

Data Sheet

1490 Low Pressure Diaphragm Gauge

FEATURES

- FlutterGuard™ option to reduce movement wear and eliminate pointer flutter
- Pointer adjustment screw
- Polycarbonate removable window
- Glass-filled polysulfone case material
- Custom dials

TYPICAL USES

- Vacuum pumps
- Air compressors
- Filters
- Gas measurement; burners and leak detectors
- Vacuum ovens
- Specialized OEM equipment
- Suction regulators and respirators



1490
2½", 3½" dial size

SPECIFICATIONS

Accuracy:	±2-1-2% of span (ASME B40.100 Grade A)
Dial Size:	2½", 3½"
Ranges:	10 in. H ₂ O through vacuum, compound to 15 psi
Process Connection Location:	Lower, center back, top, 3 o'clock, 9 o'clock
Process Connection Size:	½" NPT Male, ¼" NPT Male, ⅛" Tubing hose barb, ⅜" Tubing hose barb, ¼" Tubing hose barb, ¼" O.D. Polytube hose barb, ⅜" Tubing hose barb
Movement:	Brass
Dial:	Aluminum, white background, black figures and intervals
Proof Pressure:	1.5 X Range
Burst Pressure:	Up to 5 psi = 50 psi Greater than 5 psi = 100 psi
Mounting Option:	Stem, Flush U-clamp for panel mounting
Pointer:	Black, aluminum
Dampening:	FlutterGuard™

KEY BENEFITS

- Case won't rust or dent
- Sensitive diaphragm capsule to measure low pressure and vacuum
- Case is suitable for intermittent or continuous services on natural gas

WETTED COMPONENTS

Diaphragm:	Beryllium copper
Process Connection:	Brass

NON-WETTED COMPONENTS

Case:	Black, glass filled polysulfone
Ring/Window:	Threaded polycarbonate, bayonet

MIN/MAX TEMPERATURE LIMITS

Ambient
-40 °F to 180°F (-40 °C to 82 °C)

Data Sheet

1490 Low Pressure Diaphragm Gauge

ORDERING CODE	Example:	35	1490	A	02	B	XUC	10IWC
Dial Size								
25 - 2½"								
35 - 3½"		35						
Model Code								
1490 - Glass filled polysulfone case			1490					
Wetted Material								
A - Beryllium copper brass polysulfone RTV silicone				A				
Process Connection Size								
01 - ⅛ NPT Male (U-clamp is optional)								
02 - ¼ NPT Male (U-clamp is optional)					02			
HD - ⅛" Tubing hose barb (includes U-clamp/throttle plug not available this OPT.)								
HE - ⅜" Tubing hose barb (includes U-clamp/throttle plug not available this OPT.)								
HF - ¼" O.D. Polytube hose barb (includes U-clamp/throttle plug not available this OPT.)								
HG - ¼" Tubing hose barb (includes U-clamp/throttle plug not available this OPT.)								
HH - ⅜" Tubing hose barb (includes U-clamp/throttle plug not available this OPT.)								
Process Connection Location								
B - Center back connection								
D - Connection @ 3 o'clock								
E - Connection @ 9 o'clock								
L - Lower connection								
T - Top connection								
Options (If choosing an option(s) must include an "X")							X	
AN - 1% Accuracy								
C4- Traceable calibration certificate								
DA - Dial marking								
EO - External adjustment								
NH - Stainless Steel tag								
NN - Paper tag								
TU - Throttle plug (throttle plug must be installed for intermittent or continuous use on natural gas service)								
UC - U-clamp (U-Clamp standard with hose barb connection)							UC	
ZY - FlutterGuard™								
Range (See range table on page 3 for all standard ranges)								
10IWC - 0/10 in. H ₂ O								10IWC

Data Sheet

1490 Low Pressure Diaphragm Gauge

STANDARD PRESSURE RANGES			
Range Code	Pressure	Figure Intervals	Minor Graduation
10IW	0/10 in. H ₂ O	1	0.1
15IW	0/15 in. H ₂ O	5	0.2
30IW	0/30 in. H ₂ O	5	0.5
60IW	0/60 in. H ₂ O	10	1
100IW	0/100 in. H ₂ O	10	1
160IW	0/160 in. H ₂ O	20	2
200IW	0/200 in. H ₂ O	20	2
300IW	0/300 in. H ₂ O	50	5
10ZSI	0/10 oz./in ²	1	0.1
15ZSI	0/15 oz./in ²	5	0.2
30ZSI	0/30 oz./in ²	5	0.5
60ZSI	0/60 oz./in ²	10	1
100ZSI	0/100 oz./in ²	10	1
160ZSI	0/160 oz./in ²	20	2
250ZSI	0/250 oz./in ²	50	5
3#	0/3 psi	0.5	0.05
5#	0/5 psi	1	0.1
10#	0/10 psi	1	0.1
15#	0/15 psi	5	0.2

