

Data Sheet

1209 4½" Stainless Steel Case Process Gauge

FEATURES

- Solid front case design with full pressure relief back
- 4½" Dial size
- Accuracy: $\pm 0.50\%$ 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:	$\pm 0.5\%$ 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 Stainless steel	316L Stainless steel	316L Stainless steel

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.

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ORDERING CODE	Example:	451209	S	D	04	L	15#	-XLL
Dial Size/Model Code								
451209 - 4½" Stainless steel, solid front process gauge per ASME B40.100		451209						
System (tube and process connection)								
S - Stainless steel 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 - Stainless steel tag wired to case								
OS - Overload stop								
SG - Safety glass								
VS - Underload stop								
C3 - Material test report to EN 10204.3.1								
C4 - Traceable calibration certificate								
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.



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1209 STANDARD RANGES

	psi	bar	kPa	MPa	kg/cm²
Vacuum	30IMV	N1BR	N100KP	N1MP	N1KG
	—	N1/0.6BR	N100/60KP	0.1/0.06MP	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

