



Pressure Measurement on Rescue Equipment



Application:

Pressure gauges for respiratory protective equipment

for manufacturers of rescue equipment



Respiratory protective equipment serves as protection for firefighters. Whether for firefighting or interventions with hazardous substances, breathing protection is vital. When unprotected, toxic flue gases or other harmful substances could be inhaled, which inevitably could endanger the health or even lead to death.

The pressure gauges for respiratory protective equipment have to withstand extreme conditions. Nevertheless, the functionality has to be guaranteed. Therefore, pressure gauges have to meet high demands.

The problem:

Pressure gauges serve smoke divers for continuous control of the air supply in breathing air bottles. Here, the instruments are exposed to harsh operating conditions, which include, for example, impacts, high temperatures and vibrations. In an emergency, the pressure gauge has to withstand a fall from a height of 1.5 m (4.92 ft.) without affecting the indication accuracy, as well as temperatures of up to 800 °C (1472 °F) in case of fire. The instrument has to withstand these extreme conditions and also has to be readable in the dark.

In addition, the scale also has to indicate the critical remaining pressure, which is necessary to leave the dangerous area.

Our solution:

We have the suitable pressure gauge for these requirements. Our instrument has been tested under the described conditions and can provide exact values, even after a fall or at high temperatures. Besides that, the instrument has a non-splintering window and a case with crimped-on ring. The dial was customised. A luminescent dial ensures good readability, even in the dark, and a special scale with red marking indicates the critical area for the user.

Shockproof: RChg 50 – 3

- ◆ Accuracy class 1.6
- ◆ Case with polished crimped-on ring, 1.4301 stainless steel
- ◆ Case protection type IP 67
- ◆ NCS 50 (2")
- ◆ Wetted parts 316 L stainless steel
- ◆ Pressure range 0 – 36 MPa (360 bar)
- ◆ Window polycarbonate
- ◆ Luminescent dial
- ◆ Free of grease and oil
- ◆ Vibration-resistant (50–60 Hz, amplitude 0.4 mm)
- ◆ Impact-resistance from 1.5 m (4.92 ft.) height (with rubber protection cap) on concrete without influence on indication accuracy
- ◆ Resistant against open flame [800 °C (1472 °F), 5 sec.]
- ◆ Resistant against 200 °C (392 °F) ambience (1 min.)
- ◆ Durability >10 years

