

# ASHCROFT®

## Industrial Gauges



ISO 9001  
REGISTERED FIRM

**DRESSER** INSTRUMENT

A Halliburton Company

BULLETIN IG-1



# Introduction

## Ashcroft® Industrial Gauges

Ashcroft® industrial pressure gauges have earned a reputation for dependability as a mainstay in the marketplace for over 150 years. Meeting the requirements of ASME B40.1-1991, Ashcroft industrial pressure gauges are offered in a wide assortment of dial sizes, case styles and wetted parts materials.

### Applications

These gauges have been engineered for general service applications such as low-pressure applications from 10 inches of water, and hydraulic and refrigeration service. Other industrial pressure gauges measure differential pressure, while Ashcroft duplex pressure gauges meet requirements for indication of two related pressures with a single gauge.

The Ashcroft industrial gauge family also includes the Reid vapor test gauge specifically designed for testing volatile petroleum liquids using the vapor test procedure prescribed by ASTM D-323. Ashcroft Christmas tree gauges are designed specifically for use in the oil fields.

### Pressure Gauge Selection

Ashcroft industrial pressure gauges are available in a variety of sizes and materials to meet the demands of the industrial marketplace. When selecting an Ashcroft industrial pressure gauge, consider these seven steps:

► **Process Media** — Ashcroft industrial pressure gauges are available in a wide selection of Bourdon tube and socket materials to fit your application.

► **Pressure Gauge Range** — available with ranges as low as 10 inches of water through 20,000 psi, Ashcroft industrial pressure gauges have been designed to meet your application needs.

► **Operating Environment** — available in case materials of stainless steel, black epoxy-coated aluminum and phenolic, these gauges have been designed to withstand the most demanding environments. Most are available with an optional built-in throttle plug to help protect against pressure surges or spikes.

► **Accuracy Requirements** — all general service type industrial gauges are offered with a 1% ASME Grade 1A accuracy. Ashcroft Types 5503 and 5509 gauges have standard accuracies of 1.6% and 2.5% respectively. Low-pressure bellows gauges and all other industrial gauges are offered with a 2/1/2% ASME Grade A accuracy.

► **Dial Size** — available with dial sizes from 2½ through 8½ inches, Ashcroft industrial gauges come in sizes to meet your space requirements with optimum gauge readability.

► **Connections** — availability includes, but is not limited to ¼ NPT, ½ NPT, BSP, JIS and SAE connections.

► **Mounting Requirements** — depending on the type, Ashcroft gauges are available for stem, surface or flush mounting.

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Specifications	Type
Gauge Description	
Accuracy	
Case Style	
Case Material	
Dial Size	
Dial Material & Color	
Ring Type	
Bourdon Tube Material	
Socket Material	
Range Limits (PSI)	
Bellows & Socket Material	
Connection Size	
Connection Location	
Mounting	
Movement	
Pointer	
Window	
Warranty	
Options <sup>(4)</sup>	Code
300 Series SS Ring	63
Chrome Plated Ring	13
Flush Mounting Ring (Black)	—
Flush Mounting Ring (Polished)	53
Flush Mounting Ring (Chrome)	55
Flush Mtg. Ring (300 SS)	57
Back Flange	—
Overload/Underload Stops	OS/VS
Throttle Plug (.031) Thread-in	TS

(1) 8½" solid front case design supplied with  
 (2) Available in all case types.

# Specification Matrix

Ashcroft® Industrial Gauges



1010	1017	1220	1187/1188/1189
General Service	General Service	General Service	Low Pressure Bellows
1% ASME Grade 1A	1% ASME Grade 1A	1% ASME Grade 1A	2%-1%-2% ASME Grade A
Open Front (dry only)	Open Front (dry only)	Open Front (dry only)	Solid Front (dry only)
Aluminum, Black Epoxy Coated	Aluminum, Black Epoxy Coated	Phenolic, Black	1188 Phenolic, Black
1/2" (45), 6" (60), 8 1/2" (85) <sup>(1)</sup> , 12" (12)	4 1/2" (45), 6" (60)	4 1/2" (45), 6" (60), 8 1/2" (85) <sup>(1)</sup>	1187, 1189 Aluminum, Black Epoxy Coated
Brushed Aluminum,	Brushed Aluminum,	Brushed Aluminum,	White Aluminum,
Black Markings	Black Markings	Black Markings	Black Markings
Steel, Slip,	Hinged Steel,	SS, Snap	1187 Hinged Steel, Black Epoxy Coated
Black Epoxy Coated	Black Epoxy Coated		1188, 1189 Polypro., Black, Threaded, Reinforced
Phosphor Bronze (A) <sup>(2)</sup>	4130 Alloy Steel (B) <sup>(2)</sup>	316 SS (R) <sup>(2)</sup>	—
Brass, Silver Brazed	4130 Alloy Steel	1019 Steel	—
Vac-1000	Vac-5000	Vac-20,000	10/IW Vac to 10 psi
—	—	—	Brass (A), 316 SS (S), Monel (P)
1/4 (02), 1/2 (04) NPT, SAE and BSP (Consult Customer Service for others)			
Lower (L) or Back (B)	Back (B)	Lower (L) or Back (B)	1187 Back (B), 1188, 1189 Lower (L) or Back (B)
Stem, Surface	Stem, Flush	Stem, Surface, Flush	1188, 1189 Stem, Flush & Surface. 1187 Flush Only
400 SS with Bronze Hairspring	400 SS with Bronze Hairspring	400 SS with Bronze Hairspring	416 SS
Non-Adjustable	Non-Adjustable	Non-Adjustable	Non-Adjustable
Glass	Glass	Glass	Glass
1 Year	1 Year	1 Year	1 Year
N/A	Available	N/A	Available (1187 only)
Available	Available	N/A	N/A
Available (X50)	Standard	Available (X54)	Available (1188 & 4 1/2", 6" 1189 only, X56)
Available	Available 4 1/2" only	—	—
N/A	N/A	Available	N/A
—	—	—	1188 only
Standard	—	—	—
Available	Available	Available	Standard
Available	Available	Available	Available

inged ring.

(3) Available in all case types with 4 1/2" dial size. Consult Customer Service for other offerings.

(4) See page 12 for more optional features.

# Specification Matrix

Ashcroft® Industrial Gauges



Specifications	Type	1020	1038	1339	1122
Gauge Description		Xmas Tree	Duplex	Duplex	Gear
Accuracy		2%-1%-2% ASME Grade A	2%-1%-2% ASME Grade A	2%-1%-2% ASME Grade A	2%-1%-2% A
Case Style		Open Front (dry only)	Open Front (dry only)	Open Front (dry only)	Open Front
Case Material		304 Stainless Steel	Cast Iron 3½", 6", Aluminum 4½"	Cast Aluminum,	Stainle
			Black Epoxy Coated	Black Epoxy Coated	
Dial Size		4½" (45)	3½" (35), 4½" (45), 6" (60)	4½" (45), 6" (60)	2½"
Dial Material & Color		Brushed Aluminum with	Brushed Aluminum with	Brushed Aluminum with	Brushed Alu
		Black Markings	Black Markings	Black Markings	Black M
Ring Type		304 SS, Bayonet	Aluminum, Threaded,	Aluminum, Hinged,	304
			Black Epoxy Coated	Black Epoxy Coated	Bay
Bourdon Tube Material		316 SS (R)	Grade A Phosphor Bronze (A)	Grade A Phosphor Bronze (A)	Grade A Phosp
Socket Material		1019 Steel	Brass	Brass	Br
Connection Size and		¼ (02), ½ (04) NPT	¼ (02) NPT Lower (L) (3½" only)	¼ (02), ½ (04) NPT	¼ (02)
Connection Location		Lower (L)	Lower (L) or Back (B) (4½", 6")	Lower (L) or Back (B)	Low
Diaphragm Material		—	—	—	—
Range Limits (PSI)		1000-20,000	30-1000	30-1000	15-1
Mounting		Stem	Stem, Surface, Flush	Flush	Stem, S
Movement		400 SS with Bronze Hairspring	Bronze	Bronze	—
Pointer		Micrometer Adjustable	Non-Adjustable Black & Red	Non-Adjustable Black & Red	Non-Ad
Window		Glass	Glass	Glass	Gla
Warranty		1 Year	1 Year	1 Year	1 Y
<b>Options</b>	<b>Code</b>				
300 Series SS Ring	63	N/A	N/A	Available	N
Flush Mounting Ring (Black)	50	—	4½", 6" only	N/A	N
Flush Mounting Ring (Polished)	53	—	Available 4½" only	Available	—
Back Flange	—	—	—	—	Std. on
Overload/Underload Stops	OS/VS	Available	Available	Available	Avail
Throttle Plug (.020) Thread-in	TS	Available	Available	Available	Avail

\* See bulletin DPG-3 for information on the types 1127/1128 with 316 SS tube and socket

# Specification Matrix

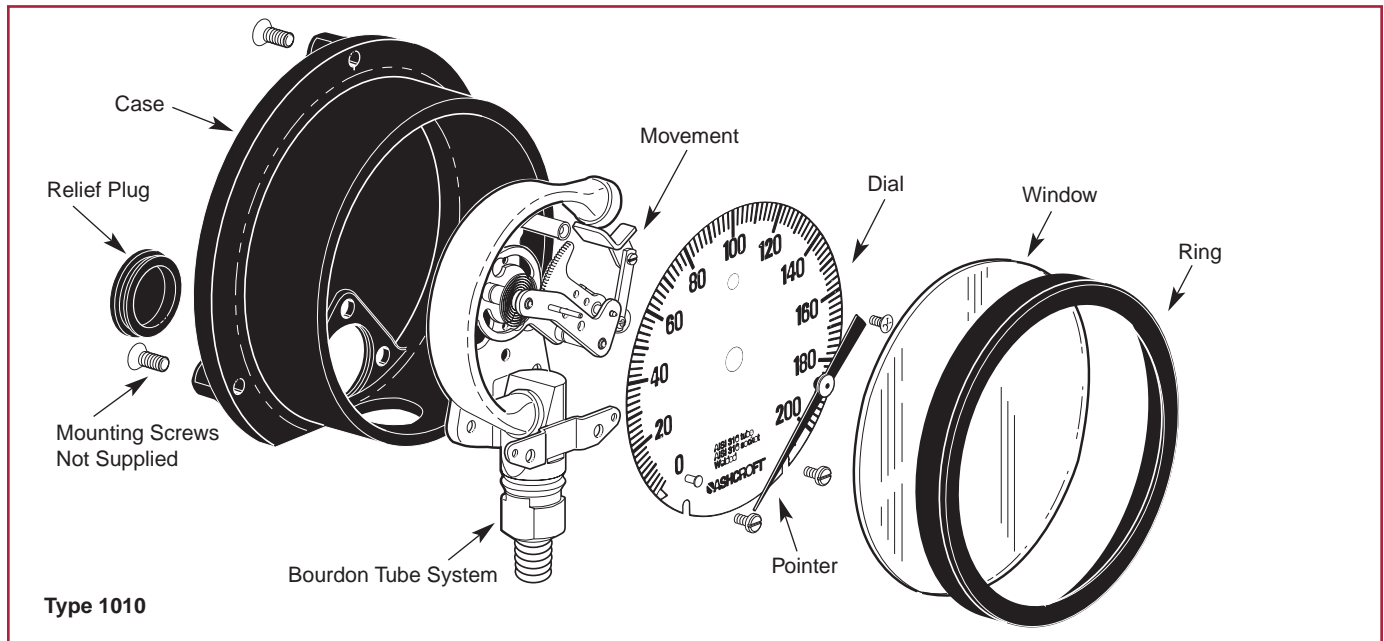
Ashcroft® Industrial Gauges



E/KF	1125/1125A*	5503	5509	1150
ess	Differential	Differential	Differential	Reid Vapor Test
SME Grade A	2%-1%-2% ASME Grade A	1.6% Full Scale	2.5% Full Scale	.5% ASME Grade 2A
(dry only)	Open Front (dry only)	Open Front (dry or liquid fill)	Open Front (dry or liquid fill)	Open Front (dry only)
s Steel	Cast Aluminum, Black Epoxy Coated	304 Stainless Steel	304 Stainless Steel	Cast Aluminum Black Epoxy Coated
25)	4½" (45)	4" (100mm)(10), 6" (160mm)(16)	4" (100mm)(10), 6" (160mm)(16)	4½" (45)
minum with	Brushed Aluminum with	White Aluminum with	White Aluminum with	Black Aluminum with
arkings	Black Markings	Black Markings	Black Markings	White Markings
S,	Aluminum, Threaded,	304 SS, Bayonet	304 SS	Aluminum, Threaded
net	Black Epoxy Coated		Bayonet	
hor Bronze (A)	Grade A Phosphor Bronze (A)	—	—	Grade A Phosphor Bronze (A)
ss	Brass	316 SS	316 SS	Brass
NPT	¼ (02) NPT	¼ (02) NPTF (female)	¼ (02) NPTF (female)	¼ (02) NPT
r (L)	Lower (L) or Back (B)	Lower (L)	Lower (L)	Lower (L)
—	—	316 SS for Ranges of 15 psi and above (S). High Strength Cobalt Alloy (Duratherm 600) (S) for Ranges of 10 psi and below.		—
000	20-1000 (1125) 10/0/10 to 500/0/500 (1125A)	0-10 IWD to 600 psid	0-10 IWD to 300 psid	15-1000
urface	Stem, Surface, Flush	Stem, Wall or Pipe	Stem, Wall or Pipe	Stem
—	Bronze	—	—	400 SS with Bronze Hairspring
ustable	Micrometer Adjustable	Aluminum, Black/Ext. Zero Adjust.	Aluminum, Black/Ext. Zero Adjust.	Aluminum, White/Adjustable
ss	Glass	Shatterproof Glass	Shatterproof Glass	Glass
ar	1 Year	1 Year	1 Year	1 Year
A	N/A	Standard	Standard	N/A
A	Available	N/A	N/A	N/A
—	Available	—	—	—
122KF	—	—	—	N/A
able	Available	Standard	Standard	Available
able	Available	—	—	Available

# Product Selection Information

Ashcroft® Industrial Gauges



## Consult ASME B40.1 for guidance in gauge selection

**WARNING:** To prevent misapplication, pressure gauges should be selected considering media and ambient operating conditions. Improper application can be detrimental to the gauge, causing failure and possible personal injury or property damage. The information contained in this bulletin is offered as a guide to assist in making the proper selection of a pressure gauge. Additional information is available from Dresser Instrument Division.

