FM

Air handling units
Air flow rate from 1.000 to 100.000 m³/h

The air handling units in the FM series are the blend of experience, research and testing in the specific aeraulic machines sector. The FM series adapts to all the specific needs of the system, both with regard to operation and to overall sizes allowing different air treatment requirements to be met even in specific fields such as hospitals, the food industry, the pharmaceutical industry and microelectronics..
The FM series is made in full compliance with the provisions of the EN 1886 norm as far as mechanical resistance, air leakage, heat performance and soundproofing is concerned.
The precise frame-panels coupling makes it possible to achieve air leakage values from the casing within the values of class B of the UNI EN 1886 standard with certification from the RWTÜV laboratories.

>Versions

24 sizes available.
Supporting structure and modular construction which enable the components to be standardised and a high flexibility of use.
50 mm thick sandwich panels available in:
- galvanised steel (inside only)
- pre-painted galvanised steel
- stainless steel
- aluminium

with insulation in injected polyurethane or mineral wool of various densities.
Special versions studied for particular environments.

>Main technical data

FM Model		13	20	28	35	42	50	57	69
Air flow rate (speed 2 m/s)	m^3/h	910	1.450	2.000	2.510	3.060	3.610	4.300	4.970
Air flow rate (speed 2,5 m/s)	m^3/h	1.130	1.810	2.500	3.130	3.820	4.510	5.090	6.210
Air flow rate (speed 3 m/s)	m^3/h	1.360	2.180	3.010	3.760	4.590	5.420	6.110	7.460
Air flow rate (speed 3,5 m/s)	m^3/h	1.590	2.540	3.510	4.390	5.350	6.320	7.460	8.700

FM Model		82	105	119	154	194	237	286	342
Air flow rate (speed 2 m/s)	m^3/h	5.870	7.580	8.580	11.080	14.000	17.060	20.610	24.620
Air flow rate (speed 2,5 m/s)	m^3/h	7.340	9.480	10.720	13.850	17.500	21.320	25.760	30.770
Air flow rate (speed 3 m/s)	m^3/h	8.800	11.370	12.870	16.620	21.000	25.580	30.900	36.930
Air flow rate (speed 3,5 m/s)	m^3/h	10.270	13.280	15.010	19.390	24.490	29.850	36.070	43.080

FM Model		413	480	547	614	681	749	816	883
Air flow rate (speed 2 m/s)	m^3/h	29.710	34.560	39.390	44.230	49.060	53.900	58.740	63.580
Air flow rate (speed 2,5 m/s)	m^3/h	37.140	43.130	49.240	55.280	61.330	67.380	73.430	79.480
Air flow rate (speed 3 m/s)	m^3/h	44.570	51.840	59.080	66.340	73.600	80.850	88.110	95.370
Air flow rate (speed 3,5 m/s)	m^3/h	51.990	60.440	68.930	77.400	85.860	94.330	102.780	111.280

Speed: face velocity on the heat exchange coil.

>Selection software

The innovative on-line AHU configuration software allows a fast and correct scaling of the unit in real time.
The choice of the components is guided and the direct access to the company database makes it possible to select them from among an extensive record.
The software gives operators a complete technical data sheet, a detailed description, a detailed drawing and an economic summary that is always up to date.

>Characteristics

Supporting structure made of new-geometry rounded aluminium profiles with corners made of reinforced nylon. The casing is made of 50 mm thick sandwich panels fixed to the frame with exclusive panel block and complete absence of screws.

Aluminium dampers with aerofoil blades. The careful construction keeps the leakage values very low.

All the types of **filtration systems** usually used in air handling units are available, thereby ensuring compliance with the room air-quality related regulations currently in force.

Heat exchange coils all extractable on slides and supplied in different materials depending on the use and the fluid.

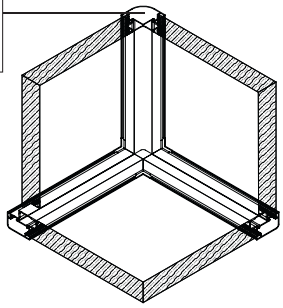
Humidification systems chosen on the basis of special usage for which they are designed in compliance with the fluid available.

Fans with forward or backward curved blades. The choice is made in accordance with the aeraulic performance required paying attention to the efficiency and noise level.

Silencers available in different lengths made of rock wool protected by a polyester film and contained in a microperforated stretched sheet made of galvanised steel.

