



# AIR HANDLING UNITS





# WORLD CLASS AIR HANDLING UNITS

since 1985

## HIGHEST EFFICIENCY

L1

Leakage class

D1

Mechanical strength

F9

Filter bypass leakage

T2

Thermal transmittance

TB2

Thermal bridging



# About SEM

**SEM srl** - with its headquarters in Termoli - Italy, has been manufacturing Air Handling Units **since 1985** for the major HVAC companies, meeting the highest demands for quality and efficiency from the European and worldwide markets. **SEM** is specialized in developing Air Handling Units for comfort, hygienic and customizable applications.

Experience, continuous research and technical development, result in the best possible solutions for Air Handling Units. The ongoing innovation and proposed solutions are the core of the widely recognized success of the **SEM** products, such as the newest range for comfort, hygienic and customizable applications.

**SEM's** mission is to produce **world class, high efficiency** Air Handling Units for all HVAC markets.





**SEM MYH** Air Handling Units are designed for use in **office buildings, hospitals and industry**. The units offer the highest performance with regard to energy, thermal and acoustic specifications. The air handling unit dimensions can be customized to fit the requirements of the building and its location.

The units are suitable for new buildings or retrofits with a large range of applications such as: cinemas, offices, shops, hotels, industry.



# Air Handling Units

MYH A, B and C are part of the newest generation of Air Handling Units designed to meet the **highest efficiency** requirements on the market. Developed for a **large range** of applications such as comfort, hygienic, clean rooms, food and pharmaceuticals. Thanks to the **flexibility** in design and execution, **the solutions are unlimited**.

MYH Air Handling Units are designed and manufactured to conform with:

EN 1886 EN 13053 - casing classes and performances

VDI 6022 (sheet 1) DIN 1946 (part 4) - hygienic requirements

2006/42/EC - Machinery directive

EN ISO 9001:2015 - Quality system



**A** From 1,000 to 180,000 m<sup>3</sup>/h



**B** From 1000 to 180,000 m<sup>3</sup>/h



**C** From 1,000 to 60,000 m<sup>3</sup>/h



# EASY INSTALLATION



## ENERGY EFFICIENCY

MYH Air Handling Units have been designed to ensure high operating efficiency and energy recovery and thanks to the smooth surface of the unit, low air velocity and low pressure drops are possible. The result is a low Specific Fan Power and High Energy Class. Thanks to the wide range of options in fans, size, types and variable frequency driver, the most reliable and efficient working condition is achievable. The MYH casing has a low air leakage and a high thermal insulation. The design is in line with international standards and is certified. The units are fully energy efficient.

## INDOOR AIR QUALITY AND EASY INSTALLATION

Reduced installation cost thanks to the concept whereby most options can be factory-installed. Units can be delivered in one piece or in multiple sections. All panels can easily be removed for maintenance, repair or to change components and all sections requiring regular maintenance are equipped with properly sized and airtight hinged doors. This solution provides full accessibility to the internal components.

The internal parts of the unit are perfectly smooth for thorough cleaning. No use is made of internal screws or bolts ensuring a high level of hygiene. Cooling coil and humidifier are provided with fully insulated stainless steel drain pan, 4-sloped with bottom drain in the lowest point to assure a complete water drainage.

Drain pans can be optionally provided in all the sections. Low filter bypass rate and low casing leakage rate provide high air quality.



## HIGH QUALITY CONSTRUCTION

The casing of the MYH Air Handling Units is manufactured using a patented new concept, for MYHA and B consisting of aluminum framework and reinforced polyamide corners with no welding, thus assuring high corrosion resistance, and, for MYHC, consisting in special design that allows panel to panel connection. The sandwich panels are assembled using wedge and gasket, providing a high-level of external and internal finishing and smoothness, high air tightness and full accessibility. Panels are supplied made of different materials and with a panel thickness of 25, 40, 50 or 60 mm.

# ENERGY EFFICIENCY

## HIGH FLEXIBILITY

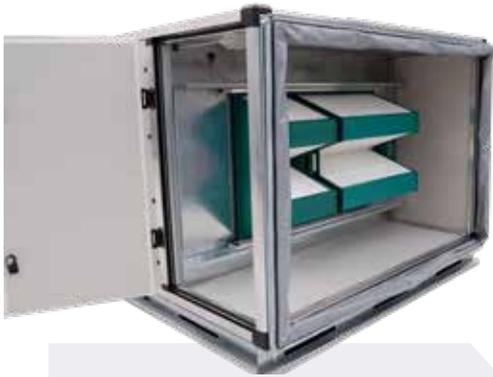
MYH Air Handling Units are **available with an aluminum framework** (type MYHA and MYHB) or in a **frameless version** (type MYHC). 70 sizes for types MYHA and MYHB and 30 sizes for type MYHC. They are available with an airflow range from 1,000 to 180,000 m<sup>3</sup>/h and with pressure drops up to 2500 Pa. **Units are available in every dimension and configuration:** single or double fans, in line, L or U shaped, double decker or side by side, vertical.