### Pressure Ranges:

As recommended by ASME B40.1, select a gauge with a full scale pressure range of approximately twice the normal operating pressure. The maximum operating pressure should not exceed approximately 75% of the full scale range. Failure to select a gauge range within these criteria may ultimately result in fatigue failure of the Bourdon tube.

### Operating Conditions:

The operating conditions to which a gauge will be subjected must be considered. If the gauge will be subjected to severe vibration and/or pressure pulsation, a liquid-filled gauge with a throttle plug will be necessary to obtain normal product life. With the exception of Types 5503 and 5509 industrial pressure gauges cannot be liquid-filled. When pulsation or vibration are present

on a gauge that cannot be liquid-filled, the gauge should be isolated from the process using flexible line assembly.

To ensure long life and accurate readings, pressure gauges should not be exposed to process or ambient temperatures over 150°F. Long term exposure to temperatures in excess of 150°F may cause discoloration of dials as well as hardening of elastomeric case seals. Soft-soldered, silver-brazed and welded pressure joints are rated at 250°F maximum, 450°F maximum and 750°F maximum respectively. Plastic gauge cases, including phenolic, should not be exposed to temperatures in excess of 250°F. Maximum recommended service temperatures for gauge windows are as follows: 350°F for plain glass; 270°F for polycarbonate; 200°F for laminated safety glass; and 180°F for acrylic.

Heat and cold affect accuracy of indication. A general rule of thumb for *dry gauges* is 0.5% of full scale change for every 40°F change from 75°F. Above 250°F there may exist very significant errors in indication.

Proper selection of the bourdon, diaphragm or bellows system material is dependent on the process fluid to which the system will be subjected. If the correct material is not available, the use of a diaphragm seal may be necessary to protect the system from the process fluid. Liquid-filled gauges with throttle plugs are recommended for the discharge side of positive displacement pumps.

### Pressure Elements:

Available in a wide variety of materials, including: phosphor bronze, alloy steel, 316 stainless steel and K Monel.

### Cases:

Depending on the type, Ashcroft industrial gauges are available in aluminum, stainless steel or cast iron case materials. With the exception of Ashcroft Types 5503 and 5509, industrial gauges are not weatherproof or hermetically sealed. They are furnished standard with a pressure-relief plug.

### Rings:

The ring, which retains the window, is bayonet (cam), or slip depending on the type number.

### Movements:

Movements are designed and materials of construction selected to reduce friction and extend wear life.

### Dials:

Dials are uniformly graduated, and have highly legible markings depending on the gauge type. Industrial gauges are offered with brushed aluminum dials with black markings or white dials with black markings.

### Windows:

Depending on the size and type, Ashcroft industrial gauges are available with acrylic, shatterproof glass or glass windows.

### Pointers:

Depending on the type, Ashcroft industrial gauges are available with adjustable or fixed pointers.



# Media Application Table

Ashcroft® Industrial Gauges

The media being measured must be compatible with the wetted parts of the pressure instrument. To use the chart below, locate the media whose pressure is to be measured and select a suitable material from those available. This is a simplified chart and assumes the media

temperature is below 200°F except for media with an \* which must be below 100°F. Throttling devices and a liquid filled instrument are recommended in applications with pulsation or vibration. These recommendations are only a guide, as service life is dependent on

temperature, concentrations, catalysts that may be added, or other conditions beyond our control. Consult Stratford, CT, customer service for specific applications and for any media not listed.

Media Application	Pressure Instrument Material				
	Brass or bronze	Steel	Stainless steel	Monel	Diaphragm seals**
Acetone*	•		•	•	
Acetic Acid <40%			•		
Acetic Anhydride					•
Acetylene (Dry)		•	•		
Acrolein 100%					•
Air	•	•	•	•	
Alcohol, Ethyl	•		•	•	
Alum. Chloride >10%					•
Alum. Sulfate 10-50%					•
Ammonia Gas (Dry)		•	•		
Ammonium Chloride <40%					•
Ammonium Nitrate <50%			•		
Ammonium Sulfate <60%					•
Aniline >99%			•		
Argon	•	•	•	•	
Beer			•		
Benzidine >99%					•
Benzene <50%			•	•	
Benzoic Acid <70%			•		
Boric Acid <25%			•		
Bromine (Dry)					•
Butane	•	•	•	•	
Butyric Acid <10%			•		
Calcium Chloride <80%					•
Calcium Hydroxide <50%					•
Carbon Dioxide (Dry)	•	•	•	•	
Carbon Monoxide >99%	•	•	•	•	
Chlorine (Dry)					•
Chlorine (Moist)*					•
Chloroform (Dry)			•	•	
Chromic Acid					•
Citric Acid 10-50%			•		
Corn Oil			•		

Media Application	Pressure Instrument Material				
	Brass or bronze	Steel	Stainless steel	Monel	Diaphragm seals**
Crude Oil (Sour)				•	
Crude Oil (Sweet)			•	•	
Ethyl Acetate	•		•	•	
Ethylene Oxide >99%	•		•	•	
Ferric Chloride <40%					•
Ferric Sulfate <10%*			•		
Ferrous Chloride <30%					•
Ferrous Sulfate <50%					•
Fluorine Gas (Dry)				•	
Formaldehyde <95%			•	•	
Formic Acid*					•
Freons		•	•		
Furfural <10%					•
Gasoline (Flowing)	•		•		
Glycerin >99%	•	•	•	•	
Hydrobromic Acid					•
Hydrochloric Acid					•
Hydrofluoric Acid					•
Hydrofluosilic Acid					•
Hydrogen ①	•		•		
Hydrogen Peroxide <50%			•		
Kerosene	•	•	•	•	
Lactic Acid <70%*			•		
Magnesium Chloride <40%					•
Mercuric Chloride <60%			•		
Mercury >99%		•	•		
Milk			•		
Naphtha >99%	•	•	•	•	
Naphthalene >99%			•		
Nickel Chloride >99%					•
Nitric Acid <95%*			•		
Nitrogen	•	•	•	•	
Oleic Acid	•				•

Media Application	Pressure Instrument Material				
	Brass or bronze	Steel	Stainless steel	Monel	Diaphragm seals**
Oxalic Acid *					•
Oxygen (Gas) ②	•		•	•	
Palmitic Acid >99%*			•		
Phosphoric Acid <80%*			•		
Picric Acid <10%			•		
Propane (Dry)		•	•	•	
Sea Water (Flowing)				•	
Silver Nitrate <70%					•
Sodium Bicarbonate <20%			•	•	
Sodium Bisulfate <30%					•
Sodium Carbonate <40%				•	
Sodium Chromate <60%	•	•	•	•	
Sodium Cyanide *		•	•		
Sodium Hydroxide < 40%				•	
Sodium Hypochlorite <25%					•
Sodium Phosphate, Tri <60%		•	•	•	
Sodium Silicate <50%		•	•	•	
Sodium Sulfide <50%					•
Stannous Chloride <10%			•		
Steam (Use siphon)	•	•	•	•	
Stearic Acid			•	•	
Sulfur Dioxide (Dry) >99%					•
Sulfur Trioxide (Dry) >99%					•
Sulfurous Acid					•
Tannic Acid <80%	•	•	•	•	
Tartaric Acid <50%			•	•	
Tin Chloride (ous) <10%			•		
Toluene >99%	•	•	•	•	
Turpentine >98%	•	•	•		
Water (Tap)	•	•	•		
Whiskey			•		
Zinc Chloride <25%*					•
Zinc Sulphate <40%					•

① Over 1000 psi — entire system must be 316 stainless steel.

② Bronze and 316 stainless steel are acceptable for oxygen service, provided the instrument has been cleaned for oxygen service and is free from oil.

\* Below 100°F

\*\* Any standard bourdon tube material may be used in conjunction with a diaphragm seal, but the gauge selection should take into consideration the corrosive environment in which it is to operate. For diaphragm seals, see Bulletin DS-1.

# Industrial Gauges

Types 1010, 1017 and 1220, Grade 1A (1.0% F.S.)

**Ashcroft General Service Gauges** meet the needs of a variety of applications. They are commonly used on boilers or other pressurized vessels, pumps, compressors and other machinery. Other applications include chemical, petrochemical, pulp and paper and power plants.

**Ashcroft Type 1010** comes standard with a back flange. This feature makes the gauge well suited for wall mounting applications. The Type 1010 is available in dial sizes to 12”.

**Ashcroft Type 1017** gauge offers the best value when flush panel mounting is required.

**Ashcroft Type 1220** phenolic type case gauge is suitable for many corrosive environments. The versatile turret-type case is available for wall mounting or can be panel mounted with the optional Type 1278 flush-mounting ring.

**Considerations for Selecting General Service Pressure Gauges Include:**

**Process Media:** General Service pressure gauges are available with bronze, 4130 alloy steel (4½” dial size only), 316 stainless steel and monel Bourdon tubes. Socket materials include brass, 4130 alloy steel, 316 stainless steel and Monel.

**Pressure Gauge Range:** These gauges are offered with ranges from vacuum thru 20,000 psi including compound ranges.

**Operating Environment:** Depending on the model number, these gauges are available with an aluminum or phenolic case.

**Accuracy Requirements:** These gauges are offered with a 1% ASME Grade1A accuracy.

**Dial Size:** Depending on the type number, available in 4½” thru 12” dial sizes.

**Connections:** ¼ or ½ NPT lower or back connections are available. JIS, BSP, DIN and SAE connections are also available.

**Mounting Requirements:** Stem, surface or flush mounting, depending on the type number.

STANDARD METRIC RANGES						
Range		Dial Graduations		Range	Dial Graduation	
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	M Gra
<b>Pressure</b>						
0/1	0/1	0.1	0.01	0/100	10	
0/1.6	0/1.6	0.2	0.02	0/160	20	
0/2.5	0/2.5	0.5	0.05	0/250	50	
0/4	0/4	0.5	0.05	0/400	50	
0/6	0/6	0.5	0.1	0/600	50	
0/10	0/10	1	0.1	0/1000	100	
0/16	0/16	2	0.2	0/1600	200	
0/25	0/25	5	0.5	0/2500	500	
0/40	0/40	5	0.5	0/4000	500	
0/60	0/60	5	1	0/6000	500	
0/100	0/100	10	1	0/10,000	1000	
0/160	0/160	20	2	0/16,000	2000	
0/250	0/250	50	5	0/25,000	5000	
0/400	0/400	50	5	0/40,000	5000	
0/600	0/600	50	10	0/60,000	5000	
0/1000	0/1000	100	10	0/100,000	10,000	10
0/1600	0/1600	200	20	0/160,000	20,000	20
<b>Vacuum</b>						
-1/0	-1/0	0.1	0.01	-100/0	10	
<b>Compound</b>						
-1/0/1.5	-1/0/1.5	0.5	0.05	-100/0/150	50	
-1/0/3	-1/0/3	0.5	0.05	-100/0/300	50	
-1/0/5	-1/0/5	0.5	0.1	-100/0/500	50	
-1/0/9	-1/0/9	1	0.1	-100/0/900	100	
-1/0/15	-1/0/15	2	0.2	-100/0/1500	200	
-1/0/24	-1/0/24	5	0.2	-100/0/2400	500	



Case Types 1010, 1017 & 1220



# Industrial Gauges

Types 1010, 1017 and 1220, Grade 1A (1.0% F.S.)

