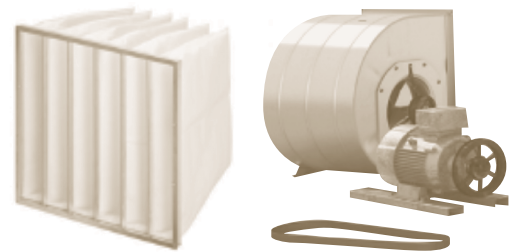
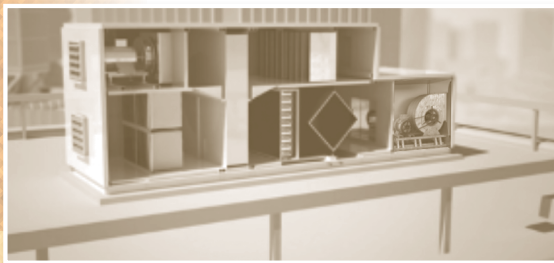


RETROFIT HVAC/R SYSTEMS

Past

Standard Mechanical Filter & Belt Fan



Present & Future

**FE SYSTEM ELECTRONIC FILTER WALL
& GREENTECH EC MODULAR FANGRID**



The replacement of mechanical filters with
FE SYSTEM ELECTRONIC FILTER WALL
matched with the replacement
of belt driven fans with
GREENTECH EC MODULAR FANGRID
ensures high and constant energy
saving estimated up to 70% per year.



The implementation of **FE SYSTEM ELECTRONIC FILTER WALL**



represents an easiest way to **increase, improve the performance and efficiency of HVAC/R Systems.**



The HVAC/R systems can account for up to **40% of the building's energy consumption.** The use of an obsolete filtration system will be far from optimisation in terms of efficiency and performance.

ADVANTAGES OF FE SYSTEM ELECTRONIC FILTER WALL

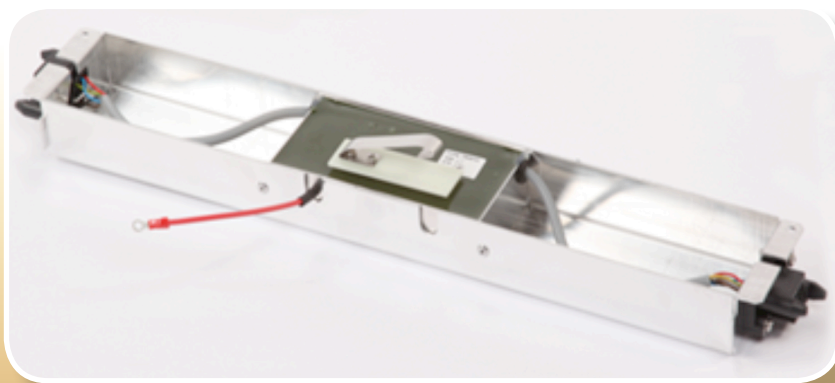
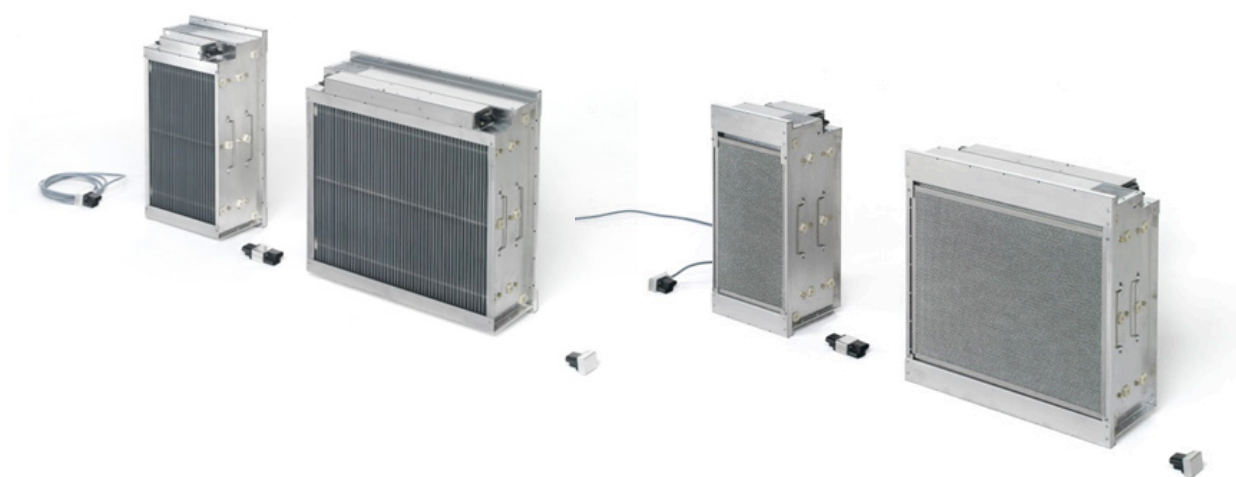