STANDARD VACUUM PRESSURE RANGES			
Range Code	Pressure	Figure Intervals	Minor Graduation
15IWV	15/0 in. H ₂ O	5	0.2
30IWV	30/0 in. H ₂ O	5	0.5
60IWV	60/0 in. H ₂ O	10	1
100IWV	100/0 in. H ₂ O	10	1
200IWV	200/0 in. H ₂ O	20	2
N15/0ZSI	15/0 oz H ₂ O	5	0.2
N30/0ZSI	30/0 oz H ₂ O	5	0.5
N60/0ZSI	60/0 oz H ₂ O	10	1
N100/0ZSI	100/0 oz H ₂ O	10	1
Compound			
N30/30IW	-30/30 in. H ₂ O	10	1
N30/30ZSI	-30/30 oz./in ²	10	1
N10/10IW	-10/10 in. H ₂ O	2	0.2

STANDARD METRIC PRESSURE RANGES			
Range Code	Pressure	Figure Intervals	Minor Graduation
60CMW	0/60 cm H ₂ O	10	1
2.5KP	0/2.5 kPa	0.5	0.05
4KP	0/4 kPa	1	0.1
10KP	0/10 kPa	1	0.1
16KP	0/16 kPa	2	0.2
25KP	0/25 kPa	5	0.5
40KP	0/40 kPa	10	1
100KP	0/100 kPa	10	1
Vacuum			
N4KP	4/0 kPa	1	0.1
N16KP	16/0 kPa	2	0.2
N100KP	100/0 kPa	10	1
Compound			
60CM	-10/60 cm H ₂ O	10	1
80CM	-10/80 cm H ₂ O	10	1
40CM	-20/40 cm H ₂ O	10	1
100CM	-10/100 cm H ₂ O	10	1
120CM	-10/120 cm H ₂ O	10	1

DUAL SCALE STANDARD PRESSURE RANGES						
Range			Inner Scale		Outer Scale	
Range Code	Inner Scale	Outer Scale	Figure Intervals	Minor Graduation	Figure Intervals	Minor Graduation
97SI/IW	0/9 oz./in ²	15/0 in. H ₂ O	0.2	0.2	5	0.2
20ZSI/IW	0/20 oz./in ²	35/0 in. H ₂ O	0.5	0.5	5	0.5
35ZSI/IW	0/35 oz./in ²	60/0 in. H ₂ O	1	0.5	10	1
60ZSI/IW	0/60 oz./in ²	100/0 in. H ₂ O	1	1	10	1

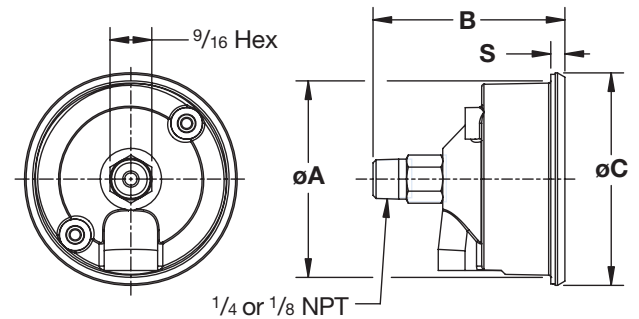
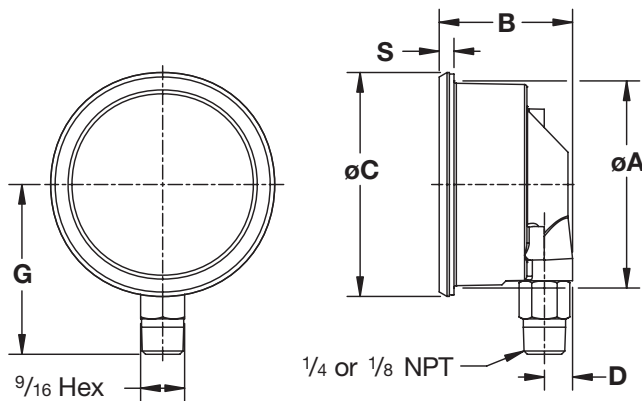
1490 Low Pressure Diaphragm Gauge

DIMENSIONS in [] are millimeters

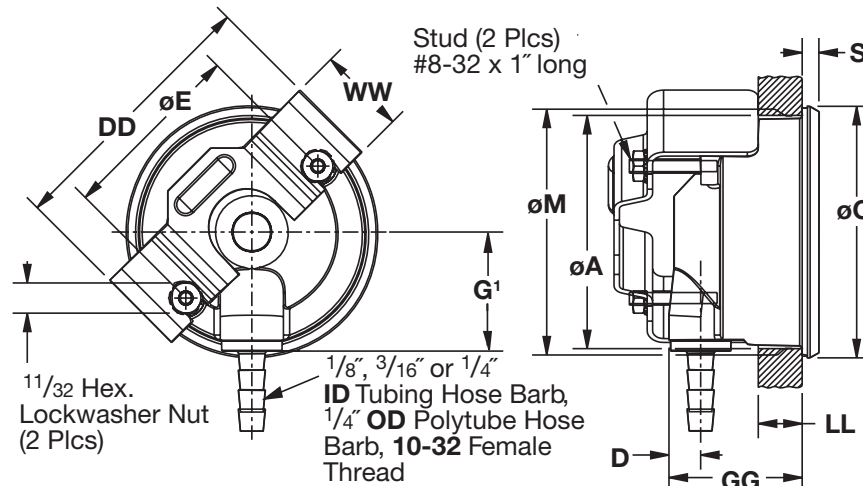
For reference only, consult Ashcroft for specific dimensional drawings

