

# PRESSURE GAUGES



SERIES:

100 • 200 • 300 • 400 • 500  
600 • 700 • 800 • 900

**NOSHOK**

**NOSHOK Company Profile**

Established in 1967, our Company was one of the first to offer a liquid filled pressure gauge. This unheard of feature slowly caught on as the industry began to recognize the value of the extended service life that a liquid filled pressure gauge provides.

In the late 1960's and early 1970's, the NOSHOK name became widely accepted and was placed on Standards Committee specifications at several of the leading industrial manufacturers in the United States. The first of these industrial giants was an automotive company and we are proud to say over 20 years later, we are still on those specifications.

During that time records were maintained on gauges sold against gauges returned for reasons of failure. During a five year period, the return rate was no more than 4 gauges out of every 1,000 gauges sold. This statistic illustrated the remarkable built-in quality of our gauges and in 1973, led to one of the most innovative moves ever made in the pressure gauge industry — offering an extended warranty on a pressure gauge.

Our company took a bold step into the future with a **THREE YEAR WARRANTY** covering accuracy, sealing and performance as well as defects in materials and workmanship. The rest is history as today NOSHOK pressure gauges are on application in virtually every industry throughout North America and are also finding wide acceptance in Latin America, Asia, Australia and New Zealand.

NOSHOK pressure gauges are sold through more than 200 distributor locations and our Company's continuing commitment to product excellence, service and a sincere desire to be the best provides the NOSHOK customer with a distinct edge.

We have come a long way in these past years by expanding our pressure gauge program and adding related new products including Transducers & Indicators, Needle Valves, Diaphragm Seals and Bimetal Thermometers. Separate catalogs are available on these other NOSHOK products. Our original 4 page pressure gauge catalog has become the 44 page catalog you are currently reviewing. I now, personally, invite you to refer to the NOSHOK product index, "Guide-to-Excellence", and select a NOSHOK product for your specific requirement.

*Remember, we guarantee its performance!*

James B. Cole  
Chief Executive Officer

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## Three Year Warranty

NOSHOK will warrant for three years our 300, 500, 600 and 700 series liquid filled pressure gauges:

- To be free from defects in materials and workmanship.
- To remain within catalogued accuracy specifications.
- To maintain the integrity of the hermetically sealed case, therefore preventing leakage.
- To operate within the catalogued performance specifications.

Limitations which apply are:

- Bourdon tube pressure gauges must be used within their calibrated maximum range to prevent damage.
- The pressure gauges must be operated within the following working pressure limits:
  - Dynamic pressure application, 60% of dial range.
  - Static pressure applications, where no sharp fluctuations occur, 90% of dial range.
- The gauges must be operated within specified ambient temperature ranges.

Determination of gauge failures will be made by NOSHOK, Inc., which will use its equipment and personnel or a certified test facility specializing in this type of evaluation and determination.

Gauge failures determined to be caused by over-range, incompatibility with environment or product media and abuse will not be considered under this warranty.

NOSHOK, Inc. will at its options, repair or replace the working parts of the damaged gauge without cost to customer.

This written warranty applies only to the NOSHOK gauges, referenced in the first paragraph of this warranty, sold by NOSHOK, Inc. and its authorized distributors.

## One Year Warranty

NOSHOK will warrant for one year our 100, 200, 400, 600, 700, 800 and 900 series pressure gauges:

- To be free from defects in materials and workmanship.

Limitations which apply are:

- Bourdon tube pressure gauges must be used within their calibrated maximum range to prevent damage.
- The pressure gauges must be operated within the following working pressure limits:
  - Dynamic pressure application, 60% of dial range.
  - Static pressure applications, where no sharp fluctuations occur, 90% of dial range.
- The gauges must be operated within specified ambient temperature ranges.

Determination of gauge failures will be made by NOSHOK, Inc., which will use its equipment and personnel or a certified test facility specializing in this type of evaluation and determination.

Gauge failures determined to be caused by over-range, incompatibility with environment or product media and abuse will not be considered under this warranty.

NOSHOK, Inc. will at its options, repair or replace the working parts of the damaged gauge without cost to customer.

This written warranty applies only to the NOSHOK gauges, referenced in the first paragraph of this warranty, sold by NOSHOK, Inc. and its authorized distributors.

### CAUTION:

Operating conditions including, but not limited to, system pressure, media compatibility and ambient conditions must be considered when selecting gauges and accessories. Improper selections and use of gauges could possibly cause gauge failure and lead to possible property damage or person injury.

Refer to American National Standard ANSI B40.1 for the correct selection and use of gauges. A copy of this standard may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.

### WARNING:

Glycerine or silicone could result in a spontaneous chemical reaction or explosion when combined with strong oxidizing agents including (but not limited to) chlorine, oxygen, hydrochloric or nitric acid and hydrogen peroxide. Do not use glycerine or silicone filled gauges or accessories in these types of service. Consult factory for application assistance.

In keeping with and for purposes of product and/or manufacturing process improvements, NOSHOK, INC. reserves the right to make design changes without prior notice.

### S E R I E S

#### GENERAL INFORMATION

NOSHOK 100 Series Standard Gauges are a high quality dry gauge designed to provide reliable service on applications not corrosive to brass. These gauges feature either an ABS case or drawn steel. On 1½, 2 and 2½ inch back connected models, the standard ABS case employs a "built-in bezel" for panel mounting that is molded as an integral part of the case. The addition of an inexpensive panel mount clamp or snap-on front flange is all that is necessary to convert a standard back connected gauge to a panel mount gauge. The standard lenses are plexiglass and are the clearfront design on all but the 4" 105 & 115 models which utilize a bayonet ring. The stem and connection are machined in one piece from brass. The high quality bourdon tubes are made in the "C" configuration on pressure ranges of 600 PSI and lower and are the "coiled" or "spiral" safety tube on ranges above 600 PSI. This spiral tube allows the higher pressure to be spread out over a greater area thereby

reducing bourdon tube stress. The precision movements provide accurate readings to a standard ±2.5% of full scale tolerance (higher accuracies are available). Our standard dials, (UV resistant), are dual scale in PSI and kPa (kilopascals). Dual scale PSI-Kg/cm<sup>2</sup> is available in most popular ranges in 1½", 2", 2½" and 4" sizes.

NOSHOK 100 Series Gauges are used in almost every area of manufacturing and are especially suited for applications in pneumatics, hydraulics, process, petrochemical, medical, food, pharmaceutical and most industrial and commercial applications. Options are available in various types of panel mounting configurations, custom dials, special connections, different lens materials, different case materials and finishes, recalibrators, maximum indicating pointers, cover rings, and orifices.

#### OPERATING SPECIFICATIONS

##### 1. Working Pressure Limitations

###### a. Dynamic Pressure

The working pressure should be limited to 60% of the dial range.

###### b. Static Pressure

The working pressure, where no sharp fluctuations occur, should be limited to 90% of the dial range.

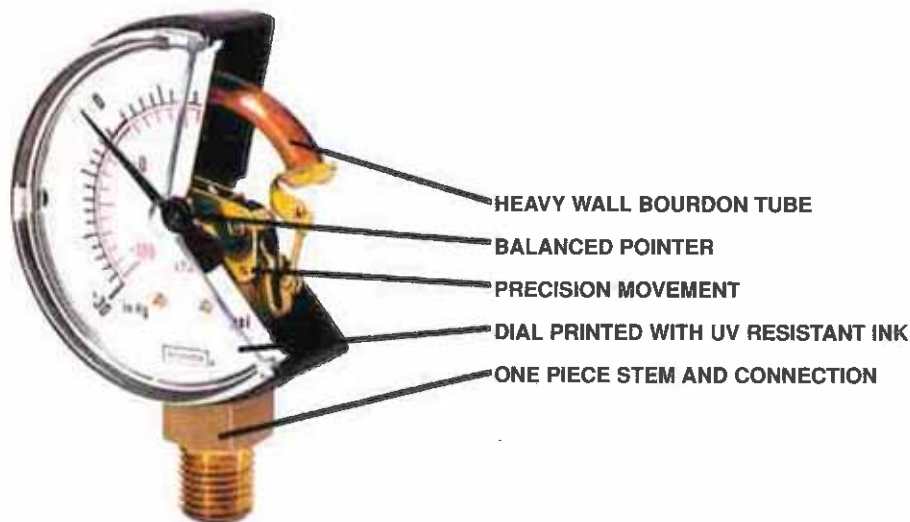
##### 2. Ambient Temperature

0°F to 140°F (-18°C to 60°C)

#### ORDERING INFORMATION

**20.110 • 100 PSI • ¼" NPT • Black Steel Case**

1. Select size and model number.....
2. Select pressure range.....
3. Select NPT connection size (if more than one is offered).....
4. Select any required accessory or option.....



# 1½ INCH STANDARD PRESSURE GAUGES

# 100 S E R I E S



**15.100**  
1½ INCH  
ABS CASE  
½" NPT  
BOTTOM CONNECTION



**15.110**  
1½ INCH  
ABS CASE  
½" NPT  
CENTER BACK CONNECTION



**15.120**  
1½ INCH  
STEEL CASE  
½" NPT  
CENTER BACK CONNECTION  
PANEL MOUNT

SPECIFICATIONS	
Case	Models 15.100, and 15.110 ABS (Acryl Nitril Butadien Styrol). Model 15.120 – Black painted steel with chrome triangular bezel and U-Clamp.
Bezel	Model 15.110 is standard with a built-in bezel, molded as an integral part of the case for ease of panel mounting. Model 15.120 – Chrome plated steel triangular bezel.
Lens	Clearfront Plexiglass
Bourdon tube	Phosphor Bronze
Connection	1/8" NPT Brass
Movement	Brass & Nylon, or All-Brass with Highly Polished Bearing Surfaces.
Accuracy	± 2.5% Full Scale ASME grade B
Pointer	Molded plastic
Dial	White Background with Black PSI Scale and Red kPa Scale. UV Resistant.

STANDARD DIAL CONFIGURATIONS						
Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	
-30 inHg to 15 psi/kPa	10 inHg-50 kPa 5 psi/50 kPa	1 inHg-5 kPa 0.5 psi/5 kPa	0 psi/kPa to 160 psi/kPa	40 psi-400 kPa	4 psi-40 kPa	
-30 inHg to 30 psi/kPa	30 inHg-100 kPa 10 psi/100 kPa	2 inHg-10 kPa 1 psi/10 kPa	0 psi/kPa to 200 psi/kPa	40 psi-400 kPa	4 psi-40 kPa	
-30 inHg to 60 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 300 psi/kPa	50 psi-500 kPa	5 psi-50 kPa	
-30 inHg to 100 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	10 inHg-50 kPa 5 psi/50 kPa	0 psi/kPa to 400 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 160 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 600 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 200 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 1000 psi/kPa	200 psi-2000 kPa	20 psi-200 kPa	
-30 inHg to 300 psi/kPa	30 inHg-100 kPa 100 psi/1000 kPa	30 inHg-100 kPa 10 psi/100 kPa	0 psi/kPa to 1500 psi/kPa	300 psi-3000 kPa	50 psi-500 kPa	
-30 inHg to 0 psi/kPa	5 inHg-20 kPa	0.5 inHg-5 kPa	0 psi/kPa to 2000 psi/kPa	400 psi-4000 kPa	40 psi-400 kPa	
0 psi/kPa to 15 psi/kPa	3 psi-30 kPa	0.5 psi-5 kPa	0 psi/kPa to 3000 psi/kPa	500 psi-5000 kPa	50 psi-500 kPa	
0 psi/kPa to 30 psi/kPa	5 psi-50 kPa	0.5 inHg-5 kPa	0 psi/kPa to 5000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 60 psi/kPa	10 psi-100 kPa	1 psi-10 kPa	0 psi/kPa to 6000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 100 psi/kPa	20 psi-200 kPa	2 psi-20 kPa				

Consult factory for availability of specific models, ranges and options.



**20.100**  
2 INCH  
ABS CASE  
1/8" OR 1/4" NPT  
BOTTOM  
CONNECTION



**20.120**  
2 INCH  
STEEL CASE  
1/4" NPT  
CENTER BACK  
CONNECTION  
PANEL MOUNT



**20.110**  
2 INCH  
ABS CASE  
1/8" OR 1/4" NPT  
CENTER BACK  
CONNECTION



**20.148**  
2 INCH  
ABS SQUARE CASE  
1/8" NPT/10-32 FEMALE  
CENTER BACK  
CONNECTION  
PANEL MOUNT

#### SPECIFICATIONS

<b>Case</b>	Models 20.100, 20.110 and 20.148 ABS (Acryl Nitril Butadien Styrol). Model 20.120 – Black painted steel with chrome triangular bezel and U-Clamp.
<b>Bezel</b>	Model 20.110 is standard with a built-in bezel, molded as an integral part of the case for ease of panel mounting. Model 20.120 – Chrome plated steel triangular bezel.
<b>Lens</b>	Clearfront Plexiglass
<b>Bourdon Tube</b>	Phosphor Bronze
<b>Connection</b>	1/8" NPT and 1/4" NPT Brass
<b>Movement</b>	Brass & Nylon, or All-Brass with Highly Polished Bearing Surfaces.
<b>Accuracy</b>	± 2.5% Full Scale ASME grade B
<b>Pointer</b>	Molded plastic
<b>Dial</b>	White Background with Black PSI Scale and Red kPa Scale. UV Resistant.

#### STANDARD DIAL CONFIGURATIONS

Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa
-30 inHg to 15 psi/kPa	10 inHg-50 kPa 5 psi/50 kPa	1 inHg-5 kPa 0.5 psi/5 kPa	0 psi/kPa to 160 psi/kPa	40 psi-400 kPa	4 psi-40 kPa
-30 inHg to 30 psi/kPa	30 inHg-100 kPa 10 psi/100 kPa	2 inHg-10 kPa 1 psi/10 kPa	0 psi/kPa to 200 psi/kPa	40 psi-400 kPa	4 psi-40 kPa
-30 inHg to 60 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 300 psi/kPa	50 psi-500 kPa	5 psi-50 kPa
-30 inHg to 100 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	10 inHg-50 kPa 5 psi/50 kPa	0 psi/kPa to 400 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa
-30 inHg to 160 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 600 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa
-30 inHg to 200 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50kPa 4 psi/40 kPa	0 psi/kPa to 1600 psi/kPa	200 psi-2000 kPa	20 psi-200 kPa
-30 inHg to 300 psi/kPa	30 inHg-100 kPa 100 psi/1000 kPa	30 inHg-100 kPa 10 psi/100 kPa	0 psi/kPa to 1500 psi/kPa	300 psi-3000 kPa	50 psi-500 kPa
-30 inHg to 0 psi/kPa	5 inHg-20 kPa	0.5 inHg-5 kPa	0 psi/kPa to 2000 psi/kPa	400 psi-4000 kPa	40 psi-400 kPa
0 psi/kPa to 15 psi/kPa	3 psi-30 kPa	0.5 psi-5 kPa	0 psi/kPa to 3000 psi/kPa	500 psi-5000 kPa	50 psi-500 kPa
0 psi/kPa to 30 psi/kPa	5 psi-50 kPa	0.5 inHg-5 kPa	0 psi/kPa to 5000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa
0 psi/kPa to 60 psi/kPa	10 psi-100 kPa	1 psi-10 kPa	0 psi/kPa to 6000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa
0 psi/kPa to 100 psi/kPa	20 psi-200 kPa	2 psi-20 kPa			

Consult factory for availability of specific models, ranges and options.

# 2 1/2 INCH & 4 INCH STANDARD PRESSURE GAUGES

# 100 S E R I E S



## 25.100

2 1/2 INCH  
ABS CASE  
1/4" NPT  
BOTTOM  
CONNECTION



## 25.120

2 1/2 INCH  
STEEL CASE  
1/4" NPT  
CENTER BACK  
CONNECTION  
PANEL MOUNT



## 25.110

2 1/2 INCH  
ABS CASE  
1/4" NPT  
CENTER BACK  
CONNECTION



## 40.100

4 INCH  
ABS CASE  
1/4" NPT  
BOTTOM  
CONNECTION

SPECIFICATIONS	
Case	Models 25.100, and 40.100 ABS (Acryl Nitril Butadien Styrol). Model 25.120 – Black painted steel with chrome triangular bezel and U-Clamp.
Bezel	Model 25.110 is standard with a built-in bezel, molded as an integral part of the case for ease of panel mounting. Model 25.120 – Chrome plated steel triangular bezel.
Lens	Clearfront Plexiglass
Bourdon Tube	Phosphor Bronze
Connection	1/4" NPT Brass
Movement	Brass & Nylon, or All-Brass with Highly Polished Bearing Surfaces.
Accuracy	± 2.5% Full Scale ASME grade B
Pointer	Aluminum
Dial	White Background with Black PSI Scale and Red kPa Scale. UV Resistant.

