

IQAir® New Edition

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CONFORTO

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First in Air Quality

# Cleanroom Series

## Professional Control of Airborne Microorganisms and Particulate Matter



The IQAir Cleanroom Series offers a range of portable, self-contained HEPA air filtration systems designed to meet airborne infection control and particulate contamination challenges in critical indoor environments.

IQAir systems filter the air by recirculation or by creating true positive or negative pressure environments with special IQAir ducting adaptors.

Each Cleanroom model **AND** each HyperHEPA® replacement filter is individually tested and certified to guarantee actual filtration efficiency.

The superior filtration efficiency, versatility and mobility make the IQAir Cleanroom Series the most advanced and cost-effective line of mobile air filtration systems available today.



## Professional Control of Airborne Microorganisms & Particulate Matter

The IQAir Cleanroom Series consists of three high-performance air cleaning models (**Cleanroom 100, 250 and H13**). Each model is specifically designed for the removal of solid and liquid airborne particles and aerosols. Due to their certified and guaranteed high filtration efficiency, the systems are predominantly used for airborne infection control in health-care settings and for the control of particulate matter in cleanroom-type applications.



*IQAir Cleanroom 250*

While all 3 Cleanroom models focus on the filtration of airborne liquid and solid particulate matter, the Cleanroom 250 also removes a wide spectrum of gaseous contaminants and odours with its V5-Cell™ filter. The H13 is the largest of the 3 models, offering the largest pre-filter surface area (i.e. longest pre-filter life) and the highest air delivery rate. Each system features antimicrobial pre- and HyperHEPA® filters, as well as anti-tampering arm-locks that prevent the system from being opened by unauthorised personnel.

### Individually Tested and Certified

To guarantee superior performance, the Swiss manufacturers have taken an uncompromising approach: Each IQAir HEPA system is individually tested for filtration efficiency and air delivery. The actual test results are documented on a numbered test certificate supplied with each system.

### Positive and Negative Pressure Environments

Each IQAir Cleanroom system can clean the air by recirculation, or can be connected to special IQAir ducting adaptors to create positive and negative pressure environments. Pressure differentials are particularly beneficial when the containment of harmful microorganisms and particles or the protective isolation of immuno-compromised patients is required.



*IQAir system connected to OutFlow™ and InFlow™ ducting adaptors for the creation of pressure differentials between adjacent areas.*

### Advanced Controls

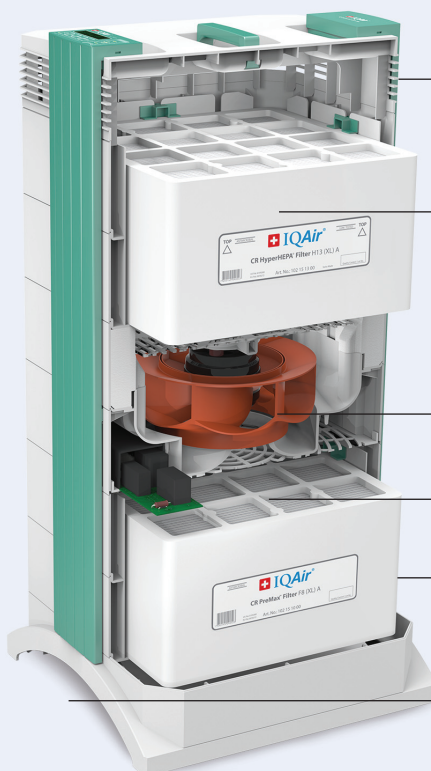
The sophisticated control features of IQAir systems include a microchip controlled filter-life monitor that calculates the remaining filter life, taking actual use and contamination levels into account. An integrated timer allows the system to be programmed to switch on and off at the desired times on the desired weekdays. The patented IQAir housing design permits quick and safe replacement of individual filter elements without any tools. For added convenience, each IQAir system can be operated via remote control. If floor space is limited, a special bracket (VMF™) is available that allows the IQAir system to be wall-mounted.

