

1279, 1377, 1379, 2462 Duragauge® Pressure Gauge

FEATURES

- Solid front safety case with pressure relief back
- Dial sizes 4½", 6" and 8½"
- ±0.5% of span (ASME B40.100 Grade 2A)
- Ranges, vacuum, compound and 0-100,000 psi
- Customizable dial printing options



SPECIFICATIONS

Accuracy:	±0.5% of span (ASME B40.100 Grade 2A)
Process Connection:	¼ NPT, ½ NPT, ¾"-18 UNF-2B Aminco (high pressure connection)
Case Style:	Solid front with pressure relief back
Movement:	Rotary, adjustable, 400 SS, Teflon® coated
Window Material	Glass (XPD Acrylic, XSG Safety glass and XNG non-glare glass optional)
Pointer:	Micrometer, adjustable, aluminum
Weather Protection:	Dry case: Case not sealed, recommended for weather protected environment only Liquid filled or field fillable: IP66 or NEMA 4X (S&P tube and socket), NEMA 4 (A&R tube and socket) Hermetically sealed: IP66
Mounting:	Standard: Stem, surface or remote Optional: Flush (X56), Pipe (XTM)
Dampening:	Liquid fill: Glycerin (STD.), Silicone (XGV), Halocarbon® (XGX), PLUS! ™ performance (XLL)

WETTED COMPONENTS

Model	Bourdon Tube	Process Connection Materials	Joints
1279	316L SS	316L SS	Welded
1377	316L SS	Steel	Welded
1379	K-Monel® 500 Tube	Monel® 400	Welded
2462	C510 Phos. Bronze	Brass	Silver brazed
1379	Inconel® 718	316L SS (60-1379 only)	Welded

NON-WETTED COMPONENTS

Model	Case	Ring	Back Cover
1279	Phenolic	Polycarbonate	Polycarbonate
1377	Aluminum, black epoxy	Hinged steel, black enamel	300 SS
1379	Aluminum	Polycarbonate	Polycarbonate
2462	Black, polypropylene	Bayonet lock, polypropylene	Polypropylene

MIN/MAX TEMPERATURE LIMITS

Version	Ambient	Process	Storage
Dry	-20°F to 200°F (-29°C to 93°C)	-20°F to 250°F (-29°C to 121°C)	-40°F to 250°F (-40°C to 121°C)
PLUS! ™	-40°F to 150°F (-40°C to 66°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 150°F (-40°C to 66°C)
Glycerin Fill	20°F to 150°F (-7°C to 66°C)	20°F to 150°F (-7°C to 66°C)	0°F to 150°F (-18°C to 66°C)
Silicone Fill	-40°F to 150°F (-40°C to 66°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 150°F (-40°C to 66°C)
Halocarbon Fill	-40°F to 150°F (-40°C to 66°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 150°F (-40°C to 66°C)



1279
4½" dial size



1377
4½", 6", 8½" dial sizes



1379
4½", 6", 8½" dial sizes



2462
6" dial size



ORDERING CODE	Example:	451279	S	SH	04	L	XLL	15#
Dial Size/Model Code								
451279 - 4½" phenolic case, solid front		451279						
451377 - 4½" aluminum case, solid front								
451379 - 4½" aluminum case, solid front								
601377 - 6" aluminum case, solid front								
601379 - 6" aluminum case, solid front								
602462 - 6" polypropylene case, solid front								
851377 - 8½" aluminum case, solid front								
851379 - 8½" aluminum case, solid front								
System (tube and process connection)								
A - Bronze tube, brass process connection, max. pressure connection 1,000 psi								
P - K-Monel® 500 tube, Monel® 400 process connection, max. pressure 30,000 psi								
R - 316L SS tube, steel process connection, max. pressure 30,000 psi								
S - 316 SS tube, 316L SS process connection, max. pressure 30,000 psi			S					
WW - Inconel® 718 tube, Inconel® 718 process connection Only available on 601379 (50,000 to 100,00 psi ranges)								
Case Design								
S - Solid front case, dry								
SH - Solid front case, dry, sealed, hermetically sealed, (451279/451379/601379 only)				SH				
SL - Solid front case, liquid filled (glycerin std.) (451279/451379/601379 only)								
Process Connection Sizes								
02 - ¼ NPT Male, N/A for ranges over 20,000 psi					04			
04 - ½ NPT Male, N/A for ranges over 20,000 psi								
09 - ⅝" 18 UNF-2B, Aminco® high pressure fitting, standard for pressures over 20,000 psi								
Process Connection Location								
L - Lower						L		
B - Back								
D - Side (3 o'clock)								
E - Side connection (9 o'clock)								
T - Top connection								
Options (if choosing an option(s) must include an "X")								
LL - PLUS! Performance							X__	LL
GV - Silicone case fill (451279/451379/601379 only)								
GX - Halocarbon® case fill (451279/451379/601379 only)								
TS - Throttle screw (standard with liquid filled, hermetically sealed or PLUS! Performance)								
6B - Cleaned for oxygen service								
PD - Acrylic window (standard with liquid filled or hermetically sealed cases)								
SG - Safety glass								
NG - Non-glare glass (4½" and 6" cases only, N/A with liquid fill or hermetically sealed cases)								
EP - Maximum pointer, (adjustable, N/A with liquid filled or hermetically sealed cases)								
SH - Red set hand, stationary								
NH - SS tag wired to case								
56 - Flush mounting ring (451279/451379/601379 only)								
BF - Surface mounting bracket (851377/851379/602462 only)								
BQ - Flush mounting bracket (602462 only)								
DA - Dial marking (text marking on the dial)								
AB - Gauges calibrated to compensate for absolute pressure								
OS - Overload stop								
VS - Underload stop								
HY - Hydrostatic/pneumatic testing (system pressurized to 150% of rated system pressure for 5 minutes. Overload stop standard.)								
C4 - Individual calibration chart (in accordance with ASME B40.100:2013. Accuracy traceable to NIST)								
Range (coding examples only, see range table on page 16 for all standard ranges)								
Single Scales								
15# - 15 psi								15#
1BR - 1 bar								
1KSC - 1 kg/cm²								
100KP - 100 kilopascal								
Dual Scales								
15#/BR - 15 psi inner scale, 1 bar outer scale								
1BR/# - 1 bar inner scale, 15 psi outer scale								