STANDARD DIAL CONFIGURATIONS						
Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	
-30 inHg to 15 psi/kPa	10 inHg-50 kPa 5 psi/50 kPa	1 inHg-5 kPa 0.5 psi/5 kPa	0 psi/kPa to 160 psi/kPa	40 psi-400 kPa	4 psi-40 kPa	
-30 inHg to 30 psi/kPa	30 inHg-100 kPa 10 psi/100 kPa	2 inHg-10 kPa 1 psi/10 kPa	0 psi/kPa to 200 psi/kPa	40 psi-400 kPa	4 psi-40 kPa	
-30 inHg to 60 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 300 psi/kPa	50 psi-500 kPa	5 psi-50 kPa	
-30 inHg to 100 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 400 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 160 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 600 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 200 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 1000 psi/kPa	200 psi-2000 kPa	20 psi-200 kPa	
-30 inHg to 300 psi/kPa	30 inHg-100 kPa 50 psi/1000 kPa	10 inHg-50 kPa 5 psi/50 kPa	0 psi/kPa to 1500 psi/kPa	300 psi-3000 kPa	20 psi-200 kPa	
-30 inHg to 0 psi/kPa	5 inHg-20 kPa	0.5 inHg-2 kPa	0 psi/kPa to 2000 psi/kPa	400 psi-4000 kPa	40 psi-400 kPa	
0 psi/kPa to 15 psi/kPa	3 psi-30 kPa	0.2 psi-2 kPa	0 psi/kPa to 3000 psi/kPa	500 psi-5000 kPa	50 psi-500 kPa	
0 psi/kPa to 30 psi/kPa	5 psi-50 kPa	0.5 inHg-5 kPa	0 psi/kPa to 5000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 60 psi/kPa	10 psi-100 kPa	1 psi-10 kPa	0 psi/kPa to 6000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 100 psi/kPa	20 psi-200 kPa	2 psi-20 kPa				

Consult factory for availability of specific models, ranges and options.

# 100 SERIES

## 4 INCH HEAVY DUTY PRESSURE GAUGES



**40.105**  
4 INCH  
HEAVY DUTY  
STAINLESS STEEL CASE  
1/4" NPT  
BOTTOM CONNECTION



**40.115**  
4 INCH  
HEAVY DUTY  
STAINLESS STEEL CASE  
1/4" NPT  
BACK CONNECTION

SPECIFICATIONS	
Case	304 Stainless Steel
Bayonet Ring	304 Stainless Steel
Lens	Plexiglass
Bourdon Tube	Phosphor Bronze "C" Tube for Pressures up to 600 PSI, 316 SS Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT Brass. 1/2" NPT is Available as a Special Order Option.
Movement	Brass and Nickel-Silver with Highly Polished Bearing Surfaces.
Accuracy	± 1% Full Scale ASME Grade 1A
Pointer	Balanced Micro-Adjustable Aluminum, Black Finish
Dial	Aluminum, White Background with Black PSI Scale and Red kPa Scale. Is standard. Single Scale PSI, and Dual Scales of PSI/BAR or PSI/Kg-cm <sup>2</sup> are Available as Stock Options. UV Resistant.

STANDARD DIAL CONFIGURATIONS						
Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	
-30 inHg to 15 psi/kPa	10 inHg-50 kPa 5 psi/50 kPa	1 inHg-5 kPa 0.5 psi/5 kPa	0 psi/kPa to 160 psi/kPa	20 psi-200 kPa	2 psi-20 kPa	
-30 inHg to 30 psi/kPa	10 inHg-100 kPa 5 psi/50 kPa	1 inHg-10 kPa 0.5 psi/5 kPa	0 psi/kPa to 200 psi/kPa	40 psi-400 kPa	4 psi-40 kPa	
-30 inHg to 60 psi/kPa	30 inHg-100 kPa 10 psi/100 kPa	2 inHg-20 kPa 1 psi/10 kPa	0 psi/kPa to 300 psi/kPa	50 psi-500 kPa	5 psi-50 kPa	
-30 inHg to 100 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	2 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 400 psi/kPa	50 psi-500 kPa	5psi-50 kPa	
-30 inHg to 180 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 800 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 200 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	5 inHg-20kPa 4 psi/40 kPa	0 psi/kPa to 1000 psi/kPa	200 psi-2000 kPa	20 psi-200 kPa	
-30 inHg to 300 psi/kPa	30 inHg-100 kPa 50 psi/500 kPa	10 inHg-50 kPa 5psi/50 kPa	0 psi/kPa to 1500 psi/kPa	300 psi-3000 kPa	20 psi-200 kPa	
-30 inHg to 0 psi/kPa	5 inHg-20 kPa	0.5 inHg-2 kPa	0 psi/kPa to 2000 psi/kPa	400 psi-4000 kPa	40 psi-400 kPa	
0 psi/kPa to 15 psi/kPa	3 psi-30 kPa	0.2 psi-2 kPa	0 psi/kPa to 3000 psi/kPa	500 psi-5000 kPa	50 psi-500 kPa	
0 psi/kPa to 30 psi/kPa	5 psi-50 kPa	0.5 inHg-5 kPa	0 psi/kPa to 5000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 60 psi/kPa	10 psi-100 kPa	1 psi-10 kPa	0 psi/kPa to 6000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 100 psi/kPa	20 psi-200 kPa	2 psi-20 kPa				

Consult factory for availability of specific models, ranges and options.

**PANEL MOUNTING**

Panel Mount Clamps (PMC) of chromated steel are available for panel mounting models 15.110, 20.110 and 25.110. The PMC is easily (field) installed into pre-formed locking grooves in the case and uses the built-in bezel, which is molded as an integral part of the case, as a narrow flange on the front of the panel.

Black Front Flanges (BFF) and Chrome Front Flanges (CFF) are available on models 15.110, 20.110 and 25.110 as an easily (field) installed item and simply snap-in to pre-formed, locking grooves behind the built-in bezel.

Polished Stainless Steel Bezels are available on models 15.110, 20.110 and 25.110.

Models 15.120, 20.120, 25.120 come complete with Chrome Plated Steel Triangular Bezels and U-Clamps.

**CASES AND COVER RINGS**

Black painted steel, chrome plated steel and 304 stainless steel cases and cover rings are available on most models as production options.

**MAXIMUM INDICATING POINTERS AND SET POINTERS**

Maximum Indicating Pointers (MIP) are an invaluable tool for identifying pressure spikes in a system. They are very helpful during system start up and trouble shooting. MIPs add an additional  $\pm 1\%$  error to the gauge because of the increased load on the bourdon tube. On ranges of 60 PSI and lower, MIPs may double the allowed error of the gauge. MIPs are available on 25.100, 25.110, 25.120, 40.105 and 40.115.

Set Pointers (SP) are used to identify an operating minimum or maximum pressure or vacuum value. Set pointers are available on most 100 series gauges.

**RUBBER CASE PROTECTORS**

Rubber Case Protectors (RCP) are ideal for gauges that are subjected to direct physical shock. They are available on models 25.100, 25.110 and 40.100 (2 1/2" covers are blue and 4" covers are black).

**ORIFICES**

Press-fit brass Orifices (.012" I.D.) are available on all 100 Series gauges. Orifices are used in a gauge to restrict the flow of rapidly increasing and decreasing pressures, therefore lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended for all dynamic applications.

**RECALIBRATORS**

This option, an adjustment screw accessible through the dial, facilitates re-setting the zero point without disassembling the gauge. Recalibrators are available on models 25.100, 25.110 and 40.100 as a production option.

**LENSES**

Instrument Glass Lenses are available on most models.

Laminated Safety Glass Lenses are available on most 2 1/2 and 4 inch models.

Homalite Lenses (resistant to many industrial solvents) are available on models 15.120, 20.120 and 25.120.

NOTE: A steel or stainless case and cover ring is required when other than plexiglass lenses are utilized.

**SPECIAL CONNECTIONS**

Special Connections are available on all 100 Series gauges. Some examples include: metric threads, female threads, straight threads (flare or swivel type) and special O-ring connections. Please contact us with your requirements for prices, availability and minimum quantities.

**CERTIFIED CALIBRATION**

Certified Calibration is available on all 100 Series gauges. Certified Calibration provides the user with a serial numbered gauge along with a calibration sheet against a primary pressure standard and is traceable to the National Institute of Standards and Technology (formerly National Bureau of Standards).



20.110  
WITH PANEL MOUNT  
CLAMP



25.110  
WITH CHROME FRONT  
FLANGE



20.148 SP

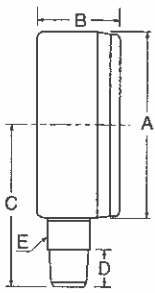


40.100 RCP

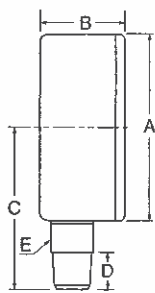


25.100 RCP

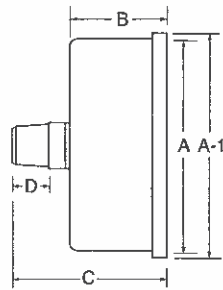
Consult factory for availability and minimum orders (if applicable) for all options & accessories.



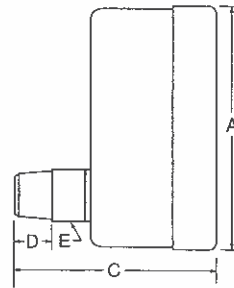
15.100, 20.100



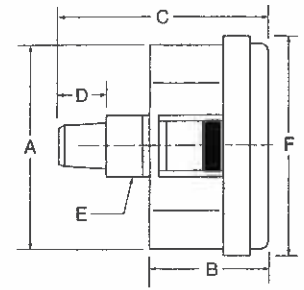
25.100, 40.100, 40.105



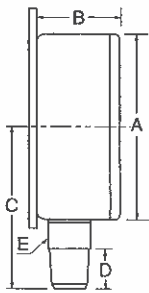
15.110, 20.110, 25.110



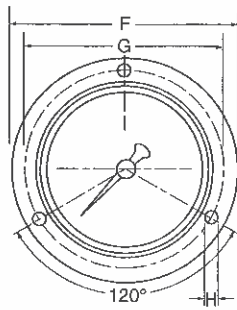
40.115



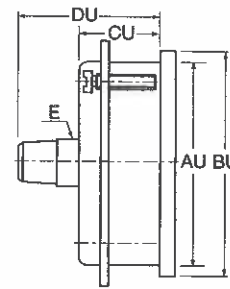
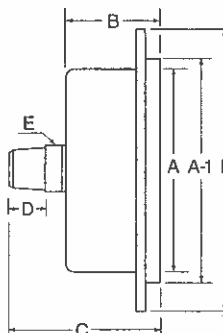
20.148



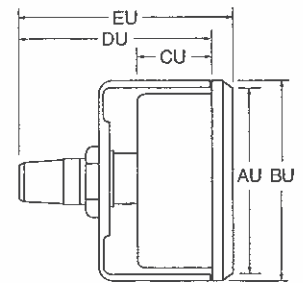
Rear Flange  
25.100, 40.100, 40.105



Front Flange  
15.110, 20.110, 25.110, 40.110, 40.115\*  
(\*note 40.115 is a lower back conn.)



Panel Mount Clamp  
15.110, 20.110, 25.110



Chrome Triangular Bezel  
with U-Clamp  
15.120, 20.120, 25.120

MODEL		A	A-1	B	C 1/8"NPT	C 1/4"NPT	D 1/8"NPT	D 1/4"NPT	E	F	G	H
15.100	IN MM	1.58 40	— —	0.91 23	1.42 36	— —	0.39 10	— —	0.47 12	2.40 61	2.01 51	0.14 3.6
15.110	IN MM	1.58 40	1.77 45	1.04 26.5	1.60 44.6	— —	0.39 10	— —	0.47 12	2.40 61	2.01 51	0.14 3.6
20.100	IN MM	2.01 51	— —	1.08 27.5	1.65 42	1.77 45	0.39 10	0.51 13	0.55 14	2.80 71	2.36 60	0.14 3.6
20.110	IN MM	1.95 49.5	2.13 54	1.06 27	1.77 45	1.89 48	0.39 10	0.51 13	0.55 14	2.80 71	2.36 60	0.14 3.6
20.148	IN MM	1.77 45	— —	1.03 26.2	1.61 41	1.81 46	0.39 10	0.51 13	0.55 14	1.89 48	— —	— —
25.100	IN MM	2.44 62	— —	1.08 27.5	— —	2.11 53.5	— —	0.51 13	0.55 14	3.35 85	2.95 75	0.14 3.6
25.110	IN MM	2.48 63	2.68 68	1.16 29.5	— —	1.88 47.8	— —	0.51 13	0.55 14	3.35 85	2.95 75	0.14 3.6
40.100	IN MM	3.90 99	— —	1.20 30.5	— —	2.80 71	— —	0.51 13	0.55 14	5.20 132	4.57 116	0.19 4.8
40.105	IN MM	3.98 101	— —	2.01 51	— —	3.23 82	— —	0.55 14	0.87 22	5.20 132	4.57 116	0.19 4.8
40.115	IN MM	3.98 101	— —	2.01 51	— —	33.5 85	— —	0.55 14	0.87 22	5.20 132	4.57 116	0.19 4.8

#### GAUGES WITH NARROW BEZEL U-CLAMP

MODEL		AU	BU	CU	DU 1/8"NPT	DU 1/4"NPT	EU 1/8"NPT	EU 1/4"NPT
15.120	IN MM	1.54 39	1.69 43	0.88 22.4	1.88 47.8	— —	2.04 51.8	— —
20.120	IN MM	1.93 49	2.13 54.1	0.98 24.9	1.93 49	2.01 51.1	— —	2.21 56.1
25.120	IN MM	2.44 62	2.64 67	1.03 26.2	— —	2.06 52.3	— —	2.30 58.4

\* Please note that the model 20.148 is a square cased gauge and therefore requires a square panel cut out.

\*\* Please note that the flange O.D.(F), bolt hole circle (G) and mounting hole (H) dimensions of the rear flange are identical to the same size front flange dimensions.

**GENERAL INFORMATION**

NOSHOK diaphragm gauges are designed for extremely low pressure or vacuum measurement. The ultra sensitive diaphragm capsules are rated for pressure (or vacuum) as low as 0-10 inches of water and as high as 0-10 PSI.

The cases are constructed of black painted steel on the 2½" size and 304ss on the 4" size. The lenses are molded plexiglass on the 2½" size and instrument glass on the 4" size for strength and clarity. The diaphragm capsules are phosphor bronze and when coupled to the precision all-brass movements provide extremely accurate indication over the service life of the gauge.

Available options include overpressure protection of up to 200% of the dial range. Mounting options include chrome or black steel triangular bezels and U-Clamps in addition to chrome or black steel front flanges.

Applications for NOSHOK 200 Series Gauges include medical, biomedical, heating-ventilating and air conditioning, gas distribution, filtration, burner and gas combustion service, waste water treatment and everywhere low pressure and vacuum measurement is required.

**OPERATING SPECIFICATIONS**

1. Working Pressure Limitations

A. Dynamic Pressure

The working pressure should be limited to 60% of the dial range for longer service life.

B. Static Pressure

The working pressure, where no sharp fluctuations occur, should be limited to 90% of the dial range.

2. Ambient Temperature

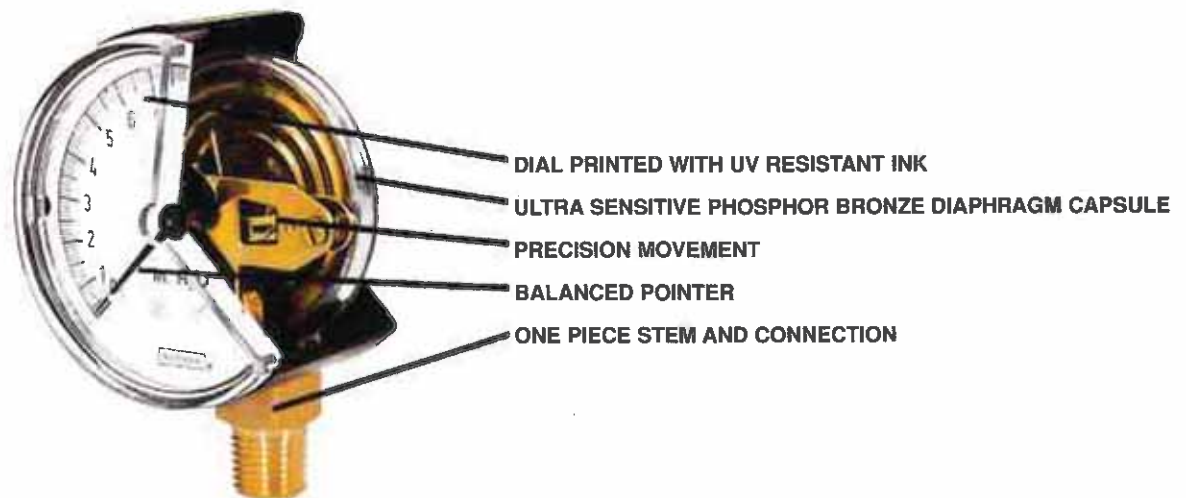
0°F to 140°F (-18°C to 60°C)

Due to the sensitivity and construction of these gauges, the measured media should not exceed 140°F (60°C).

