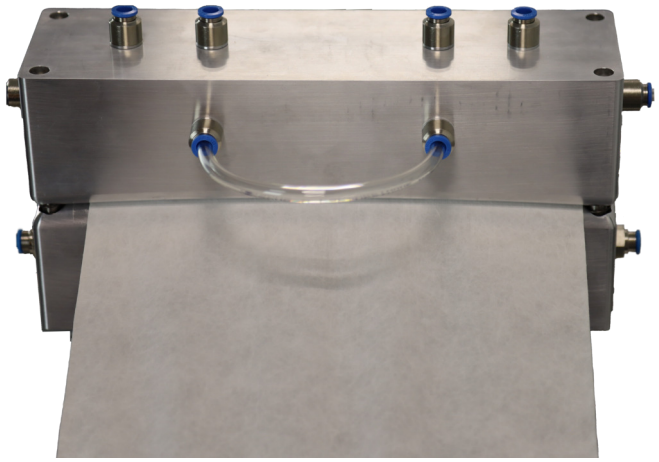
P-MFP INLINE 2300



The P-MFP inline 2300 enables 100 % control of flat filtration media without influencing it.

For quality assurance of filter media, a salt aerosol is applied in a defined manner, and the particle size is measured before and after the medium using the aerosol spectrometer. This allows penetration/filter efficiency, pressure drop, and breathing resistance to be measured at 100 % of the material, thus providing a statement on quality. This data can also be used to control processes in manufacturing and processing plants. It is also possible to use the P-MFP inline 2300 as a "stand-alone" solution and thus perform outgoing and incoming goods inspections.

OPERATION PRINCIPLE

INLINE PENETRATION TEST

In the P-MFP inline 2300, the belt material is fed through a custom-made carriage and exposed to salt aerosols via an aerosol generator. This is a medical-grade salt aerosol with an extremely low mass concentration. This prevents the belt material and its filtration properties from being affected. The aerosol spectrometer measures the aerosol concentration before and after the filtration medium, thus measuring the filter efficiency. Differential pressure sensors are also used to measure the pressure difference, which allows conclusions to be drawn about breathing resistance.

Depending on the application, the P-MFP inline 2300 can be implemented directly in the production line or as a separate measuring station. Thus, it is possible to qualify 100 % of the strip material.

BENEFITS

- 100 % quality control
- Continuous monitoring and logging of actual product quality
- Filtration characteristics, as well as pressure difference and/or respiration resistance for the entire belt material
- Individually adjustable limit values related to particle concentration difference and/or pressure difference
- Possibilities for incoming as well as outgoing goods inspection
- Cost optimization
- Reduction of rejects
- Optimization of production efficiency
- Easy integration into existing plant
- Modularity
- Adaptation of all components to the respective application possible
- Retrofittability of existing systems
- Easy to maintain

DATASHEET

Aerosols	Salts (NaCl)
Interfaces	USB-C, ethernet (LAN), RS-232, analog/digital signal
Protocols	TCP/IP, Modbus, UDP
Power supply	115 – 230 V, 50/60 Hz
Compressed air supply	6 – 8 bar
Belt width	250 – 1,000 mm (customer-specific adaptations possible)
Belt thickness	1 – 10 mm (customer-specific adaptations possible)
Belt speed	Depending on application (customer-specific adaptations possible)
Dimensions	Inline: customer-specific adaptations, stand-alone: possible for roll widths 250 - 1,000 mm

APPLICATIONS

- Mask making
- Nonwoven fabric production
- Production of filtration media (e.g., a combination of several layers of material)
- Production of filters (e.g., nonwoven roll at the beginning, pleated filter at the end)

Mehr Informationen:
https://www.palas.de/en/product/P-MFPinline2300