#### Medical Applications:

- Protective isolation rooms
- ICUs
- Burn units
- Minor surgery rooms
- Organ transplant wards
- Oncology wards
- Research, IVF & microbiology labs
- TB isolation & anterooms

#### Commercial Applications:

- FDA-required "controlled environments"
- Medical device manufacturing & packaging
- Food processing & packaging
- Air locks
- Cleanroom gowning rooms
- Critical data storage facilities
- Computer & server rooms



*IQAir Cleanroom H13 cross-section*

## IQAir® Cleanroom Series: Features

### Air Outlet Diffuser

- returns clean, low turbulence, low velocity air
- **optional:** various outlet adapters to create positive and negative pressure environments or to direct the air flow (OutFlow™)

### Antimicrobial Certified HyperHEPA® Filter

- individually tested & certified for actual filtration efficiency
- guaranteed efficiency of  $\geq 99.97\%$  at  $\geq 0.3 \mu\text{m}$  (HEPA Class H13)
- large filter surface (H13:  $7.5 \text{ m}^2$ ) for long filter life (other models  $5.5 \text{ m}^2$ )
- individually tested & certified HyperHEPA® replacement filters

### High-Performance Centrifugal Fan

- air delivery with filters: up to  $530 \text{ m}^3/\text{h}$  (H13 model)
- sandwiched between double-walled housing and noise-absorbing filter elements

### Antimicrobial Pre-Filter

- fine dust filtration with mini-pleat 55% efficient media at  $\geq 0.3 \mu\text{m}$  (ASHRAE 90-95%, Class F8) prolongs life of HyperHEPA® filter
- large surface (H13:  $7.0 \text{ m}^2$ ) for long filter life (other models  $2.8 \text{ m}^2$ )

### Dual Air Intake

- maximum distance from air outlet prevents immediate re-intake of cleaned air (short-cutting)
- **optional:** various air intake adaptors to create positive/negative pressure environments (InFlow™ and VM InFlow™) or to provide source capture of contaminants (FlexVac™ and VM FlexVac™)

## IQAir® Cleanroom Series

### World-Leading Swiss Technology for High-Performance Airborne Infection Control

For over 57 years, INCEN AG of Switzerland (a member of The IQAir Group) has been an industry leader for indoor air quality and hygiene. In the 1990s the IQAir product line was developed which is now recognised as the world's premier range of mobile high-efficiency air cleaning systems. Leading institutions around the world are relying on IQAir solutions to protect against airborne infectious diseases, toxic chemicals and particulate contaminants. Here are the key reasons why IQAir systems are the No.1 choice of world-leading healthcare and research institutions.



#### 1. Used around the world in the fight against Covid-19

IQAir's particular strength lies in providing cost-effective decentralised airborne infection control solutions for healthcare institutions and other professional applications. Due to their certified high-efficiency performance, IQAir Cleanroom models are currently being deployed in healthcare institutions across Europe, Asia and America to reduce the risk of airborne infection transmission of the novel corona virus (SARS-CoV-2). Their use in critical environments such as patient isolation rooms, intensive care units and Covid-19 test centers effectively reduces airborne pathogens, thus reducing the risk of staff and patients becoming exposed to infectious doses of virus-laden aerosols that can remain airborne for hours.

#### 2. Scientifically tested performance against viruses

The unique filter combination of the Cleanroom models provides reliable removal of infectious microorganisms, including all types of fungal spores, bacteria and even viruses. The exceptional removal efficiency of the Cleanroom 250 and Cleanroom H13 models for airborne viruses was confirmed by the independent European test laboratory, *Airmid Healthgroup*. Within only 10 minutes they reduced the viral load in a 28.5 m³ room by over 99.9%, eliminating the virus beyond the measuring threshold.

The outstanding filtration efficiency for the removal of viruses as well as gram positive and gram negative bacteria has also been tested and verified by the British Government's *Health Protection Agency* (now *Public Health England*).

