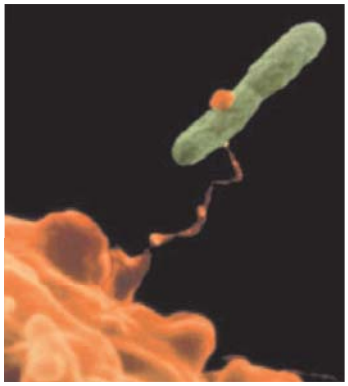
FM-H

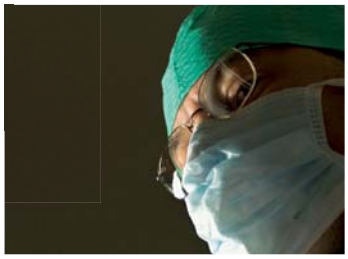
Air handling units for special sectors with patented antibacterial treatment Air flow rate from 1.000 to 30.000 m^3/h

The air handling unit in the FM-H series has proved to be the ideal choice to minimize the risks of the internal development of biological contaminants and therefore a totally innovative on the panorama of climate control for specific applications (hospital, food processing, chemical, pharmaceutical sectors etc.). **In addition to the geometric-constructive characteristics laid down in recent standard-legislation related documents, the unit is provided with a special patented antibacterial treatment applied on the internal surface, the efficiency of which has been confirmed by the University of Padua.** The FM-H 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

15 sizes available.
Bearing frame and modular construction.
50 mm thick sandwich panels available in:
- aluminium alloy with anti-bacteria treatment for the internal panel;
- pre-painted galvanized steel, stainless steel or aluminium for the external panel with insulation made of injected polyurethane or mineral wool of various thicknesses.





EUROVENT CERTIFIED PERFORMANCE

>Main technical data

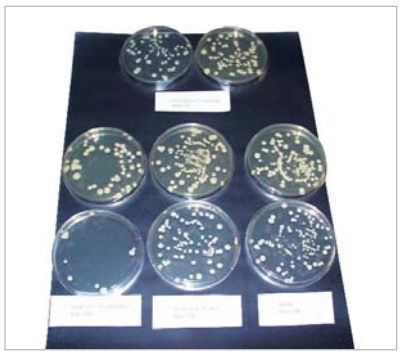
FM Model		20	28	35	42	50	57	69	82
Air flow rate (Speed 1,5 m/s)	m^3/h	1.100	1.500	1.900	2.300	2.700	3,100	3,700	5,700
Air flow rate (Speed 2 m/s)	m^3/h	1.450	2.000	2.500	3.100	3.600	4,100	5,000	7,600
Air flow rate (Speed 2,5 m/s)	m^3/h	1.800	2.500	3.100	3.800	4.500	5,100	6,200	9,500
Air flow rate (Speed 3 m/s)	m^3/h	2.160	3.000	3.800	4.500	5.400	6,200	7,500	8,900

FM Model		105	119	154	194	237	286	342
Air flow rate (Speed 1,5 m/s)	m^3/h	5.700	6.400	8.300	10.500	12.800	15.500	18.500
Air flow rate (Speed 2 m/s)	m^3/h	7.600	8.600	11.100	14.000	17.100	20.600	24.600
Air flow rate (Speed 2,5 m/s)	m^3/h	9.500	10.700	13.900	17.500	21.300	25.800	30.800
Air flow rate (Speed 3 m/s)	m^3/h	11.300	12.900	16.600	21.000	25.600	30.900	37.000

Speed: face velocity on the heat exchange coil.

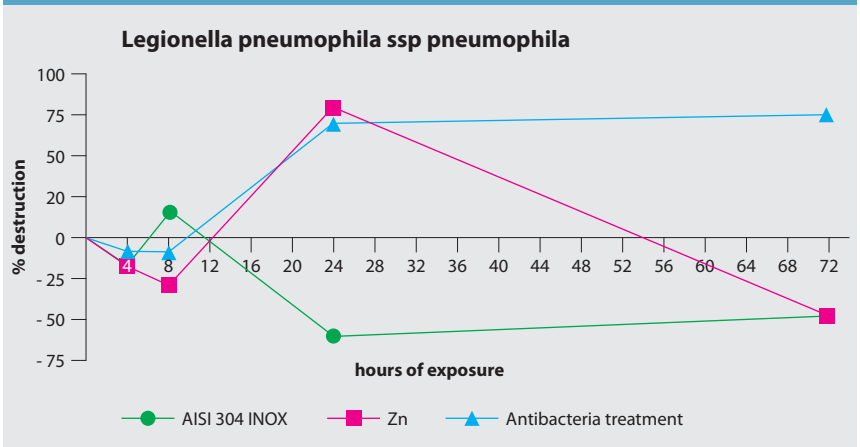
>Patented antibacterial treatment

The excellent results obtained in terms of anti-bacteria action, through the use of a special treatment carried out by FAST and the application of which has been patented, are confirmed through laboratory tests. These tests guarantee the non-proliferation and the destruction of biological pollutants harmful for human health, thereby enabling the units to meet ever more demanding standard and legislation related provisions



The laboratory tests to assess the bactericide effectiveness of the treatment were carried out by Padua University in Italy

Tests in culture soup with humidity around 100%



The destructive power of the bactericide treatment (Legionella pneumophila in the photograph) remains constant over time

>Characteristics

Inspection and cleaning:
- access doors, draining panels and adequate lighting in each section;
- internal corners connected to avoid the build up of dirt;
- edges and cracks are avoided, the permanent joints are sealed.

