

1490 Low Pressure Diaphragm Gauge



- *Glass-filled polysulfone case material, won't rust or dent*
- *Beryllium copper diaphragm*
- *Brass socket*
- *Wetted materials of beryllium copper, brass, polysulfone and RTV silicone*

The Ashcroft® Type 1490 low pressure diaphragm gauge is designed to measure pressure from 10 in. H₂O to 15 psi, both positive and negative pressures. This gauge uses a very sensitive diaphragm capsule to measure low pressure and vacuum. The gauge is specifically designed for use whenever the pressure medium is a gas that is not corrosive to beryllium copper, brass, polysulfone and RTV silicone. The polysulfone case is suitable for intermittent or continuous service on natural gas provided a .013 throttle plug is installed in the socket. Typical applications are, but not limited to, vacuum pumps, gas leak detectors, air compressors, air filters, gas burners, gas measurement, vacuum ovens, suction regulators and respirators.

PRODUCT SPECIFICATIONS

Model Number:	1490
Accuracy:	±2-1-2% full scale (Grade A, ASME B40.100)
Ranges:	10 in. H ₂ O through 15 psi including vac. and compound
Dial Size:	2½" and 3½" diameter
Case Material:	Black, glass filled polysulfone
Socket Material:	Brass
Movement:	Brass
Sensing Element:	Beryllium copper diaphragm
Wetted Material:	Beryllium copper, brass, polysulfone and RTV silicone
Window:	Polycarbonate, quarter turn bayonet style mounting
Dial:	Aluminum, white background, black figures and intervals.
Pointer:	Black, aluminum, fixed
Connection Size:	⅛ NPT (01) ¼ NPT (02) ⅛" tubing hose barb (HD) ⅜" tubing hose barb (HE) ¼" tubing hose barb (HF) ¼" O.D. polytube hose barb (HG) 10-32 2B female thread (HH)
Connection Location:	Lower (L) Center Back (B) Top (T) 3 o'clock (D) 9 o'clock (E)
Operating Temperature:	-40 to 180°F
Proof Pressure:	150% of range
Burst Pressure:	Up to 5 psi = 50 psi Greater than 5 psi = 100 psi

OPTIONAL FEATURES

1% Accuracy:	XAN
Dial Marking:	XDA
Stainless Steel Tag:	XNH
Paper Tag:	XNN
Throttle Plug:⁽¹⁾⁽³⁾	XTU
Throttle Screw:⁽⁴⁾	XTS
U-clamp:⁽²⁾	XUC
FlutterGuard™:	XZY

- (1) A throttle plug must be installed in the socket whenever the gauge is used for intermittent or continuous service on natural gas.
- (2) U-clamp furnished when hose barb or female thread is specified.
- (3) Throttle plug not available with hose barb or female thread connections.
- (4) .020 throttle screw available with HH connection only.

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STANDARD RANGES

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

STANDARD RANGES (Cont.)

Vacuum	Figure Intervals	Minor Graduation			
15/0 in.H ₂ O	5	0.2			
30/0 in.H ₂ O	5	0.5			
60/0 in.H ₂ O	10	1			
100/0 in.H ₂ O	10	1			
200/0 in.H ₂ O	20	2			
15/0 oz./in. ²	5	0.2			
30/0 oz./in. ²	5	0.5			
60/0 oz./in. ²	10	1			
100/0 oz./in. ²	10	1			
Compound					
-30/30 in.H ₂ O	10	1			
-30/30 in.oz./in. ²	10	1			
-10/10 in.H ₂ O	2	0.2			
Dual Scale					
Range		Graduations			
		Inner Scale		Outer Scale	
Inner Scale	Outer Scale	Figure Intervals	Minor Grad.	Figure Intervals	Minor Grad.
0/9 oz./in. ²	0/15 in.H ₂ O	1	0.2	5	0.2
0/20 oz./in. ²	0/35 in.H ₂ O	5	0.5	5	0.5
0/35 oz./in. ²	0/60 in.H ₂ O	5	0.5	10	1
0/60oz./in. ²	0/100 in.H ₂ O	10	1	10	1

Other ranges available on request. Consult factory.