**ORDERING INFORMATION**

25.200 • 30" H<sub>2</sub>O • ¼" NPT • Orifice

- 1. Select size and model number.....
- 2. Select pressure range.....
- 3. Select NPT connection size (if more than one is offered).....
- 4. Select any required accessory or option.....





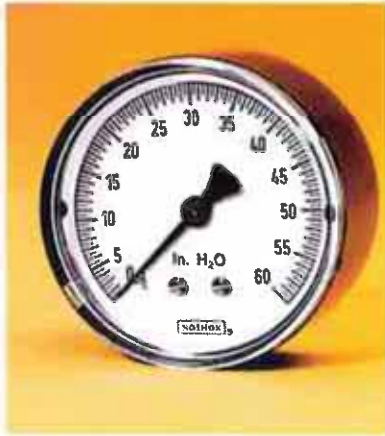
### 25.200

2 1/2 INCH  
STEEL CASE  
1/4" NPT  
BOTTOM  
CONNECTION



### 25.224

2 1/2 INCH  
ABS CASE  
1/4" NPT  
CENTER BACK  
CONNECTION  
PANEL MOUNT



### 25.210

2 1/2 INCH  
STEEL CASE  
1/4" NPT  
CENTER BACK  
CONNECTION



### 40.200

4 INCH  
STAINLESS STEEL  
CASE  
1/4" NPT  
BOTTOM  
CONNECTION

#### SPECIFICATIONS

Case	25.200, 25.210; Black Painted Steel 25.224; Black ABS with Zinc Plated Steel Panel Mount Clamp 40.200; 304SS Case & Bezel
Lens	2 1/2"; Clearfront Plexiglass 4"; Instrument Glass
Diaphragm Capsule	Phosphor Bronze
Connection	1/4" NPT Brass
Movement	Brass and Nickel Silver with Highly Polished Bearing Surfaces.
Accuracy	2 1/2"; ±1.5% Full Scale. ASME grade A 4"; ±1% Full Scale. ASME Grade 1A
Pointer	Black Finished Aluminum
Dial	Aluminum, White Background with Black Markings. Single Scale Except as Noted in the Dial Configuration Chart. UV Resistant.

#### STANDARD DIAL CONFIGURATIONS

Dial Range	Figure Interval	Graduation Intervals	Dial Range	Figure Interval	Graduation Intervals
-15 inH2O to 0 inH2O	3 inH2O	0.2 inH2O	0 oz/in2 to 15 oz/in2	3 oz/in2	0.2 oz/in2
-30 inH2O to 0 inH2O	5 inH2O	0.5 inH2O	0 oz/in2 to 30 oz/in2	5 oz/in2	0.5 oz/in2
-50 inH2O to 0 inH2O	10 inH2O	1 inH2O	0 oz/in2 to 35 oz/in2	5 oz/in2	0.5 oz/in2
-100 inH2O to 0 inH2O	20 inH2O	2 inH2O	0 oz/in2 to 60 oz/in2	10 oz/in2	1 oz/in2
0 inH2O to 10 inH2O	2 inH2O	0.2 inH2O	0 oz/in2 to 100 oz/in2	20 oz/in2	2 oz/in2
0 inH2O to 15 inH2O	3 inH2O	0.2 inH2O	0 oz/in2 to 160 oz/in2	40 oz/in2	4 oz/in2
0 inH2O to 30 inH2O	5 inH2O	0.5 inH2O	0 oz/in2/inH2O to 20 oz/in2/inH2O	4 oz/in2-10 inH2O	0.4 oz/in2-1 inH2O
0 inH2O to 50 inH2O	10 inH2O	1 inH2O	0 oz/in2/inH2O to 32 oz/in2/inH2O	4 oz/in2-10 inH2O	0.5 oz/in2-1 inH2O
0 inH2O to 100 inH2O	20 inH2O	2 inH2O	0 psi to 3 psi	0.5 psi	0.05 psi
0 inH2O to 160 inH2O	40 inH2O	4 inH2O	0 psi to 5 psi	1 psi	0.1 psi
0 inH2O to 200 inH2O	40 inH2O	4 inH2O	0 psi to 10 psi	2 psi	0.2 psi
0 oz/in2 to 10 oz/in2	2 oz/in2	0.2 oz/in2			

Consult factory for availability of specific models, ranges and options.

#### MODEL 25.234 GAS PRESSURE TEST KIT

(photo not shown) is a convenient pre-assembled test kit that includes:

- Carrying Case
- 20 oz/35 in H<sub>2</sub>O 2 1/2" Test Gauge
- 3 ft of Hose with Test Fitting

See line drawing Pg 13

**PANEL MOUNTING**

Chrome Plated Steel Front Flanges (CFF) and Black Painted Steel Front Flanges (BFF) are available for flush panel mounting utilizing 3 mounting holes to attach the gauge to the panel.

Chrome Plated Steel Triangular Bezels w/ U-clamp (CB-U-Clamp) and Black Painted Steel Triangular Bezels w/ U-clamp (BB-U-Clamp) are also available on model 25.210. Model 25.224 incorporates a built-in narrow bezel case and Panel Mount Clamp as standard and is intended for direct U.S. size retrofits.

All panel mounting options are considered factory installed options.

**CASES AND COVER RINGS**

Chrome plated steel and 304SS cases and cover rings are available on models 25.200 and 25.210.

**RECALIBRATOR**

An external recalibrator, or zero point adjustment, accessible through the front of the dial is standard on all models.

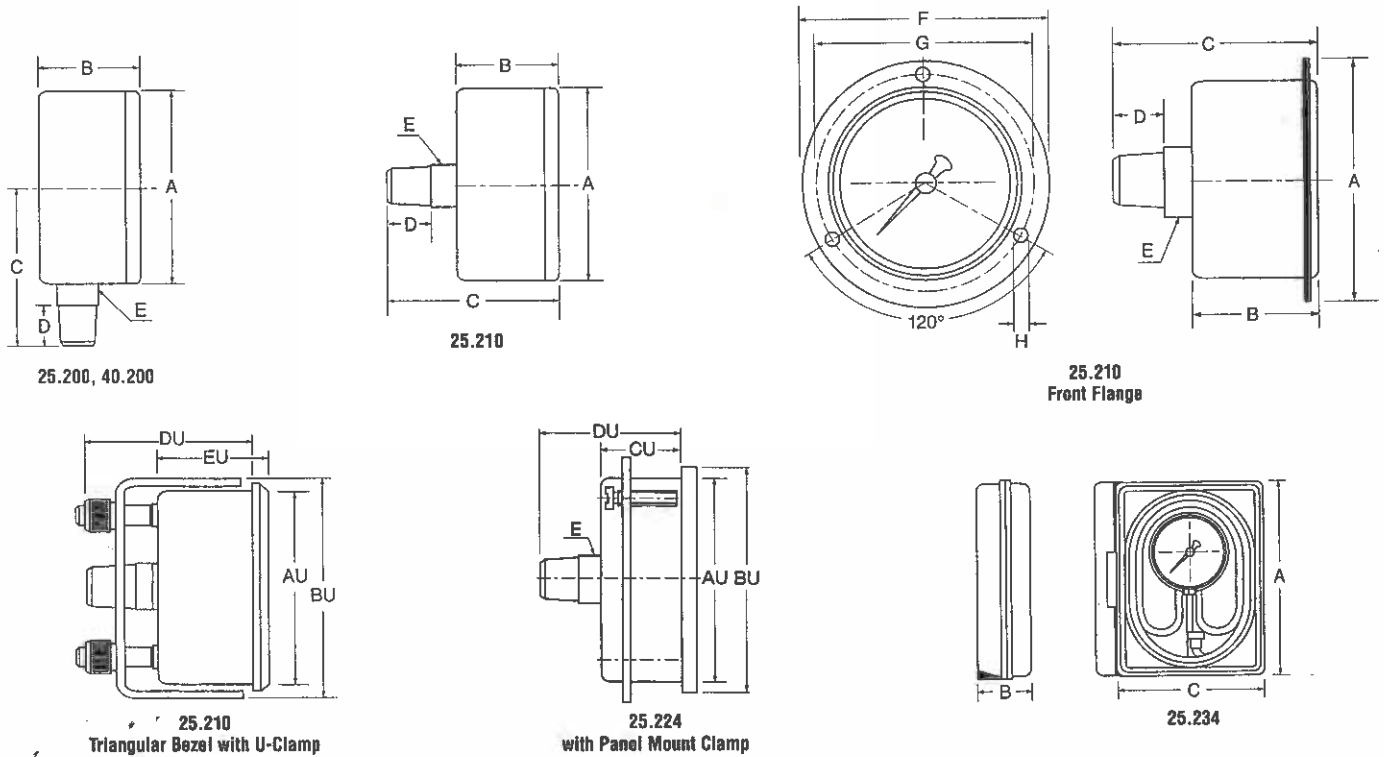
**OVER PRESSURE PROTECTION**

Over pressure protection of up to 200% of the dial range is available on models 25.200 and 25.210 as a production option.

**ORIFICES**

Press-fit brass Orifices (.012" I.D.) are available on all models. Orifices are used in a gauge to restrict the flow of rapidly increasing and/or decreasing pressures (or vacuum), thereby lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended for all dynamic applications.

Consult factory for availability and minimum orders (if applicable) for all options & accessories.



**PANEL MOUNT GAUGES WITH NARROW BEZEL AND U-CLAMP**

MODEL		A	B	C	D	E	F	G	H
25.200	IN	2.48	1.58	2.09	0.55	0.55			
	MM	63	40	53	14	14			
25.210	IN	2.48	1.58	2.17	0.55	0.55	3.35	2.96	0.14
	MM	63	40	55	14	14	85	75	3.6
25.234	IN	7.50	2.06	5.75					
	MM	190.5	52.3	146.1					
40.200	IN	3.98	1.94	3.43	0.55	0.87			
	MM	101	49.5	87	14	22			

MODEL		AU	BU	CU	DU	EU
25.210	IN	2.50	2.68	-	2.17	2.33
	MM	63.5	68	-	55.2	59.2
25.224	IN	2.60	2.84	1.31	2.03	-
	MM	65.9	72.2	33.2	51.6	-

### S E R I E S

#### GENERAL INFORMATION

NOSHOK 300 Series Gauges are the highest quality liquid filled gauges available in today's market. The heavy one-piece die casting integrates the case, connection, movement support and bourdon tube support into a solid unit that eliminates leakage and when coupled with the glycerine fill, greatly reduces the effects of vibration, pulsation and shock. The lenses are molded plexiglass and are sealed with an o-ring.

The lenses are protected with a polished brass or chrome cover ring.

The heavy wall bourdon tubes are made in the "C" configuration on pressure ranges of 600 PSI and lower and are the "coiled" or "spiral" safety tubes on ranges above 600 PSI. This spiral tube spreads the pressure out over a greater area, thereby reducing bourdon tube stress. These tubes coupled to a precision all brass movement and balanced pointer provide very accurate readings over an extended service life.

The glycerine used for dampening the effects of shock and vibration as well as lubrication of the movement is an extremely high grade of synthetic glycerine so it retains its crystal clarity and lubricity for the life of the gauge. The dials are printed with bold UV resistant ink for ease of readability even after years of exposure to direct sunlight. Positive case relief is accomplished by means of a relief system on the top of the gauge case and away from the operator.

NOSHOK 300 Series liquid filled gauges are used on demanding applications throughout the world that are not corrosive to brass. Options are available in various U.S. and metric forms of measurement, panel mounting configurations, maximum indicating pointers and special connections.

And while everyone else talks about *Quality*, NOSHOK stands behind its *Quality*, as each and every 300 Series gauge carries NOSHOK's exclusive 3 year Warranty.

#### OPERATING SPECIFICATIONS

##### 1. Working Pressure Limitations

###### a. Dynamic Pressure

The working pressure should be limited to 60% of the dial range.

###### b. Static Pressure

The working pressure, where no sharp fluctuations occur, should be limited to 90% of the dial range.

##### 2. Ambient Temperature

0°F to 160°F (-18°C to 71°C)

Lower operating temperatures are available to -40°F (40°C) by using a special glycerine mixture or low temperature silicone. Please contact us for assistance in selecting the best fill liquid for your application.

#### ORDERING INFORMATION

40.300 • 3000 PSI • ½" NPT • RF (Rear Flange)

1. Select size and model number.....
2. Select pressure range.....
3. Select NPT connection size (if more than one is offered).....
4. Select any required accessory or option.....



- SAFETY RELIEF
- HEAVY DUTY BOURDON TUBE
- PRECISION ALL BRASS MOVEMENT
- ONE PIECE DIE CAST BRASS CASE

NOTE: All NOSHOK hermetically sealed gauges with ranges of 200 PSI and below, including all vacuum and compound ranges, are equipped with a vent pin in the relief disc. The vent pin should be removed after installation of the gauge to insure accurate indication.

# 2½ INCH BRASS CASE LIQUID FILLED PRESSURE GAUGES

# 300

# S E R I E S



**25.300**  
2½ INCH  
BRASS CASE  
GLYCERINE FILLED  
¼" NPT  
BOTTOM CONNECTION



**25.310**  
2½ INCH  
BRASS CASE  
GLYCERINE FILLED  
¼" NPT  
CENTER BACK CONNECTION

SPECIFICATIONS	
Case	Die Cast Brass - Natural Brass Finish
Cover Ring	Polished Brass
Lens	Molded Plexiglass with O-Ring Seal
Bourdon Tube	Phosphor Bronze "C" Tube for Pressures up to 600 PSI, Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT Die Cast with the Case, 7/16" -20 SAE Adjustable Type Straight Thread with Viton O-Ring is also Available as a Stock Option on many ranges. (-4 SAE).
Movement	Brass and Nickel-Silver with Highly Polished Bearing Surfaces.
Safety Protection	Safety Relief Disc on the Top of the Case
Accuracy	± 1.5% Full Scale ASME Grade A
Pointer	Balanced Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.
Fill Liquid	Glycerine and Water

STANDARD DIAL CONFIGURATIONS					
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 300 psi	50 psi	5 psi
-30 inHg to 15 psi	10 inHg-5 psi	1 inHg-0.5 ps	0 psi to 400 psi	100 psi	10 psi
-30 inHg to 30 psi	30 inHg-10 psi	2 inHg-1 psi	0 psi to 600 psi	100 psi	10 psi
-30 inHg to 60 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 800 psi	200 psi	20 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 160 psi	30 inHg-40 psi	10 inHg-4 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 200 psi	30 inHg-40 psi	10 inHg-4 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 3000 psi	500 psi	50 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 5000 psi	1000 psi	100 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 6000 psi	1000 psi	100 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 7500 psi	1500 psi	100 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 160 psi	40 psi	4 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 200 psi	40 psi	4 psi			

Consult factory for availability of specific models, ranges and options.

