



Bringing clean air to life:

Product Quick Reference Guide



Bringing clean air to life.™



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Classifying Air Filters

Measuring Real Life – ISO 16890 replaces EN779:2012



International Standards Organization issues a new standard for filter testing and rating



ISO coarse – filters allocated to this range capture less than 50% of PM10 particles.



PM10 – Refers to the particle size fraction in the range from 0,3 µm up to 10 µm.



PM2,5 – Refers to the particle size fraction in the range from 0,3 µm up to 2,5 µm.



PM1 – Refers to the particle size fraction in the range from 0,3 µm up to 1 µm.

The precise definition of PM10, PM2,5 and PM1 is quite complex and not simple to measure. Public authorities, like the US EPA or the German Federal Environmental Agency (Umweltbundesamt), increasingly use in their publications the simpler denotation of PM10 as being the particle size fraction less or equal to 10 µm. Since this deviation to the above-mentioned complex "official" definition does not have a significant impact on a filter elements particle removal efficiency, the ISO 16890 documents refer to this simplified definition of PM10, PM2,5 and PM1.

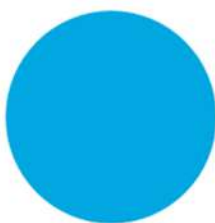
More Than Logic— ISO 16890 Measures Reality!

The world's leading health-related organizations consider PM10, PM2,5 and PM1 fine dust fractions as the most important and dangerous for humans. Their official documentation to the public always refers to these PM levels.

It is more than logic that filter test methods and classifications follow this approach to demonstrate filtration performance towards the most harmful fine dusts.



The Main Difference Between EN779 and the ISO 16890



10 µm

2,5 µm

1 µm

0,4 µm

0,3 µm

According to **EN779** filter test procedures are considering only particles in the size of 0,4 µm

According to **ISO 16890** filter test procedures are considering the range from 10 µm–0,3 µm

Due to their Harmfulness, Permanence, and Frequency, Particles Smaller or Equal to 1µm Need the Most Attention!

The lighter and smaller a particle is, the longer it stays in the air.



Particles smaller than **1 micron** contribute only a few % to the mass, at the same time contributing to **over 90% of the numbers**.

VariCel®

Highly efficient compact filter with a deep-pleat media pack, supported by aluminium separators in a robust construction

Recommended application:
Pre- or final filtration in central air handling systems and industrial installations under demanding conditions

Configuration and performance:

- ISO 16890: ePM1 and ePM10
- Filter class EN779: M6 - F8
- Media: fibreglass
- Filter frame: galvanized steel and extruded aluminium
- Optional: dry seal gasket
- Temperature limit: 70 °C (with gasket)
- 150 °C (without gasket)



VariCel® II

Mini-pleat filter with lightweight frame and low pressure drop for easy installation and reduced energy consumption

Recommended application:
Pre- or final filtration in central air handling systems under turbulent conditions

Configuration and performance:

- ISO 16890: ePM1 and ePM10
- Filter class EN779: M6 - F8
- Media: fibreglass
- Optional: bacteriostatic treatment
- Filter frame: MDF or beverage cardboard
- Optional: dry seal gasket
- Temperature limit: 70 °C



VariCel® EcoPak

Very compact filter with uniform media pack for high filtration efficiency of fine dust in lightweight and fully combustible frame

Recommended application:
Pre- or final filtration in central air handling systems and industrial installations with limited space

Configuration and performance:

- ISO 16890: ePM 1 and ePM 10
- Filter class EN779: M6 - F9
- Media: fibreglass
- Optional: bacteriostatic treatment
- Filter frame: HIPS
- Optional: dry seal gasket
- Temperature limit: 70 °C



VariCel® M-Pak

Lightweight and space-saving compact filter with extended filtration surface in non-corrosive and fully combustible frame

Recommended application:
Pre-filtration in central air handling systems and industrial installations under turbulent conditions

Configuration and performance:

- ISO 16890: ePM 1 and ePM 10
- Filter class EN779: M6 - F9
- Media: fibreglass
- Optional: bacteriostatic treatment
- Filter frame: HIPS
- Optional: dry seal gasket
- Temperature limit: 70 °C



VariPak

Mini-pleat filter with ultrafine fibreglass media pack, low pressure drop and available with various configuration options

Recommended application:
Pre- or final filtration in central air handling systems, pre-filtration for cleanrooms

Configuration and performance:

- ISO 16890: ePM 1 and ePM 10
- Filter class EN779: M6 - F9
- Media: fibreglass
- Filter frame: anodized extruded aluminium or MDF
- Optional: dry seal or gel seal gasket
- Temperature limit: 70 °C



VariCel® V XLE

Air filter with high capacity in a robust V-shaped configuration with a lightweight and fully combustible plastic construction

Recommended application:

Designed to provide excellent performance combined with high energy savings, in either industrial or commercial HVAC installations

Configuration and performance:

- ISO 16890: ePM1
- Filter class EN779: F7 - F9
- Media: fibreglass
- Filter frame: combination of HIPS and ABS
- Optional: Polyurethane foamed endless
- Temperature limit: 70 °C



VariCel® V XL

Air filter with high capacity in a robust V-shaped configuration with a lightweight and fully combustible plastic construction

Recommended application:

Pre- or final filtration in central air handling systems and demanding industrial installations, pre-filtration for cleanrooms

Configuration and performance:

- ISO 16890: ePM1 and ePM10
- Filter class EN779: M6 - F9
- Media: fibreglass
- Filter frame: combination of HIPS and ABS
- Optional: dry seal gasket / reverse airflow
- Temperature limit: 70 °C



Pocket Filtr

DriPak GC

Pocket filter made of microglass media with self-rigid properties removes both particles and gases

Recommended application:

Pre- or final filtration in properties in environments with heavy traffic flows, hospitals, schools, day care centres

Configuration and performance:

- ISO 16890: ePM1
- Filter class EN779: F7
- Media: microglass with activated carbon granules
- Filter frame: galvanized steel
- Temperature limit: 50 °C

