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Pressure Measurement in Pharmacy, Food and Semiconductor Industry



Application:

Differential pressure measurement for filter monitoring of ambient air

for manufacturers and operators of filtration systems



For aseptic applications in the pharmaceutical or food sector, but also during the production and processing of semiconductor products, it is essential to remove adverse dusts and germs from the ambient air. Usually, special filters are used for this purpose. These are gradually clogged with the filtered particles and have to be cleaned.

The problem:

With the increasing contamination level of the filter, the pressure measuring instrument no longer indicates precisely. The pending cleaning of the filter always bears the risk that the dusts, which have already been filtered from the air, could find their way back

into the process environment. Furthermore, the dust-air-mixtures are often explosive and require a pressure measuring instrument with approval for potentially explosive atmospheres.

www.armano-messtechnik.com

ARMANO Messtechnik GmbH

Location Beierfeld • Am Gewerbepark 9 • 08344 Grünhain-Beierfeld
Tel.: +49 3774 58 – 0 • Fax: +49 3774 58 – 545 • mail@armano-beierfeld.com

Location Wesel • Manometerstraße 5 • 46487 Wesel-Ginderich

Tel.: +49 2803 9130 – 0 • Fax: +49 2803 1035 • mail@armano-wesel.com

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Application:

Differential pressure measurement for filter monitoring of ambient air

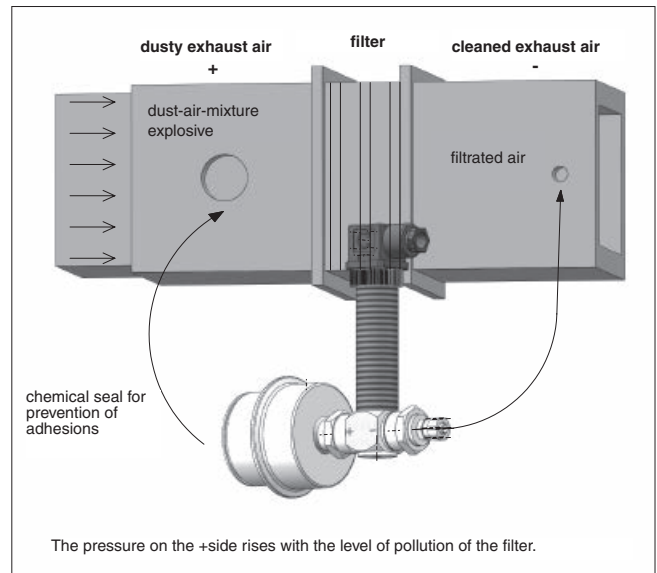
for manufacturers and operators of filtration systems

Our solution:

Despite its compact design, our differential pressure transmitter, mounted on one side, has a diaphragm that allows for a high-precision indication of lowest pressures even at increased contamination of the instrument. It is not necessary to shake or blow-out the pressure measuring instrument. Hence, there is no danger of re-contamination. The high-soft membrane with trapezium geometry, as well as our special filling technology prevent temperature fluctuations from having effect on the measuring result. Thus, the intervals between the cleaning processes are prolonged and the downtimes are reduced.

The reference side of our differential pressure measuring instrument allows for an affordable attachment at a streamlined position in the process via a hose. This connection can also be used for calibration purposes.

For operation in an intrinsically safe circuit it features the ignition protection type Ex ia.



Our advantages at a glance:

- ◆ High-precision measuring results
- ◆ No shaking or blowing-out necessary
- ◆ Reduced downtimes
- ◆ Compact construction
- ◆ High-soft membrane

Our instrument in detail:

Compact and precise: DiPTMEx with chemical seal

for further details see T09-000-042

- ◆ Piezoresistive sensor
- ◆ 0 – 16 mbar to 0 – 25 bar
- ◆ Diaphragm: stainless steel 316L (1.4435)
- ◆ Case: stainless steel, degree of protection IP65
- ◆ Chemical seal with process connection clamp ISO 2852, e.g. 2 1/2" with 30 mm (1.18") extension tube
- ◆ Ex-approval marking
II 1/2 G Ga/Gb Ex ia II C T4...T6
I M1 Ex ia I
II 1D Ex ia D20 T105 °C



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