# 300

## 4 INCH BRASS CASE LIQUID FILLED PRESSURE GAUGES

### S E R I E S



**40.300**  
 4 INCH  
 BRASS CASE  
 GLYCERINE FILLED  
 1/4" OR 1/2" NPT  
 BOTTOM CONNECTION



**40.310**  
 4 INCH  
 BRASS CASE  
 GLYCERINE FILLED  
 1/4" NPT  
 LOWER BACK CONNECTION

#### SPECIFICATIONS

Case	Die Cast Brass
Cover Ring	Polished Brass
Lens	Molded Plexiglass with O-Ring Seal
Bourdon Tube	Phosphor Bronze "C" Tube for Pressures up to 600 PSI, 316 SS Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT Die Cast with the Case. 1/2" NPT is Available on Certain 40.300 Ranges as a Stock Option, and on All Other 40.300 and 40.310's as a Non-Stock Option.
Movement	Brass and Nickel-Silver with Highly Polished Bearing Surfaces.
Safety Protection	Safety Relief Disc on the Top of the Case
Accuracy	± 1% Full Scale ASME Grade 1A
Pointer	Balanced Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.
Fill Liquid	Glycerine and Water

#### STANDARD DIAL CONFIGURATIONS

Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 300 psi	50 psi	5 psi
-30 inHg to 15 psi	0 inHg-5 psi	1 inHg-0.5 psi	0 psi to 400 psi	50 psi	5 psi
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 600 psi	100 psi	10 psi
-30 inHg to 60 psi	10 inHg-10 psi	2 inHg-1 psi	0 psi to 800 psi	100 psi	10 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 160 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 200 psi	30 inHg-40 psi	5 inHg-4 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 3000 psi	500 psi	50 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 5000 psi	1000 psi	100 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 6000 psi	1000 psi	100 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 7500 psi	1500 psi	100 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 160 psi	20 psi	2 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 200 psi	40 psi	4 psi			

Consult factory for availability of specific models, ranges and options.

**FLANGES FOR PANEL MOUNTING**

Polished Brass Front Flanges (BFF) are available for flush mounting on models 25.300 and 25.310. Chrome plated brass Front Flanges (CFF) are available on models 25.300, 25.310, 40.300 and 40.310. These flanges can be installed in the field.

Chrome Triangular Bezel Front Flanges with U-Clamp (CB-U) are available for flush mounting on models 25.310 and 40.310. Chrome plated steel Adapter Rings (AR) are available in conjunction with these flanges to adapt to oversized panel cut outs. These flanges can be installed in the field.

Rear Flanges (RF), for front of panel mounting, are available on models 25.300, 25.310, 40.300 and 40.310. The 2½ inch rear flanges are brass painted brass and the 4 inch models are chrome plated brass. Rear flanges are a factory installed option.

**ORIFICES**

Threaded Brass Orifices (.032" I.D.) are available on all 300 Series gauges. Orifices are used on a gauge to restrict the flow of rapidly increasing and decreasing pressures, thereby lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended on all dynamic applications.

**CERTIFIED CALIBRATION**

Certified Calibration is available on all 300 Series gauges. Certified Calibration provides the user with a serial numbered gauge along with a calibration sheet against a pressure standard and is traceable to National Institute of Standards and Technology (formerly National Bureau of Standards).

**MAXIMUM INDICATING POINTERS**

Maximum Indicating Pointers (MIP) are an invaluable tool for identifying pressure spikes in a system. They are very helpful during system start up and trouble shooting. MIP's add an additional 1% error to the gauge because of the increased load on the bourdon tube. On ranges of 60 PSI and lower, MIP's may double the allowed error of the gauge.

Maximum Indicating Pointers are available on models 25.300 and 25.310.

**METRIC DIALS AND HAND MADE SPECIAL DIALS**

Dual scale Metric Dials in PSI/BAR, PSI/kPa, and PSI/Kg-cm<sup>2</sup> are available on models 25.300, 25.310, 40.300 and 40.310. Certain other scales are available for specific sizes and ranges: single scale bar and kPa, refrigerant scales and altitude scales; please consult the factory for availability.

Hand Made Special Dials such as a non-standard metric scale, tons on ram, lbs. of force, etc. are available in small quantities (as FEW as One Piece) on models 25.300, 25.310, 40.300 and 40.310.

**SPECIAL CONNECTIONS**

Special Connections are available on all 300 Series gauges. Some examples include: metric threads, female threads, straight threads (flare or swivel type) and special o-ring connections. Please contact us with your requirements for prices, minimum quantities and lead times.



25.310 BFF



25.310 CB-U



25.300 MIP



25.300 RF

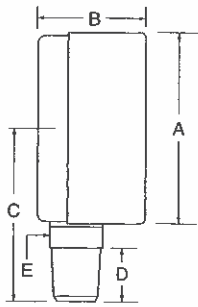


25.300 SST  
7/16-20 Adjustable Straight Thread  
(-4 SAE)

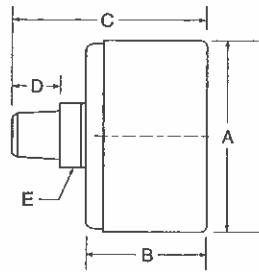


25.300 PSI/kPa

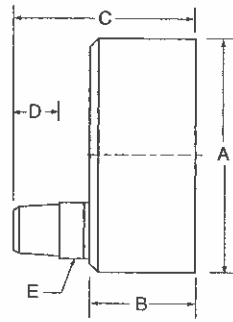
Consult factory for availability and minimum orders (if applicable) for all options & accessories.



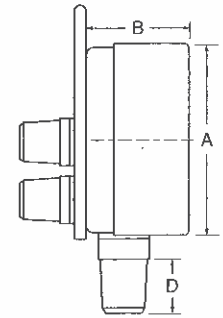
25.300, 40.300



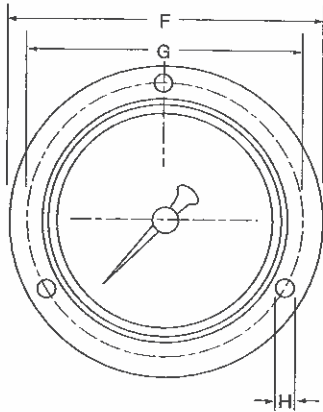
25.310



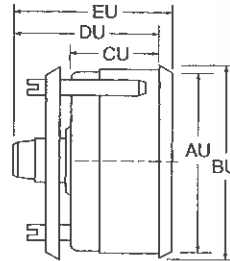
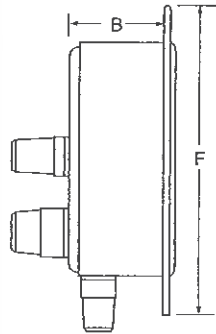
40.310



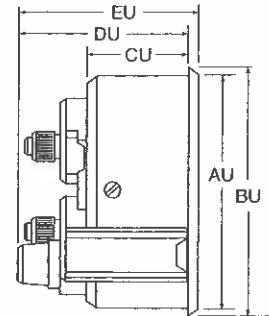
Rear Flange:\*\*  
All styles and sizes



Front Flange: All styles and sizes



25.310



40.310

Chrome Triangular Bezel with U-Clamp

MODEL		A	B	C 1/2"	C 1/4"	D 1/2"	D 1/4"	E	F	G	H
25.300	IN	2.48	1.34	2.13	—	0.55	—	0.55	3.35	2.95	0.14
	MM	63	34	54	—	14	—	14	85	75	3.6
25.310	IN	2.48	1.34	2.13	—	0.55	—	0.55	3.35	2.95	0.14
	MM	63	34	60	—	14	—	14	85	75	3.6
40.300	IN	3.94	1.77	3.47	3.47	0.55	0.71	0.87	5.20	4.57	0.19
	MM	100	45	88	88	14	18	22	132	116	4.8
40.310	IN	3.94	1.77	3.47	3.47	0.55	0.71	0.87	5.20	4.57	0.19
	MM	100	45	88	88	14	18	22	132	116	4.8

#### GAUGES WITH CHROME NARROW BEZEL W/U-CLAMP

MODEL		AU	BU	CU	DU	EU
25.310	IN	2.48	2.68	1.10	2.36	2.52
	MM	63	68	28	60	64
40.310	IN	3.94	4.21	1.61	2.87	3.03
	MM	100	107	41	73	77

\*\*Please note that the flange O.D. (F), bolt hole circle (G) and mounting hole (H) dimensions of the rear flange are identical to the same size front flange dimensions.

**GENERAL INFORMATION**

NOSHOK 400 (dry) and 500 (glycerine filled) Series gauges with all stainless steel construction are the ultimate in corrosion resistant heavy duty vacuum and pressure gauges.

The cases and bezels are constructed of solid 304 SS. Lenses are either plexiglass, trogamide, instrument glass or safety glass. The connection and bourdon tubes are 316 SS and are argon-arc welded utilizing a 316 alloy filler material to maintain the integrity of the measuring system. "C" tubes are used on pressure ranges through 600 PSI and coiled safety tubes are used on pressure ranges above 600 PSI. The bourdon tubes are then matched to stainless steel precision movements and balanced pointers for

smooth, accurate indication.

Glycerine filling (in the 500 Series) further enhances gauge life by constantly lubricating the movement and dampening the effects of vibration, pulsation and shock.

NOSHOK 400 and 500 Series all stainless steel gauges are in use on demanding applications where corrosion resistance and reliable operation are important. Typical applications include chemical plants, petro chemical refineries, pharmaceutical, food and beverage processing, offshore oil platforms, papermills, salt mines, fertilizer plants and on shipboard.

**OPERATING SPECIFICATIONS**

1. Working Pressure Limitations

A. Dynamic Pressure

The working pressure should be limited to 60% of the dial range.

B. Static Pressure

The working pressure, where no sharp fluctuations occur, should be limited to 90% of the dial range.

2. Ambient Temperature

A. 400 Series

-40°F to 260°F (-40°C to 127°C)

Higher operating temperature available to 450°F (232°C) with installation of a safety glass lens.

B. 500 Series

0°F to 160°F (-18°C to 71°C)

Lower operating temperatures are available to -40°F (-40°C) by using a special glycerine mixture or low temperature silicone. Please contact us for assistance in selecting the best fill liquid for your application.

**ORDERING INFORMATION**

**40.500 • 600 PSI • ½" NPT • MIP (Max. Indicating Pointer)**

1. Select size and model number.....
2. Select pressure range.....
3. Select NPT connection size (if more than one is offered).....
4. Select any required accessory or option.....



NOTE: All NOSHOK hermetically sealed gauges with ranges of 200 PSI and below, including all vacuum and compound ranges, are equipped with a vent pin in the relief disc. The vent pin should be removed after installation of the gauge to insure accurate indication.

# 400/500

## 1½ INCH STAINLESS STEEL GAUGES

### S E R I E S



### 15.400

1½ INCH  
ALL STAINLESS STEEL  
1/8" NPT  
BOTTOM CONNECTION



### 15.410

1½ INCH  
ALL STAINLESS STEEL  
1/8" NPT  
CENTER BACK CONNECTION

#### SPECIFICATIONS

Case	304 Stainless Steel
Cover Ring	Polished 304 Stainless Steel
Lens	Instrument Glass
Bourdon Tube	316 Stainless Steel "C" Tube
Connection	1/8" NPT, 316 Stainless Steel
Movement	Stainless Steel and Nylon with Highly Polished Bearing Surfaces.
Accuracy	± 2.5% Full Scale ASME Grade B
Pointer	Black Finished Aluminum
Dial	Aluminum, White Background with Black Markings. Single Scale, PSI. UV Resistant.

#### STANDARD DIAL CONFIGURATIONS

0 psi to 15 psi	3 psi	0.5 psi
0 psi to 30 psi	5 psi	0.5 psi
0 psi to 60 psi	10 psi	1 psi
0 psi to 100 psi	20 psi	2 psi
0 psi to 160 psi	40 psi	4 psi
0 psi to 200 psi	40 psi	4 psi
0 psi to 300 psi	50 psi	5 psi
0 psi to 400 psi	100 psi	10 psi
0 psi to 500 psi	100 psi	10 psi

Consult factory for availability of specific models, ranges and options.

# 2 1/2 INCH ALL STAINLESS STEEL GAUGES

# 400/500 S E R I E S



## 25.400

2 1/2 INCH  
ALL STAINLESS STEEL  
DRY  
1/4" NPT  
BOTTOM  
CONNECTION



## 25.500

2 1/2 INCH  
ALL STAINLESS STEEL  
GLYCERINE FILLED  
1/4" NPT  
BOTTOM  
CONNECTION



## 25.410

2 1/2 INCH  
ALL STAINLESS STEEL  
DRY  
1/4" NPT  
CENTER BACK  
CONNECTION



## 25.510

2 1/2 INCH  
ALL STAINLESS STEEL  
GLYCERINE FILLED  
1/4" NPT  
CENTER BACK  
CONNECTION

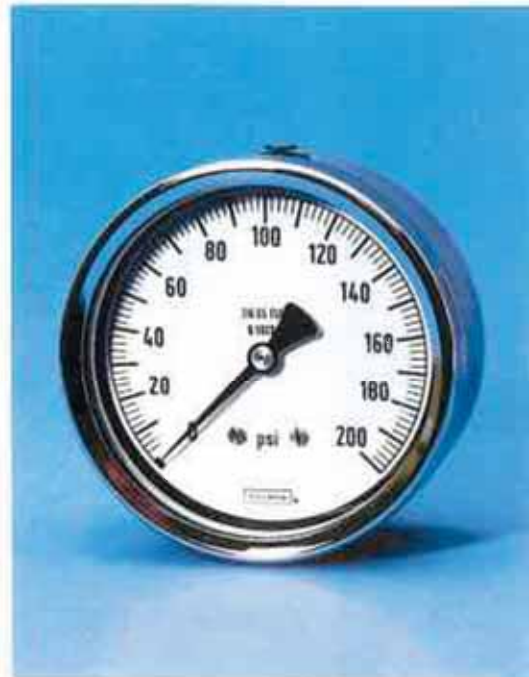
SPECIFICATIONS	
Case	Polished 304 Stainless Steel
Cover Ring	Polished 304 Stainless Steel
Lens	Trogamide
Bourdon Tube	316 Stainless Steel "C" Tube for Pressures up to 600 PSI, Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT 316 Stainless Steel
Movement	Stainless Steel and Nylon with Highly Polished Bearing Surfaces.
Safety Protection	Safety Relief Disc on the Top of the Case
Accuracy	± 1.5% Full Scale ASME Grade A
Pointer	Balanced Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.
Fill Liquid	Glycerine and Water (500 Series only)

STANDARD DIAL CONFIGURATIONS					
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 200 psi	40 psi	4 psi
-30 inHg to 15 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 300 psi	50 psi	5 psi
-30 inHg to 30 psi	30 inHg-10 psi	2 inHg-1 psi	0 psi to 400 psi	100 psi	10 psi
-30 inHg to 60 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 600 psi	100 psi	10 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 160 psi	30 inHg-40 psi	10 inHg-4 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 200 psi	30 inHg-40 psi	10 inHg-4 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 3000 psi	500 psi	50 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 5000 psi	1000 psi	100 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 6000 psi	1000 psi	100 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 160 psi	40 psi	4 psi			

Consult factory for availability of specific models, ranges and options.



**40.400**  
4 INCH  
ALL STAINLESS STEEL  
DRY  
1/4" OR 1/2" NPT  
BOTTOM CONNECTION



**40.410**  
4 INCH  
ALL STAINLESS STEEL  
DRY  
1/4" OR 1/2" NPT  
LOWER BACK CONNECTION

#### SPECIFICATIONS

Case	304 Stainless Steel
Cover Ring	Polished 304 Stainless Steel
Lens	Instrument Glass
Bourdon Tube	316 Stainless Steel "C" Tube for Pressures up to 600 PSI, Coiled Safety Tube Above 600 PSI
Connection	1/2" NPT 316 Stainless Steel. 9/16"-18 high pressure connections are standard on 0-30,000 PSI and higher.
Movement	All Stainless Steel with internal Zero Stop and Highly Polished Bearing Surfaces.
Safety Protection	Safety Relief Disc on the Top of the Case
Accuracy	± 1% Full Scale ASME Grade 1A
Pointer	Balanced Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.

#### STANDARD DIAL CONFIGURATIONS

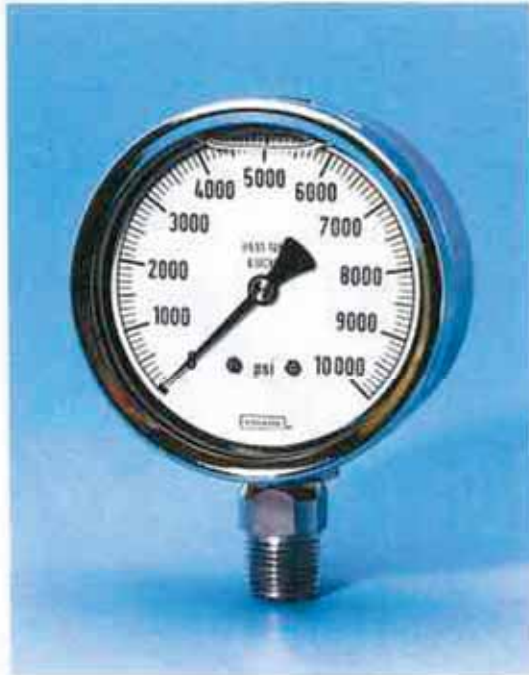
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 400 psi	50 psi	5 psi
-30 inHg to 15 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 800 psi	100 psi	10 psi
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 60 psi	10 inHg-10 psi	2 inHg-1 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 160 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 3000 psi	500 psi	50 psi
-30 inHg to 200 psi	30 inHg-40 psi	5 inHg-4 psi	0 psi to 5000 psi	1000 psi	100 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 6000 psi	1000 psi	100 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 20000 psi	4000 psi	400 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 30000 psi	5000 psi	500 psi
0 psi to 160 psi	20 psi	2 psi	0 psi to 40000 psi	5000 psi	500 psi
0 psi to 200 psi	40 psi	4 psi	0 psi to 60000 psi	10000 psi	1000 psi
0 psi to 300 psi	50 psi	5 psi			

Consult factory for availability of specific models, ranges and options.