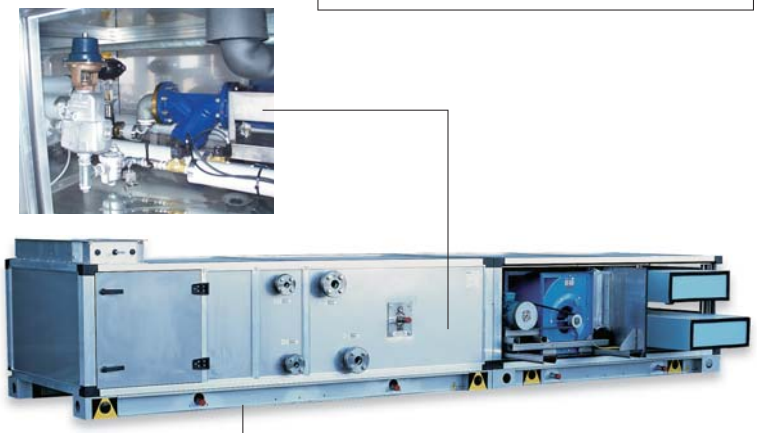
Various types of **heat recovery systems** make it possible to comply with energy saving regulations currently in force.

The exclusive fixing of the panels to the frame permits uniform pressure over the casing providing excellent air tightness (class B – EN 1886)



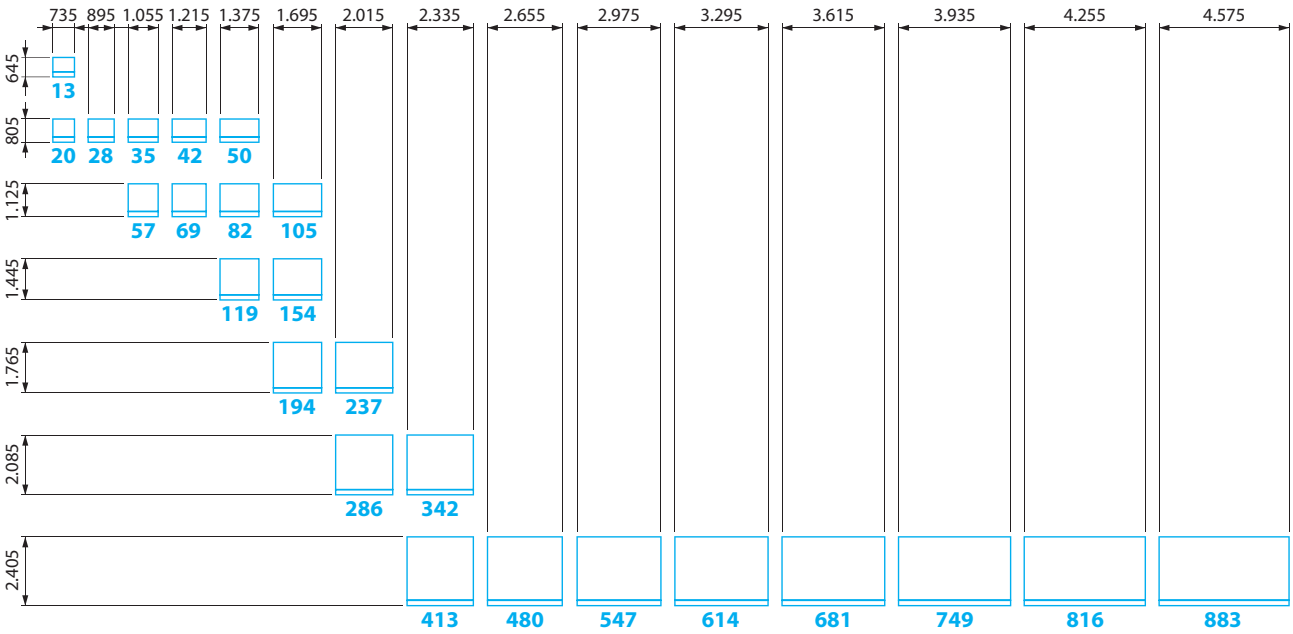
Extractable coils on slides for easy maintenance and cleaning

Perfectly smooth internal surfaces to prevent dirt from accumulating



Special versions for particular applications

>Face dimensions (mm)



>Eurovent certificate performance

The voluntary certification programmes established and managed by Eurovent provide for a comparison between the technical characteristics declared by the manufacturer in the documentation and in the selection software and the results of the test conducted on real products. Eurovent purpose is to create a basis for comparison in order to ensure "healthy" and "fair" competition on the European market and constitute a benchmark for engineers, consultants and users who draw on it for the selection of air conditioning and refrigeration systems with certified performances.

FAST Spa has obtained the Eurovent certification for the "Air handling unit" programme FM series units and for FM-H series units for specific sectors guaranteeing its costumers total transparency and accuracy in the declared performance.

	FM Series Class	EN 1886 values
Casing mechanical strenght	2A	Max. relative bending: 4 mm/m
Casing air leakage with pressure test – 400 Pa	B	Max. leakage: 0,44 l/s m²
Casing air leakage with pressure test +700 Pa	B	Max. leakage: 0,63 l/s m²
Filter by-pass leakage	F9	Total leakage K: 0,5 %
Thermal transmittance U	T3	1 < U ≤ 1,4 W/K m²
Base unit thermal bridging factor	TB3	0,45 < kb ≤ 0,6

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