#### 3. Peer-reviewed research article attests clear reduction in infection rates

In an independent peer-reviewed research study published in February 2010 in the *American Journal of Infection Control* it was shown that IQAir HyperHEPA® systems reduced the rate of invasive aspergillosis infections by 50%. The research was conducted by a team of doctors and scientists at *Singapore General Hospital*. In view of the fact that invasive aspergillosis is often fatal, with mortality rates ranging from 30% to 95%, and the enormous costs associated with its treatment, IQAir systems can save lives as well as costs. The researchers concluded that IQAir systems are an effective and powerful tool for hospital infection control and that their deployment will enable hospitals to realise massive cost savings by reducing infection rates:

*"Compared with patients without IA [invasive aspergillosis], patients with IA have an average excess duration of hospitalization of 12.3 days and an excess cost of \$ 51'779. Thus, the deployment of [IQAir] portable HEPA units is a very cost-effective strategy."*

#### 4. HEPA Filter Classification in accordance with European Norm EN 1822

The HyperHEPA® filter of the IQAir Cleanroom models has been tested and classified in accordance with one of the world's most stringent filter test norm for high-efficiency filters - *European Norm EN 1822*. The awarded "H13" classification means that the IQAir Cleanroom systems have an absolute minimum efficiency of 99.95%, even for the tiniest and most infectious particles known.

#### 5. Effective removal of airborne MRSA (*methicillin-resistant Staphylococcus aureus*)

A British research study published in the *Journal of Hospital Infection* confirmed that the use of an IQAir Cleanroom system significantly reduced the environmental MRSA contamination in patient rooms by 75% to 93%, thus reducing the risk of MRSA spreading and infecting other patients.

#### 6. The choice of leading health authorities and medical institutions around the world

During the first SARS outbreak in 2002/2003 over 150 clinics, healthcare centres and hospitals across Hong Kong were equipped with IQAir to reduce the risk of infection transmission for healthcare staff and patients. In the wake of the Covid-19 pandemic, tens of thousands more IQAir air purifiers have been deployed in healthcare facilities, dental practices, offices, retail locations, hotels, restaurants and educational institutions to reduce the risk of infection transmission in densely occupied indoor spaces.

#### 7. Individually Tested and Certified for Guaranteed Performance

Each IQAir Cleanroom model is individually tested and certified for actual filtration efficiency and actual air delivery. The individual test results are recorded on a hand-signed *Certificate of Performance* supplied with the IQAir system. This provides total quality assurance for critical applications. The HyperHEPA replacement filters of the IQAir Cleanroom Series are also individually tested and certified to ensure continuing high-efficiency performance even after the original filter has been replaced.





#### 8. Optional ducting accessories for the creation of positive/negative pressure environments

IQAir systems can be deployed as stand-alone room air purifiers or can be attached to optional ducting adaptors (*OutFlow™* and *InFlow™*) to create negative pressure (containment) or positive pressure (protective) isolation rooms in a matter of minutes. The creation of pressure differentials is one of the most effective ways to limit the airborne spread of infectious particles within buildings.



## The IQAir® Cleanroom Series – Model Comparison

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			Cleanroom 100	Cleanroom 250 MG	Cleanroom H13
					