Resolution	Outer Scale When Dual Range Specified psi
1	0/14
2	0/22
5	0/35
5	0/55
0	0/85
0	0/140
0	0/220
0	0/350
0	0/550
0	0/850
0	0/1400
0	0/2200
0	0/3500
0	0/5500
0	0/8500
0	0/14,000
0	0/22,000
1	30/0~Hg
5	30~Hg/0/20
5	30~Hg/0/40
0	30~Hg/0/70
0	30~Hg/0/125
0	30~Hg/0/215
0	30~Hg/0/340

## STANDARD RANGES

Pressure Range	Figure Interval	Minor Graduation	Compound Range		Figure Interval		Minor Graduation	
					Inches Mercury	psi	Inches Mercury	psi
0/15	1	0.2						
0/30	5	0.5						
0/60	5	1						
0/100	10	1						
0/160	20	2						
0/200	20	2						
0/300	30	5						
0/400	50	5						
0/600	50	10						
0/800	100	10						
0/1000	100	10						
0/1500	200	20						
0/2000	200	20						
0/3000	300	50						
0/5000	500	50						
0/6000	1000	100						
0/7500	1000	100						
0/10,000	1000	100						
0/15,000	2000	200						
0/22,000	2000	200						
0/300	10	10						
0/100psi	10	10						
0/150psi	10	20						
0/300psi	30	25						
0/15psi	0/34	3	5	0.05	1			
0/30	0/70	5	10	0.5	1			
0/60	0/140	5	20	1	2			
0/100	0/230	10	20	1	5			
0/160	0/370	20	50	2	5			
0/200	0/460	20	50	5	5			
0/300	0/690	25	50	5	10			
Vacuum Range	Figure Interval	Minor Graduation	Dial Size	Retard Range				
30-0 inches Mercury	5 inches	0.5 inches	4½"	0/15 psi retard to 30 psi 0/30 psi retard to 60 psi		10" Hg Vac/5 psi retard to 30" Hg and to 15 psi		

TABLE A – CASE SELECTION AND MOUNTING

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4½" 6"	(45) (60)	1010	Aluminum Black, epoxy coated	Steel Black, Slip	Stem Surface	Lower Back
8½" <sup>(1)</sup> 12"	(85) (12)					
4½" 6"	(45) (60)	1017	Aluminum Black, epoxy coated	Steel Black, Hinged	Flush	Back
8½"	(85)					
4½" 6"	(45) (60)	1220	Phenolic Black	SS Snap Black, Hinged	Stem Surface Flush	Lower or Back Lower or Back Back, specify X54
8½"	(85)					

TABLE B – SYSTEM, CONNECTION & LOCATION

Bourdon Tube <sup>(2)</sup> & Tip Material	Socket Material Code	Tube & Socket Code	Case Style	NPT Conn Code	Connection Location & Code	Range Selection Limits (psi)
(all joints TIG welded except code "A")						
C510 Grade A Phosphor Bronze Tube, Brass Tip, Silver Brazed	C360 Brass	(A)	Open Front	(04) ½ STD (02) ¼ OPT	Lower (L) or Back (B)	vac./1000
4130 Alloy Steel	1019 Steel	(B)				vac./5000
316 SS	1019 Steel	(R)				vac./20,000
316 SS	316 SS	(S)				vac./20,000
K 500 Monel <sup>(3)</sup>	Monel 400	(P)				vac./20,000

(1) 8½" case is solid front and has hinged rings.

(2) For selection of the correct Bourdon system material, see the media application table on page 7.

(3) Use on applications where NACE MR-01-75 is specified for selection of the correct Bourdon system material. See the media selection table on page 7.

## TO ORDER A 1010, 1017 OR 1220 PRESSURE GAUGE:

Select: \_\_\_\_\_ 45 \_\_\_\_\_ 1220 \_\_\_\_\_ A \_\_\_\_\_ 04L \_\_\_\_\_ XXX \_\_\_\_\_ 1000 psi

- Dial size—4½", 6", 8½" \_\_\_\_\_
- Case type—1220 \_\_\_\_\_
- Tube and socket material \_\_\_\_\_
- Connection size—¼ (02), ½ (04) \_\_\_\_\_
- Connection location—Lower (L), Back (B) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range—1000 psi \_\_\_\_\_



# Industrial Gauges

Types 1010, 1017 and 1220, Grade 1A (1.0% F.S.)  
Refrigeration and Hydraulic Service

## Ashcroft Hydraulic Gauges

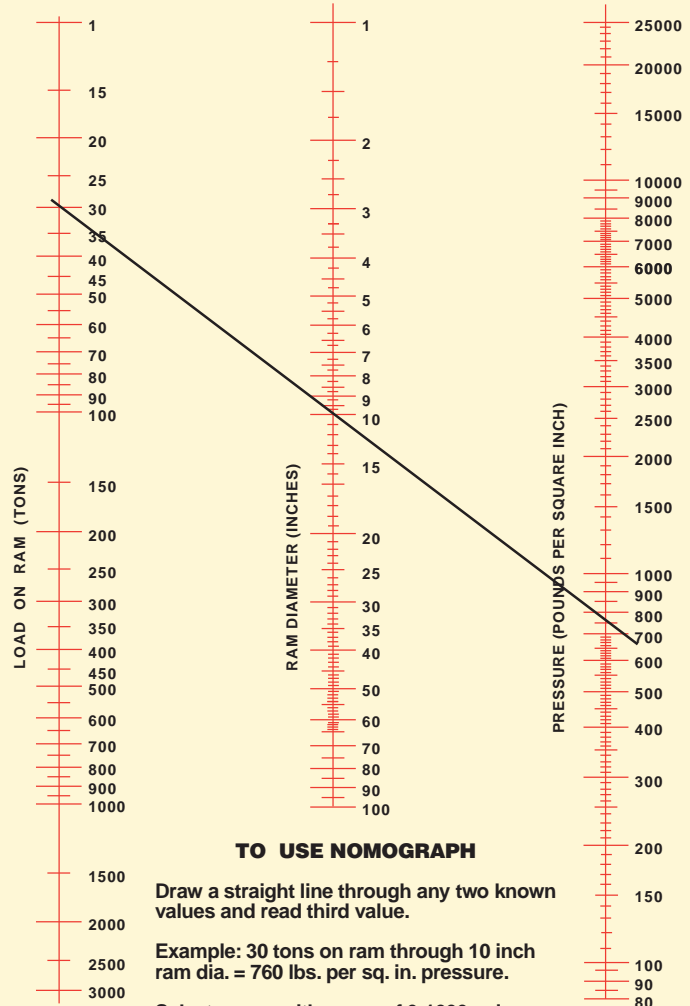
Designed for use on hydraulic presses, pumps and systems using hydraulic fluid, Ashcroft general service gauge Types 1010, 1017 and 1220 with the XTR variation meet the needs of many hydraulic applications. Equipped with a slotted link and throttle screw, these gauges are available with either a psi range or a psi range with a corresponding tons-on-ram scale. Use the nomograph on this page to help determine the appropriate tons-on-ram scale.

## Ashcroft Refrigeration Gauges

Ashcroft refrigeration gauge Types 1010, 1017 and 1220 are designed to meet the requirements of the refrigeration marketplace. Available with a bronze or 316 stainless steel Bourdon tube and socket, these gauges come standard with a pressure and corresponding temperature scale in red. Available refrigerants include Refrigerant 11, Refrigerant 12, Refrigerant 22, Refrigerant 502, Refrigerant 114, Refrigerant 500, Refrigerant 134A and Refrigerant 123.

To meet the stringent needs of an ammonia refrigeration system, Ashcroft offers gauge Types 1010, 1017 and 1220 with a 316 stainless steel Bourdon tube and socket. These gauges are offered standard with a pressure and corresponding temperature scale in red.

Chart for determining approximate pressure of Ashcroft Gauges for hydraulic presses when maximum tons-load-on-ram and diameter of ram are known.



Hydraulic Gauges Types 1010, 1017 & 1220  
Refrigeration Gauges Types 1010, 1017 & 1220

# Industrial Gauges

Types 1010, 1017 and 1220, Grade 1A (1.0% F.S.)

Refrigeration and Hydraulic Service

## STANDARD REFRIGERATION METRIC RANGES

Range		Dial Graduations		Range	Dial Graduations		Outer Scale When Dual Range Specified psi
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	Minor Graduation	
<b>Compound</b>							
-1/0/9	-1/0/9	1	0.1	-100/0/900	100	10	30" Hg/0/125
-1/0/24	-1/0/24	5	0.2	-100/0/2400	500	20	30" Hg/0/340

Temperature Scale in Red °C

## STANDARD REFRIGERATION RANGES

Compound Range	Dial Graduations			
	Figure Interval		Minor Graduation	
	psi	Hg	psi	Hg
30" Hg vac./0/150 psi	20	10	2	5
30" Hg vac./0/300 psi	25	30	5	5

Temperature Scale in Red °F

## Standard Refrigerant Order Code

Standard Refrigerant	Order Code
R-11	R1
R-12	R2
R-22	R3
R-502	R4
Ammonia	R5
R-114	R6
R-500	R7
R-134A	R8
R-123	R9

## STANDARD HYDRAULIC METRIC RANGES

Range		Dial Graduations		Range	Dial Graduations		Outer Scale When Dual Range Specified psi
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	Minor Graduation	
<b>Pressure</b>							
0/60	0/60	5	1	0/6000	500	100	0/850
0/100	0/100	10	1	0/10,000	1000	100	0/1400
0/160	0/160	20	2	0/16,000	2000	200	0/2200
0/250	0/250	50	5	0/25,000	5000	200	0/3500
0/400	0/400	50	5	0/40,000	5000	500	0/5500
0/600	0/600	50	10	0/60,000	5000	500	0/8500
0/1000	0/1000	100	10	0/100,000	10,000	1000	0/14,000
0/1600	0/1600	200	20	0/160,000	20,000	2000	0/22,000 <sup>(1)</sup>

## STANDARD HYDRAULIC RANGES

Pressure Range psi	Figure Interval	Minor Graduation
0/1000	100	10
0/1500	200	20
0/2000	200	20
0/3000	300	50
0/5000	500	50
/6000	1000	100
0/7500	1000	100
0/10,000	1000	100
0/15,000	2000	200
0/20,000 <sup>(1)</sup>	2000	200

(1) 4½" & 6" size only

### NOTE:

Dual scale dials showing psi and tons-on-ram are available on application. See nomograph for determining approximate pressure range when tons-on-ram and diameter of ram are known.

To order a gauge with a tons-on-ram scale.

Specify:

- Load-on-Ram (Tons)
- Ram Diameter (inches)
- Pressure (psi)

## TO ORDER A 1010, 1017 OR 1220 REFRIGERATION OR HYDRAULIC PRESSURE GAUGE:

**Select:** 45 1010 A 04L XTR 1000 psi

- Dial size—4½", 6", 8½" \_\_\_\_\_
- Case type—1010 \_\_\_\_\_
- Tube and socket material \_\_\_\_\_
- Connection size—¼ (02), ½ (04) \_\_\_\_\_
- Connection location—Lower (L), Back (B) \_\_\_\_\_
- Optional features (tons-on-ram) \_\_\_\_\_
- Standard pressure range —1000 psi \_\_\_\_\_



# Industrial Gauges

Types 1010, 1017 and 1220, Grade 1A (1.0% F.S.)