STANDARD METRIC RANGES

Pressure	Figure Intervals	Minor Graduation
0/60 cm. H ₂ O	10	1
0/2.5 kPa	0.5	0.05
0/4 kPa	1	0.1
0/10 kPa	1	0.1
0/16 kPa	2	0.2
0/25 kPa	5	0.5
0/40 kPa	10	1
0/100 kPa	10	1
Vacuum		
2.5/0 kPa	0.5	0.05
4/0 kPa	1	0.1
10/0 kPa	1	0.1
16/0 kPa	2	0.2
25/0 kPa	5	0.5
40/0 kPa	10	1
100/0 kPa	10	1
Compound		
-10/60 cm H ₂ O	10	1
-10/80 cm H ₂ O	10	1
-20/40 cm H ₂ O	10	1
-10/100 cm H ₂ O	10	1
-10/120 cm H ₂ O	20	2

SELECTION TABLE

Dial Size		Type		Wetted Material		Conn. Size & Type		Connection Location		Ranges		Optional Features	
Code	Desc.	Code	Description	Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
25	2 1/2"	1490	Low Pressure Diaphragm Gauge	A	Beryllium Copper	01	1/8 NPT	L	Lower	10 IW	0 to 10 in.H ₂ O	XAN	1% Opt. Accuracy
35	3 1/2"				Brass	02	1/4 NPT	B	Center Back			XDA	Dial Marking
					Polysulfone	HD	1/8" I.D.Tubing Hose Barb ^(2,3)	T	Top		See Chart for Entire List of Ranges	XNH	Stain. Steel Tag
					RTV Silicone	HE	3/16" I.D.Tubing Hose Barb ^(2,3)	D	3 O'Clock			XNN	Paper Tag
						HF	1/4" I.D.Tubing Hose Barb ^(2,3)	E	9 O'Clock			XTU ^(1,3)	Throttle Plug
						HG	1/4" O.D. Polytube Hose Barb ^(2,3)					XTS ⁽⁴⁾	Throttle Screw
						HH	10-32-2B Female Thread ^(2,3,5)					XUC ⁽²⁾	U-clamp
												XZY	FlutterGuard™

(1) A throttle plug must be installed in the socket whenever the gauge is used for intermittent or continuous service on natural gas.

(2) U-clamp furnished when hose barb or female thread is specified.

(3) Throttle plug not available with hose barb or female thread connections.

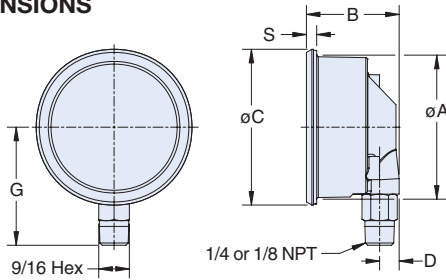
(4) .020 throttle screw available with HH connection only.

HOW TO ORDER:

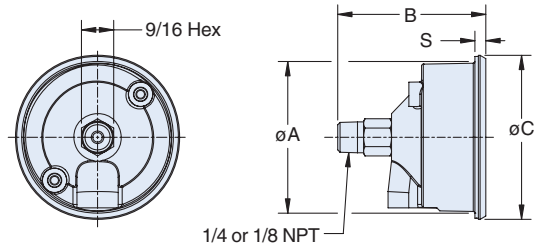
25 1490 A 02L XXX 10 IW
 1. Dial size – 2 1/2" (25), 3 1/2" (35) _____
 2. Case type _____
 3. Wetted material _____
 4. Connection size – 1/4" (02), 1/8" (01) _____
 5. Connection location – Lower (L), Back (B) _____
 6. Optional features _____
 7. Standard pressure range – 10 in.H₂O _____

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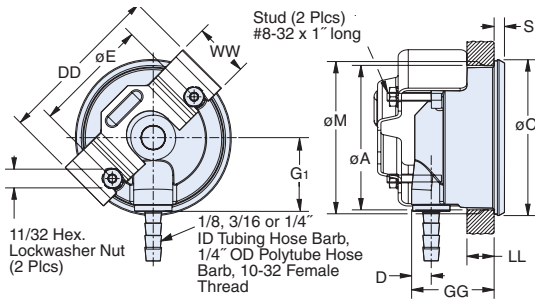
DIMENSIONS



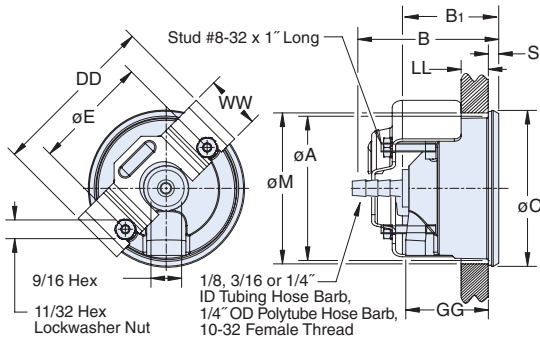
Size	øA	B	øC	D	G	S
25	2 ¹⁹ / ₃₂ (66)	1 ²³ / ₃₂ (44)	2 ⁷ / ₈ (73)	3 ¹⁰ / ₁₆ (10)	2 ²³ / ₁₆ (55)	1 ¹³ / ₆₄ (5)
35	3 ²¹ / ₃₂ (93)	1 ¹¹ / ₁₆ (43)	3 ³¹ / ₃₂ (101)	3 ¹⁰ / ₁₆ (10)	2 ²³ / ₃₂ (69)	1 ¹³ / ₆₄ (5)



