

Data Sheet

1209 4½" Stainless Steel Case Process Gauge

FEATURES

- Solid front case design with full pressure relief back
- 4½" Dial size
- Accuracy: ±0.50% of span (ASME B40.100 Grade 2A)
- 316L stainless steel case and ring
- Patented **PLUS!**™ Performance, dampens vibration, shock and pulsation effects

TYPICAL USES

- Oil & Gas Industry
 - Upstream: Onshore/offshore production
 - Midstream: Transport, storage and natural gas compression
 - Downstream: Refineries and petrochemical industries
- Chemical Industry
- Injection Molding Equipment
- Power Plants
 - Conventional power plants
 - Flue gas desulfurization plants
- Other Industries
 - Waste incineration plants
 - Seawater desalination plants
 - Steel mills
 - Cement plants



1209
4½" Dial size

KEY BENEFITS

- Full pressure relief back for safety
- Socket welded to case for superior leak integrity

SPECIFICATIONS

| | |
|---------------------|---|
| Accuracy: | ±0.5% of span (ASME B40.100 Grade 2A) |
| Dial Size: | 4½" |
| Range: | Vacuum, compound to 20,000 psi |
| Process Connection: | ¼ NPT Male, ½ NPT Male |
| Case Style: | Solid front with full pressure relief back |
| Movement: | 304 stainless steel, adjustable |
| Window Material: | Acrylic (STD.), safety glass (OPT.) |
| Pointer: | Micrometer adjustable, aluminum |
| Weather Protection: | IP65 |
| Mounting: | Stem, surface (STD.), flush, pipe, remote (OPT.) |
| Dampening: | Liquid fill, PLUS! ™ Performance, throttle screw, dampeners, capillary, diaphragm seals and snubbers |

WETTED COMPONENTS

| Model | Bourdon Tube | Process Connection | Joints |
|-------|------------------------|----------------------|--------|
| 1209 | 316L SS or K-Monel 500 | 316L SS or Monel 400 | Welded |

NON-WETTED COMPONENTS

| Model | Case | Ring | Back Cover |
|-------|---------|---------|------------|
| 1209 | 316L SS | 316L SS | 316L SS |

MIN./MAX. TEMPERATURE LIMITS

| | Ambient | Process | Storage |
|----------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Dry | -40 °F to 200 °F (-40 °C to 93 °C) | -40 °F to 200 °F (-40 °C to 93 °C) | -40 °F to 200 °F (-40 °C to 93 °C) |
| PLUS! ™ | -40 °F to 200 °F (-40 °C to 93 °C) | -40 °F to 200 °F (-40 °C to 93 °C) | -40 °F to 200 °F (-40 °C to 93 °C) |
| Glycerin | 20 °F to 150 °F (-7 °C to 66 °C) | 20 °F to 150 °F (-7 °C to 66 °C) | 20 °F to 150 °F (-7 °C to 66 °C) |
| Silicone | -40 °F to 150 °F (-40 °C to 66 °C) | -40 °F to 150 °F (-40 °C to 66 °C) | -40 °F to 150 °F (-40 °C to 66 °C) |
| Halocarbon® | -40 °F to 150 °F (-40 °C to 66 °C) | -40 °F to 150 °F (-40 °C to 66 °C) | -40 °F to 150 °F (-40 °C to 66 °C) |

Note: Other than discoloration of the dial and hardening of the gasketing that may occur as ambient or process temperatures exceeds 150 °F, non-liquid-filled gauges with standard glass windows, can withstand continuous operating temperatures up to 250 °F (121 °C). Liquid-filled gauges can withstand 200 °F (93 °C) but glycerin fill and acrylic window will tend to yellow. Accuracy at temperatures above or below the reference ambient temperature of 68 °F (20 °C) will be affected by approximately 0.4% per 25 °F. Gauges with welded joints will withstand 750 °F (400 °C), 450 °F (232 °C) with silver brazed joints for short times without rupture, although other parts of the gauge will be destroyed and calibration will be lost. For continuous use and for process or ambient temperatures above 250 °F (121 °C), a diaphragm seal or capillary or siphon is recommended.