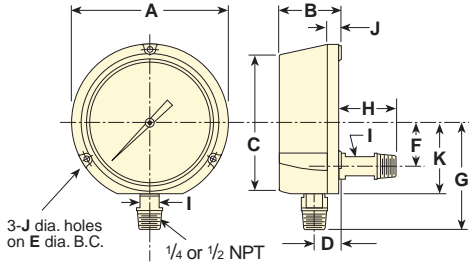
## Optional Features

Case and Ring Options	Code	Comments
Flush Mounting Ring (black)	50	Available on 4½" 6" Type 1010 back connection.
Flush Mounting Ring (black)	20	Available on 12" Type 1010 back connection.
Flush Mounting Ring (polished SS)	53	Available on 4½" 6" Type 1010 back connection.
Stainless Steel Polished Ring	63	Available on 4½" 6", and 8½" Type 1010.
Chrome Plated Ring	13	Available on Type 1010, 1017.
Flush Mounting Ring (black)	54	Available on 1220 back connection.
Flush Mounting Ring (chrome plated steel)	55	Available on 1220 back connection.
Bourdon Tube and System Assembly Options		
Overload Stop	OS	Used to protect the gauge against pressures beyond the gauge range.
Underload Stop	VS	Used to protect low pressure gauges against vacuum.
Tons-on-Ram Gauge	TR	Includes throttle screw, slotted link and special dial. Consult customer service for dial availability.
Movement Options		
Stainless Steel Movement	SM	Option includes all stainless steel components.
Sudden Increase Link	RJ	Designed to protect the gauge from sudden pressure surge on increase.
Sudden Decrease Link	S4	Designed to protect the gauge from sudden pressure surge on decrease.
Special Connections		
Ashcroft Types 1010, 1017 and 1220 are available but not limited to SAE, DIN, BSP, JIS and UNF connections. Consult customer service regarding your requirements.		
Pointer Options		
Friction Adjustable	AP	Available on all sizes and types (excludes 12" Type 1010).
Micrometer Adjustable	MP	Available on all sizes and types (excludes 12" Type 1010).
Stationary Red Set-Hand (single)	SH	Available on all sizes and types.
Maximum Pointer	EP	Externally reset by a knob on outside of an acrylic window.
Minimum Pointer	EQ	Externally reset by a knob on outside of an acrylic window.
Window Options		
Acrylic Window	PD	Available on all sizes and types (excludes 12" Type 1010).
Laminated Safety Glass	SG	Available on all sizes and types (excludes 12" Type 1010).
Marking and Tagging Options		
Dial Marking	DA	Service marking printed on dial.
Paper Tagging of Carton and Gauge	NN	Tag is bonded to gauge case.
Stainless Steel Tag, Wired	NH	Stainless steel tag is wired to gauge case.
Stainless Steel Tag, Bonded	MN	Stainless steel tag is bonded to gauge case.
Calibration Options		
Absolute Pressure	AB	Involves offset of pointer. Consult customer service for details.
Special Cleaning Options		
Cleaning for Gaseous Oxygen Service	6B	In accordance with ASME B40.1, Level IV.
Dial Options		
White Dial	WN	White dial with black numerals.
Black Dial	BD	Black dial with white numerals. Furnished with a white pointer. Consult Customer Service for dial availability.
Refrigeration/Ammonia Dials	R1-R9	See page 11 for information on these gauges.

# Industrial Gauges

Types 1010, 1017 and 1220, Grade 1A (1.0% F.S.)

**Case Type 1220**  
4½", 6" and 8½" Back and Lower Connect

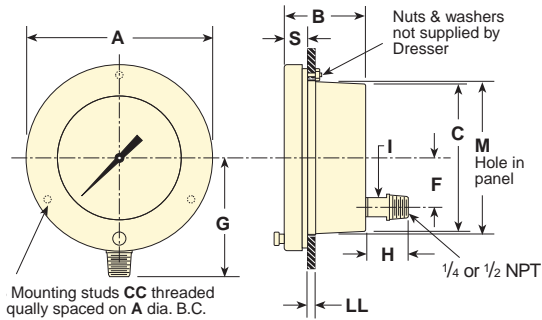


**Case Type 1220 4½", 6" and 8½" Back and Lower Connect**

Dial Size Inches	A	B	C	D	E	F	G	H	I	J	K	L	Wgt (lbs)
4½	5 13/16 (148)	2 5/16 (59)	5 1/16 (129)	1 (25)	5 3/8 (137)	1 5/8 (41)	3 15/16 (100)	1 1/2 (38)	5/8 (16)	9/16 (14)	2 5/8 (67)	.218 (6)	2.5 (1.1 kg)
6	7 9/16 (194)	2 3/8 (60)	6 5/8 (168)	1 1/16 (27)	7 (178)	2 1/8 (54)	4 1/2 (114)	1 7/16 (37)	5/8 (16)	5/8 (16)	3 1/2 (89)	.281 (7)	3.5 (1.6 kg)
8½	10 1/4 (260)	2 3/8 (60)	9 (229)	1 1/16 (27)	9 5/8 (244)	2 1/8 (54)	6 (152)	1 7/16 (37)	5/8 (16)	5/8 (16)	4 1 1/16 (119)	.281 (7)	4.5 (2.0 kg)

Drawings are for representation only. See dimension table.

**Case Type 1017**  
4½", 6" and 8½" Back and Lower Connect



**Case Type 1017 4½", 6" and 8½" Back Connect**

Dial Size Inches	A	B	C	E	F	H	I	M	S	U	CC	LL	Wgt (lbs)
4½	6 1/16 (154)	2 3/16 (56)	4 13/16 (122)	5 3/8 (136.5)	1 5/8 (41)	1 5/8 (41)	5/8 (16)	4 7/8 (124)	5/8 (16)	3/4 (19)	10-24	1/8-1/2 (3-13)	2.63 (1.2 kg)
6	7 9/16 (192)	2 3/8 (56)	6 5/8 (160)	7 (178)	2 1/8 (54)	1 5/8 (41)	5/8 (16)	6 1/2 (165)	5/8 (16)	3/4 (19)	1/4-20	1/8-1/2 (3-13)	2.75 (1.3 kg)

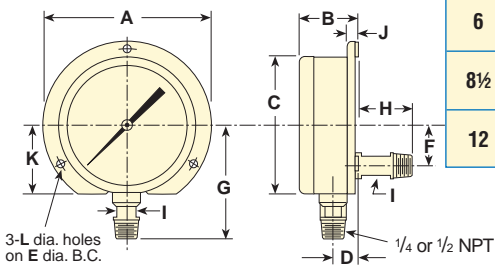
Drawings are for representation only. See dimension table.

**Case Type 1010 4½", 6", 8½" and 12" Back and Lower Connect**

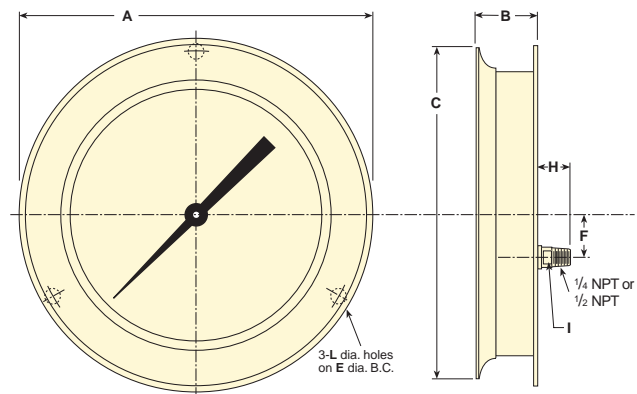
Dial Size Inches	A	B	C	D	E	F	G	H	I	J	K	L	M	S	Wgt (lbs)
4½	5 13/16 (148)	2 1/16 (52)	4 3/4 (121)	1 3/16 (30)	5 3/8 (137)	1 5/8 (41)	3 15/16 (100)	1 5/8 (41)	5/8 (16)	5/8 (16)	2 7/8 (60)	.218 (6)	4 15/16 (125)	—	2.25 (1.0 kg)
6	7 7/8 (194)	2 5/16 (59)	7 (178)	1 5/16 (24)	7 (178)	1 5/8 (41)	5 1/4 (133)	1 5/8 (41)	5/8 (16)	7/16 (11)	3 3/8 (79)	.281 (7)	6 7/16 (164)	—	3.5 (1.6 kg)
8½	10 1/16 (256)	2 7/8 (73)	4 3/4 (121)	1 11/16 (39)	9 5/8 (244)	1 5/8 (41)	6 (152)	1 3/8 (35)	5/8 (16)	—	1 1/16 (27)	—	9 (228)	1 1/16 (17)	4.5 (2.0 kg)
12	14 1/2 (368)	2 15/16 (75)	14 1/4 (361)	1 1/32 (26)	13 1/2 (343)	2 1/8 (54)	7 1/2 (191)	1 13/32 (36)	5/8 (16)	3/16 (5)	—	.281 (7)	12 11/16 (329)	3/16 (5)	8 (3.6 kg)

Drawings are for representation only. See dimension table.

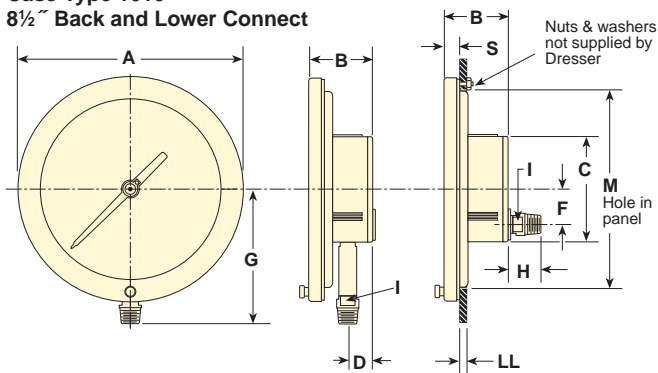
**Case Type 1010**  
4½" Back and Lower Connect



**Case Type 1010**  
12" Back and Lower Connect



**Case Type 1010**  
8½" Back and Lower Connect



# Low Pressure Bellows Gauge

Type 1187, 1188 & 1189 Grade A (2-1-2% F.S.)

With ranges as low as 10 inches of water vacuum, a variety of wetted parts and case materials and solid front case designs, these low pressure gauges are generally used on applications measuring air, liquid or gas.

## Considerations for Selecting Low Pressure Bellows Type Gauges Include:

**Process Media:** The 1187, 1188 and 1189 series of pressure gauges are available with bronze, 316 stainless steel and Monel bellows materials. Socket materials include brass, 316 stainless steel and Monel.

**Pressure Gauge Range:** These gauges are offered with ranges from 10 inches of water vacuum thru 10 psi including compound ranges.

**Operating Environment:** Depending on the model number, these gauges are available with an aluminum or phenolic case.

**Accuracy Requirements:** These gauges are offered with a 2-1-2% ASME Grade A accuracy.

**Dial Size:** Available in 4½" thru 8½" dial sizes depending on the type number.

**Connections:** ¼ or ½ NPT lower or back connections are available depending on the type number. JIS, BSP, DIN and SAE connections are also available.

**Mounting Requirements:** Stem, surface or flush mounting, depending on the type number.

**TABLE A – CASE SELECTION AND MOUNTING**

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4½", 6" 8½"	(45)(60) (85)	1187	Aluminum Black, Epoxy Coated	Steel Black Crinkle Enamel Hinged	Flush	Back
4½"	(45)	1188	Phenolic Black	Threaded Polypropylene	Stem Surface Flush	Lower or Back Lower or Back Back, order 1278M Mounting Ring X56
4½", 6" 8½"	(45)(60) (85)	1189	Aluminum Black, Epoxy Coated	Threaded Polypropylene	Stem Surface Flush	Lower or Back <sup>(2)</sup> Lower or Back <sup>(2)</sup> Back, specify X56 <sup>(2)</sup>

(1) 8½" cases have hinged rings. (2) 8½" Only available in lower connect.

**TABLE B – BELLWS SYSTEM/RANGE SELECTION<sup>(1)</sup>**

Order Code	Bellows & Socket	Pressure Range Material	Vacuum Range	Compound Range	NPT Conn. <sup>(2)</sup>	Available Case Size and Type
A	Brass	10" H <sub>2</sub> O to 10 psi	10" H <sub>2</sub> O to 20" mercury	5" H <sub>2</sub> O vac. & 5" H <sub>2</sub> O press. to 10" mercury vac. & 5 psi	¼	4½", 6", 8½" 1187 4½" 1188 4½", 6", 8½" 1189
S	316SS	10" H <sub>2</sub> O to 10 psi	10" H <sub>2</sub> O to 20" mercury	5" H <sub>2</sub> O vac. & 5" H <sub>2</sub> O press. to 10" mercury vac. & 5 psi	¼	4½", 6", 8½" 1187 4½", 1188 4½", 6", 8½" 1189
P	Monel	10" H <sub>2</sub> O to 10 psi	10" H <sub>2</sub> O to 20" mercury	5" H <sub>2</sub> O vac. & 5" H <sub>2</sub> O press. to 10" mercury vac. & 5 psi	¼	4½", 6", 8½" 1187 4½" 1188 4½", 6", 8½" 1189

(1) For selection of the correct bellows system material, see the media application table on page 7.

(2) Optional connection ½ NPT.

(3) Others ranges available: Consult factory.

