

Air Purifiers and Ventilation Units

Indoor Air Quality

Proper ventilation is the key to high-quality indoor air. Emeg are dedicated to providing excellent indoor air quality within the rail industry both in administration facilities and depot shed buildings.

Recent events have made indoor air quality (IAQ) one of the most trending topics, highlighting the connection between indoor air quality and the wellbeing of the occupants of buildings. We spend more time inside buildings than outside, with jobs and lifestyles that force us to spend more than 80% of our time indoors.

Exposure in these environments to air contaminants - from dust to spores, bacteria or viruses, as well as the chemical compounds released by paint, claddings and furniture - has a direct impact on our immune systems and can cause anything from mild discomfort in our respiratory systems (for example, irritation and dryness) to much more serious health problems such as allergies, especially when the exposure to the contaminants is prolonged.

It has been proven that poor IAQ encourages the transmission of infectious diseases. Maintaining optimal indoor air quality has become a priority - a highly important priority during this pandemic situation. Having equipment and systems that can decrease the virus load and reduce the possibility of infection is especially important.

And it is in this search for excellence in indoor air quality where Emeg continues to work and provide solutions.

Indoor air quality (IAQ) in rail buildings (offices, MDUs, TMDs, LMDs, DMUs, stations, canteens, shops, etc.) is directly related to people's health, productivity and comfort.

What is the solution to improve indoor air quality (IAQ)?

- ❖ Standalone air purification equipment that traps contaminants in the indoor air, turning spaces into comfortable and healthy places.
- ❖ Ventilation systems that reduce the concentration of contaminants in the indoor air, replacing it with filtered outdoor air.

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Standalone Air Purification Equipment

The air purifier option is ideal for premises or buildings that do not have adequate ventilation systems, or companies with facilities or spaces that lack advanced ventilation systems. This type of purifying equipment is also suitable as a ventilation accessory in the elimination of specific contaminants, including viruses and bacteria. The dirty air, laden with pollutants and odours, is sucked in by the equipment and, after circulating through the different filter stages, clean of contaminants, is returned to the interior of the premises. The continuous air recirculation process allows for a constant improvement in air quality, which solves the problems caused by poor indoor air quality.

Simple to operate, the purifiers have a multi-level filtering system that, with a suitable combination of filtering activities, removes contaminants from the air in the places where they are located.

EMAF 850 / EMAF 650

Portable air purifiers.



EMAF 420 / EMAF 350

Portable air purifiers.



CAP

Air purification units for commercial applications.



EMAF 850 / EMAF 650

Portable Air Purifiers

Applications

Air purification in commercial applications, including:

- Offices
- Commercial establishments
- Meeting rooms
- Train maintenance depots
- Light maintenance depots
- Diesel maintenance units
- Canteens
- Security offices
- Data centres
- Station circulation areas
- Rack cupboards where electronic devices are stored
- Workshops and areas where cutting, publishing or welding work is undertaken



Model		Filters	Filtration capacity
Horizontal	Vertical		
EMA 850 H14	EMA 850V H14	F7+H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀)
EMA 650 CA H14	EMA 650V CA H14	F7 + active carbon + H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀) + odours
EMA 650 VOC H14	EMA 650V VOC H14	F7 + Filtro VOC + H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀) + odours + formaldehyde, ethylene, CO, SO ₂ , NO _x , VOC

Model		Clean filter flow rate (m³/h)	Dirty filter flow rate (m³/h)	Area to treat* (m²)		Sound level at maximum speed (dB)	Power supply	Power (W)	Maximum current absorbed (A)
Horizontal	Vertical								
EMA 850 H14	EMA 850V H14	850	600	80	60	50	230V 50-60Hz	180	1,2
EMA 650 CA H14	EMA 650V CA H14	650	450	60	45	49	230V, 50-60Hz	178	1,1
EMA 650 VOC H14	EMA 650V VOC H14	650	450	60	45	49	230V 50-60Hz	178	1,1

*Based on commercial premises with a ceiling height of 3m.

