,10
Static efficiency of the fans according to (UE) n. 327/2011	%	49,25	41,80	40,20	47,30	48,55	54,50	55,00

### HEAT RECOVERY

Winter thermal efficiency (3)	%	73,0	74,0	76,0	74,0	76,0	76,0	74,2
Winter enthalpy efficiency (3)	%	65,0	65,0	67,0	65,0	65,0	62,0	59,0
Total thermal power recovered (3)	kW	1,53	2,17	3,19	4,03	5,10	6,37	8,09
Delivery air temperature (3)	°C	13,3	13,5	14,0	13,5	14,0	14,0	13,6
Summer thermal efficiency (4)	%	73,0	74,0	76,0	74,0	76,0	76,0	74,0
Summer enthalpy efficiency (4)	%	62,0	62,0	63,0	60,0	63,0	60,0	58,0
Cooling capacity recovered (4)	kW	0,36	0,51	0,75	0,95	1,20	1,50	1,90
Delivery air temperature (4)	°C	27,6	27,6	27,4	27,6	27,4	27,4	27,6
Dry thermal efficiency (5)	%	73,0	74,0	76,0	74,0	76,0	76,0	74,0

### SPECIFIC DATA ECODESIGN

Declared typology		NRVU - BVU						
Internal specific ventilation power - SFP int (5)	W/(m <sup>3</sup> s)	812	670	547	846	865	881	873
Maximum specific internal power of the ventilation components	W/(m <sup>3</sup> s)	940	965	1019	953	1007	998	926
Front speed at nominal capacity	m/s	4,24	5,96	4,70	3,94	4,83	6,05	7,85
Pressure loss of internal ventilation components	Pa	200	140	110	200	210	240	240
Maximum external leakage of the casing	%	< 3						
Maximum internal leakage or residual flow	%	7,8	7,8	7,7	7,7	7,8	7,8	7,8
Annual energy consumption of F7 and M5 filters (8760h of operation)	kWh/a	91	129	139	399	480	461	609
Sound power level radiated to the enclosure (2)	dB(A)	46	49	51	53	54	55	55

(1) Multiple = Multispeed > 3

Man = Manual from selector or keyboard; 0-10V = from potentiometer or keyboard

VDS = Modulation from air quality/humidity sensor

(2) Sound power level at nominal operating conditions

(3) Outdoor air -5 °C 80% RH; ambient air 20 °C 50% RH

(4) Outdoor air 32 °C 50% RH; ambient air 26 °C 50% RH

(5) According to EU regulation 1253/2014: at nominal pressure; temperature and humidity conditions referred to EN 308