## Type 1189, X56, Back Connect

Dial Size Inches	A-1	M	CC	LL	Wgt (lbs)
4½	6 (152)	5½ (143)	#10-24	⅛-5/16 (3) (8)	2.50 1.1 kg
6*	7 <sup>4</sup> / <sub>64</sub> (197)	7¼ (184)	#¼-20	⅛-5/16 (3) (8)	3.13 1.4 kg

\*1189 only.

Drawings are for representation only. See dimension table.

## STANDARD METRIC RANGES

Dial Arc (degrees)	Range	Dial Graduation		Range (mbar (millibar))	Dual Graduation Figure Interval					
		Figure Interval	Minor Grad.							
180	Pressure	50	2	0/25	5					
	180					0/400	5	0/40	5	
	220					0/600	5	0/60	5	
	270					0/1000	100	0/100	10	
	270					0/1600	200	0/160	20	
	270					0/2500	500	0/250	50	
	270					0/4000	500	0/400	50	
	270					0/6000	500	0/600	50	
	180					Vacuum	50	2	-25/0	5
						180				
220		-600/0	5	-60/0	5					
270		-1000/0	100	-100/0	10					
270		-1600/0	200	-160/0	20					
270		-2500/0	500	-250/0	50					
270		-4000/0	500	-400/0	50					
270		-6000/0	500	-600/0	50					
180		Vacuum	50	2	-12.5/0/12.5	5				
		180								
	220	-300/0/300					5	-30/0/30	5	
	270	-500/0/500					100	-50/0/50	10	
	270	-800/0/800					200	-80/0/80	20	
	270	-1250/0/1250					500	-125/0/125	50	
	270	-2000/0/2000					500	-200/0/200	50	
	270	-3000/0/3000					500	-300/0/300	50	

## STANDARD RANGES

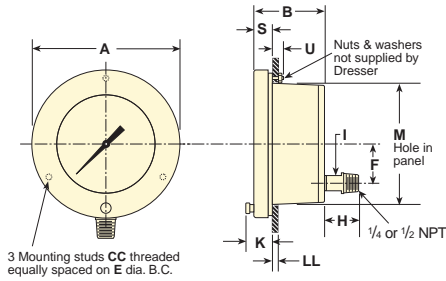
Double Arc										
Pressure Range		Dial Graduations								
		Inner Scale			Outer Scale		Range	Dial Graduations		
Inner Scale	Outer Scale	Dial Arc (degrees)	Figure Interval	Minor Graduation	Figure Interval	Minor Graduation		Compound (Vac./Pres.)	Dial Arc (degrees)	Figure Interval
<b>in. H<sub>2</sub>O</b>	<b>oz/in<sup>2</sup></b>						<b>in. H<sub>2</sub>O</b>		<b>in. H<sub>2</sub>O</b>	
0/10	0/6	180	1	0.5	1	0.25	5/0/5	180	1	0.2
0/15	0/9	180	3	0.5	1	0.25	10/0/10	180	2	0.5
0/20	0/12	180	2	1	1	0.25	30/0/10	270	5	1
0/30	0/18	216	5	1	1	0.5	20/0/20	270	5	0.5
0/40	0/24	270	5	1	3	0.5	40/0/20	270	5	1
0/60	0/35	270	5	1	5	1	10/0/30	270	5	1
0/80	0/45	270	10	1	5	1	30/0/30	270	10	1
0/100	0/57	270	10	1	5	1	70/0/30	270	10	1
0/150	0/90	270	25	1	10	2	20/0/40	270	10	1
<b>psi</b>	<b>in. Hg</b>						<b>50/0/50</b>	<b>270</b>	<b>10</b>	<b>1</b>
0/5	0/10	270	1	0.25	1	0.5	<b>in. Hg/psi</b>	<b>in. Hg psi</b>	<b>in. Hg psi</b>	<b>in. Hg psi</b>
0/8	0/16	270	1	0.25	2	0.5	5/0/3	270	1 1	0.2 0.1
0/10	0/20	270	1	0.25	2	0.5	2/0/5	270	1 1	0.1 0.1
<b>Vacuum</b>	<b>mmHg</b>						<b>5/0/5</b>	<b>270</b>	<b>1 1</b>	<b>0.2 0.1</b>
10/0	18/0	180	1	0.5	5	1	10/0/5	270	2 1	0.2 0.1
15/0	28/0	180	3	0.5	3	1				
20/0	37/0	180	2	1	5	1				
30/0	56/0	216	5	1	5	1				
40/0	75/0	270	5	1	10	2				
60/0	110/0	270	5	1	10	2				
80/0	150/0	270	10	1	20	5				
100/0	180/0	270	10	1	20	5				
150/0	270/0	270	25	1	20	5				
<b>in. Hg</b>	<b>ft H<sub>2</sub>O</b>									
10/0	11/0	270	1	0.5	1	5				
15/0	17/0	270	1	0.5	2	5				
20/0	23/0	270	2	0.5	2	1				



# Low Pressure Bellows Gauge

Type 1187, 1188 & 1189 Grade A (2-1-2% F.S.)

## Case Type 1187 4½", 6" & 8½" Back Connect

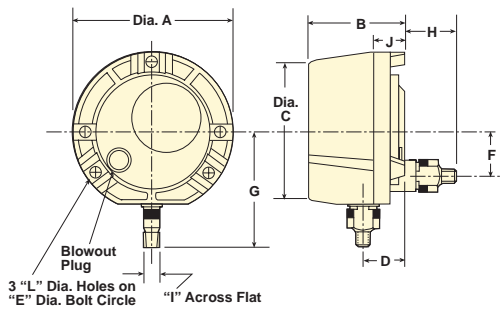


## Type 1187

Dial Size Inches	A	B	E	F	H	I	K	M	S	U	CC	LL	Wgt (lbs)
4½	6⅜ (155)	3⅞ (87)	5⅜ (137)	1⅝ (41)	1⅞ (40)	⅝ (16)	1⅜ (28)	4⅞ (124)	1⅞ (17)	¾ (19)	#10-24	⅞-¼ (2) (6)	2.63 1.2 kg
6	7⅞ (192)	3⅞ (87)	7 (178)	1⅝ (41)	1⅞ (40)	⅝ (16)	1⅜ (28)	6½ (165)	1⅞ (17)	¾ (19)	#¼-20	⅞-¼ (2) (6)	2.75 1.2 kg
8½	10⅞ (256)	3⅞ (87)	9⅞ (244)	1⅝ (41)	1⅞ (40)	⅝ (16)	1⅜ (28)	9 (229)	1⅞ (17)	¾ (19)	#¼-20	⅞-¼ (2) (6)	4.50 2.0 kg

Drawings are for representation only. See dimension table.

## Case Type 1188 4½" Back and Lower Connect



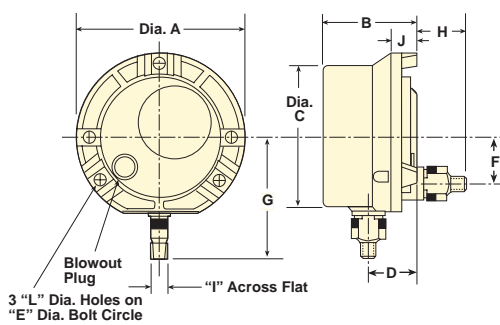
## Type 1188

Dial Size Inches	A	B	C	D	E	F	G	H	I	J	L	Wgt (lbs)
4½	5⅜ (148)	3⅞ (87)	5⅞ (129)	1⅞ (43)	5⅞ (137)	1⅞ (41)	3⅞ (100)	1½ (38)	⅝ (16)	1⅞ (29)	⅞ (5,5)	2.50 1.1 kg

Drawings are for representation only. See dimension table.

## Case Type 1189

### 4½", 6" & 8½" Back and Lower Connect



## Type 1189

Dial Size Inches	A	B	C	D	E	F	G	H	I	J	L	S	Wgt (lbs)
4½	5⅜ (148)	3⅞ (87)	4⅞ (124)	1⅞ (43)	5⅞ (137)	1⅞ (41)	3⅞ (100)	1½ (38)	⅝ (16)	1⅞ (29)	⅞ (5,5)	—	2.50 1.1 kg
6	7⅞ (192)	3⅞ (89)	6⅞ (162)	1⅞ (43)	7 (178)	1⅞ (41)	4⅞ (122)	1½ (38)	⅝ (16)	1⅞ (29)	⅞ (7,5)	—	3.13 1.4 kg
8½	10⅞ (256)	3⅞ (89)	9⅞ (244)	1⅞ (44)	N/A	N/A	6⅞ (156)	N/A	⅝ (16)	N/A	N/A	1⅞ (17)	4.50 2.5 kg

Drawings are for representation only. See dimension table.

Standard or d.	Range (kilopascal)	Dial Graduations		Outer Scale When Dual Range Specified in. H <sub>2</sub> O
		Figure Interval	Minor Grad.	
2	0/2.5	0.5	0.02	0/10
5	0/4	0.5	0.05	0/16
5	0/6	0.5	0.05	0/24
	0/10	1	0.1	0/40
	0/16	2	0.2	0/60
	0/25	5	0.2	0/100
	0/40	5	0.5	0/160
	0/60	5	0.5	0/240
2	-2.5/0	0.5	0.02	10/0
5	-4/0	0.5	0.05	16/0
5	-6/0	0.5	0.05	24/0
	-10/0	1	0.1	40/0
	-16/0	2	0.2	60/0
	-25/0	5	0.2	100/0
	-40/0	5	0.5	160/0
	-60/0	5	0.5	240/0
2	-1.25/0/1.25	0.5	0.02	5/0/5
5	-2/0/2	0.5	0.05	8/0/8
5	-3/0/3	0.5	0.05	12/0/12
	-5/0/5	1	0.1	20/0/20
	-8/0/8	2	0.2	30/0/30
	-12.5/0/12.5	5	0.2	50/0/50
	-20/0/20	5	0.5	80/0/80
-30/0/30	5	0.5	120/0/120	



Gauge Types 1187, 1188 & 1189

### TO ORDER THESE 1187, 1188 & 1189 LOW PRESSURE BELLWS GAUGES:

Select: **45** **1187** **AS** **02L** **XXX** **10 psi**

- Dial size—4½" \_\_\_\_\_
- Case type—1187 \_\_\_\_\_
- Tube and socket material/solid front \_\_\_\_\_
- Connection size—¼ (02) \_\_\_\_\_
- Connection location—Lower (L) , Back (B) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range —10 psi \_\_\_\_\_

# Christmas Tree Gauge

Type 1020R, Grade 1A (1.0% F.S.)

Ashcroft Christmas tree gauges are specifically made for use in the oil fields where rugged construction and minimal maintenance is important.

## Considerations for Selecting an Ashcroft Christmas Tree Gauge Include:

**Process Media:** The Type 1020 has a 316 stainless steel Bourdon tube with a 1019 steel socket.

**Pressure Gauge Range:** Christmas tree gauges are offered with ranges from 1000 psi thru 20,000 psi.

**Operating Environment:** The 1020 comes standard with a 304 stainless steel case and ring.

**Accuracy Requirements:** Ashcroft Christmas tree gauges have an accuracy of 2-1-2% ASME grade A.

**Dial Size:** Available in a 4½" dial size.

**Connections:** ¼ or ½ NPT lower.

**Mounting Requirements:** The Ashcroft Christmas tree gauge is available for stem mounting.

**TABLE A – CASE SELECTION AND MOUNTING**

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4½"	(45)	1020	Stainless Steel	Stainless Steel	Stem	Lower

**TABLE B – SYSTEM, CONNECTION & LOCATION**

Bourdon Tube <sup>(1)</sup> & Tip Material <small>(all joints TIG welded)</small>	Socket Material	Tube & Socket Code	Case Style	NPT Conn. Code	Connection Location & Code	Range Selection Limits (psi)
316 Stainless Steel	1019 Steel	(R)	Open Front	(04) ½ Std (02) ¼ Opt	Lower (L)	1000/20,000

(1) For selection of the correct bourdon system material, see the media application table on page 7.