Models		Width (mm)	Length (mm)	Height (mm)	Weight (kg)
Vertical	EMA 850 / EMA 650	550	520	820	50
Horizontal	EMA 850 / EMA 650	550	735	605	50

EMAF 420 / EMAF 350

Portable Air Purifiers

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Model	Filters	Filtration capacity
EMAF 420 H 14P	F7+H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀)
EMAF 350 CA H14	F7 + active carbon + H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀) + odours
EMAF 350 VOC H14	F7 + Filtro VOC + H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀) + odours + formaldehyde, ethylene, CO, SO ₂ , NO _x , VOC

Model	Clean filter flow rate (m ³ /h)	Dirty filter flow rate (m ³ /h)	Area to treat* (m ²)		Sound level at maximum speed (dB)	Power supply	Power (W)	Maximum current absorbed (A)
EMAF 420 H14	420	300	40	30	53	230V 50-60Hz	98	0,7
EMAF 350 CA H14	350	290	36	27	52	230V 50-60Hz	98	0,7
EMAF 350 VOC H14	350	290	36	27	52	230V 50-60Hz	98	0,7

*For commercial premises with height of 3m.

Model	Width (mm)	Length (mm)	Height (mm)	Weight (kg)
EMAF 420 / 350	380	350	708	33

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Air Purification Units for Commercial Applications

Applications

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- ✦ Commercial establishments
- ✦ Meeting rooms
- ✦ Train maintenance depots
- ✦ Light maintenance depots
- ✦ Diesel maintenance units
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Wall- or ceiling-mounted application

Model	Filters	Filtration capacity
CAP series	G4 + F7 + H14	Dust, pollen, spores, bacteria, viruses, fine particles in suspension (PM ₁ , PM _{2.5} y PM ₁₀)

Model	Nominal flow rate (m³/h)	Static pressure clean filters available (Pa)	Area to treat* (m²)	Power supply	Power (kW)	Maximum current absorbed (A)
CAP-1200 H14	1,200	245	100 - 133	1F/230V, 50-60Hz	0,46	2
CAP-2300 H14	2,300	310	192 - 256	1F/230V, 50-60Hz	0,9	4
CAP-3600 H14	3,600	360	300 - 400	1F/230V, 50-60Hz	1,7	7,6
CAP-5200 H14	5,200	300	433 - 578	3+N/400v, 50-60Hz	2	3,8

*For commercial premises with height of 3m.

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Air Purification Units for Commercial Applications

Wall- or ceiling-mounted application

The design of the product is perfect for installing purifiers in vertical furnishings in commercial establishments and offices.

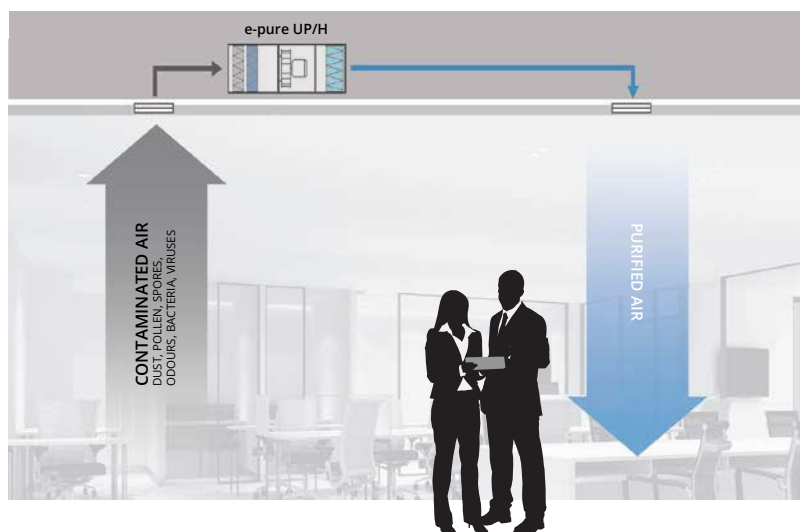


Model	Width (mm)	Depth (mm)	Height (mm)
CAP-1200 H14	750	360	2,220
CAP-2300 H14	1,100	410	2,320
CAP-3600 H14	1,500	410	2,300
CAP-5200 H14	1,900	500	2,300

Model	Width (mm)	Depth (mm)	Height (mm)
CAP-1200 H14	750	360	1,860
CAP-2300 H14	1,100	410	1,910
CAP-3600 H14	1,500	410	1,910
CAP-5200 H14	1,900	500	1,910

Horizontal purification unit

The design is perfect for purification systems in ceilings and false ceilings.