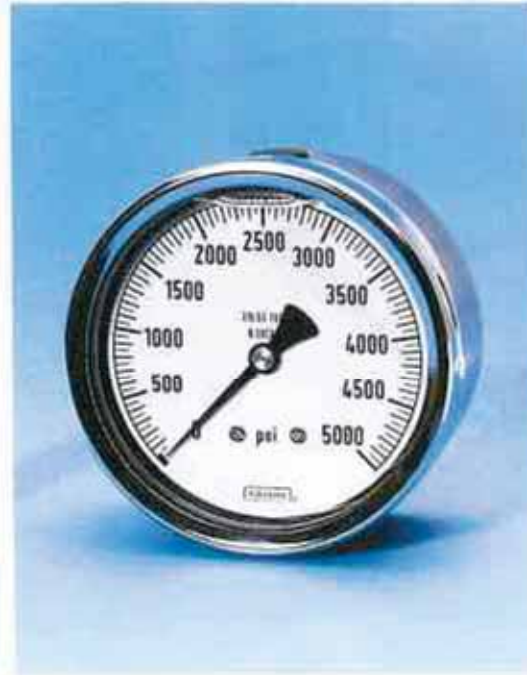
# 4 INCH ALL STAINLESS STEEL GAUGES

# 400/500

# SERIES



**40.500**  
4 INCH  
ALL STAINLESS STEEL  
GLYCERINE FILLED  
1/4" OR 1/2" NPT  
BOTTOM CONNECTION



**40.510**  
4 INCH  
ALL STAINLESS STEEL  
GLYCERINE FILLED  
1/4" OR 1/2" NPT  
LOWER BACK CONNECTION

SPECIFICATIONS	
Case	Polished 304 Stainless Steel
Cover Ring	Polished 304 Stainless Steel
Lens	Instrument Glass
Bourdon Tube	316 Stainless Steel "C" Tube for Pressures up to 600 PSI, Coiled Safety Tube Above 600 PSI
Connection	1/2" NPT 316 Stainless Steel. 9/16"-18 high pressure connections are standard on 0-30,000 PSI and higher
Movement	All Stainless Steel with internal Zero Stop and Highly Polished Bearing Surfaces.
Safety	Safety Relief Disc on the Back and Top of the Case
Accuracy	± 1% Full Scale ASME Grade 1A
Pointer	Balanced Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.
Fill Liquid	Glycerine and Water (500 Series only)

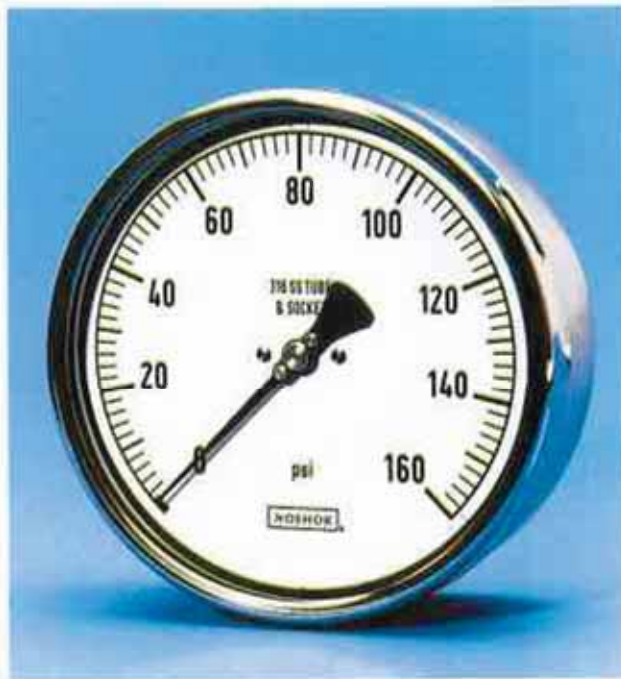
STANDARD DIAL CONFIGURATIONS					
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 400 psi	50 psi	5 psi
-30 inHg to 15 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 600 psi	100 psi	10 psi
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 60 psi	10 inHg-10 psi	2 inHg-1 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 160 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 3000 psi	500 psi	50 psi
-30 inHg to 200 psi	30 inHg-40 psi	5 inHg-4 psi	0 psi to 5000 psi	1000 psi	100 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 6000 psi	1000 psi	100 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 20000 psi	4000 psi	400 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 30000 psi	5000 psi	500 psi
0 psi to 160 psi	20 psi	2 psi	0 psi to 40000 psi	5000 psi	500 psi
0 psi to 200 psi	40 psi	4 psi	0 psi to 60000 psi	10000 psi	1000 psi
0 psi to 300 psi	50 psi	5 psi			

Consult factory for availability of specific models, ranges and options.



### 60.400

6 INCH  
ALL STAINLESS STEEL  
DRY  
1/2" NPT  
BOTTOM CONNECTION



### 60.410

6 INCH  
ALL STAINLESS STEEL  
DRY  
1/2" NPT  
LOWER BACK CONNECTION

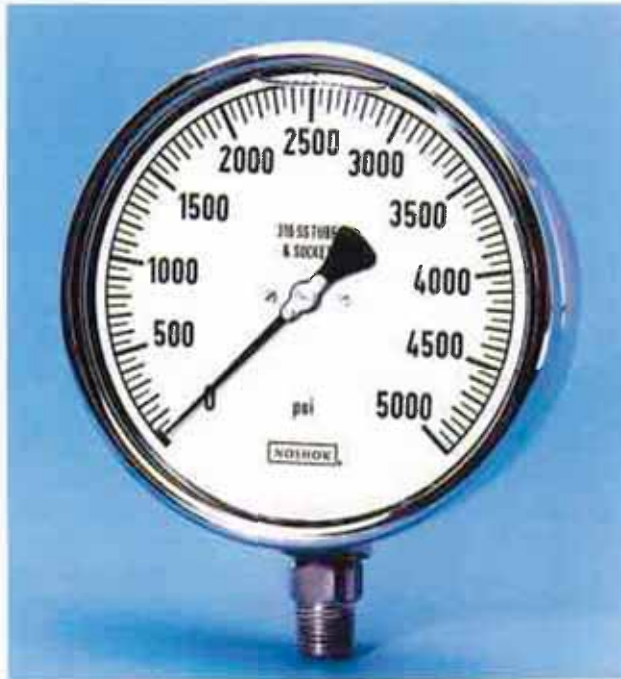
SPECIFICATIONS	
Case	304 Stainless Steel
Cover Ring	Polished 304 Stainless Steel Bayonet Ring
Lens	Laminated Safety Glass
Bourdon Tube	316 Stainless Steel "C" Tube for Pressures up to 600 PSI, Coiled Safety Tube Above 600 PSI
Connection	1/2" NPT 316 Stainless Steel. 9/16"-18 high pressure connections are standard on 0-30,000 PSI and higher.
Movement	Stainless Steel with Highly Polished Bearing Surfaces. An Internal Zero Stop is Standard.
Safety Protection	Safety Relief Disc on the Rear of the Case
Accuracy	± 1% Full Scale ASME Grade 1A.
Pointer	Balanced Micro-Adjustable Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.

STANDARD DIAL CONFIGURATIONS					
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 600 psi	100 psi	10 psi
-30 inHg to 15 psi	0 inHg-5 psi	1 inHg-0.5 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 60 psi	10 inHg-10 psi	2 inHg-1 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 3000 psi	500 psi	50 psi
-30 inHg to 160 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 5000 psi	1000 psi	100 psi
-30 inHg to 200 psi	30 inHg-40 psi	5 inHg-4 psi	0 psi to 6000 psi	1000 psi	100 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 20000 psi	4000 psi	400 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 30000 psi	5000 psi	500 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 40000 psi	5000 psi	500 psi
0 psi to 160 psi	20 psi	2 psi	0 psi to 60000 psi	10000 psi	1000 psi
0 psi to 200 psi	40 psi	4 psi	0 psi to 80000 psi	10000 psi	1000 psi
0 psi to 300 psi	50 psi	5 psi	0 psi to 100000 psi	20000 psi	2000 psi
0 psi to 400 psi	50 psi	5 psi			

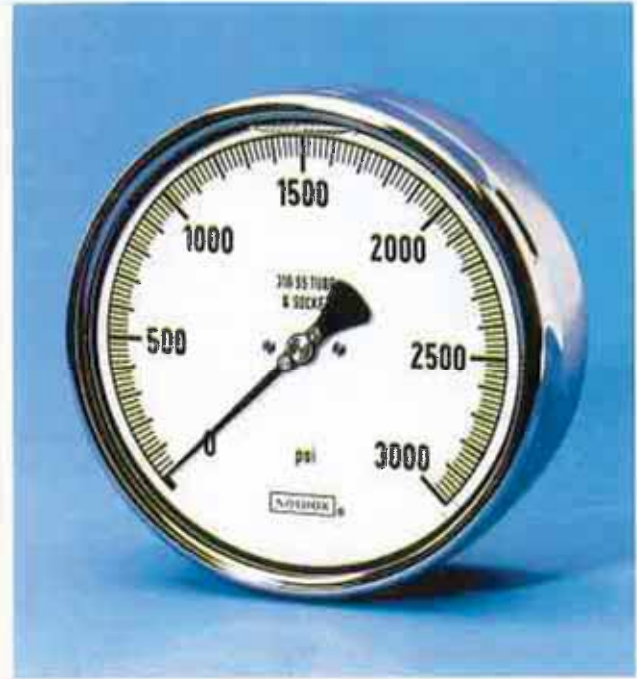
Consult factory for availability of specific models, ranges and options.

# 6 INCH ALL STAINLESS STEEL GAUGES

# 400/500 S E R I E S



**60.500**  
6 INCH  
ALL STAINLESS STEEL  
GLYCERINE FILLED  
1/2" NPT  
BOTTOM CONNECTION



**60.510**  
6 INCH  
ALL STAINLESS STEEL  
GLYCERINE FILLED  
1/2" NPT  
LOWER BACK CONNECTION

SPECIFICATIONS	
Case	304 Stainless Steel
Cover Ring	Polished 304 Stainless Steel Bayonet Ring
Lens	Laminated Safety Glass
Bourdon Tube	316 Stainless Steel "C" Tube for Pressures up to 600 PSI, Coiled Safety Tube Above 600 PSI
Connection	1/2" NPT 316 Stainless Steel. 9/16"-18 high pressure connections are standard on 0-30,000 PSI and higher.
Movement	Stainless Steel with Highly Polished Bearing Surfaces. An Internal Zero Stop is Standard.
Safety Protection	Safety Relief Disc on the Rear of the Case
Accuracy	± 1% Full Scale ASME Grade 1A.
Pointer	Balanced Micro-Adjustable Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.

STANDARD DIAL CONFIGURATIONS					
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 600 psi	100 psi	10 psi
-30 inHg to 15 psi	0 inHg-5 psi	1 inHg-0.5 psi	0 psi to 1000 psi	200 psi	20 psi
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 1500 psi	300 psi	20 psi
-30 inHg to 60 psi	10 inHg-10 psi	2 inHg-1 psi	0 psi to 2000 psi	400 psi	40 psi
-30 inHg to 100 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 3000 psi	500 psi	50 psi
-30 inHg to 160 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 5000 psi	1000 psi	100 psi
-30 inHg to 200 psi	30 inHg-40 psi	5 inHg-4 psi	0 psi to 6000 psi	1000 psi	100 psi
-30 inHg to 300 psi	30 inHg-50 psi	10 inHg-5 psi	0 psi to 10000 psi	2000 psi	200 psi
0 psi to 15 psi	3 psi	0.2 psi	0 psi to 15000 psi	3000 psi	200 psi
0 psi to 30 psi	5 psi	0.5 psi	0 psi to 20000 psi	4000 psi	400 psi
0 psi to 60 psi	10 psi	1 psi	0 psi to 30000 psi	5000 psi	500 psi
0 psi to 100 psi	20 psi	2 psi	0 psi to 40000 psi	5000 psi	500 psi
0 psi to 160 psi	20 psi	2 psi	0 psi to 60000 psi	10000 psi	1000 psi
0 psi to 200 psi	40 psi	4 psi	0 psi to 80000 psi	10000 psi	1000 psi
0 psi to 300 psi	50 psi	5 psi	0 psi to 100000 psi	20000 psi	2000 psi
0 psi to 400 psi	50 psi	5 psi			

Consult factory for availability of specific models, ranges and options.

#### FLANGES FOR PANEL MOUNTING

Polished stainless steel Front Flanges (SS FF) are available for flush panel mounting on models 25.410, 25.510, 40.400, 40.410, 60.400, 60.410, 40.500, 40.510, 60.500, 60.510. Front Flanges are generally considered to be a factory installed option although field installation is possible.

Panel Mount Clamps (PMC) of stainless steel are available for flush mounting models 25.410 and 25.510. The PMC is easily (field) installed on the gauge diameter into pre-formed grooves in the case and utilizes the existing gauge bezel as a narrow flange on the front of the panel. A polished stainless steel Flange Ring (FR) is also available for use in conjunction with the PMC. The FR has a diameter approximately 20% larger than the gauge bezel and is used when it is necessary to adapt the gauge to an oversized panel cutout.

Polished Stainless Steel Narrow Bezel Front Flanges with U-Clamp (SSB-U) are available for flush mounting models 40.410, 60.410, 40.510 and 60.510. SSB-U's are a factory installed option.

Stainless steel Rear Flanges (RF) for front of panel mounting are available on models 40.400, 40.410, 60.400, 60.410, 40.500, 40.510, 60.500 and 60.510. Rear Flanges are a factory installed option.

#### MAXIMUM INDICATING POINTERS

Maximum Indicating Pointers (MIP) are an invaluable tool for identifying pressure spikes in a system. They are very helpful during system start up and trouble shooting. MIP's add an additional 1% error to the gauge because of the increased load on the bourdon tube. On ranges of 60 PSI and lower, MIP's may double the allowed error of the gauge. Maximum Indicating Pointers are available on most models, except 1 1/2" and 2" sizes.

#### ORIFICES

Press-fit brass Orifices (.012" I.D.) are available on all models. Orifices are used in a gauge to restrict the flow of rapidly increasing and/or decreasing pressures (or vacuum), thereby lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended for all dynamic applications. For 2 1/2" gauges MIP's are not recommended for pressures less than 60 PSI when dry and 100 PSI when liquid filled.

#### SOLID FRONT, SAFETY CASE GAUGES

All 2 1/2", 4" and 6" sizes are available in a solid front, safety case configuration, both dry and liquid filled, as a production option.

#### AMMONIA GAUGES

Ammonia Refrigeration Gauges with dials reading in both pressure and temperature are available in 2 1/2 and 4 inch sizes.

#### METRIC DIALS AND HANDMADE SPECIAL DIALS

Dual scale Metric Dials in PSI/BAR, PSI/kPa and PSI/Kg-cm<sup>2</sup> are available on most models. Certain other scales are available for specific sizes and ranges. Examples include Bar and kPa single scale, refrigerant and altitude scales.

Handmade Special Dials such as non-standard metric

scales, tons on ram, lbs. of force, etc. are available in small quantities (as few as one piece) on most models.

#### SPECIAL CONNECTIONS

Special Connections are available on all 400 and 500 series gauges. Some examples include: metric threads, female threads, straight threads (flare or swivel type), high pressure connections and special o-ring connections.

#### ORIFICES

Threaded 316SS Orifices (.032" I.D.) are available on all 400 and 500 Series gauges. Orifices are used on a gauge to restrict the flow of rapidly increasing and decreasing pressures, thereby lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended on all dynamic applications.