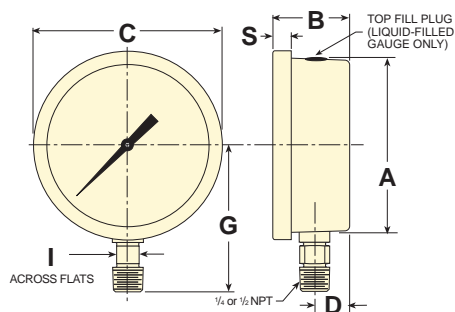
**STANDARD RANGES**

Pressure Range (psi)	Figure Interval	Minor Graduation
0/1000	100	10
0/2000	200	20
0/3000	300	50
0/5000	500	50
0/10,000	1000	100
0/20,000	2000	200

**STANDARD METRIC RANGES**

Range		Dial Graduations		Range	Dial Graduations		Outer Scale When Dual Range Specified psi
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	Minor Graduation	
<b>Pressure</b>							
0/60	0/60	5	1	0/6000	500	100	0/850
0/100	0/100	10	1	0/10,000	1000	100	0/1400
0/160	0/160	20	2	0/16,000	2000	200	0/2200
0/250	0/250	50	5	0/25,000	5000	200	0/3500
0/400	0/400	50	5	0/40,000	5000	500	0/5500
0/600	0/600	50	10	0/60,000	5000	500	0/8500
0/1000	0/1000	100	10	0/100,000	10,000	1000	0/14,000
0/1600	0/1600	200	20	0/160,000	20,000	2000	0/22,000

## Case Type 1020 4½" Lower Connect



Dial Size Inches	A	B	C	D	G	I	S	Wght (lbs)
4½	4 1/16 (121)	2 1/16 (53)	5 1/2 (130)	1 5/16 (24)	4 1/16 (103)	5/8 (16)	1 5/16 (12)	1.75 .8 kg

Drawings are for representation only. See dimension table.



Case Type 1020  
4½" Lower Connect

## TO ORDER THIS 1020R PRESSURE GAUGE:

Select: **45 1020 R 04L XXX 1000 psi**

- Dial size—4½" \_\_\_\_\_
- Case type—1020 \_\_\_\_\_
- Tube and socket material \_\_\_\_\_
- Connection size—¼ (02), ½ (04) \_\_\_\_\_
- Connection location—Lower only (L) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range—1000 psi \_\_\_\_\_

# Reid Vapor Test Gauge

Type 1150H, Grade 2A (.5% F.S.)

The Reid Vapor Test pressure gauge is specifically designed for testing petroleum product by the Reid Vapor Pressure Method. (ASTM D-323)

### Considerations for Selecting the Reid Vapor Test Pressure Gauge Include:

**Process Media:** Phosphor bronze Bourdon tube with a brass socket.

**Pressure Gauge Range:** This gauge is offered with ranges from 15 psi thru 600 psi.

**Operating Environment:** The Type 1150 has an aluminum case and ring.

**Accuracy Requirements:** .05% ASME Grade 2A.

**Dial Size:** Available in a 4½" dial size.

**Connections:** A ¼ NPT lower connection is offered with the Type 1150.

**Mounting Requirements:** Stem mounting only.

**TABLE A – CASE SELECTION AND MOUNTING**

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4½"	(45)	1150H	Aluminum Black, Epoxy Coated	Steel Black Slip	Stem	Lower

**TABLE B – SYSTEM, CONNECTION & LOCATION**

Bourdon Tube <sup>(1)</sup> & Tip Material	Socket Material Code	Tube & Socket Code	Case Style	NPT Conn Code	Connection Location & Code	Range Selection Limits (psi)
Phosphor Bronze Tube, Brass Tip, Silver Brazed	Brass	(A)	Open Front	(02) ¼ Std	Lower (L)	15/600

(1) For selection of the correct Bourdon system material, see the media application table on page 7.

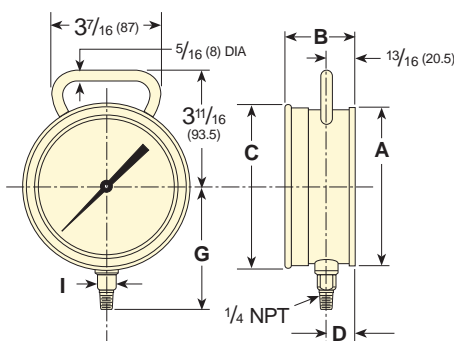
### STANDARD RANGES

Pressure Range (psi)	Figure Interval	Minor Graduation
0/15	1	0.1
0/30	2	0.2
0/60	3	0.2
0/100	4	0.25
0/160	5	0.5
0/200	10	1.0
0/300	10	1.0
0/400	10	1.0
0/600	20	2.0

### STANDARD METRIC RANGES

Range		Dial Graduations		Range	Dial Graduations	
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	Minor Graduation
<b>Pressure</b>						
0/1	0/1	0.1	0.01	0/100	10	1
0/1.6	0/1.6	0.2	0.02	0/160	20	2
0/2.5	0/2.5	0.5	0.05	0/250	50	5
0/4	0/4	0.5	0.05	0/400	50	5
0/6	0/6	0.5	0.1	0/600	50	10
0/10	0/10	1	0.1	0/1000	100	10
0/16	0/16	2	0.2	0/1600	200	20
0/25	0/25	5	0.5	0/2500	500	50
0/40	0/40	5	0.5	0/4000	500	50

### Case Type 1150H 4½" Lower Connect



Dial Size Inches	A	B	C	D	G	I	Wght (lbs)
4½	4 <sup>31</sup> / <sub>32</sub> (127)	2 <sup>1</sup> / <sub>8</sub> (54)	4 <sup>7</sup> / <sub>8</sub> (124)	1 <sup>9</sup> / <sub>16</sub> (24)	3 <sup>13</sup> / <sub>16</sub> (97)	5/8 (16)	1.7 .8kg

Drawings are for representation only. See dimension table.



Case Type 1150  
4½" Lower Connect

### TO ORDER THIS 1150H PRESSURE GAUGE:

Select: **45 1150 A 02L XXX 1000 psi**

- Dial size—4½" \_\_\_\_\_
- Case type—1150H \_\_\_\_\_
- Tube and socket material \_\_\_\_\_
- Connection size—¼ NPT only (02) \_\_\_\_\_
- Connection location—Lower only (L) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range—1000 psi \_\_\_\_\_



# Differential Pressure Gauge

Type 5503, ( $\pm 1.6\%$  F.S.)

This gauge utilizes a single pointer to indicate the difference between two independent sources of pressure on the dial. With 316 stainless steel wetted parts standard and optional static pressure to 3625 psi, the Type 5503 markets include petrochemical, pulp and paper and original equipment manufacturers.

## Considerations for Selecting a Differential Pressure Gauge Include:

**Process Media:** A 316 stainless steel diaphragm and housing standard for ranges of 15 psi and above. High strength Cobalt Alloy (Duratherm 600) for ranges below 15 psi. Optional monel or hastelloy wetted parts available.

**Pressure Gauge Range:** 0-30IW (inches of water differential) to 600 psi.

**Static Pressure Range:** 580 psi standard with optional static pressure to 3625 psi.

**Operating Environment:** These gauges feature a 304 SS case and ring.

**Accuracy Requirements:** This gauge has an accuracy of  $\pm 1.6\%$  full scale.

**Dial Size:** Available in a 4" (100mm) or 6" (160 mm) dial size.

**Connections:**  $\frac{1}{4}$  or  $\frac{1}{2}$  NPTF (female) lower connection.

**Mounting Requirements:** The Type 5503 can be stem, surface or pipe mounted.

**TABLE A – CASE SELECTION AND MOUNTING**

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4" (100mm)	(10)	5503	Stainless Steel	Stainless Steel	Stem, Surface, Pipe	Lower
6" (160mm)	(16)					

**TABLE B – SYSTEM, CONNECTION & LOCATION**

Diaphragm Material	Socket Material	Diaphragm & Socket Code	Case Style	NPTF Conn Code	Connection Location & Code	Range Selection Limits (psi)
316 SS for 15 psi & above Duratherm for 10 psi & below	316 SS	(S)	Open Front	(04) $\frac{1}{2}$ (02) $\frac{1}{4}$	Lower (L)	0-30 IWD to 300 psid

(1) For selection of the correct system materials, see the media application table on page 7.

**STANDARD RANGES<sup>(1)</sup>**

psid	mBar	Bar	I.W.D.	Static Pressure <sup>(2)</sup>
3	40	0.6	30	580 psi (std.)
5	60	1.0	60	
10	100	1.6	100	
15	160	2.5	200	
30	250	4		
60	400	6		3625 psi (opt.)
100	10			
160	16			
200	25			
300				
600				

(1) Other ranges on application

(2) Or maximum working pressure must be considered when selecting the range of the gauge.

**OPTIONAL FEATURES**

OPTIONAL FEATURES	CODE
<b>Applicable to Liquid Filling</b>	
Glycerin fill	L <sup>(1)</sup>
Silicone fill	GV
<b>Applicable to Special Connections</b>	
$\frac{1}{4}$ NPT or $\frac{1}{2}$ NPT Male	—
<b>Applicable to Case</b>	
Weatherproof/Hermetically Sealed	H
<b>Applicable to Mounting</b>	
Pipe Mounting Bracket (316 SS)	TM
Wall Mounting Bracket	FW
3-Way Manifold (316 SS)	43
5-Way Manifold (316 SS)	44
$\frac{1}{2}$ NPTF Process Connection	
<b>Applicable to Diaphragm</b>	
Hastelloy C Diaphragm <sup>(2)</sup>	H
Monel Diaphragm	P
<b>Applicable to Gauge Housing</b>	
Hastelloy C Housing <sup>(2)</sup>	H
<b>Applicable to Static Pressure</b>	
Static Pressure to 1400 psi	SP
Static Pressure to 2300 psi	SP
Static Pressure to 3625 psi	SP
<b>Applicable to Calibration</b>	
Individual Calibration Charts	CD-4
<b>Applicable to Electric Contacts</b>	
Single Setpoint	
Dual Setpoint	
• High and Low Contact	ED
• Double High Contact	EE
• Double Low Contact	EF

(1) Standard on liquid-filled gauges

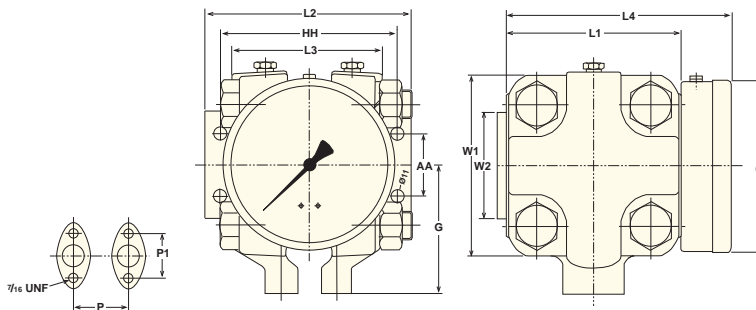
(2) For ranges 5 psid and above

## Type 5503

Dial Size mm	C	G	P	P1	AA	HH	L1	L2	L3	L4	W1	W2
100	2.97 (101)	3.97 (120)	2.13 (054)	1.63 (41.3)	2.36 (060)	6.69 (170)	6.89 (175)	7.87 (200)	5.83 (148)	8.96 (227.5)	6.69 (170)	3.94 (100)
160	6.34 (161)	4.72 (120)	2.13 (054)	1.63 (41.3)	2.36 (060)	6.69 (170)	6.89 (175)	7.87 (200)	5.83 (148)	8.96 (227.5)	6.69 (170)	3.94 (100)

Drawings are for representation only. See dimension table.

## Case Type 5503 4" (100mm), 6" (160mm) Lower Connect



## TO ORDER THIS 5503 PRESSURE GAUGE:

Select: 45 5503 S S 02L XXX 100 psi

- Dial size—4", 6"
- Case type—5503
- 316 SS diaphragm
- 316 SS housing and socket
- Connection size and location —  $\frac{1}{4}$  NPTF (02) Lower (L)
- Optional features
- Standard pressure range—100 psi



Case Type 5503  
4" & 6" Lower Connect

# Differential Pressure Gauge

Type 5509, ( $\pm 2.5\%$  F.S.)

Standard features of the Type 5509 include 316 SS wetted parts, a liquid-fillable case and ranges starting at 30 inches of water.

## Considerations for Selecting a Differential Pressure Gauge Includes:

**Process Media:** 316 stainless steel diaphragm and housing standard for ranges of 15 psi and above. High strength Cobalt Alloy (Duratherm 600) for ranges below 15 psi. Optional Hastelloy-C diaphragm available.

