



**HAZE FREE FILTERS**  
AIR FILTERS FOR SMOKE/HAZE

***Ultimate PM1, VOCs and Ozone removal!***



Clean air solutions

### INDOOR AIR QUALITY

Haze and smog have become severe health risks all over the world, but in particular in Asia, due to the forest burning activities and pollution from industries and traffic. The key air pollutant of concern during the haze period is particulate matter (PM). Exposure to particulate matter can cause severe illness and premature death.

The basic idea behind ventilation is to mix indoor air with outdoor air. Because the outdoor air is so polluted, the choice of filters is of utmost importance. If the air is not properly cleaned, there is a risk that indoor air will contain a very large quantity of harmful particulates (also VOCs and Ozone) which will find their way into people's respiratory tracts and circulation systems.

### PARTICULATE MATTER

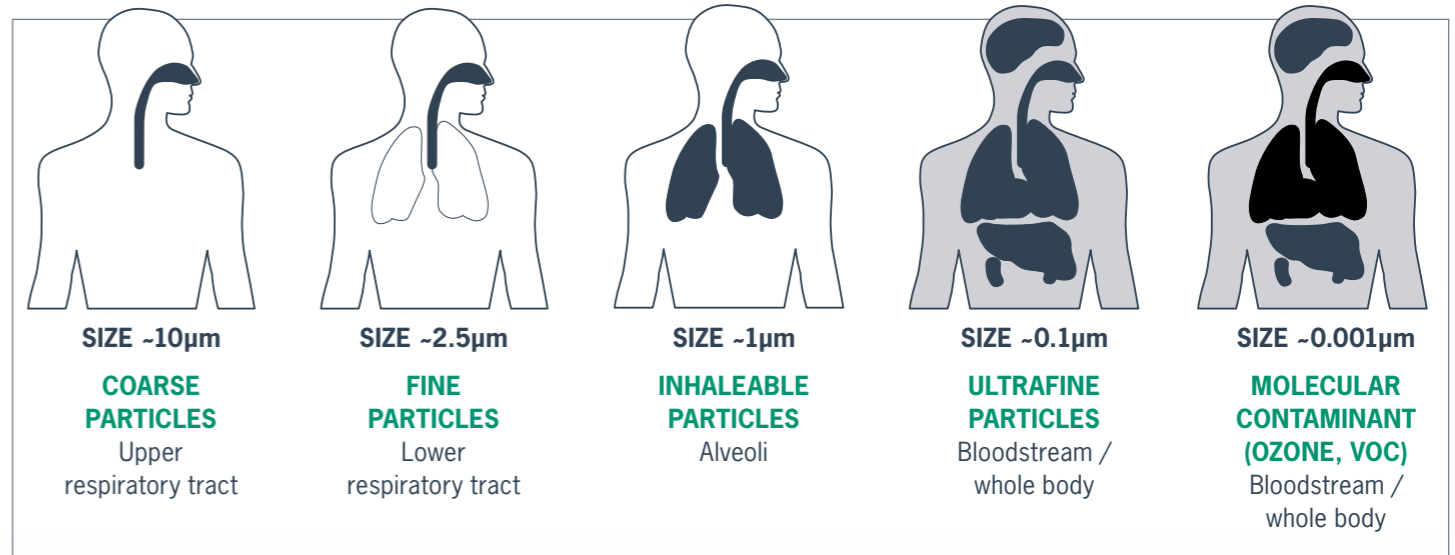
We all know that air pollution is bad for human health. A much less known fact is that new research indicates that the smallest particles in the air are the most dangerous.

**PM1** (particles smaller than 1/1000 mm) is so bad for our health because the human body has no protection against these very small particles. They enter our bodies through the respiratory system when we inhale, and a significant amount go deep into our lungs and continue into the blood stream.

**PM1** particles contribute to deadly diseases such as heart attacks and lung cancer. Recent studies show the small particles may also link to dementia.

### FILTER SOLUTION

- Filters need to provide the efficiency for particle size 1µm or smaller.
- The smell associated with burning or vehicle emissions is created from molecular gases such as VOC and Ozone. The gases should be filtered to provide fresh air indoors.
- Haze Free filters are compact filters with good energy ratings and adequate efficiency on particulates and gases.
- In an environment with dirty air, Haze Free filters with high ePM1 efficiency are recommended.
- In an environment with high gas levels, Haze Free filters with high molecular gas efficiency are recommended.



### FACTS

- Significant risks for the development of new cases of chronic bronchitis and obstructive airways disease were found for annual average PM10 and PM2.5 levels of 20 - 100 µg/m³.
- When forest burning in SEA, air contain PM2.5 higher than 35µg/m³.
- The mean concentrations of VOC in Beijing were 67.4 ± 33.3 µg/m³ on clear days and have five to seven-fold increase in polluted periods.
- Long-term exposure to high levels of some VOCs can cause cancer and affect the liver, kidney and nervous system.
- In studies, Ozone concentration at 80ppb produce adverse effect on human health. Ozone level on a hazy day can easily reach this concentration.
- Long term exposure to Ozone can cause reduced lung function and aggravated asthma.



### HAZE FREE FILTERS PRODUCT RANGE



	CITYPLEAT 200 594x594x95	CITYPLEAT 480 594x594x95	CITY-FLO 592x592x534	CITY-FLO XL 592x592x640	CITYCARB I 592x592x292
<b>PREFILTER</b>	Yes	Yes	No	No	No
<b>SECONDARY FILTER TWO-IN-ONE</b>	No	No	Yes	Yes	Yes
<b>PARTICLE EFFICIENCY</b>	ISO 16890 Coarse 65%	ISO 16890 Coarse 65%	ePM1 60%	ePM1 60%	ePM1 70%
<b>EN 779</b>	G4	G4	F7	F7	F7
<b>DUST HOLDING CAPACITY (DHC)</b>	★★	★★★	★★★★★	★★★★★	★★★★★
<b>AIR FLOW(m³/h)</b>	3400	3400	3400	3400	3400
<b>ISO 10121-3 OZONE</b>	LD 60	HD 60	HD85	vLD 20	HD 80
<b>ISO 10121-3 NO<sub>2</sub></b>	vLD 55	LD 60	LD 85	vLD 20	LD 70
<b>ISO 10121-3 SO<sub>2</sub></b>	vLD 25	vLD 35	MD 55	vLD 10	MD 50
<b>ISO 10121-3 TOLUENE</b>	LD 70	MD 70	MD 80	vLD 30	MD 80
<b>PRESSURE DROP(PA)</b>	125	90	140	85	130

## Camfil – a global leader in air filters and clean air solutions

For more than half a century, Camfil has been helping people breathe cleaner air. As a leading manufacturer of premium clean air solutions, we provide commercial and industrial systems for air filtration and air pollution control that improve worker and equipment productivity, minimize energy use, and benefit human health and the environment.

We firmly believe that the best solutions for our customers are the best solutions for our planet, too. That's why every step of the way – from design to delivery and across the product life cycle – we consider the impact of what we do on people and on the world around us. Through a fresh approach to problem-solving, innovative design, precise process control and a strong customer focus we aim to conserve more, use less and find better ways – so we can all breathe easier.

The Camfil Group is headquartered in Stockholm, Sweden, and has 30 manufacturing sites, six R&D centers, local sales offices in 35+ countries, and about 5,600 employees and growing. We proudly serve and support customers in a wide variety of industries and in communities across the world. To discover how Camfil can help you to protect people, processes and the environment, visit us at [www.camfil.com](http://www.camfil.com).



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