The requalification of HVAC/R Systems with FE SYSTEM ELECTRONIC FILTER WALL can be performed in a few days, minimizing interruptions and inconveniences. FE SYSTEM filters are a universal solution that can be retrofitted to any HVAC/R system, regardless of brand, age or size.



In fact, they have the **same standard ASHRAE (EN 15805) dimensions** as traditional mechanical filters and can be installed on existing sliding frames, greatly simplifying installation operations. Expansion Electronic manufactures both frontal and sliding filters' support frames in case their replacement is necessary.

FE SYSTEM active electronic filters manufactured by Expansion Electronic have been patented with **on board electronic circuit** to simplify and minimize not only the mechanical but also the electrical installation. The electronic circuit on board allows **to connect the filters in series** through multipolar connectors. It is completely resin coated and **waterproof**. It is not necessary to remove it during maintenance operations (simple washing of the filter with water and detergent).



Each circuit is equipped with a **signal LED** which communicates the operating status of the filters in real time; the **signal** can be sent to external management systems such as **PLC or BMS**.

NEEDED INFORMATION FOR A CORRECT SELECTION OF FE SYSTEM FILTERS FOR RETROFIT:

- Quantity of mechanical filters installed in the HVAC/R system
- Arrangement of mechanical filters
(number of rows and number of filters for each row)
- Dimensions of mechanical filters
- Type of mechanical filter support frames
(sliding or frontal)
- Presence or absence of class G2/G4 prefilters
- Airflow of the HVAC/R system in m³/h
- Filtering section internal dimensions in mm
- Efficiency requested



ENERGY EFFICIENCY OF HVAC/R SYSTEMS CAN RISE UP TO 70%

Do you know why?