ORDERING CODE	Example:	451187	S	D	02	B	XC4	10IW
Dial Size/Model Code								
451187 - 4½" aluminum case, solid front		451187						
451188 - 4½" phenolic case, solid front								
451189 - 4½" aluminum case, solid front								
601189 - 6" aluminum case, solid front								
System (tube and process connection)								
A - Brass bellows, brass process connection								
S - 316 SS bellows, stainless steel process connection			S					
P - K-Monel [®] 500 bellows, Monel [®] 400 process connection								
Case Design								
D - Dry, (IP54)				S				
Process Connection Sizes								
02 - ¼ NPT Male					02			
04 - ½ NPT Male								
Process Connection Location								
L - Lower, (1188 and 1189 only.)								
B - Back mount connection, (1188 and 1187 only.)						B		
Options (if choosing an option(s) must include an "X")								
C4 - Individual calibration chart (in accordance with ASME B40.100:2013. Accuracy traceable to NIST)							X__	C4
6B - Cleaned for oxygen service								
F8 - Gauge, flexible line assembly and diaphragm seal								
PD - Acrylic window								
SG - Safety glass								
NG - Non-glare glass								
DA - Marking on dial								
NH - SS tag wired to case								
NN - Paper tag bonded to case								
56 - Flush mounting ring, (1188 and 1189 only)								
Range (coding examples only, see range table on page 18 for all standard ranges)								
Single Scales								
10IW - 10" inH ₂ O								10IW

Standard Pressure Ranges

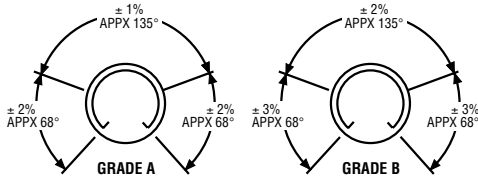
1279, 1377, 1379, 2462					
	psi	bar	kPa	MPa	kg/cm ²
Vacuum	30IMV	N1BR	N100KP	N1MP	N1KG
	-	N1/.6BR	N100/60KP	.1/.06MP	N1/.6KG
Compound	V/15#	-	-	-	-
	-	N1/1.5BR	N100/150KP	N.1/.15MP	N1/1.5KG
	V/30#	-	-	-	-
	-	N1/3BR	N100/300KP	N.1/.3MP	N1/3KG
	V/60#	-	-	-	-
	-	N1/5BR	N100/500KP	N.1/.5MP	N1/5KG
	V/100#	-	-	-	-
	-	N1/9BR	N100/900KP	N.1/.9MP	N1/9KG
	15#	1BR	100KP	.1MP	1KG
	20#	-	-	-	-
Positive Pressure	-	1.6BR	160KP	.16MP	1.6KG
	30#	-	-	-	-
	-	2.5BR	250KP	.25MP	2.5KG
	60#	4BR	400KP	.4MP	4KG
	-	6BR	600KP	.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	
30000#	-	-	-	-	
-	2500BR	-	250MP	2500KG	
50000#	-	-	-	-	
-	4000BR	-	400MP	4000KG	
80000#	-	-	-	-	
-	6000BR	-	600MP	6000KG	
1379WW Only	100000#	-	-	-	-