Filtration Spectrum & Efficiency	Allergens (pet dander, pollen, mould spores, etc.)		✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
	Odours***		✓	✓✓✓✓	✓
	Fine Dust and Particulate Matter		✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
	Gaseous substances***		✓	✓✓✓✓	✓
	Bacteria		✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
	Viruses		✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
	Total System Efficiency for Particles		≥99.97% @ ≥0.3 µm (certified)		
	MPPS*-Efficiency (according to EN1822)		≥99.95% at fan speeds up to 190 m³/h; ≥99.50% at fan speeds up to 475 m³/h		
Filters	Pre-filter	Type/Description	CR PreMax™ Filter F8 (S) A Antimicrobial pre-filter (class F8) for the control of coarse and fine particulate matter		CR PreMax™ Filter F8 (XL) A High-capacity, antimicrobial pre-filter (class F8) for the control of coarse and fine particulate matter
		approx. Filter Life †	9-15 months		21-27 months
		Surface area	2.8 m²		7.0 m²
	Gas- & Odour filter	Type/Description	n/a	V5-Cell™ Filter MG Wide-spectrum MultiGas™ granular media mix for the control of a broad range of chemical pollutants and odours***	n/a
		approx. Filter Life †		15-21 months	
		Weight		2.5 kg	
	Particle Filter	Type/Description	CR HyperHEPA® Filter H13 (L) A High-capacity, antimicrobial, hospital-grade HEPA filter (class H13) for the control of fine & ultra-fine particulate matter and microorganisms (incl. fungal spores, bacteria and viruses)		CR HyperHEPA® Filter H13 (XL) A High-capacity, antimicr., hospital-grade HEPA filter (class H13) for the control of fine & ultra- fine particulate matter and microorganisms (incl. fungal spores, bacteria and viruses)
		approx. Filter Life †	30-42 months		36-48 months
		Surface area	5.5 m²		7.5 m²
Technical Specifications	Air Delivery per level (m³/h)**		1: 60, 2: 100, 3: 170, 4: 260, 5: 350, 6: 500 m³/h	1: 55, 2: 100, 3: 170, 4: 250, 5: 320, 6: 450 m³/h	1: 65, 2: 120, 3: 190, 4: 270, 5: 370, 6: 530 m³/h
	Sound Pressure / Power Level per level**		L <sub>p</sub> : 1: 22, 2: 33, 3: 41, 4: 47, 5: 52, 6: 57 dB(A); L <sub>w</sub> : 1: 32, 2: 43, 3: 51, 4: 57, 5: 62, 6: 67 dB(A)		
	Dimensions		61 x 41 x 38 cm	71 x 41 x 38 cm	82 x 41 x 38 cm
	Weight (incl. Filter)		approx. 12 kg	approx. 16 kg	approx. 21 kg
Features & Accessories	Standard Equipment		Intelligent filter life monitor • Filter replacement LED • Advanced timer • 6 fan speeds • 4 display languages • 4-key touch-pad with 2-line LCD display • Anti-tampering arm lock • Anti-tampering power cord lock • High-performance centrifugal backward curved fan • Individually tested & certified HyperHEPA® replacement filters • Remote control (incl. battery) • Power cord • Certificate of performance		
			Mobility Deluxe casters		n/a
	Optional Accessories		VMF (wall-mount bracket) • PF40 (coarse dust pre-filter) • InFlow, VM InFlow & OutFlow (positive/negative pressure duct connections) • FlexVac & VM FlexVac (mobile & wall-mounted source capture kits) • SMC (side-mounted control panel) • Mobility S6 / Mobility Deluxe casters		
	Origin / Guarantee		Made in Switzerland / 2 years (without filters)		

\* Most Penetrating Particle Size; \*\* measured at 230V, 50Hz; tolerance ±10% (± 10 m³/h); \*\*\* see IQAir Media Selection Chart for Gaseous Contaminant control; for replacement filters there is a choice of 5 media types available: MultiGas, VOC, ChemiSorber, AM, Hg

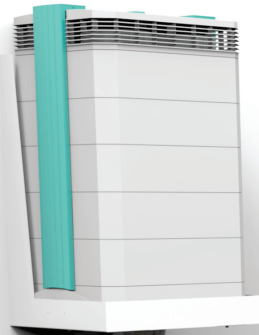
† The filter life estimate is based on the following assumptions: Average usage (12 hours/day), average fan speed (3) and average pollution concentrations. Actual filter life will depend on actual usage conditions.

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# Overview of professional IQAir® accessories



**VM FlexVac™**  
wall-mounted source capture kit



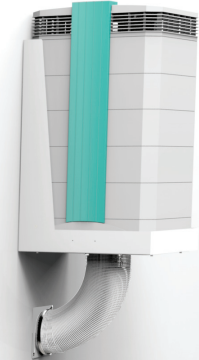
**VMF** wall-mounted bracket



**SMC\*** side-mounted control panel and  
**VMF** wall-mount bracket



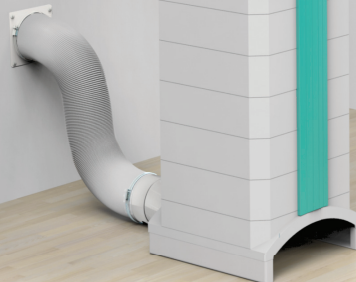
**VM InFlow™** wall-mounted  
ducting adaptor



**OutFlow™** ducting adaptor



**InFlow™** ducting adaptor



**FlexVac™** mobile source  
capture kit