Internal panels and surfaces:
- the precise frame-panels coupling makes it possible to achieve air leakage values from the casing within class B of the UNI EN 1886 standard with certification from the TÜV laboratories.
- materials resistant to the formation of cracks, splinters, chipping and abrasion, which can be washed and disinfected, which do not favour the proliferation of biological agents and which reduce the microbic load (anti-bacteria treatment with certified destruction of the microbe load) are used.

Fan sections, exchange coils, filters and external air intakes:
- plug fans coated with antibacterial treatment for all the sizes, provided with guides and supports reduced to the minimum;
- coils and heat recovery units in Cu/Cu, Stainless steel/Cu or Stainless Steel/Stainless Steel versions;
- class F7 filters positioned upstream on the unit intakes, F8/F9 class downstream;
- external air intakes scaled for speeds less than 2 m/s and provided with adequate means of protection.

Humidification, silencers and drop eliminators:
- direct steam-type humidification or with immersed electrode producer;
- adequate distances are kept between humidification and the next component;
- drop eliminators subjected to anti-bacteria treatment.

Performance and safety-related characteristics:
- the performance of the unit has been certified as per the Eurovent programme;
- the unit is CE-labeled, which confirms compliance with the safety requirements of the applicable directives.

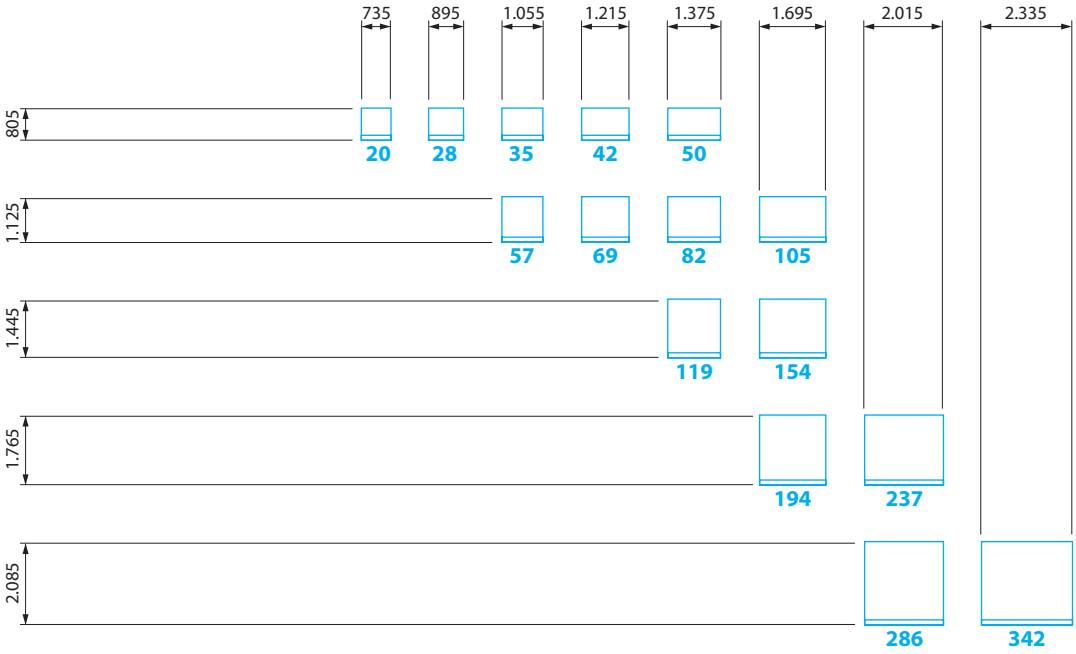
The units may be supplied complete with thermo-regulation

The units have specific features suitable for hospital application

All sections are equipped with draining panels with central discharge

The fan sections are equipped with plug-fans to make cleaning procedures easier

>Face dimensions (mm)



>Eurovent certificate performance

EUROVENT
CERTIFIED 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..

Classified characteristic	FM-H 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 m^2
Casing air leakage with pressure test +700 Pa	B	Max. leakage: 0.63 l/s m^2
Filter by-pass leakage	F9	Total leakage K: 0,5 %
Thermal transmittance U	T3	$1 < U \leq 1,4$ W/K m^2
Base unit thermal bridging factor	TB3	$0,45 < kb \leq 0,6$

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