



## **AIR FILTRATION SOLUTIONS FOR AUTOMOTIVE INDUSTRY**





Mikropor began its journey in 1987 with a passion to create “Tomorrow’s Technology” and has become one of the leading manufacturers of atmospheric air filtration solutions and compressed air treatment systems for a variety of industries.

By closely following the latest developments in technology, Mikropor’s “Best in Class” products and solutions are appreciated by customers in more than 140 countries.

The company’s sustainable growth has been provided by its passion for innovation and commitment to quality, as well as its dedication to technology. Mikropor is an environmentally conscious company that values people, while developing products that extend the needs and expectations of customers.

With this mission, Mikropor continues to become one of the most recognized brands in the world by expanding its global penetration in the field of technological filtration and contributes to a healthier planet.

[www.mikropor.com](http://www.mikropor.com)



**Painting is the most important process** in the automotive industry-after all, it is the first thing a prospective client sees on the vehicle!

Painting provides the attractive appearance and finish on a vehicle and protects against corrosion and weathering. The painting process itself includes multiple sub-processes such as Pre-Treatment & Electrodeposition (ED), ED Sanding, Sealant and PVC, Priming and Topcoat finishing.

**The key to getting a quality, long lasting paint finish is good filtration.**



## WHY AIR FILTRATION IS IMPORTANT AND CRITICAL FOR AUTOMOTIVE PAINTING?

The minor issues with the paint process can have serious and detrimental consequences to the automotive industry. Air Quality is critical in every step of the process in a paint shop. Contaminated air can lead to expensive reworking and can even shut down the production line. Overspray of paint is also generally attributable to issues with air filtration in the paint systems used.



## HOW CAN YOU KEEP YOUR SYSTEM OPTIMAL IN TERMS OF FILTRATION?

Potential defects and contamination that can cause reworking in the paint process include:

- Shedding particles from low quality filters
- Process dust
- Overspray paint
- Shedding of cloths, human sourced particles
- Contamination originating from equipment's transportation

**Air Quality Management** is critical for the entire painting process. Eliminating airborne dust contamination is essential to prevent failures. Selecting the right filter for the right application is the first step in controlling the air quality. As a general rule, all airborne particles that have a diameter greater than 10 microns will be visible to the naked eye, so we consider that the critical particle size is any particle greater than 10 microns.

Mikropor recommend using a minimum two stages of filtration and in environments with heavy contaminants three stages of filtration may be appropriate.

**For recirculating air systems, it is strongly recommended to have a three-stage filter design to ensure consistently good air quality and avoid agglomeration of overspray particles.**



## OPTIMISING FILTRATION PERFORMANCE IS THE KEY TO TROUBLE-FREE PRODUCTION

Mikropor highly recommends the following filter combinations for paint processes.

AIR SYSTEM		1 <sup>st</sup> STAGE	2 <sup>nd</sup> STAGE	3 <sup>rd</sup> STAGE
FRESH AIR SUPPLY SYSTEM	PAINT PROCESS	MSKPN G4 MPR G4	MPR M5/M6 MV F7	MV F7
	DRYING PROCESS (DIRECT BURNER)	MSKPHT G4/M5	MASHT M6 MV4HT M6	MPHT F8
	DRYING PROCESS (INDIRECT BURNER)	MASHT M6 MV4HT M6	MPHT F8	
RECIRCULATE AIR SUPPLY SYSTEM	PAINT PROCESS	MPR G4	MPR M6	MV F7 / F8
	DRYING PROCESS (DIRECT BURNER)	MSKPHT G4/M5	MASHT M6 MV4HT M6	MPHT F8
	DRYING PROCESS (INDIRECT BURNER)	MASHT M6 MV4HT M6	MPHT F8	



## YOU SHOULD TRUST YOUR FILTER WHEN TEMPERATURE RISES TO 350°C



Mikropor has more than 20 years' experience in the design and manufacture of high temperature filtration. The expertise developed over this time helps us provide the right high temperature filters for both recirculation heat generators and drying channels/ovens.

High Temperature filters are produced in silicone free zones and these filters can also meet the toughest quality expectations for automotive drying technology. MV4HT models have the highest surface area and lowest resistance in its class and achieve the highest energy efficiency ratings.