Dial Size (inches)	øA	B	øC	D	G	S
2½	2.59 [66]	1.72 [44]	2.88 [73]	.38 [10]	2.19 [55]	.20 [5]
3½	3.66 [93]	1.69 [43]	3.97 [101]	.38 [10]	2.72 [69]	.20 [5]

Dial Size (inches)	øA	B	øC	S
2½	2.59 [66]	2.59 [66]	2.88 [73]	.20 [5]
3½	3.66 [93]	2.56 [65]	3.97 [101]	.20 [5]



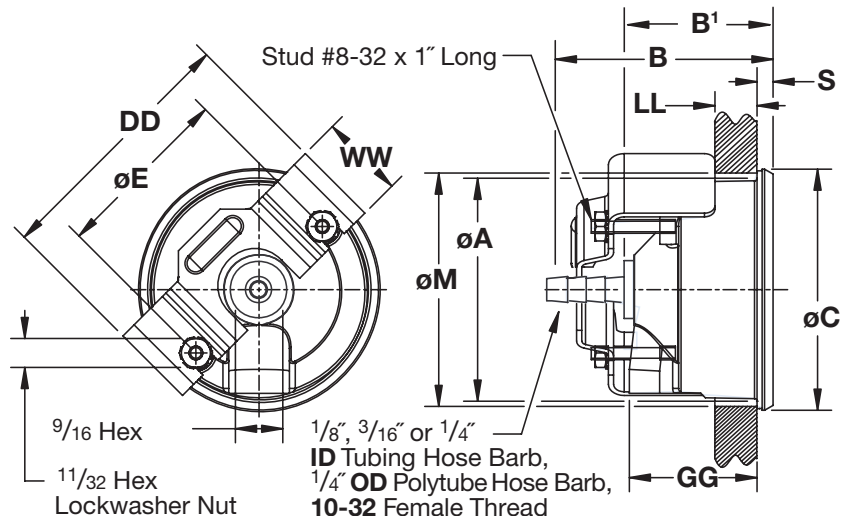
Dial Size (inches)	øA	øC	D	DD	øE	1/8 ID Tubing	3/16 ID Tubing	1/4 ID Tubing	1/4 OD Tubing	G ¹ 10-32 Female	GG	LL Max.	øM	S	WW
2½	2.59 [66]	2.88 [73]	.38 [10]	3.06 [78]	2.13 [54]	1.75 [44]	2.13 [54]	2.28 [54]	1.75 [44]	1.34 [34]	1.59 [40]	.50 [13]	2.66 [67]	.20 [5]	1 [25]
3½	3.66 [93]	3.66 [101]	.38 [10]	4.13 [105]	3.38 [67]	2.31 [59]	2.66 [81]	2.81 [54]	2.31 [59]	1.97 [50]	1.53 [39]	.50 [13]	3.75 [95]	.20 [5]	1 [25]



Data Sheet

1490 Low Pressure Diaphragm Gauge

Dial Size (inches)	øA	1/8 ID Tubing	3/16 ID Tubing	1/4 ID Tubing	1/4 OD Tubing	B' 10-32 Female	øC	DD	øE	GG	LL Max.	øM	S	WW
2½	2.59 [66]	2.19 [55]	2.53 [64]	2.69 [68]	2.19 [55]	1.78 [45]	2.88 [73]	3.06 [78]	2.13 [54]	1.59 [40]	.5 [13]	2.66 [67]	.20 [5]	1 [25]
3½	3.66 [93]	2.13 [54]	2.50 [63]	2.97 [67]	2.13 [54]	1.72 [44]	3.97 [101]	4.13 [105]	3.19 [81]	1.53 [39]	.50 [13]	3.75 [95]	.20 [5]	1 [25]



U-CLAMP (OPT.)										
Dial Size (inches)	øA	B	øC	DD	øE	GG	LL Max.	øM	S	WW
2½	2.59 [66]	2.59 [66]	2.88 [73]	3.06 [78]	2.13 [54]	1.59 [40]	.50 [13]	2.66 [67]	.20 [5]	1 [25]
3½	3.66 [93]	2.56 [65]	3.97 [101]	4.13 [105]	3.38 [67]	1.53 [39]	.5 [13]	3.75 [95]	.20 [5]	1 [25]

