



## 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 operations with hazardous substances, breathing protection is vital. If unprotected, toxic flue gases or other harmful substances could be inhaled, which can inevitably lead to health hazards or even 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 monitoring of the air supply in breathing air bottles. Here, the instruments are exposed to harsh operating conditions including impacts, high temperatures, vibrations, etc. In an emergency, the pressure gauge must be able to withstand a fall from a height of 1.5 m (4.92 ft.) without affecting the indication accuracy. The device also must be able to withstand temperatures up to 800 °C (1472 °F) in the event of a fire. The instrument has to withstand these extreme conditions and also has to remain readable in the dark.

In addition, the scale also has to indicate the critical range of the residual pressure required to leave the hazardous area.

### Our solution:

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

### Shockproof: RChg 50 – 3

- ◆ Accuracy class 1.6
- ◆ Case with polished crimped-on ring, stainless steel 304 (1.4301)
- ◆ Degree of protection IP67
- ◆ NCS 50 (2")
- ◆ Wetted parts stainless steel 316L
- ◆ 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-resistant from 1.5 m (4.92 ft.) height (with rubber protection cap) on concrete without influence on the indication accuracy
- ◆ Resistant against open flame [800 °C (1472 °F), 5 sec.]
- ◆ Resistant against 200 °C (392 °F) ambience (1 min.)
- ◆ Durability >10 years