# MICAM

With customer demand and long-term cost reduction in mind we have created an all-inclusive filter management system, **MICAM, MIKROPOR CLEAN AIR MANAGEMENT**, utilizing top quality optimized filters.

## MICAM STEPS

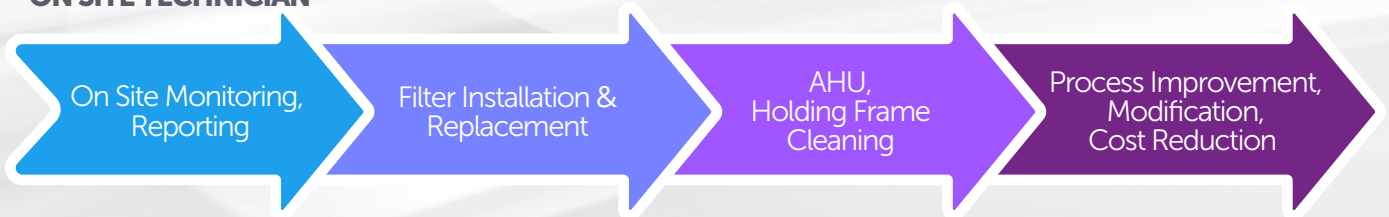
### FULL SITE AUDIT



### REPORTING & OPTIMIZATION



### ON SITE TECHNICIAN



## MIKROPOR SOLUTIONS

With over 20 years' experience in automotive paint process air filtration, world class certified filter manufacturing with state-of-the-art technology and listening and understanding our customers requirement, we are the perfect partner to automotive manufacturers.

### MSKPN SERIES

<b>Media</b>	Synthetic
<b>Frame</b>	Plastic (ABS), Galvanized Steel, Stainless Steel
<b>Final Pressure Drop</b>	250 Pa
<b>Operating Temperature</b>	80°C
<b>Filter Efficiency*</b>	G4
<b>Filter Class**</b>	ISO Coarse
<b>Sealant</b>	Polyurethane
<b>Separators</b>	Thermoplastic Adhesive
<b>Gasket</b>	Optional

#### Applications

- Primary filtration

#### Advantages

- Tidy pleat spacing
- Light and rigid filter
- Leakage free



### MPR SERIES

<b>Media</b>	Synthetic
<b>Frame</b>	Molded Plastic Frame
<b>Final Pressure Drop</b>	450 Pa
<b>Operating Temperature</b>	80°C
<b>Filter Efficiency*</b>	G4-M5-M6
<b>Filter Class**</b>	ISO Coarse - ISO ePM10

#### Applications

- Automotive industry
- Gas turbine air intake systems
- General ventilation and air conditioning for office buildings, industrial environments, food processing facilities and laboratories

#### Advantages

- High dust holding capacity
- Low initial pressure drop
- Rigid self-supporting pocket filter
- Incinerable



\* According to EN 779:2012 \*\* According to ISO 16890



# MIKROPOR SOLUTIONS

## MV SERIES

Media	Microglass Fiber
Frame	PS
Final Pressure Drop	450 Pa
Operating Temperature	80°C
Filter Efficiency*	M6-F7-F8-F9
Filter Class**	ISO ePM10 / ISO ePM1
Gasket	Optional
Sealant	Polyurethane
Separators	Hot Melt
Header Thickness	20 mm, 25 mm

### Applications

- HVAC
- Cleanroom applications
- Air purification of smokes, pollens

### Advantages

- Compact design
- High surface area
- High efficiency
- Energy saver



## MSKPHT SERIES

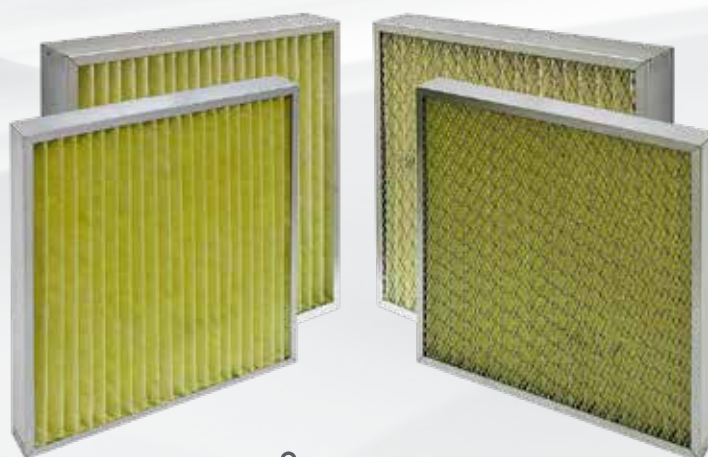
Media	Glass Fiber
Frame	Galvanized Steel or Stainless Steel
Final Pressure Drop	450 Pa
Operating Temperature	270°C
Filter Efficiency*	M5
Filter Class**	ISO ePM10
Gasket	High Temperature Gasket