Model	Width (mm)	Depth (mm)	Height (mm)
CAP-1200 H14	360	750	1,500
CAP-2300 H14	410	1,100	1,500
CAP-3600 H14	410	1,500	1,500
CAP-5200 H14	500	1,900	1,500

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Air Purification Units for Commercial Applications

Boost Current Systems Ventilation Systems: The Complete Solution

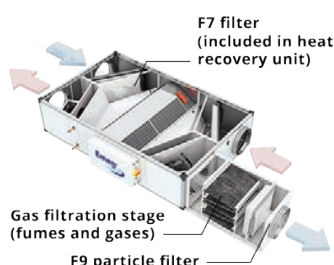
The ventilation system must be sized in such a way that guarantees the airflow needed in accordance with the occupancy and the activity of the building. Air filters in ventilation systems are essential elements in commercial areas and spaces where safety and greater health benefits are sought, in addition to a feeling of comfort. The incorporation of filters for incoming outdoor air will prevent particles entering from the external environment (dust, pollen, fine particles PM10, PM2.5 and PM1), which will guarantee the protection and comfort of the occupants. In installations located in urban areas with high levels of pollution, the filtering stages will also include processes to eliminate gaseous pollutants.

In order to guarantee the efficiency of the ventilation and filtration system, it is essential to carry out a preliminary study, taking into account the particular needs of each space or building.

The benefits may vary depending on the combination of filters we use, achieving a certain level of protection, starting with basic levels of filtration, which protect against dust, up to levels of filtration with the ability to trap fine particles, bacteria and viruses.

FB-IAQ HE

IAQ modules CADB-HE to be installed with.



UVF ECOWAT

Energy-efficient acoustically insulated ventilation units with integrated filters.



CFL-N

Steel filter units for the CVTT series.



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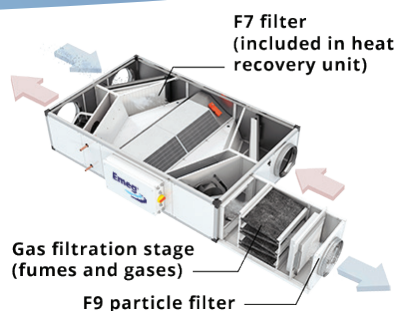
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FB-IAQ HE

IAQ modules CADB-HE to be installed with.

They have two high-efficiency filtration stages, which give them high capacity to trap gases and particles contained in outdoor air such as H_2S , CO , SO_2 , O_3 or NO_x , and PM_{10} , $PM_{2.5}$ and PM_1 particles.



CFL-N

Steel filter units for the CVTT series.

Galvanised steel filter units, with capacity for two high-efficiency filters, from G4 to F9, ideal for supplying outdoor air in industrial applications. They adapt to the CVTT series ventilation units without accessories.

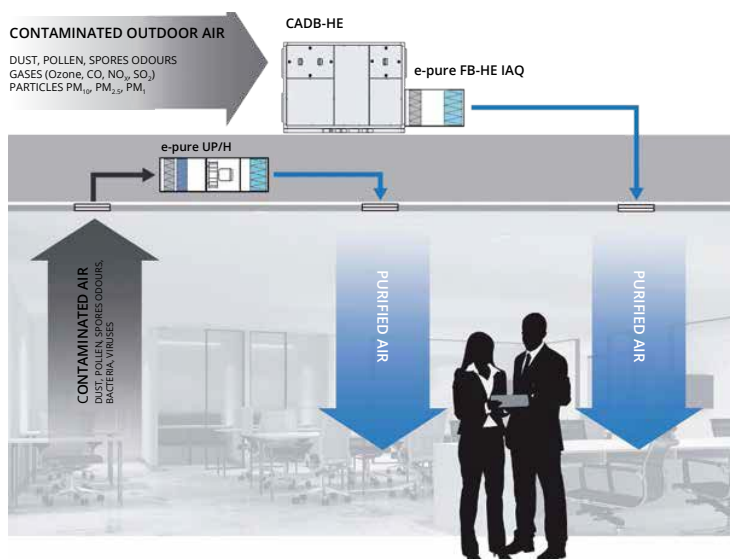
UVF ECOWAT

Energy-efficient acoustically insulated ventilation units with integrated filters.

Capacity to assemble up to three filters. Filtration efficiency $ePM_{10} = 99.5\%$, $ePM_{2.5} = 98.5\%$, $ePM_1 = 96.2\%$.



Combination of filters	Filtration efficiency s/ISO-16890		
	ePM_{10}	$ePM_{2.5}$	ePM_1
M5	55%	-	-
F7	90%	83%	75%
F9	95%	91%	85%
M5+F7	95.5%	83%	75%
M5+F9	97.7%	91%	85%
F7+F9	99.5%	98.5%	96.2%



The complete solution
Purifiers + filter units for outdoor air.

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