TROX® TECHNIK
The art of handling air

Conforme à VDI 6022

# MFPCR

## POUR LES EXIGENCES LES PLUS CRITIQUES CONCERNANT LA PURETÉ DE L'AIR INTÉRIEUR, LES ZONES BLANCHES ET LES APPAREILS

HEPA and ULPA filters as high-efficiency particulate filters for the separation of suspended particles in clean room systems. Used for industrial, research, medical, pharmaceutical, and nuclear engineering applications.

- Filter classes H14, U15, U16
- Performance data tested to EN 1822
- Meets the hygiene requirements of VDI 6022
- Filter media for special requirements, glass fibre papers with spacers made of thermoplastic hot-melt adhesive
- Perfect adjustment to individual requirements due to variable pleat depths
- Low initial differential pressure due to ideal pleat position and largest possible filter area
- Automatic filter scan test
- Fitting into filter fan units, clean room workbenches, or operating theatre ceilings

## Application

Application

- Mini Pleat filter panel type MFPCR for the separation of suspended particles such as aerosols, toxic dusts, viruses and bacteria from the supply and extract air in clean room systems with controlled air cleanliness and airflow
- Particulate filter: Final filter for the most critical requirements of air cleanliness and sterility in areas such as industry, research, medicine, pharmaceuticals, and nuclear engineering

Special characteristics

- Ideal pleat geometry of the filter medium
- Low initial differential pressure at high filtration performance
- Low-turbulence airflow on the downstream side
- Filter scan test ensures leak-free construction as well as compliance with the stated efficiency and differential pressure

## Description

Filter classes

- Particulate filters H14, U15, U16

Construction

- ALB: Frame made of extruded aluminium sections (depth 69 mm)
- ALC: Frame made of extruded aluminium sections (depth 78 mm)
- ALG: Frame made of extruded aluminium sections (depth 90 mm)

Special construction:

- Filter frame with knife edge profile
- Filter frame with U-channel section, filled with a gel as fluid seal

Options

- FT: Pleat depth
- PU: Protection grid on the upstream side
- PD: Protection grid on the downstream side
- PB: Protection grid on both sides
- CSU: Continuous seal on the upstream side
- CSD: Continuous seal on the downstream side
- CSB: Continuous seal on both sides
- OT: Oil mist test (only for filter class H14)

Construction features

- Perimeter continuous seal on the upstream side as standard
- Some constructions with optional continuous seal on the downstream side or on both sides
- Protection grid made of expanded metal, can be fitted on the downstream or upstream side or both sides as required

Materials and surfaces

- Filter media made of high-quality, moisture-resistant glass fibre papers, pleated
- Spacers made of thermoplastic hot-melt adhesive provide a uniform spacing of the pleats
- Joint sealing compound made of permanently elastic two-component polyurethane adhesive
- Frame made of extruded aluminium sections

## INFORMATION TECHNIQUE

| Filter class according to EN 1822 | H14 | U15 | U16 |
|---|---|---|---|
| Efficiency according to EN 1822 | >99.995 % | >99.9995 % | >99.99995 % |
| Nominal face velocity | 0.45 m/s | 0.45 m/s | 0.45 m/s |
| Initial differential pressure at nominal face velocity for frame ALB | 110 Pa | 130 Pa | – |
| Initial differential pressure at nominal face velocity for frame ALC | 95 Pa | 115 Pa | 140 Pa |
| Initial differential pressure at nominal face velocity for frame ALG | 85 Pa | 100 Pa | 120 Pa |
| Maximum operating temperature | 80°C | 80°C | 80°C |
| Maximum relative humidity | 100 % | 100 % | 100 % |

Mini Pleat filter panels MFPCR for the separation of suspended particles such as aerosols, toxic dusts, viruses and bacteria from the supply and extract air in clean room systems with controlled air cleanliness and airflow.

Use as particulate filters, i.e. main or final filters, for the most critical requirements of air cleanliness and sterility in areas such as industry, research, medicine, pharmaceuticals, and nuclear engineering. The filter media are made of high-quality, moisture-resistant glass fibre papers, with spacers made of thermoplastic hot-melt adhesive.

Different pleat depths enable perfect adjustment to individual requirements.

Mini Pleat filter panels for clean room technology available in standard and special sizes, filter classes H14, U15, U16.

As standard, Mini Pleat filter panels for clean room technology are fitted with a perimeter continuous seal on the upstream side.

Some constructions are available with an optional seal on the downstream side or on both sides, or with a protection grid, fitting as required.

As standard, Mini Pleat filter panels for clean room technology are subjected to an automatic filter scan test.

Special characteristics

- Ideal pleat geometry of the filter medium
- Low initial differential pressure at high filtration performance
- Low-turbulence airflow on the downstream side
- Filter scan test ensures leak-free construction as well as compliance with the stated efficiency and differential pressure

Materials and surfaces

- Filter media made of high-quality, moisture-resistant glass fibre papers, pleated
- Spacers made of thermoplastic hot-melt adhesive provide a uniform spacing of the pleats
- Joint sealing compound made of permanently elastic two-component polyurethane adhesive
- Frame made of extruded aluminium sections

Construction

- ALB: Frame made of extruded aluminium sections (depth 69 mm)
- ALC: Frame made of extruded aluminium sections (depth 78 mm)
- ALG: Frame made of extruded aluminium sections (depth 90 mm)

Special construction:

- Filter frame with knife edge profile
- Filter frame with U-channel section, filled with a gel as fluid seal

Sizing data

- Filter class
- Volume flow rate [$m^3/h$]
- Initial differential pressure [Pa]
- Nominal size [mm]

## MFPCR

**MFPCR – H14 – ALC / 1220 × 610 × 78 × 58 / PD / CSU / ST**

1 2 3 4 5 6 7 8

### 1 Type
**MFPCR** Mini Pleat filter panel for clean room technology

### 2 Filter class
**H14** Particulate filter according to EN 1822
**U15** Particulate filter according to EN 1822
**U16** Particulate filter according to EN 1822

### 3 Construction
**ALB** Frame made of extruded aluminium profile (depth 69 mm)
**ALC** Frame made of extruded aluminium profile (depth 78 mm)
**ALG** Frame made of extruded aluminium profile (depth 90 mm)

### 4 Nominal size [mm]
B × H × T

### 5 Pleat depth
**FT**

### 6 Protection grid
No entry: none
**PU** Protection grid on the upstream side
**PD** Protection grid on the downstream side
**PB** Protection grid on both sides

### 7 Seal
**CSU** Continuous seal on the upstream side
**CSD** Continuous seal on the downstream side
**CSB** Continuous seal on both sides

### 8 Testing
**ST** Scan test
**OT** Oil mist test (only for filter class H14)