### Applications

- Pre-filter for heat treatment

### Advantages

- Depth loading
- High dust holding capacity



\* According to EN 779:2012 \*\* According to ISO 16890

# MIKROPOR SOLUTIONS

## MV4HT SERIES

Media	Microglass Fiber
Frame	Galvanized Steel
Final Pressure Drop	450 Pa
Operating Temperature	350°C
Filter Efficiency*	M6-F8
Filter Class**	ISO ePM10 / ISO ePM1
Gasket	High Temperature Gasket
Header Thickness	22 mm
Separators	Microglass Fiber

### Applications

- Automotive industry

### Advantages

- High efficiency
- High surface area



## MASHT SERIES

Media	Glass Fiber
Frame	Galvanized Steel
Final Pressure Drop	450 Pa
Operating Temperature	270°C
Filter Efficiency*	M6-F8
Filter Class**	ISO ePM10 / ISO ePM1
Gasket	High Temperature Gasket

### Applications

- Automotive industry

### Advantages

- High efficiency
- High surface area



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# MIKROPOR SOLUTIONS

## MPHT SERIES

Media	Microglass Fiber
Frame	Extruded Aluminium, Galvanized Steel, Stainless Steel
Final Pressure Drop	450 Pa
Operating Temperature	350°C
Filter Efficiency*	M6-F8
Filter Class**	ISO ePM10 / ISO ePM1
Gasket	High Temperature Gasket
Protection Grid	Expanded Metal, Both Sides
Separators	Microglass Fiber

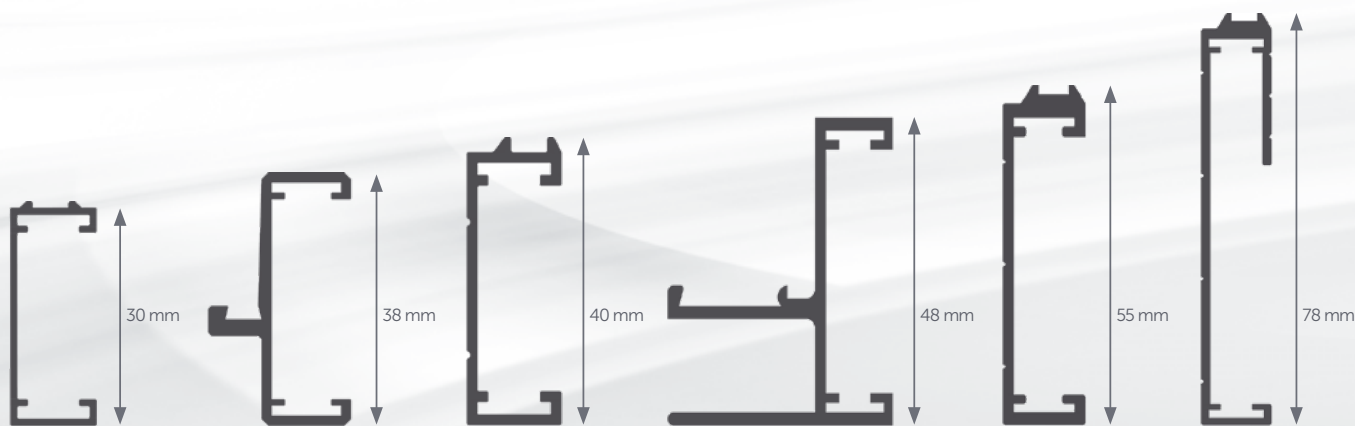


### Applications

- Painting ovens

### Advantages

- High efficiency
- Energy saver



DIFFERENT ALUMINIUM FRAME PROFILES AVAILABLE

\* According to EN 779:2012 \*\* According to ISO 16890



# AIR FILTRATION SOLUTIONS FOR AUTOMOTIVE INDUSTRY



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