**Pressure Gauge Range:** 0-30 IW (inches of water differential) to 300 psi.

**Static Pressure:** 145 psi for ranges of 10-30 IW (inches of water differential)

**Operating Environment:** These gauges feature a 304 SS case and ring.

**Accuracy Requirements:** The Type 5509 differential pressure gauge has an accuracy of  $\pm 2.5\%$  full scale.

**Dial Size:** Available in a 4" (100mm) or 6" (160mm) dial size.

**Connections:**  $\frac{1}{4}$  or  $\frac{1}{2}$  NPTF (female) lower connection.

**Mounting Requirements:** The Type 5509 can be stem, surface or pipe mounted.

**TABLE A – CASE SELECTION AND MOUNTING**

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4" (100mm)	(10)	5503	Stainless Steel	Stainless Steel	Stem, Surface, Pipe	Lower
6" (160mm)	(16)					

**TABLE B – SYSTEM, CONNECTION & LOCATION**

Diaphragm Material	Socket Material	Diaphragm & Socket Code	Case Style	NPTF Conn Code	Connection Location & Code	Range Selection Limits (psi)
316 SS for 15 psi & above Duratherm for 10 psi & below	316 SS	(S)	Open Front	(04) $\frac{1}{2}$ (02) $\frac{1}{4}$	Lower (L)	0-30 IWD to 300 psid

(1) For selection of the correct system materials, see the media application table on page 7. (2) Solid Front Optional.

**STANDARD RANGES<sup>(1)</sup>**

psid	mBar	Bar	I.W.D.	STATIC PRESSURE <sup>(2)</sup>
3	40	0.6	10	145 psi (std.)
5	60	1.0	30	360 psi (opt.)
10	100	1.6	60	360 psi
15	160	2.5	100	
30	250	4	200	
60	400	6		
100		10		
160		16		
200		25		
300				

(1) Other ranges on application

(2) Or maximum working pressure must be considered when selecting the range of the gauge.

**OPTIONAL FEATURES**

OPTIONAL FEATURES	CODE
<b>Applicable to Liquid Filling</b>	
Glycerin fill	L <sup>(1)</sup>
Silicone fill	GV
<b>Applicable to Special Connections</b>	
$\frac{1}{4}$ NPT or $\frac{1}{2}$ NPT	—
<b>Applicable to Case</b>	
Weatherproof/Hermetically Sealed	H
Solid Front Case	S
<b>Applicable to Mounting</b>	
Pipe Mounting Bracket (316 SS)	TM
Wall Mounting Bracket	FW
3-Way Manifold (316 SS)	43
5-Way Manifold (316 SS)	44
$\frac{1}{2}$ NPTF Process Connection	
<b>Applicable to Diaphragm</b>	
Hastelloy C Diaphragm <sup>(2)</sup>	H
<b>Applicable to Accuracy</b>	
0.5% Upscale	AJ
<b>Applicable to Static Pressure</b>	
Static Pressure to 360 psi	SP
<b>Applicable to Calibration</b>	
Individual Calibration Charts	CD-4
<b>Applicable to Electric Contacts</b>	
Single Setpoint	
Dual Setpoint	
• High and Low Contact	ED
• Double High Contact	EE
• Double Low Contact	EF

(1) Standard on liquid-filled gauges

(2) For ranges 5 psid and above

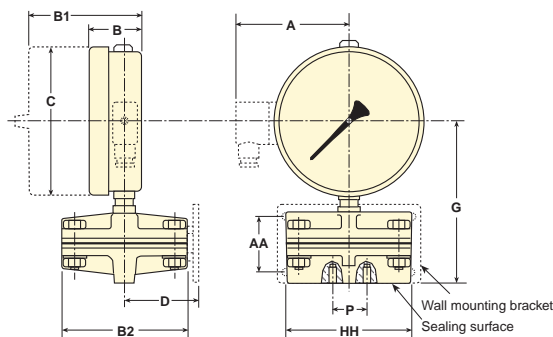
## Type 5509 – Open Front Design

Dial Size mm	A	B	B1	B2	C	D	G	P	AA	HH
100	3.97 (086)	2.17 (055)	3.74 (095)	5.35 (136)	3.98 (101)	2.95 (075)	5.51 (140)	1.46 (037)	2.36 (060)	5.20 (132)
160	4.72 (120)	2.17 (055)	4.13 (105)	5.35 (136)	6.34 (161)	2.95 (075)	6.69 (170)	1.46 (037)	2.36 (060)	5.20 (132)

## Type 5509 – Solid Front Design

Dial Size mm	A	B	B1	B2	C	D	G	P	AA	HH
100	3.97 (086)	2.76 (070)	4.37 (111)	5.35 (136)	3.98 (101)	2.95 (075)	5.51 (140)	1.46 (037)	2.36 (060)	5.20 (132)
160	4.72 (120)	2.76 (070)	4.76 (121)	5.35 (136)	6.34 (161)	2.95 (075)	6.69 (170)	1.46 (037)	2.36 (060)	5.20 (132)

**Case Type 5509**  
4" (100mm)  
6" (160mm)  
Lower Connect



## TO ORDER THIS 5509 PRESSURE GAUGE:

Select: 45 5509 S S 02L XXX 100 psi

- Dial size—4", 6" \_\_\_\_\_
- Case type—5509 \_\_\_\_\_
- 316 SS diaphragm \_\_\_\_\_
- 316 SS housing and socket \_\_\_\_\_
- Connection size and location —  $\frac{1}{4}$  NPTF (02) Lower (L) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range —100 psi \_\_\_\_\_



Case Type 5509  
4" & 6" Lower Connect

# Differential Pressure Gauge

Type 1125, 1125A, Grade 2A (2-1-2% F.S.)

The Ashcroft® Type 1125 and 1125A differential pressure gauges display the difference of two separate inputs on one dial indicator. The 1125A is offered with "0" at the 12 o'clock position on the dial with positive pressure on either side of zero.

## Considerations for Selecting an Ashcroft Differential Pressure Gauge Include:

**Process Media:** The 1125/1125A has bronze Bourdon tubes with brass sockets. When the process media is corrosive to the gauge wetted parts, a diaphragm seal with capillary is available. Consult Ashcroft Bulletin DS-1. Also see Bulletin DPG-3 for Type 1127/1127A differential with 316 SS or Monel wetted parts.

**Pressure Gauge Range:** From 20 psid-1000 psid.

**Static Pressure:** With these gauges, the static or working pressure is totally dependant on the range of the gauge. Range selection must be selected with the appropriate static pressure. See static pressure limits in the STANDARD RANGE chart on the right.

**Operating Environment:** These gauges feature an aluminum case and ring, black epoxy coated.

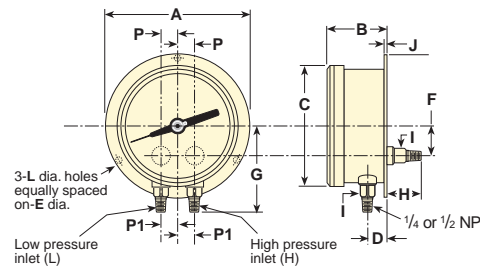
**Accuracy:** The Type 1125/1125A differential pressure gauges meet ASME B40.1 Grade 1A accuracy requirement 2%-1%-2%.

**Dial Size:** Available in a 4½" or 6" dial size.

**Connections:** ¼ NPT lower connection.

**Mounting Requirements:** These gauges can be stem, surface or flush mounted.

## Case Type 1125/1125A 4½" Lower Connect



Drawings are for representation only. See dimension table.

Dial Size Inches	A	B	C	D	E	F	G	H	I	J	P	P <sub>1</sub>	L	Wgt (lbs)
4½	5⅞ (149)	3⅞ (82)	4⅞ (126)	1⅞ (26)	5⅞ (137)	1⅞ (27)	3⅞ (91)	1⅞ (40)	⅞ (16)	⅞ (3)	2⅞ (17)	1⅞ (15)	⅞ (6)	3.0 6.6 kg
6	7⅞ (198,5)	3⅞ (79)	9⅞ (167)	1⅞ (26)	7 (178)	1⅞ (27)	5 (127)	1⅞ (40)	1⅞ (15)	⅞ (5)	2⅞ (17)	1⅞ (15)	⅞ (7)	3.0 6.6 kg

## TO ORDER THIS 1125, 1125A DIFFERENTIAL PRESSURE GAUGE:

Select: 45 1125 02L XXX 1000 psi

- Dial size-4½" \_\_\_\_\_
- Case type-1125 \_\_\_\_\_
- Connection size-¼ (02), ½ (04) \_\_\_\_\_
- Connection location-Lower only (L) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range -1000 psi \_\_\_\_\_

TABLE A – CASE SELECTION AND MOUNTING

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
4½" 6"	(45) (60)	1125/1125A	Aluminum Black	Aluminum Black Threaded	Stem Surface	Lower

TABLE B – SYSTEM, CONNECTION & LOCATION

Bourdon Tube <sup>(1)</sup> & Tip Material	Socket Material	Tube & Socket Code	Case Style	NPT Conn Code	Connection Location & Code	Range Selection Limits (psi)
Phosphor Bronze Tube, Brass Tip, Silver Brazed	Brass	(A)	Open Front	¼ std. ½ opt.	Lower (L)	20/1000-1125 10/0/10-1125A 500/0/500-1125A

(1) For selection of the correct Bourdon system material, see the media application table on page 7.

## STANDARD RANGES

Type 1125 (210° dial arc)				Type 1125A (210° dial arc) Zero centered dial			
Pressure Range psi	Figure Interval	Minor Graduation	Static Pressure Limits*	Pressure Range psi	Figure Interval	Minor Graduation	Static Pressure Limits*
0/20	5	0.2	30	10/0/10	2	0.2	30
0/30	5	0.5	60	15/0/15	5	0.5	60
0/60	10	1	120	30/0/30	10	1	120
0/100	10	1	200	50/0/50	10	1	200
0/160	20	2	300	80/0/80	20	2	300
0/200	20	2	300	100/0/100	20	2	300
0/300	50	5	450	150/0/150	50	5	450
0/400	50	5	600	200/0/200	50	5	600
0/600	100	10	900	300/0/300	100	10	900
0/800	100	10	1200	400/0/400	100	10	1200
0/1000	100	10	1500	500/0/500	100	10	1500

\* Maximum pressure that can be admitted into Bourdon tubes.

## METRIC RANGES

	PRESSURE RANGE		DIAL GRADUATIONS		RANGE kPa (kilopascal)	DIAL GRADUATIONS		Outer Range When Dual Range Specified psi
	kg/cm <sup>2</sup>	bar	Figure Interval	Minor Graduation		Figure Interval	Minor Graduation	
Type 1125	0/1.4	0/1.4	0.2	0.02	0/140	20	2	0/20
	0/2	0/2	0.5	0.05	0/200	50	5	0/28
	0/4	0/4	0.5	0.05	0/400	50	5	0/55
	0/7	0/7	0.5	0.1	0/400	50	10	0/100
	0/11	0/11	2	0.2	0/1100	200	20	0/160
	0/14	0/14	2	0.2	0/1400	200	20	0/200
	0/20	0/20	5	0.5	0/2000	250	50	0/300
	0/28	0/28	5	0.5	0/2800	500	50	0/400
	0/40	0/40	5	0.5	0/4000	500	50	0/600
	0/56	0/56	10	1	0/5600	1000	100	0/800
0/70	0/70	10	1	0/7000	1000	100	0/1000	
Type 1125A	0.7/0/0.7	0.7/0/0.7	0.2	0.02	70/0/70	20	2	10/0/10
	1/0/1	1/1	0.5	0.05	100/0/100	50	5	14/0/14
	2/0/2	2/2	0.1	0.01	200/0/200	50	5	28/0/28
	3.5/0/3.5	3.5/3.5	0.5	0.1	350/0/350	50	10	50/0/50
	5.5/0/5.5	5.5/5.5	2	0.2	550/0/550	200	20	80/0/80
	7/0/7	7/7	2	0.2	700/0/700	200	20	100/0/100
	10/0/0	10/10	5	0.5	1000/0/1000	250	50	150/0/150
	14/0/14	14/14	5	0.5	1400/0/1400	500	50	200/0/200
	20/0/20	20/20	5	0.5	2000/0/2000	500	50	300/0/300
	28/0/28	28/28	10	1	2800/0/2800	1000	100	400/0/400
	35/0/35	35/35	10	1	3500/0/3500	1000	100	500/0/500



Case Type 1125A  
4½" Lower Connect

# Movementless Gauge

## Type 1122KE/KF, Grade A (2-1-2% F.S.)

Specifically designed for applications involving vibration; particularly for turbines, pumps and compressors.

### Considerations for Selecting an Ashcroft Gearless Gauge Include:

**Process Media:** This gearless gauge has a phosphor bronze bourdon tube with a brass socket.

**Pressure Gauge Range:** The Type 1122KE/KF gauge is offered with ranges from 15 psi thru 1000 psi.

**Operating Environment:** Standard with a 304 stainless steel case and ring.

**Accuracy Requirements:** The Type 1122KE/KF gauge has an accuracy of 2-1-2% ASME grade A.

**Dial Size:** Available in a 2½" dial size.

**Connections:** ¼ NPT lower connection is available with the gearless gauge.

**Mounting Requirements:** The Type 1122KE/KF can be stem or surface mounted depending on the type number. The Type 1122KF is furnished standard with a back flange.