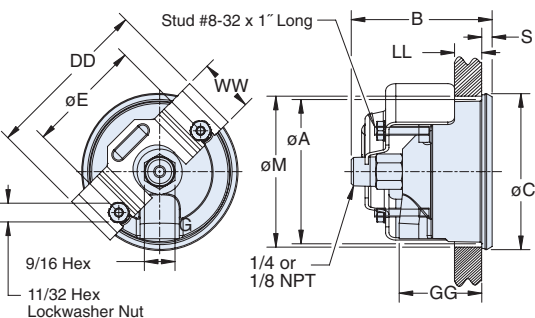
Size	øA	B	øC	S
25	2 ¹⁹ / ₃₂ (66)	2 ¹⁹ / ₃₂ (66)	2 ⁷ / ₈ (73)	1 ¹³ / ₆₄ (5)
35	3 ²¹ / ₃₂ (93)	2 ⁹ / ₁₆ (65)	3 ³¹ / ₃₂ (101)	1 ¹³ / ₆₄ (5)



Size	øA	øC	D	øE	G					øM	S	DD	GG	LL Max.	WW
					1/8 ID Tubing	3/16 ID Tubing	1/4 ID Tubing	1/4 OD Tubing	10-32 Female						
25	2 ¹⁹ / ₃₂ (66)	2 ⁷ / ₈ (73)	3 ¹⁰ / ₁₆ (10)	2 ¹ / ₈ (54)	1 ¹ / ₄ (44)	2 ¹ / ₈ (54)	2 ²³ / ₃₂ (54)	1 ¹ / ₄ (44)	1 ¹¹ / ₃₂ (34)	2 ²³ / ₃₂ (67)	1 ¹³ / ₆₄ (5)	3 ¹ / ₁₆ (78)	1 ¹⁹ / ₃₂ (40)	1/2 (13)	1 (25)
35	3 ²¹ / ₃₂ (93)	3 ³¹ / ₃₂ (101)	3 ¹⁰ / ₁₆ (10)	3 ³ / ₁₆ (67)	2 ⁵ / ₁₆ (59)	2 ² / ₁₆ (81)	2 ¹ / ₁₆ (54)	2 ⁵ / ₁₆ (59)	1 ³¹ / ₃₂ (50)	3 ³ / ₄ (95)	1 ¹³ / ₆₄ (5)	4 ¹ / ₈ (105)	1 ¹⁷ / ₃₂ (39)	1/2 (13)	1 (25)



Size	øA	B					øC	øE	øM	S	DD	GG	LL Max.	WW
		1/8 ID Tubing	3/16 ID Tubing	1/4 ID Tubing	1/4 OD Tubing	10-32 Female								
25	2 ¹⁹ / ₃₂ (66)	2 ³ / ₁₆ (55)	2 ¹⁷ / ₃₂ (64)	2 ¹¹ / ₁₆ (68)	2 ³ / ₁₆ (55)	1 ²⁵ / ₃₂ (45)	2 ⁷ / ₈ (73)	2 ¹ / ₈ (54)	2 ²¹ / ₃₂ (67)	1 ¹³ / ₆₄ (5)	3 ¹ / ₁₆ (78)	1 ¹⁹ / ₃₂ (40)	1/2 (13)	1 (25)
35	3 ²¹ / ₃₂ (93)	2 ¹ / ₈ (54)	2 ¹ / ₂ (63)	2 ²¹ / ₃₂ (67)	2 ¹ / ₈ (54)	1 ²³ / ₃₂ (44)	3 ³¹ / ₃₂ (101)	3 ³ / ₁₆ (81)	3 ³ / ₄ (95)	1 ¹³ / ₆₄ (5)	4 ¹ / ₈ (105)	1 ¹⁷ / ₃₂ (39)	1/2 (13)	1 (25)



U-clamp Option

Size	øA	B	øC	øE	øM	S	DD	GG	LL MAX	WW
25	2 ¹⁹ / ₃₂ (66)	2 ¹⁹ / ₃₂ (66)	2 ⁷ / ₈ (73)	2 ¹ / ₈ (54)	2 ²³ / ₃₂ (67)	1 ¹³ / ₆₄ (5)	3 ¹ / ₁₆ (78)	1 ¹⁹ / ₃₂ (40)	1/2 (13)	1 (25)
35	3 ²¹ / ₃₂ (93)	2 ⁹ / ₁₆ (65)	3 ³¹ / ₃₂ (101)	3 ³ / ₁₆ (81)	3 ³ / ₄ (95)	1 ¹³ / ₆₄ (5)	4 ¹ / ₈ (105)	1 ¹⁷ / ₃₂ (39)	1/2 (13)	1 (25)