**Thanks to FE SYSTEM ELECTRONIC FILTER WALL
matched with GREENTECH EC MODULAR FANGRID**

*Are you curious to know the new look
of your ventilation system?*



**ELECTRONIC
FILTER
WALL™**

**EC MODULAR
FANGRID**



 **expansion[®]
electronic**

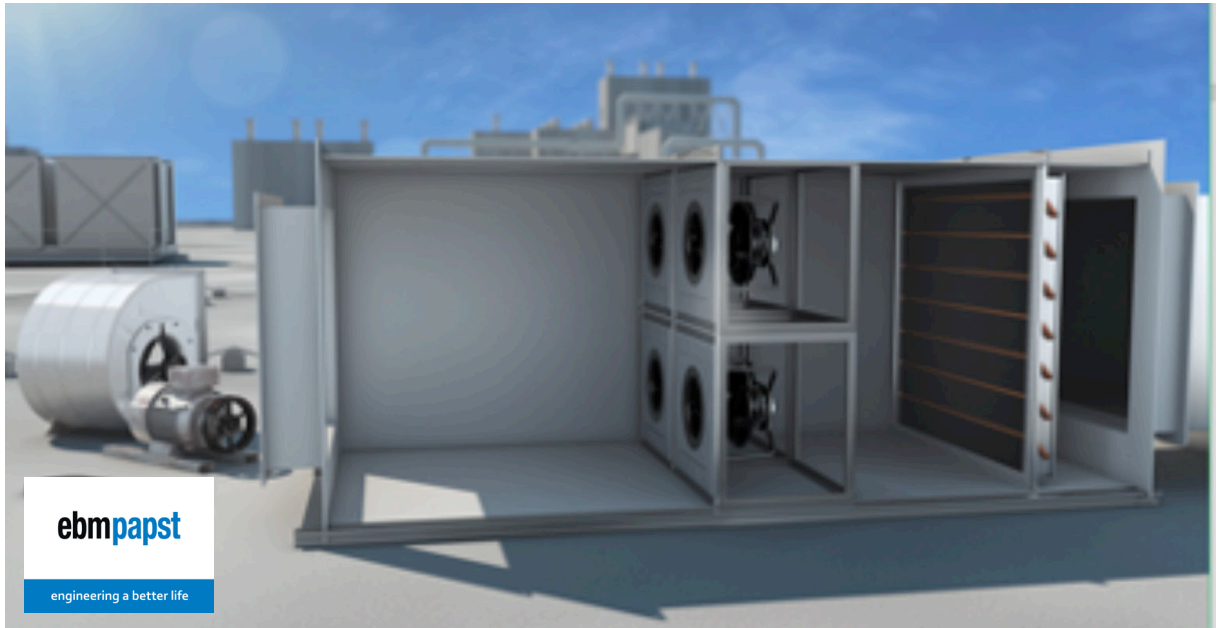
ebm papst

engineering a better life

**expansion[®]
electronic**
BETTER AIR FOR A BETTER QUALITY OF LIFE

MODULAR FANGRID SOLUTION: SEVERAL FANS – COUNTLESS ADVANTAGES

Highly-efficient GreenTech EC technology provides customers with the best opportunities for the future in industrial digitization.



GreenIntelligence offers intelligent networked complete solutions that are unique anywhere in the world today and that secure customers a decisive advantage; solutions which combine the highest energy efficiency with the advantages of IoT and digital networking together with the maximum environmental compatibility.

These days, ventilation technology has moved beyond using large individual fans to generate high air performance levels and is moving increasingly towards leveraging several fans that operate in parallel inside “FanGrids”. This type of arrangement is very flexible and efficient.

What’s more, the redundancy ensures a high level of operational reliability; if one fan fails, the other fans compensate for the missing air quantity.

MODULAR FANGRID SOLUTION: SEVERAL FANS – COUNTLESS ADVANTAGES

The GreenTech EC fans also help to significantly reduce operation costs.

Several small fans also require less space and are lighter than a single large fan. This reduces the cost of the system and makes replacing the fans simple.

An important factor that tends to be overlooked in practice is the risk of installation losses.

If fans are installed too closely together, they tend to influence one another.

The dimensions of the FanGrid module with cube design are very generous and large enough to prevent installation losses.



MODULAR FANGRID ADVANTAGES



Simple handling

- Easy to transport and assemble
- Connecting elements can be purchased separately
- Customized assembly and scalability
- Mount up to five modules one on top of the other
- Direct connection of centrifugal and axial fan units
- Easy to connect



Worry-free operation

- Service-friendly modules
- Maintenance-free fans
- Operational reliability thanks to redundancy (N+x)
- Uniform flow through upstream and downstream components (filter, heat exchanger, etc.)
- Individual stepless control for each fan
- Control and monitoring via MODBUS-RTU communication



Innovative design

- High-strength, lightweight material
- Customized cube sizes possible
- Aerodynamically optimized design to prevent installation losses



Immense power range

- Power range up to ∞ m³/h

RETROFIT made by the combination of **FE SYSTEM ELECTRONIC FILTER WALL** conceived by **Expansion Electronic** and **GREENTECH EC MODULAR FANGRID** is the key to make the **building efficient** through the **reduction of CO2 emissions, energy saving and healthy** through **clean energy** with the **constant goal of a ZERO impact on the environment** that surrounds us.



Expansion Electronic is European market leader
in the production of active electronic filters
with **high energy efficiency and low environmental impact.**
Every day we commit to offer our customers
high quality and first class performance backed by
over 40 years of experience in the air filtration industry.



BETTER AIR FOR A BETTER QUALITY OF LIFE

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