### STANDARD RANGES (60° dial arc) except 15 psi - 45°

Pressure Range (psi)	Figure Interval	Minor Graduation
0/15	5	1
0/30	10	2
0/60	15	5
0/100	20	10
0/160	40	10
0/200	50	10
0/300	100	25
0/400	100	25
0/600	150	50
0/1000	250	50

TABLE A – CASE SELECTION AND MOUNTING

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
2½"	(25)	1122	Stainless Steel	Stainless Steel	Stem Surface	Lower

TABLE B – SYSTEM, CONNECTION & LOCATION

Bourdon Tube <sup>(1)</sup> & Tip Material	Socket Material	Tube & Socket Code	Case Style	NPT Conn Code	Connection Location & Code	Range Selection Limits (psi)
Phosphor Bronze Tube, Brass Tip, Silver Brazed	Brass	(A)	Open Front	(02) ¼ Std	Lower (L)	15/600

(1) For selection of the correct Bourdon system material, see the media application table on page 7.

### STANDARD METRIC RANGES

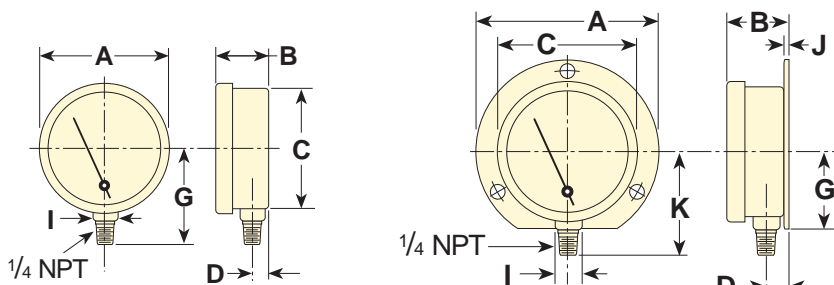
Range		Dial Graduations		Range		Dial Graduations		Outer Scale When Dual Range Specified psi
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	Minor Graduation		
<b>Pressure</b>								
0/1	0/1	0.1	0.01	0/100	10	1	0/14	
0/1.6	0/1.6	0.2	0.02	0/160	20	2	0/22	
0/2.5	0/2.5	0.5	0.05	0/250	50	5	0/35	
0/4	0/4	0.5	0.05	0/400	50	5	0/55	
0/6	0/6	0.5	0.1	0/600	50	10	0/85	
0/10	0/10	1	0.1	0/1000	100	10	0/140	
0/16	0/16	2	0.2	0/1600	200	20	0/220	
0/25	0/25	5	0.5	0/2500	500	50	0/350	
0/40	0/40	5	0.5	0/4000	500	50	0/550	
0/60	0/60	5	1	0/6000	500	100	0/850	
<b>Compound</b>								
-1/0/1.5	-1/0/1.5	0.5	0.05	-100/0/150	50	5	30" Hg/0/20	
-1/0/3	-1/0/3	0.5	0.05	-100/0/300	50	5	30" Hg/0/40	
-1/0/5	-1/0/5	0.5	0.1	-100/0/500	50	50	30" Hg/0/70	

Dial Size Inches	A	B	C	D	G	I	J	K	Wgt (lbs)
2½" KE	2⅞ (73)	1⅝ (29)	2⅞ (68)	⅜ (10)	2⅞ (60)	⅞ (15)	—	—	.5 .2 kg
2½" KF	3⅞ (94)	1⅝ (29)	2⅞ (73)	⅜ (14)	2⅞ (60)	⅞ (15)	⅝ (4)	1⅝ (41)	.5 .2 kg

### Case Type 1122 2½" Lower Connect

1122KE

1122KF



Drawings are for representation only. See dimension table.

### TO ORDER THIS 1122 PRESSURE GAUGE:

Select: **25 1122KF - 04L XXX 1000 psi**

- Dial size—2½"
- Case type—1122
- Tube and socket material
- Connection size—¼ (02)
- Connection location—Lower only (L)
- Optional features
- Standard pressure range—1000 psi



Case Type 1122  
2½" Lower Connect



# Duplex Gauge

Type 1038, 1339 Grade A (2-1-2% F.S.)

Ashcroft duplex gauges indicate two related pressures on the same dial. Ashcroft Types 1038 and 1339 are typically used on steam (with syphons or capillary), water, air or any gas or liquid that will not corrode bronze. The Ashcroft Type 1339 gauge features a hinged ring and is suitable for panel mounting.

## Considerations for Selecting an Ashcroft Duplex Gauge Include:

**Process Media:** Ashcroft Types 1038 and 1339 gauges are available with phosphor bronze Bourdon tubes with brass sockets. See the corrosion data guide on page 7 to ensure the media is compatible with the gauge wetted parts. If the process media is corrosive to the bronze/brass wetted parts, these gauges are available with capillary attached to diaphragm seals. See Ashcroft Bulletin DS-1.

**Pressure Gauge Range:** These gauges are available with ranges from 30 psi to 1000 psi.

**Operating Environment:** Ashcroft Type 1038 duplex gauges with dial sizes of 3½" and 4½" have an aluminum case and ring. The 6" dial is offered with a cast iron case with an aluminum ring. The Type 1339 has an aluminum case and ring.

**Accuracy Requirements:** Ashcroft duplex gauges have an accuracy of 2-1-2% ASME grade A.

**Dial Size:** Available in 3½" thru 6" dial sizes.

**Connections:** ¼ NPT lower or back connections depending on model number.

**Mounting Requirements:** Ashcroft duplex gauges can be stem, surface or flush mounted depending on the model number.

**TABLE A – CASE SELECTION AND MOUNTING**

Dial <sup>(1)</sup> Size (inches)	Order Code	Case Type	Case: Material Finish	Ring: Material Finish Style	Mounting	Connection
3½", 4½"	(35)(45) (60)	1038	Aluminum	Aluminum	Stem	Lower
		1038	Cast Iron, Black	Black Threaded	Surface Flush	Back
4½", 6"	(45)(60)	1339	Aluminum, Black	Aluminum Black Hinged	Flush	Back

**TABLE B – SYSTEM, CONNECTION & LOCATION**

Bourdon Tube <sup>(1)</sup> & Tip Material	Socket Material Code	Tube & Socket Code	Case Style	NPT Conn Code	Connection Location & Code	Range Selection Limits (psi)
Phosphor Bronze Tube, Brass Tip, Silver Braze	Brass	(A)	Open Front	¼	Lower (L) Back (B)	30/1000

(1) For selection of the correct Bourdon system material, see the media application table on page 7.

## Type 1038

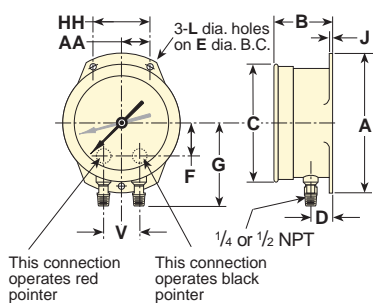
Dial Size Inches	A	B	C	D	E	F	G	H	I	J	L	V	AA	HH	Wght (lbs)
3½	4¾ (121)	1 15/16 (49)	3 15/16 (100)	2 3/32 (18)	4 ¼ (108)	—	2 25/32 (71)	—	—	1/8 (3)	9/32 (7)	1 3/16 (30)	1 (25)	2 (51)	1.5 .7 kg
	4½	5 13/16 (148)	2 ¼ (57)	5 7/8 (149)	2 7/32 (22)	5 3/8 (137)	1 1/16 (27)	3 25/32 (96)	1 17/32 (39)	1 9/32 (15)	3/8 (10)	7/32 (6)	1 ½ (38)	—	2.4 1.0 kg
6	7 11/16 (18)	2 5/8 (67)	6 3/32 (168)	1 5/16 (24)	7 (178)	1 11/16 (43)	4 15/16 (110)	5 15/32 (37)	5/8 (16)	3/4 (5)	9/32 (7)	1 5/8 (42)	—	3.6 1.6 kg	

## Type 1339A

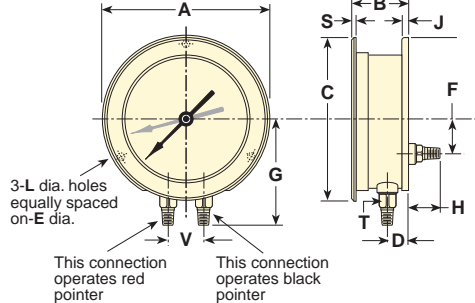
Dial Size Inches	A	B	C	E	F	H	I	V	S	CC	Wght (lbs)
4½	4 13/16 (122)	2 3/4 (56)	6 1/16 (154)	5 3/8 (137)	1 1/16 (27)	1 9/16 (40)	5/8 (16)	1 ½ (38)	5/8 (16)	10-25	3 1.4 kg
6	6 3/4 (160)	2 17/32 (64)	7 9/16 (182)	7 (178)	1 11/16 (43)	1 9/16 (40)	5/8 (16)	1 5/8 (41)	1 (25)	¼-20	3.85 1.7 kg

Drawings are for representation only. See dimension table.

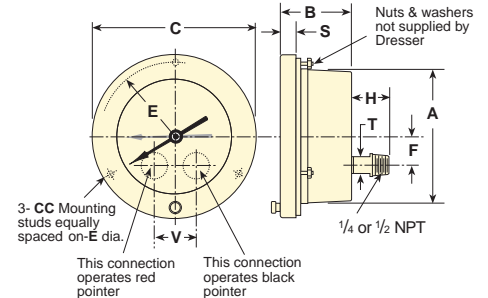
### Case Type 1038 3½" Lower Connect



### Case Type 1038 4½" & 6" Back and Connect



### Case Type 1339A 4½" & 6" Back Connect



## TO ORDER THESE 1038, 1339 DUPLEX PRESSURE GAUGES:

Select: 45 1038 A 04L XXX 1000 psi

- Dial size—4½" \_\_\_\_\_
- Case type—1038 \_\_\_\_\_
- Tube and socket material \_\_\_\_\_
- Connection size—¼ (02), ½ (04) \_\_\_\_\_
- Connection location—Lower only (L) \_\_\_\_\_
- Optional features \_\_\_\_\_
- Standard pressure range—1000 psi \_\_\_\_\_

# Duplex Gauge

Type 1038, 1339 Grade A (2-1-2% F.S.)

STANDARD METRIC RANGES							
Range		Dial Graduations		Range	Dial Graduations		Outer Scale When Dual Range Specified psi
kg/cm <sup>2</sup> (Kilograms per sq. cm.)	Bar	Figure Interval	Minor Graduation	kPa (kilopascal)	Figure Interval	Minor Graduation	
<b>Pressure</b>							
0/2.5	0/2.5	0.5	0.05	0/250	50	5	0/35
0/4	0/4	0.5	0.05	0/400	50	5	0/55
0/6	0/6	0.5	0.1	0/600	50	10	0/85
0/10	0/10	1	0.1	0/1000	100	10	0/140
0/16	0/16	2	0.2	0/1600	200	20	0/220
0/25	0/25	5	0.5	0/2500	500	50	0/350
0/40	0/40	5	0.5	0/4000	500	50	0/550
0/60	0/60	5	1	0/6000	500	100	0/850
0/100	0/100	10	1	0/10,000	1000	100	0/1400
0/160	0/160	20	2	0/16,000	2000	200	0/2200
0/250	0/250	50	5	0/25,000	5000	500	0/3500
0/400	0/400	50	5	0/40,000	5000	500	0/5500
<b>Compound</b>							
-1/0/1.5	-1/0/1.5	0.5	0.05	-100/0/150	50	5	30" Hg/0/20
-1/0/3	-1/0/3	0.5	0.05	-100/0/300	50	5	30" Hg/0/40
-1/0/5	-1/0/5	0.5	0.1	-100/0/500	50	10	30" Hg/0/70
-1/0/9	-1/0/9	1	0.1	-100/0/900	100	10	30" Hg/0/125
-1/0/15	-1/0/15	1		-100/0/1500	200	20	30" Hg/0/215
-1/0/24	-1/0/24	5	0.2	-100/0/2400	500	20	30" Hg/0/340

STANDARD RANGES		
Pressure Range (psi)	Figure Interval	Minor Graduation
0/15	1	0.2
0/30	5	0.5
0/60	5	1
0/100	10	1
0/160	20	2
0/200	20	2
0/300	30	5
0/600	50	10
0/800	100	10
0/1000	100	10



Case Type 1339, 4½" & 6" Lower Connect

Case Type 1038, 3½" Lower Connect