



Pressure Measurement in the Energy Industry



Application:

Capsule gauge for low pressure and Bourdon tube pressure gauge for natural gas transfer stations

for manufacturers and operators of gas pressure regulating stations, gas supply companies, municipal works, energy service companies

Natural gas is the basis for processes in which heat is necessary and shall be generated. It is distributed internationally via pipelines by the producing countries and is carried to the end users (municipalities, companies, households) via integrated grid systems.



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The problem:

Natural gas is carried under pressure. When the natural gas is extracted from the long distance pipeline, the pressure has to be reduced in order to distribute it to transfer stations. From these transfer stations, gas lines branch out until they reach the individual households. That means, the pressure of the gas also has to be continually reduced.

The pumping pressure has to be reduced gradually.

Long-distance line → Transfer station (GPCM) → Households

Our solution:

Special systems, such as gas pressure control and measuring systems (GPCM), allow for the observance of the flow pressure dependent on the flow rate. In the GPCM, both the high pressure (Bourdon tube pressure gauge) and the low pressure (capsule gauge for low pressure) have to be measured. Although over-range protection devices are installed in the low-pressure area, our capsule gauges for low pressure are often applied 3-times or 10-times overrange protected.

Overpressure protection piston valve:

- ◆ Brass version: PN 500 bar
- ◆ Instrument connection: clamping sleeve – connection
- ◆ Process connection: G ½

High-pressure side: RCh 100 – 1

- ◆ 0 – 4 to 0 – 100 bar
- ◆ Bottom connection G ½ B
- ◆ Accuracy class 1.0
- ◆ Test report 2.2 according to EN 10 204



Low-pressure side: KPCh 100 – 1

- ◆ 0 – 60 to 0 – 400 mbar
- ◆ 3-times or 10-times overrange protected
- ◆ Accuracy class 1.6
- ◆ Accuracy class 1.0 possible
- ◆ Test report 2.2 according to EN 10 204