1209 4½" Stainless Steel Case Process Gauge

| ORDERING CODE | Example: | 451209 | S | D | 04 | L | 15# | -XLL |
|--|----------|--------|---|---|----|---|-----|------|
| Dial Size/Model Code | | | | | | | | |
| 451209 - 4½" SS, solid front process gauge per ASME B40.100 | | 451209 | | | | | | |
| System (tube and process connection) | | | | | | | | |
| S - SS system | | | S | | | | | |
| P-Monel System | | | | | | | | |
| Case Fill | | | | | | | | |
| D - Dry Case | | | | D | | | | |
| L - Liquid filled case, glycerin (STD.) | | | | | | | | |
| Process Connection Sizes | | | | | | | | |
| 02 - ¼ NPT Male (up to 20,000 psi) | | | | | | | | |
| 04 - ½ NPT Male (up to 20,000 psi) | | | | | 04 | | | |
| Process Connection Location | | | | | | | | |
| L - Lower connection only | | | | | | L | | |
| Range (coding examples only, see range table on next page for all standard ranges) | | | | | | | | |
| Single Scales | | | | | | | | |
| 15# - 15 psi | | | | | | | 15# | |
| 1KSC - 1 kg/cm² | | | | | | | | |
| 100KP - 100 kPa | | | | | | | | |
| Options (if choosing an option(s) must include an "X") | | | | | | | | |
| EP - Maximum pointer, adjustable | | | | | | | | -X__ |
| GV - Silicone case fill | | | | | | | | |
| GX - Halocarbon case fill | | | | | | | | |
| LL - PLUS! ™ Performance | | | | | | | | LL |
| NH - SS tag wired to case | | | | | | | | |
| OS - Overload stop | | | | | | | | |
| SG - Safety glass | | | | | | | | |
| VS - Underload stop | | | | | | | | |
| C3 - Material test report to EN 10204.3.1 | | | | | | | | |
| C4 - Individual calibration chart (in accordance with ASME B40.100:2013. Accuracy traceable to NIST) | | | | | | | | |
| D3 - DuraVis™ Retroreflective Dial (4½" and dry case only) | | | | | | | | |
| 6B - Cleaned for oxygen service | | | | | | | | |
| 5G - Attach one accessory to gauge. Applicable to PL02 pressure limiting valve, V01,V02,V03 valves, 098, 1100, 1198, 2198 siphons, 7001, 7004 needle valves, 1115 capillary, 1106 pulsation dampner, 1112, PD02 pressure snubbers, MDV swivel adapter. (1209P, Monel requires accessory with Monel body) | | | | | | | | |

When selecting a diaphragm seal or isolation ring, refer to the [Min/Max Guide](#) for compatibility with this gauge or scan the QR code to the right.



1209 4 1/2" Stainless Steel Case Process Gauge

| 1209 STANDARD RANGES | | | | | |
|--------------------------|--------|----------|------------|-------------|--------------------|
| | psi | bar | kPa | mPa | kg/cm ² |
| Vacuum | 30IMV | N1BR | N100KP | N1MP | N1KG |
| | - | N1/0.6BR | N100/60KP | 0.1/0.6MP | N1/0.6KG |
| Compound | V/15# | - | - | - | - |
| | - | N1/1.5BR | N100/150KP | N0.1/0.15MP | N1/1.5KG |
| | V/30# | - | - | - | - |
| | - | N1/3BR | N100/300KP | N0.1/0.3MP | N1/3KG |
| | V/60# | - | - | - | - |
| | - | N1/5BR | N100/500KP | N0.1/5MP | N1/5KG |
| | V/100# | - | - | - | - |
| | - | N1/9BR | N100/900KP | N0.1/0.9MP | N1/9KG |
| | 15# | 1BR | 100KP | 0.1MP | 1KG |
| | 20# | - | - | - | - |
| Positive Pressure | - | 1.6BR | 160KP | 0.16MP | 1.6KG |
| | 30# | - | - | - | - |
| | - | 2.5BR | 250KP | 0.25MP | 2.5KG |
| | 60# | 4BR | 400KP | 0.4MP | 4KG |
| | - | 6BR | 600KP | 0.6MP | 6KG |
| | 100# | - | - | - | - |
| | 120# | - | - | - | - |
| | - | 10BR | 1000KP | 1MP | 10KG |
| | 160# | - | - | - | - |
| | 200# | - | - | - | - |
| | - | 16BR | 1600KP | 1.6MP | 16KG |
| | 300# | - | - | - | - |
| | - | 25BR | 2500KP | 2.5MP | 25KG |
| | 400# | - | - | - | - |
| | 500# | - | - | - | - |
| | 600# | 40BR | 4000KP | 4MP | 40KG |
| | 800# | - | - | - | - |
| | - | 60BR | 6000KP | 6MP | 60KG |
| | 1000# | - | - | - | - |
| | 1500# | 100BR | 10000KP | 10MP | 100KG |
| 2000# | - | - | - | - | |
| - | 160BR | 16000KP | 16MP | 160KG | |
| 3000# | - | - | - | - | |
| - | 250BR | 25000KP | 25MP | 250KG | |
| 4000# | - | - | - | - | |
| 5000# | - | - | - | - | |
| 6000# | 400BR | 40000KP | 40MP | 400KG | |
| 8000# | - | - | - | - | |
| - | 600BR | 60000KP | 60MP | 600KG | |
| 10000# | - | - | - | - | |
| 15000# | 1000BR | 100000KP | 100MP | 1000KG | |
| 20000# | 1600BR | - | 160MP | 1600KG | |

DIMENSIONS in [] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