1259					
	psi	bar	kPa	MPa	kg/cm ²
Vacuum	30IMV	N1BR	N100KP	N1MP	N1KG
	-	N1/.6BR	N100/60KP	.1/.06MP	N1/.6KG
Compound	V/15#	-	-	-	-
	-	N1/1.5BR	N100/150KP	N.1/.15MP	N1/1.5KG
	V/30#	-	-	-	-
	-	N1/3BR	N100/300KP	N.1/.3MP	N1/3KG
	V/60#	-	-	-	-
	-	N1/5BR	N100/500KP	N.1/.5MP	N1/5KG
	V/100#	-	-	-	-
	-	N1/9BR	N100/900KP	N.1/.9MP	N1/9KG
	15#	1BR	100KP	.1MP	1KG
	20#	-	-	-	-
Positive Pressure	-	1.6BR	160KP	.16MP	1.6KG
	30#	-	-	-	-
	-	2.5BR	250KP	.25MP	2.5KG
	60#	4BR	400KP	.4MP	4KG
	-	6BR	600KP	.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	1,000KG	
20000#	-	-	-	-	

ACCURACY:

Accuracy – the conformity of indication to an accepted standard or true value. Accuracy is the difference (error) between the true value and the indication expressed as a percent of the span. It includes the combined effects of method, observer, apparatus and environment. Accuracy error includes hysteresis and repeatability errors but not friction error. It is determined under specific conditions. (Normal position, 73.4°F (23°C), and 29.92 in Hg barometric pressure.)

The following tables define the ASME B40.1* accuracy grades used by Ashcroft products.



Accuracy of a pressure gauge may be expressed as percent of span or percent of indicated reading. Percent of span is the most common method. Percent of indicated reading is usually limited to precision test gauges and unless specifically spelled out, it may be assumed that an accuracy of ±0.5% means ±0.5% of span.

GRADE 4A:

Gauges offering the highest accuracy and calibrated to ±0.1% of span over the entire range of the gauge. These gauges are called laboratory precision test gauges and are generally 8½", 12" or 16" dials. These high-accuracy gauges may be temperature compensated. They must be handled carefully in order to retain accuracy.

ACCURACY EXAMPLES

Range	Accuracy Span	Grade	Permissible Error % of Span
0/100 psi	100 psi	1A	1.0
0/400 kPa	400 kPa	2A	0.5
0/1000 bar	1000 bar	B	3 (0/250 & 750/1000 bar) 2 (250/750 bar)
-100/400	400 kPa	2A	0.5
30 inHg/ 30 psi	44.7 psi	4A	0.1

The last item (30 inHg/30 psi) deserves some explanation. The span is defined as the algebraic difference between the limits of the scale. 30 inHg = -14.7 psi Span = 30 psi - (-14.7) = 44.7 psi. 0.1% of 44.7 psi = 0.045 psi or 0.022 Hg.

*ASME B40.1 may be ordered from:
 American Society of Mechanical Engineers
 Three Park Avenue, New York, NY 10016

GRADE 3A:

Gauges are calibrated to an accuracy of ±0.25% of span over the entire range of these gauges. These gauges are called test gauges and are generally 4½", 6" or 8½" dials. The gauges are generally not temperature compensated (except Ashcroft Type 1082).

GRADE 2A:

Gauges are calibrated to an accuracy of ±0.5% of span over the entire range of the gauge. They are often referred to as process gauges and are usually supplied as 4½" and 6" cases and are not temperature compensated.

GRADE 1A:

Gauges are calibrated to an accuracy of ±1% over the entire range of the gauge. These gauges are high-quality industrial gauges and are supplied in 2½", 3½" and 4½" sizes.

GRADE A:

Gauges are calibrated to an accuracy of ±1% of span over the middle half of the scale and ±2% of span over the first and last quarters of the scale.

GRADE B:

Gauges are calibrated to an accuracy of ±2% of span over the middle half of the scale and ±3% of span over the first and last quarters of the scale. These gauges are often referred to as commercial or utility gauges and are supplied in 1½", 2", 2½", 3½" and 4½" case sizes.

GRADE C:

Gauges are calibrated to an accuracy of ±3% of span over the middle half of the scale and ±4% of span over the first and last quarters of the scale.

GRADE D:

Gauges are calibrated to an accuracy of ±5% of span over the entire scale.

ACCURACY EXAMPLES

Type of Gauge	Grade	Permissible Error % of Span			Max. Friction (% of Span)
		Lower 25%	Middle 50%	Upper 25%	
Precision Test (A4A)	4A	0.1	0.1	0.1	See Note
Test (1082)	3A	0.25	0.25	0.25	0.25
Process (1279)	2A	0.5	0.5	0.5	0.5
Industrial/Hydraulic (1009)	1A	1.0	1.0	1.0	1.0
Industrial/Hydraulic (1010, 1188, 1490)	A	2.0	1.0	2.0	1.0
Commercial/Utility (1005, 3005, 1008A)	B	3.0	2.0	3.0	2.0

Note: Grade 4A gauges must remain within 0.1% before and after being lightly tapped.