# UNLIMITED CHOICES



# COMPONENTS



## FILTERS

Available filters: G3, G4, M5 or M6 folded filters, class EN779; F6, F7, F8, F9 soft or rigid bag filters class EN779; E10, E12, H13, H14 HEPA filters class EN1882; roll filters.

As an option: Roll filter with stainless steel frame, internal filters, electro static filters, active carbon filters, stainless steel filter frame.

High filter air tightness:  
Certified F9 EN 1886.

The filter is locked in a frame with a gasket, preventing the air from bypassing the filter.



## FAN SECTION

The fan section is provided with a wide range of fans and options, to ensure efficiency, noise level and energy consumption; centrifugal forward curved or backward inclined blades, air-foil blade, fan array up to 16 fans properly controlled; plug fan directly coupled; motors are AC or EC type, IE3+, IP 55+, class F+. The motor and fan are mounted on a steel frame with rubber or spring shock absorbers designed for the maximum vibration attenuation. Epoxy painting, stainless steel fans, axial fans, variable frequency drivers (VFD), spark proof and EExd execution are available as options.



## RECOVERY SYSTEMS

A wide range of recovery systems are available to ensure proper and high energy saving: cross flow or counter flow exchanger, rotary wheel, for high recovery efficiency, hygroscopic option; heat pipes, supply-exhaust or U shaped, coil loop.



## ELECTRIC HEATERS

Heaters are manufactured with frame and finned heaters made of carbon steel or stainless steel and are mounted on rails for quick and easy removal. Heating coils are available in one or more stages. There is a low thermal specific load on heaters to ensure low temperature and high reliability.



## SOUND ATTENUATION

A large range of attenuators is available, lengths and baffle shapes are variable to achieve the requested sound attenuation. Sound attenuators are protected against fiber cleavage.



## HUMIDIFICATION

The humidification section can be provided by several types of humidifiers: honeycomb humidification with different thicknesses, nylon water nozzles humidification, with or without pump, steam humidification with stainless steel pipes, including factory mounted steam generator, high pressure water humidification with generator, water and air compressed nozzles humidification with generator.



## COIL SECTION

A wide range of type of coils is available: chilled or hot water coil, glycol water coil, DX or condensing coil, one or more refrigerant circuits, steam coil. Tubes are made of copper or steel and fins are made of aluminum or copper. If required, epoxy coating is available in different specifications. As an option, coils with a stainless steel frame, tubes, fins and anticorrosion treatment are available.

Components are removable in all the units. Coils and humidifiers are mounted on a rail for easy removal. As an option, all other components can be installed on rail for fast and easy removal.

The cooling coil and humidification sections are provided with a diamond shaped drainpan in order to prevent water residues.



# Materials

MYH Air Handling Units are suitable for outdoor installation, provided with protection roof and rain hoods, grilles on intakes.

Custom materials and surface treatments are available, providing chemical resistance or hygienic execution of the unit. Stainless steel construction (components fully made in 304 or 316 stainless steel) or epoxy painted are optional. Air tightness of the casing: Certified L1 EN 1886, reduces the air leakage of non-treated air.



## **Casing and internal parts:**

Galvanized steel, Painted steel, Peraluman, Stainless steel 304 or 316.

## **Thermal insulation:**

Injected polyurethane foam, density 40 kg/m<sup>3</sup>. Mineral wool density 80 kg/m<sup>3</sup>.

## **Dampers:**

Extruded aluminum airfoil blades provided with gasket, rotation by gears out of airflow.

Class 3 or class 2 air tightness according to EN1751-1998.

# Certification

MYH Air Handling Units are certified VDI 6022 (sheet 1) DIN 1946 (part 4) for hygienic requirements and, thanks to continuous research and innovative solutions, they can meet high air quality requirements and can provide a safe and comfortable environment.

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SEM selection software is Eurovent certified and it is a powerful support for the air handling unit design, permitting to reach best in energy Class A.

SEM participates in the ECC programme for Air Handling Units (AHU); check ongoing validity of certificate online: [www.eurovent-certification.com](http://www.eurovent-certification.com) or using [www.certiflash.com](http://www.certiflash.com).

EN 1886 & EN 13053 - Casing classes and performances  
VDI 6022 (sheet 1) & DIN 1946 (part 4) - Hygienic requirements  
2006/42/EC - Machinery directive  
EN ISO 9001:2015 - Quality system





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Political of SEM, top player as HVAC solution provider in residential, commercial and industrial applications, is focused on development of the quality and comfort in building, increase efficiency and productivity and warranty a safe and healthy environment. Due to policy of continuous improvement, SEM reserves the right to change design and specification without prior notice.

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