#### CERTIFIED CALIBRATION

Certified Calibration is available on all 400 and 500 Series gauges. Certified Calibration provides the user with a serial numbered gauge along with a calibration sheet against a primary pressure standard and is traceable to National Institute of Standards and Technology (formerly National Bureau of Standards).



25.410 DRY  
w/ SS FRONT FLANGE



25.400 AMMONIA



25.410 PMC



40.410 SS FF  
W/ ADJUSTABLE POINTER

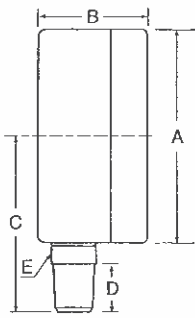


40.410 SSB-U  
W/ ADJUSTABLE POINTER

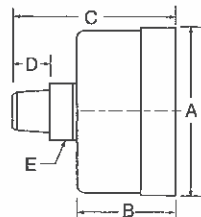


25.500 MIP

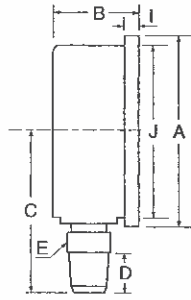
Consult factory for availability and minimum orders (if applicable) for all options & accessories.



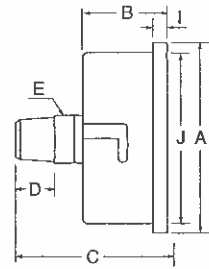
15.400  
40.400/500  
60.400/500



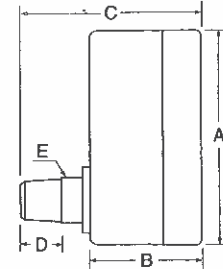
15.410



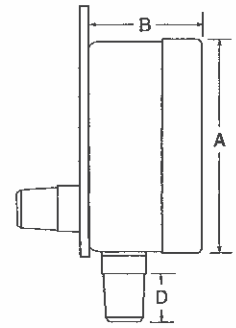
25.400/500



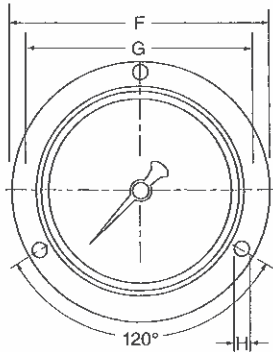
25.410/510



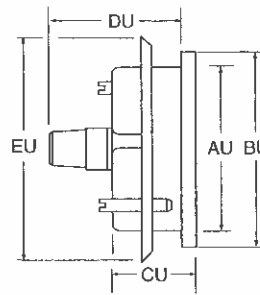
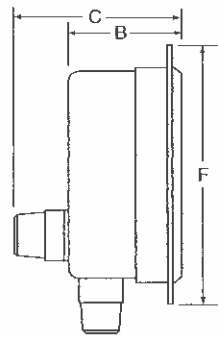
40.410/510  
60.410/510



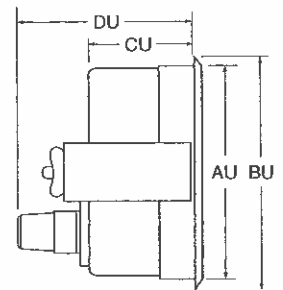
Rear Flange\*\*  
40.400/500, 40.410/510  
60.400/500, 60.410/510



Front Flange & Flange Ring\*  
25.410/510  
40.400/500, 40.410/510  
60.400/500, 60.410/510



Panel Mount Clamp\*  
25.410, 25.510



SS Narrow Bezel with U-Clamp  
40.410, 40.510  
60.410, 60.510

\*The SS Flange Ring (SSFR) is applicable only for models 25.410/510. It must be used in conjunction with the Panel Mount Clamp (PMC) and does not have mounting holes.

MODEL		A	B	C	D	E	F	G	H	I	J
15.400	IN	1.58	1.02	1.50	0.47	0.55	—	—	—	—	—
	MM	40	26	38	12	14	—	—	—	—	—
15.410	IN	1.58	1.02	1.61	0.39	0.55	—	—	—	—	—
	MM	40	26	41	10	14	—	—	—	—	—
25.400	IN	2.72	1.26	2.25	0.55	0.55	—	—	—	0.20	2.44
25.500	MM	69	32	57	14	14	—	—	—	5	62
25.410	IN	2.72	1.26	2.24	0.55	0.55	3.35	2.95	0.14	0.20	2.44
25.510	MM	69	32	57	14	14	85	75	3.6	5	62
40.400	IN	3.98	2.01	3.43	0.79	0.87	5.20	4.57	0.19	—	—
40.500	MM	101	51	87	20	22	132	116	4.8	—	—
40.410	IN	3.98	2.01	3.35	0.79	0.87	5.20	4.57	0.19	—	—
40.510	MM	101	51	85	20	22	132	116	4.8	—	—
60.400	IN	6.33	1.95	4.65	0.79	0.87	7.72	7.01	0.23	—	—
60.500	MM	161	49.5	118	20	22	196	178	5.8	—	—
60.410	IN	6.33	1.95	3.27	0.79	0.87	7.72	7.01	0.23	—	—
60.510	MM	161	49.5	83	20	22	196	178	5.8	—	—

GAUGES WITH PANEL MOUNT CLAMP OR NARROW BEZEL WITH U-CLAMP

MODEL		AU	BU	CU	DU	EU
25.410	IN	2.44	2.72	1.07	2.05	2.96
25.510	MM	62	69	27	52	75
40.410	IN	3.98	4.14	1.85	3.21	—
40.510	MM	101	105	47	81.5	—
60.410	IN	6.30	6.85	2.19	3.45	—
60.510	MM	160	174	55.5	87.5	—

\*\*Please note that the flange O.D. (F), bolt hole circle (G) and mounting hole (H) dimensions of the rear flange are identical to the same size front flange dimensions.

## S E R I E S

### GENERAL INFORMATION

Noshok 4 1/2 Inch 600 (Brass) and 700 (316SS) Series Process Gauges are specifically designed for demanding applications in the chemical and petroleum processing industries, as well as many industrial applications.

The turret style cases are constructed of a rugged, corrosion resistant phenolic material. The solid front, safety case design with a blow-out back isolates the gauge face from the pressure measuring system and assures operator protection if ever needed. The standard lenses are a shatter resistant acrylic and safety glass lenses are available.

The heavy-wall bourdon tubes and connections are made of copper alloy and brass (600 series) or all 316 stainless steel (700 series). "C" tubes are used on pressure ranges through 600 PSI and coiled safety tubes are used on pressure ranges above 600 PSI. These bourdon tubes are then

matched with precision movements of similar materials; brass movements in the 600 Series and stainless steel movements in the 700 Series. The pointers are balanced and micro-adjustable.

Liquid filled models are also available to further enhance gauge life and incorporate a unique breathing diaphragm that limits the effect of calibration changes due to ambient pressure and temperature changes.

Applications for Noshok 4 1/2 Inch 600 and 700 Series Process Gauges include service in chemical, petroleum and petrochemical refineries and pumping stations, food processing plants, power generating stations, water treatment plants and pulp and paper plants. They are widely used throughout industry where accuracy, readability, safety and reliability are important.

### OPERATING SPECIFICATIONS

1. Working Pressure Limitations
  - a. Dynamic Pressure  
The working pressure should be limited to 60% of the dial range.
  - b. Static Pressure  
The working pressure, where no sharp fluctuations occur, should be limited to 90% of the dial range.

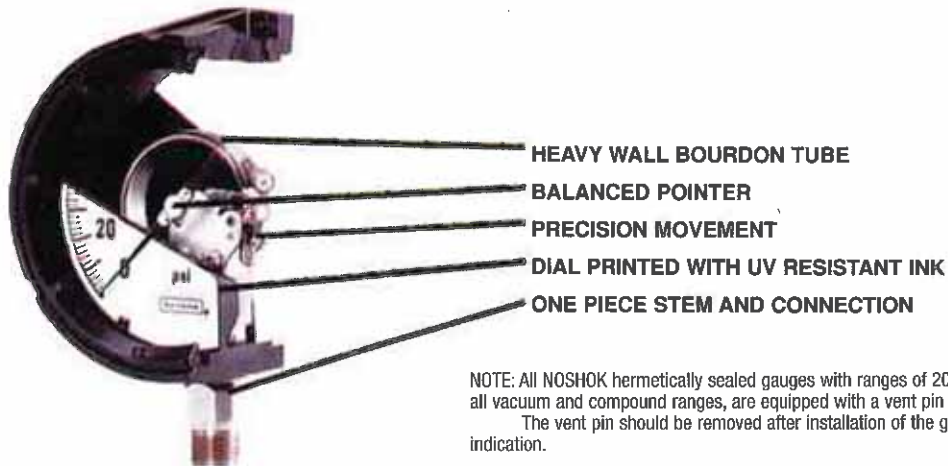
2. Ambient Temperature
  - a. 640 and 740 (dry)  
-40°F to 160°F (-40°C to 71°C)
  - b. 660 and 760 (liquid filled)  
0°F to 140°F (-18°C to 60°C)

Lower operating temperatures are available to -40°F (-40°C) by using a special glycerine mixture or low temperature silicone. Please contact us for assistance in selecting the best fill liquid for your application.

### ORDERING INFORMATION

45.740 • 100 PSI • 1/2" NPT • 316SS Orifice

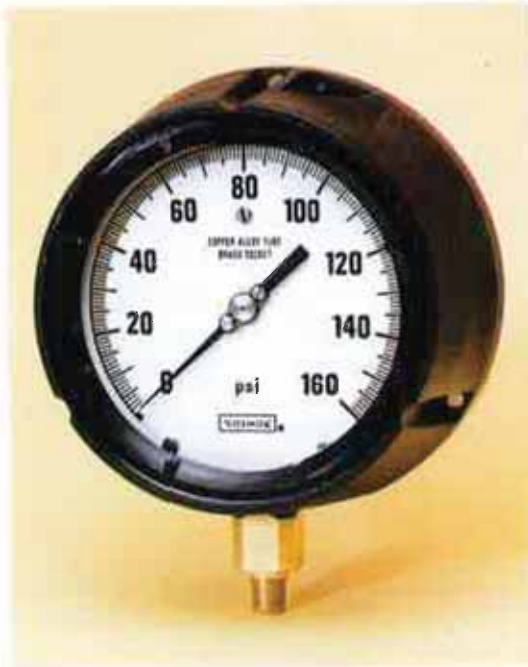
1. Select size and model number.....
2. Select pressure range.....
3. Select NPT connection size (if more than one is offered).....
4. Select any required accessory or option .....



NOTE: All NOSHOK hermetically sealed gauges with ranges of 200 PSI and below, including all vacuum and compound ranges, are equipped with a vent pin in the relief disc. The vent pin should be removed after installation of the gauge to insure accurate indication.

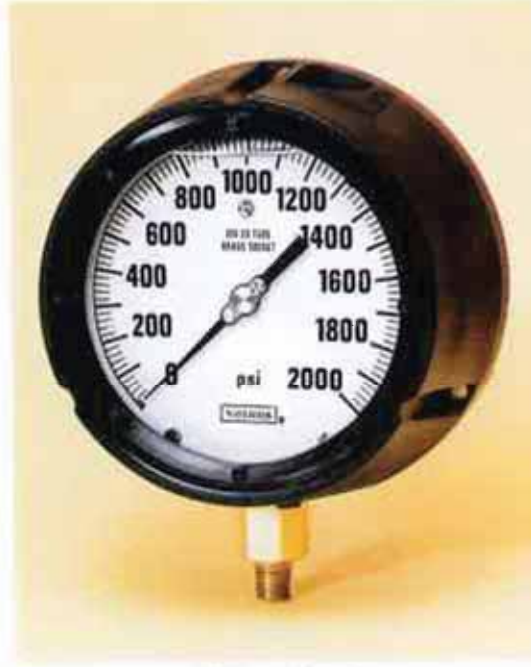
# 4 1/2 INCH PROCESS GAUGES

# 600/700 S E R I E S



## 45.640

4 1/2 INCH  
PHENOLIC CASE  
COPPER ALLOY INTERNALS  
DRY  
1/4" NPT  
BOTTOM CONNECTION



## 45.660

4 1/2 INCH  
PHENOLIC CASE  
COPPER ALLOY INTERNALS  
GLYCERINE FILLED  
1/4" NPT  
BOTTOM CONNECTION

### SPECIFICATIONS

Case	Turret Style Black Phenolic. Solid Front, Safety Case with Blow-out Back
Bayonet Ring	Threaded Black Phenolic
Lens	Acrylic, Laminated Safety Glass is Available
Bourdon Tube	Beryllium Copper "C" Tube for Pressures up to 600 PSI 316SS Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT
Safety Protection	Blow-out Back on the Rear of Case.
Movement	Brass and Nickel Silver with Highly Polished Bearing Surfaces. An internal zero stop is standard.
Accuracy	± 1/2% Full Scale ASME Grade 2A
Pointer	Balanced Micro-Adjustable Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.
Fill Liquid	(Model 45.660) Glycerine and Water. Silicone or Halocarbon are Available as Options.

### STANDARD DIAL CONFIGURATIONS

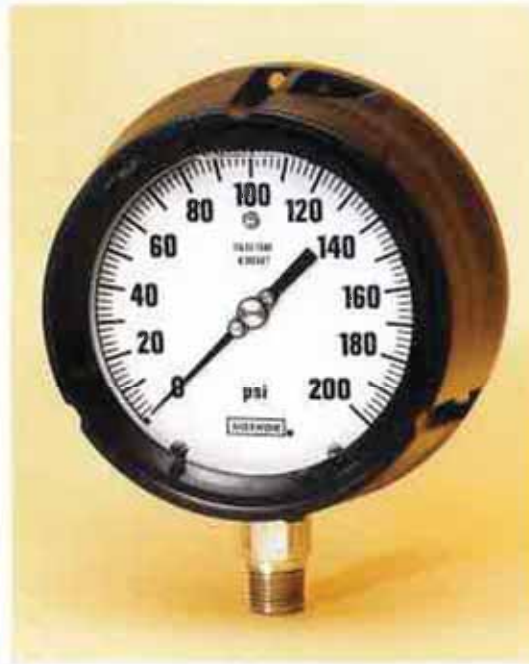
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 200 psi	20 psi	2 psi
-30 inHg to 15 psi	5 inHg-3 psi	0.5 inHg-0.2 psi	0 psi to 300 psi	50 psi	2 psi
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 400 psi	40 psi	4 psi
-30 inHg to 60 psi	10 inHg-10 psi	1 inHg-0.4 psi	0 psi to 500 psi	100 psi	4 psi
-30 inHg to 100 psi	30 inHg-10 psi	2 inHg-1 psi	0 psi to 600 psi	100 psi	5 psi
-30 inHg to 160 psi	30 inHg-20 psi	2 inHg-1 psi	0 psi to 1000 psi	100 psi	10 psi
-30 inHg to 200 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 1500 psi	300 psi	10 psi
-30 inHg to 300 psi	30 inHg-50 psi	5 inHg-2 psi	0 psi to 2000 psi	200 psi	20 psi
0 psi to 15 psi	3 psi	0.1 psi	0 psi to 3000 psi	500 psi	20 psi
0 psi to 30 psi	5 psi	0.2 psi	0 psi to 5000 psi	1000 psi	50 psi
0 psi to 60 psi	10 psi	0.4 psi	0 psi to 6000 psi	1000 psi	40 psi
0 psi to 100 psi	10 psi	1 psi	0 psi to 10000 psi	1000 psi	100 psi
0 psi to 100 psi	20 psi	1 psi	0 psi to 15000 psi	3000 psi	100 psi

Consult factory for availability of specific models, ranges and options.



### 45.740

4 1/2 INCH  
PHENOLIC CASE  
316SS INTERNALS  
DRY  
1/4" OR 1/2" NPT  
BOTTOM CONNECTION



### 45.760

4 1/2 INCH  
PHENOLIC CASE  
316SS INTERNALS  
DRY  
1/4" OR 1/2" NPT  
BOTTOM CONNECTION

SPECIFICATIONS	
Case	Turret Style Black Phenolic. Solid Front, Safety Case with Blow-out Back
Bayonet Ring	Threaded Black Phenolic
Lens	Acrylic, Laminated Safety Glass is Available
Bourdon Tube	316 Stainless Steel "C" Tube for Pressures up to 600 PSI 316SS Coiled Safety Tube Above 600 PSI
Connection	1/2" NPT or 1/4" NPT 316SS
Safety Protection	Blow-out Back on the Rear of Case.
Movement	Stainless Steel with Highly Polished Bearing Surfaces. An internal zero stop is standard.
Accuracy	± 1/2% Full Scale ASME Grade 2A 1.5% Full Scale, ASME Grade A for inH <sub>2</sub> O, 5 PSI and 10 PSI ranges
Pointer	Balanced Micro-Adjustable Aluminum, Black Finish
Dial	Aluminum, White Background with Black Markings. Single Scale PSI, is standard. PSI/BAR, PSI/kPa or PSI/Kg-cm <sup>2</sup> Dual Scale is Available as a Stock Options. On Dual Scale Dials, the Outer Scale is PSI in Black and the Inner Metric Scale is Red. UV Resistant.
Fill Liquid	(Model 45.760) Glycerine and Water. Silicone or Halocarbon are Available as Options.

STANDARD DIAL CONFIGURATIONS						
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval	
-30 inH <sub>2</sub> O to 0 psi*	5 inH <sub>2</sub> O	0.5 inH <sub>2</sub> O	0 psi to 30 psi	5 psi	0.2 psi	
-80 inH <sub>2</sub> O to 0 psi*	10 inH <sub>2</sub> O	1 inH <sub>2</sub> O	0 psi to 60 psi	10 psi	0.4 psi	
-60 inH <sub>2</sub> O to 60 inH <sub>2</sub> O*	10 inH <sub>2</sub> O	1 inH <sub>2</sub> O	0 psi to 100 psi	10 psi	1 psi	
-30 inHg to 0 psi	5 inHg	0.5 inHg	0 psi to 180 psi	20 psi	1 psi	
-30 inHg to 15 psi	5 inHg-3 psi	0.5 inHg-0.2 psi	0 psi to 200 psi	20 psi	2 psi	
-30 inHg to 30 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 300 psi	50 psi	2 psi	
-30 inHg to 60 psi	10 inHg-10 psi	1 inHg-0.4 psi	0 psi to 400 psi	40 psi	4 psi	
-30 inHg to 100 psi	30 inHg-10 psi	2 inHg-1 psi	0 psi to 600 psi	100 psi	4 psi	
-30 inHg to 180 psi	30 inHg-20 psi	2 inHg-1 psi	0 psi to 800 psi	100 psi	5 psi	
-30 inHg to 200 psi	30 inHg-20 psi	5 inHg-2 psi	0 psi to 1000 psi	100 psi	10 psi	
-30 inHg to 300 psi	30 inHg-50 psi	5 inHg-2 psi	0 psi to 1500 psi	300 psi	10 psi	
0 inH <sub>2</sub> O to 15 inH <sub>2</sub> O*	3 inH <sub>2</sub> O	0.2 inH <sub>2</sub> O	0 psi to 2000 psi	200 psi	20 psi	
0 inH <sub>2</sub> O to 30 inH <sub>2</sub> O*	5 inH <sub>2</sub> O	0.5 inH <sub>2</sub> O	0 psi to 3000 psi	500 psi	20 psi	
0 inH <sub>2</sub> O to 60 inH <sub>2</sub> O*	10 inH <sub>2</sub> O	1 inH <sub>2</sub> O	0 psi to 5000 psi	1000 psi	50 psi	
0 inH <sub>2</sub> O to 100 inH <sub>2</sub> O*	20 inH <sub>2</sub> O	2 inH <sub>2</sub> O	0 psi to 6000 psi	1000 psi	40 psi	
0 inH <sub>2</sub> O to 180 inH <sub>2</sub> O*	40 inH <sub>2</sub> O	4 inH <sub>2</sub> O	0 psi to 10000 psi	1000 psi	100 psi	
0 inH <sub>2</sub> O to 200 inH <sub>2</sub> O*	40 inH <sub>2</sub> O	4 inH <sub>2</sub> O	0 psi to 15000 psi	3000 psi	100 psi	
0 inH <sub>2</sub> O to 300 inH <sub>2</sub> O*	50 inH <sub>2</sub> O	5 inH <sub>2</sub> O	0 psi to 20000 psi	1000 psi	50 psi	
0 psi to 5 psi*	1 psi	0.1 psi	0 psi to 30000 psi	1000 psi	40 psi	
0 psi to 10 psi*	2 psi	0.2 psi	0 psi to 40000 psi	1000 psi	100 psi	
0 psi to 15 psi	3 psi	0.1 psi	0 psi to 60000 psi	3000 psi	100 psi	

\* Only available in 740 Series

# 4½ INCH PROCESS GAUGES—OPTIONS & ACCESSORIES

# 600/700 S E R I E S

## PANEL MOUNT RING FOR FLUSH PANEL MOUNTING

A Black Panel Mount Ring (PMR) is easily installed in the field to facilitate flush mounting of all 4½ inch 600 and 700 Series gauges. Our unique turret case with our mounting pads on the rear of the case make front of panel or wall mounting a "built in option" on all 4½ inch 600 and 700 Series gauges.

## OPTIONAL LENSES

Both Instrument Glass and Laminated Safety Glass are available on all 4½ inch 600 and 700 Series gauges.

## LIQUID FILLING OPTIONS

All 4½ inch 600 and 700 Series gauges are available in a liquid filled version. Our standard fill is glycerine and water, however, optional fill liquids include <sup>1</sup>Dow Corning 200 Silicone and <sup>2</sup>Halocarbon. A Liquid Filling Kit (LFK) is also available to convert dry gauges in the field. Each Liquid Filling Kit (LFK) includes a vented blow-out back with breathing diaphragm (for internal case pressure compensation) and O-ring. Fill liquid is not included.

## REID VAPOR TEST GAUGES

A Reid Vapor Test Gauge configuration which includes a handle, special dial and special pressure part is available in pressure ranges of 0-5 PSI, 0-15 PSI and 0-30 PSI.

## RECEIVER GAUGES

3-15 PSI Receiver Gauges are available in both 600 Series (Brass) and 700 Series (316SS) configurations.

## METRIC AND HANDMADE SPECIAL DIALS

Dual scale Metric Dials in PSI/kPa and PSI/Kg-cm<sup>2</sup> are available on all 600 and 700 Series gauges.

Handmade Special Dials such as non-standard metric scales, tons on ram, lbs. of force, etc. are available in small quantities (as few as one piece) on all 600 and 700 Series gauges.



45.740 PMR



45.740 PSI/kPa

## ORIFICES

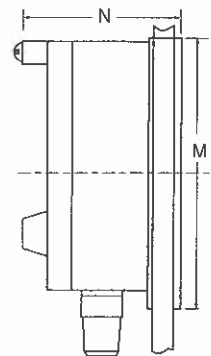
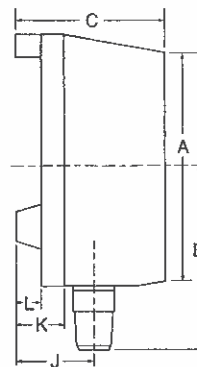
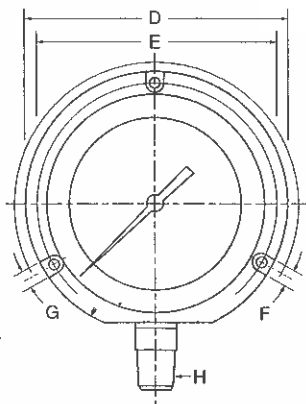
Threaded Orifices (.032" I.D.) are available on all 600 and 700 Series gauges. Orifices are used on a gauge to restrict the flow of rapidly increasing and decreasing pressures, thereby lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended on all dynamic applications.

## CERTIFIED CALIBRATION

Certified Calibration is available on all 600 and 700 Series gauges. Certified Calibration provides the user with a serial numbered gauge along with a calibration sheet against a pressure standard and is traceable to the National Institute of Standards and Technology (formerly National Bureau of Standards).

<sup>1</sup> Dow Corning—A registered trademark of Dow Corning Corporation

<sup>2</sup> Halocarbon—A registered trademark of Halocarbon Products Company.



STYLE		B		C	D	E	F	G	H	J	K	L	M	N
		1/4" NPT	1/2" NPT											
45.640	MM	129	97	86	148	137	6	11	—	43	27	14	152.4	88
45.660		97	102.5	148	137	6	11	—	43	27	14	152.4	88	
45.740	IN	5.0	3.81	3.38	5.83	5.39	.23	.43	1/4" or 1/2"	1.69	1.06	.55	6.00	3.46
45.760		5.0	3.81	3.38	5.83	5.39	.23	.43	1/4" or 1/2"	1.69	1.06	.55	6.00	3.46

### S E R I E S

#### GENERAL INFORMATION

The NOSHOK Test Gauge is accurate to within  $\pm 0.25\%$  full scale on either rising or falling pressure. This accuracy is obtained through selection of the highest quality components and a specially designed movement with jeweled bearings.

NOSHOK Test Gauges are also built with your safety in mind. A safety blow-out disc on the rear of the case is standard. The NOSHOK adjustable knife-edge pointer in conjunction with the mirror dial band eliminates parallax\* error. (\*The difference in apparent direction of an object as seen from two different points not on a straight line with the object.)

NOSHOK Test Gauges meet the specification of ASME Standard B40.1 Grade 3A.

NOSHOK Test Gauges are used in laboratories on calibration stands, gauge repair facilities and on sophisticated aerospace equipment used in launching space vehicles. When accuracy and sensitivity are critical parameters in measurement, NOSHOK Test Gauges rise to the occasion... accurately.



# 60.800

6 INCH  
STEEL CASE  
1/4" NPT  
BOTTOM CONNECTION

#### OPERATING SPECIFICATIONS

##### 1. Working Pressure Limitations

###### a. Static Pressure

The working pressure, where no sharp fluctuations occur, is 100% of dial range.

NOTE: 800 Series Test Gauges are not intended for use on dynamic applications.

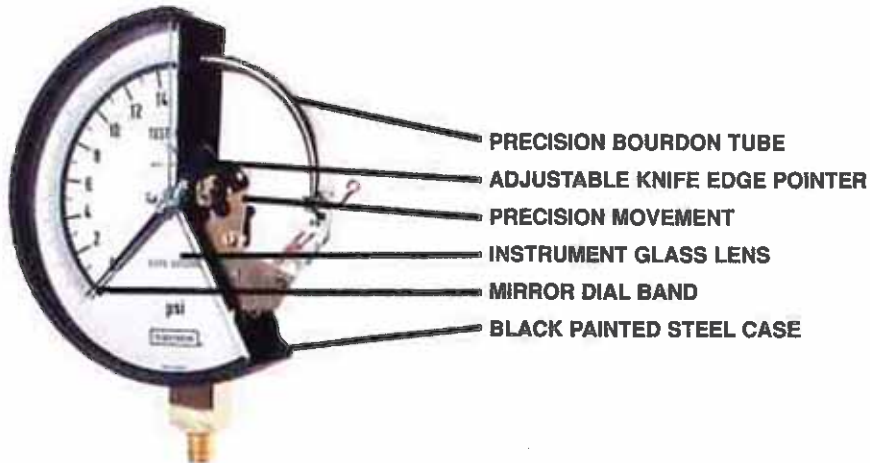
##### 2. Ambient Temperature

0°F to 140°F (-18°C to 60°C)

#### ORDERING INFORMATION

60.800 • 100 PSI • 1/4" NPT • Carrying Case

1. Select size and model number.....
2. Select pressure range.....
3. Select NPT connection size (if more than one is offered).....
4. Select any required accessory or option.....

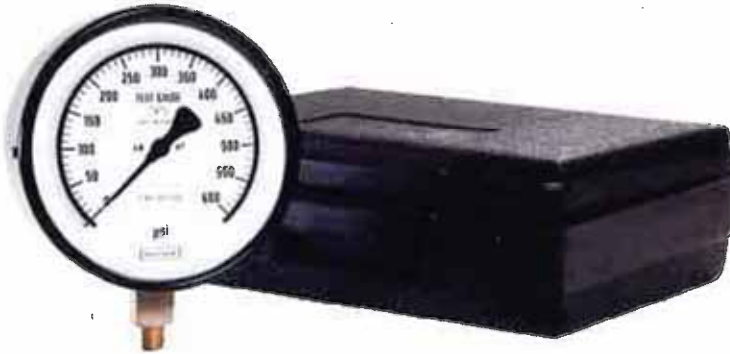


**PANEL MOUNTING**

Black Painted Steel Front Flanges (BFF) for flush panel mounting and Black Painted Steel Rear Flanges (RF) for front of panel (or bulkhead) mounting are available. Both versions utilize three mounting holes for attachment to the panel.

**CARRYING CASE**

A rugged high density polyethylene case is available for safely transporting or storing your NOSHOK Test Gauge.



**OPTIONAL LENSES**

Laminated safety glass and plexiglass are available on all 800 Series gauges.

**ORIFICES**

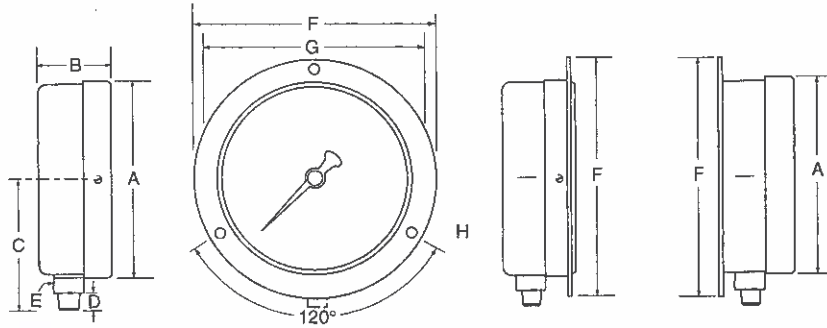
Threaded (.032" I.D.) are available on all 800 Series gauges. Orifices are used in a gauge to restrict the flow of rapidly increasing and decreasing pressures.

**OPTIONAL MATERIALS AND CONNECTIONS**

NOSHOK 800 Series Test Gauges are also available in a back connected version and with 316 SS internals as a production option.

**CERTIFIED CALIBRATION**

Certified Calibration is available on all 800 Series Test Gauges. Certified Calibration provides the user with a serial numbered gauge along with a calibration sheet against a pressure standard and is traceable to the National Institute of Standards and Technology (formerly National Bureau of Standards).



MODEL		A	B*	C	D	E	F	G	H
60.800	IN	6.34	1.95	4.65	0.55	0.87	7.72	7.01	0.23
	MM	161	49.5	118	14	22	196	178	5.8

\* 0.63" (16mm) for pressures ≤ 60 PSI

SPECIFICATIONS	
Case	304 Stainless Steel
Cover	304 Stainless Steel
Lens	Instrument Glass
Bourdon Tube	Beryllium Copper to 6000 PSI CRO MO 52 above 6000 PSI
Connection	1/4" NPT Bottom Connection
Movement	Brass with Jeweled Bearings Nickel-Silver Pinion Gear and Shafts
Safety Protection	Safety Relief Disc on the Rear of the Case.
Accuracy	±0.25% Full Scale ASME Grade 3A
Pointer	Adjustable Knife-Edge Pointer
Dial	Aluminum, White Mirrored Background with Black Graduations

STANDARD DIAL CONFIGURATIONS					
Dial Range	Figure Intervals	Graduation Interval	Dial Range	Figure Intervals	Graduation Interval
-30 inHg Vacuum	2 inHg	0.1 inHg	0 psi to 200 psi	20 psi	2 psi
-30 inHg to 15 psi	5 inHg-3 psi	0.25 inHg-0.1 psi	0 psi to 300 psi	50 psi	2 psi
-30 inHg to 30 psi	10 inHg-5 psi	5 inHg-0.2 psi	0 psi to 400 psi	40 psi	4 psi
-30 inHg to 60 psi	10 inHg-5 psi	1 inHg-0.5 psi	0 psi to 600 psi	100 psi	4 psi
-30 inHg to 100 psi	10 inHg-10 psi	1 inHg-0.5 psi	0 psi to 800 psi	100 psi	5 psi
-30 inHg to 160 psi	30 inHg-20 psi	2 inHg-1 psi	0 psi to 1000 psi	100 psi	10 psi
-30 inHg to 200 psi	30 inHg-20 psi	2 inHg-1 psi	0 psi to 1500 psi	300 psi	10 psi
-30 inHg to 300 psi	30 inHg-50 psi	5 inHg-2 psi	0 psi to 2000 psi	200 psi	20 psi
0 psi to 15 psi	3 psi	0.1 psi	0 psi to 3000 psi	500 psi	20 psi
0 psi to 30 psi	5 psi	0.2 psi	0 psi to 5000 psi	1000 psi	50 psi
0 psi to 60 psi	10 psi	0.4 psi	0 psi to 6000 psi	1000 psi	40 psi
0 psi to 100 psi	10 psi	1 psi	0 psi to 10000 psi	1000 psi	100 psi
0 psi to 160 psi	20 psi	1 psi	0 psi to 15000 psi	3000 psi	100 psi

Consult factory for availability of specific models, ranges and options.

### S E R I E S

#### GENERAL INFORMATION

NOSHOK 900 Series Liquid Filled Gauges are extremely high quality liquid filled pressure gauges which incorporate unique design features geared towards extended service life and reliability,

These gauges feature a light weight, shatter resistant ABS or a 304 stainless steel case. This is made possible with the modular measuring systems which interchange with either case (in the 2½ inch sizes). The lenses are molded plexiglass for strength and are sealed by ultrasonic welding in the ABS case and a rolled 304SS bezel and O-ring in the stainless steel cased models. The unique O-ring case and connection seals guard against leakage and help protect against physical shock and vibration.

The heavy wall bourdon tubes are made in the "C" configuration on ranges of 600 PSI and lower and are "coiled" or "spiral" safety tubes above 600 PSI.

These bourdon tubes are then matched with precision

movements and balanced pointers for accuracy over an extended service life.

The glycerine we use for dampening the effects of pulsation, vibration and shock loads as well as lubrication of the movement is a very high grade of synthetic glycerine so it retains its crystal clear clarity and lubricity over the life of the gauge.

Our dials are printed in bold UV resistant ink for ease of readability even after years of exposure to direct sunlight.

Positive case relief is accomplished by means of a relief disc on top of the case (on 2½ inch gauges) or on the back of the case (on 1½ inch gauges) and away from the operator to insure the operators safety if ever needed.

NOSHOK 900 Series Liquid Filled Gauges are used on industrial applications throughout the world where pulsation, vibration and shock is present and the pressure media is not corrosive to brass.

#### OPERATING SPECIFICATIONS

##### 1. Working Pressure Limitations

###### a. Dynamic Pressure

The working pressure should be limited to 60% of the dial range.

###### b. Static Pressure

The working pressure, where no sharp fluctuations occur, should be limited to 90% of the dial range.

##### 2. Ambient Temperature

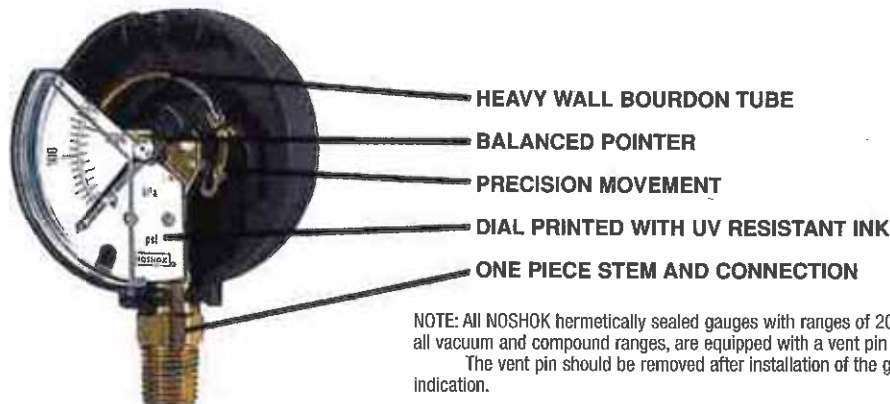
0°F to 140°F (-18°C to 60°C)

Lower operating temperatures are available to -40°F (-40°C) by using a special glycerine and water mixture or low temperature silicone. Please contact us for assistance in selecting the best fill liquid for your application.

#### ORDERING INFORMATION

25.910 • 1000 PSI/kPa • ¼" NPT • PMC (Panel Mount Clamp)

1. Select size and model number.....: | | | | |
2. Select pressure range.....: | | | | |
3. Select NPT connection size (if more than one is offered).....: | | | | |
4. Select any required accessory or option.....: | | | | |



NOTE: All NOSHOK hermetically sealed gauges with ranges of 200 PSI and below, including all vacuum and compound ranges, are equipped with a vent pin in the relief disc.

The vent pin should be removed after installation of the gauge to insure accurate indication.

# ABS CASED LIQUID FILLED PRESSURE GAUGES

# 900

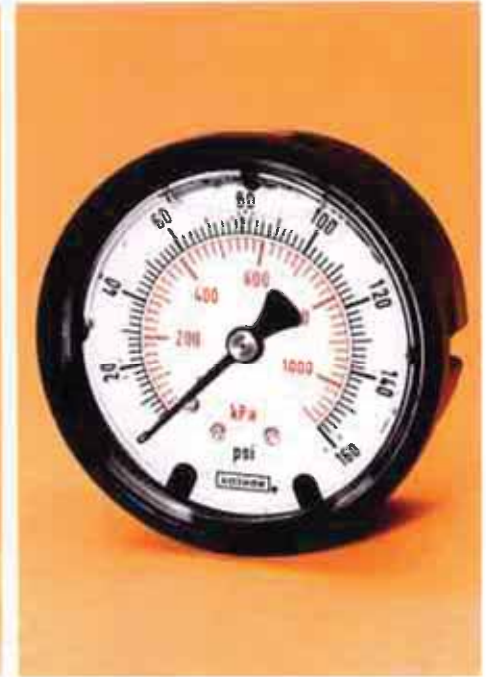
# S E R I E S



**15.910**  
 1½ INCH  
 ABS CASE  
 GLYCERINE FILLED  
 ¼" NPT  
 CENTER BACK CONNECTION



**25.900**  
 2½ INCH  
 ABS CASE  
 GLYCERINE FILLED  
 ¼" NPT  
 BOTTOM CONNECTION



**25.910**  
 2½ INCH  
 ABS CASE  
 GLYCERINE FILLED  
 ¼" NPT  
 CENTER BACK CONNECTION

SPECIFICATIONS	
Case	ABS, Acryl Nitril Butadien Styrol
Lens	Plexiglass; Ultrasonically Welded to the Case
Bourdon Tube	Phosphor Bronze. "C" Tube for Pressures up to 600 PSI Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT Brass. 15.910-1/8" NPT
Safety Protection	25.900/910: Safety Relief Disc on Top of Case. 15.910: Safety Relief Disc on the back of the Case.
Movement	Brass and Nylon with Highly Polished Bearing Surfaces.
Accuracy	25.900/910: ± 1.5% Full Scale ASME Grade A. 15.910: ± 2.5% Full Scale, ASME Grade B.
Pointer	Balanced Aluminum, Black Finished. 15.910-Molded Plastic
Dial	25.900/910: Aluminum, White Background, Dual Scale PSI-kPa. Black PSI Scale, and Red kPa Scale. UV Resistant. 15.910: Molded Plastic, White Background with Black PSI Scale and Red kPa Scale. UV Resistant.
Fill Liquid	Glycerine and Water.

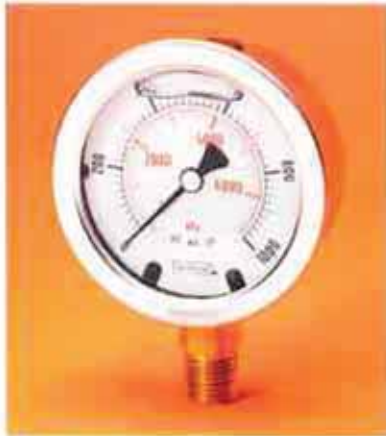
STANDARD DIAL CONFIGURATIONS						
Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Graduation Intervals psi/kPa
-30 inHg to 15 psi/kPa	10 inHg-50 kPa 5 psi/50 kPa	1 inHg-5 kPa 0.5 psi/5 kPa	0 psi/kPa to 200 psi/kPa	40 psi-400 kPa	4 psi-40 kPa	
-30 inHg to 30 psi/kPa	30 inHg-100 kPa 10 psi/100 kPa	inHg-10 kPa 1 psi/10 kPa	0 psi/kPa to 300 psi/kPa	50 psi-500 kPa	5 psi-50 kPa	
-30 inHg to 60 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 400 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 100 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	10 inHg-50 kPa 5 psi/50 kPa	0 psi/kPa to 600 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa	
-30 inHg to 160 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 1000 psi/kPa	200 psi-2000 kPa	20 psi-200 kPa	
-30 inHg to 200 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50kPa 4 psi/40 kPa	0 psi/kPa to 1500 psi/kPa	300 psi-3000 kPa	50 psi-500 kPa	
-30 inHg to 300 psi/kPa	30 inHg-100 kPa 100 psi/1000 kPa	30 inHg-100 kPa 10 psi/100 kPa	0 psi/kPa to 2000 psi/kPa	400 psi-4000 kPa	40 psi-400 kPa	
-30 inHg to 0 psi/kPa	5 inHg-20 kPa	0.5 inHg-5 kPa	0 psi/kPa to 3000 psi/kPa	500 psi-5000 kPa	50 psi-500 kPa	
0 psi/kPa to 15 psi/kPa	3 psi-30 kPa	0.5 psi-5 kPa	0 psi/kPa to 5000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 30 psi/kPa	5 psi-50 kPa	0.5 inHg-5 kPa	0 psi/kPa to 6000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 60 psi/kPa	10 psi-100 kPa	1 psi-10 kPa	0 psi/kPa to 7500 psi/kPa	1500 psi-10000 kPa	100 psi-1000 kPa	
0 psi/kPa to 100 psi/kPa	20 psi-200 kPa	2 psi-20 kPa	0 psi/kPa to 10000 psi/kPa	2000 psi-20000 kPa	200 psi-2000 kPa	
0 psi/kPa to 160 psi/kPa	40 psi-400 kPa	4 psi-40 kPa				

Consult factory for availability of specific models, ranges and options.  
 NOTE: Refer to page 5 for 15.910 dial configurations.

# 900

## 2 1/2 INCH STAINLESS STEEL CASED LIQUID FILLED PRESSURE GAUGES

### S E R I E S



### 25.901

2 1/2 INCH  
STAINLESS STEEL CASE  
GLYCERINE FILLED  
1/4" NPT  
BOTTOM  
CONNECTION



### 40.901

4 INCH  
STAINLESS STEEL CASE  
GLYCERINE FILLED  
1/4" OR 1/2" NPT  
BOTTOM  
CONNECTION



### 25.911

2 1/2 INCH  
STAINLESS STEEL CASE  
GLYCERINE FILLED  
1/4" NPT  
CENTER BACK  
CONNECTION



### 40.911

4 INCH  
STAINLESS STEEL CASE  
GLYCERINE FILLED  
1/4" NPT  
LOWER BACK  
CONNECTION

#### SPECIFICATIONS

Case	304 Stainless Steel
Bezel	304 Stainless Steel
Lens	2.5" Polycarbonate 4" Instrument Glass
Bourdon Tube	Phosphor Bronze. "C" Tube for Pressures up to 600 PSI Coiled Safety Tube Above 600 PSI
Connection	1/4" NPT Brass
Safety Protection	Safety Relief Disc on Top of Case.
Movement	Brass and Nylon with Highly Polished Bearing Surfaces.
Accuracy	25.901/911: ± 1.5% Full Scale ASME Grade A. 40.901/911: ± 1.0% Full Scale, ASME Grade 1A.
Pointer	Balanced Aluminum, Black Finished.
Dial	Aluminum, White Background, Dual Scale PSI-kPa. Black PSI Scale, and Red kPa Scale. UV Resistant.

#### STANDARD DIAL CONFIGURATIONS

Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa	Dial Range psi/kPa	Figure Interval psi/kPa	Graduation Intervals psi/kPa
-30 inHg to 15 psi/kPa	10 inHg-50 kPa 5 psi/50 kPa	1 inHg-5 kPa 0.5 psi/5 kPa	0 psi/kPa to 200 psi/kPa	40 psi-400 kPa	4 psi-40 kPa
-30 inHg to 30 psi/kPa	30 inHg-100 kPa 10 psi/100 kPa	inHg-10 kPa 1 psi/10 kPa	0 psi/kPa to 300 psi/kPa	50 psi-500 kPa	5 psi-50 kPa
-30 inHg to 60 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	5 inHg-20 kPa 2 psi/20 kPa	0 psi/kPa to 400 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa
-30 inHg to 100 psi/kPa	30 inHg-100 kPa 20 psi/200 kPa	10 inHg-50 kPa 5 psi/50 kPa	0 psi/kPa to 600 psi/kPa	100 psi-1000 kPa	10 psi-100 kPa
-30 inHg to 160 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50 kPa 4 psi/40 kPa	0 psi/kPa to 1000 psi/kPa	200 psi-2000 kPa	20 psi-200 kPa
-30 inHg to 200 psi/kPa	30 inHg-100 kPa 40 psi/400 kPa	10 inHg-50kPa 4 psi/40 kPa	0 psi/kPa to 1500 psi/kPa	300 psi-3000 kPa	50 psi-500 kPa
-30 inHg to 300 psi/kPa	30 inHg-100 kPa 100 psi/1000 kPa	30 inHg-100 kPa 10 psi/100 kPa	0 psi/kPa to 2000 psi/kPa	400 psi-4000 kPa	40 psi-400 kPa
-30 inHg to 0 psi/kPa	5 inHg-20 kPa	0.5 inHg-5 kPa	0 psi/kPa to 3000 psi/kPa	500 psi-5000 kPa	50 psi-500 kPa
0 psi/kPa to 15 psi/kPa	3 psi-30 kPa	0.5 psi-5 kPa	0 psi/kPa to 5000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa
0 psi/kPa to 30 psi/kPa	5 psi-50 kPa	0.5 inHg-5 kPa	0 psi/kPa to 6000 psi/kPa	1000 psi-10000 kPa	100 psi-1000 kPa
0 psi/kPa to 60 psi/kPa	10 psi-100 kPa	1 psi-10 kPa	0 psi/kPa to 7500 psi/kPa	1500 psi-10000 kPa	100 psi-1000 kPa
0 psi/kPa to 100 psi/kPa	20 psi-200 kPa	2 psi-20 kPa	0 psi/kPa to 10000 psi/kPa	2000 psi-20000 kPa	200 psi-2000 kPa
0 psi/kPa to 160 psi/kPa	40 psi-400 kPa	4 psi-40 kPa			

Consult factory for availability of specific models, ranges and options.

**COVER RINGS**

Protective friction fit Cover Rings are available in black painted steel (BCR) or chrome plated steel (CCR) on models 25.900. A rolled on 304 stainless steel cover ring (SSCR) is available for model 25.910. 304 stainless steel cover rings (or bezels) are standard on models 25.901 and 25.911.

**FLANGES FOR PANEL MOUNTING**

Panel Mount Clamps (PMC) of chromated steel are available for flush mounting on models 25.910 and 25.911. The PMC is easily (field) installed on the gauge diameter into the pre-formed grooves in the case and utilizes the existing gauge bezel or lip as a narrow flange on the front of the panel. A chrome plated steel or polished 304 stainless steel Flange Ring (CFR or SSFR) is also available for use in conjunction with the Panel Mount Clamp (PMC). The Flange ring has a diameter approximately 20% larger than the existing gauge bezel or lip and is used when it is necessary to adapt the gauge to an over-sized panel cut out.

Stainless Steel Front Flanges (SSFF) are available for flush panel mounting on model 25.911.

Black painted steel or chrome plated steel Front Flanges (BFF or CFF) are available for flush panel mounting on model 25.900. They are also available on model 25.910 as a special production option. Please contact us for pricing, minimum quantities and lead times.

**ORIFICES**

Press fit brass Orifices (.012" I.D.) are available on all 900 Series gauges. Orifices are used on a gauge to restrict the flow of rapidly increasing and decreasing pressures, thereby lessening the immediate effect of pulsations and pressure spikes. Orifices are recommended on all dynamic applications.

**SPECIAL CONNECTIONS**

Special Connections are available on all 900 Series gauges. Some examples include: metric threads, female threads, straight threads (flare or swivel type), high pressure connections and special o-ring connections. Please contact us with your requirements for prices, delivery and minimum quantities.

**RUBBER CASE PROTECTORS**

Rubber Case Protectors (RCP) are ideal for gauges that are subjected to direct physical shock. They are available on model 25.900 as a stock option and as a special production option on model 25.910. Please contact us for minimum quantities and lead times. RCP's are molded in blue.

**CERTIFIED CALIBRATION**

Certified Calibration is available on all 900 Series gauges. Certified Calibration provides the user with a serial numbered gauge along with a calibration sheet against a pressure standard and is traceable to the National Institute of Standards and Technology (formerly National Bureau of Standards).

**ADDITIONAL PRODUCTION OPTIONS**

- Maximum Indicating Pointers
- A 2 inch bottom or back connected model



25.900 BCR



25.910 SSCR PMC

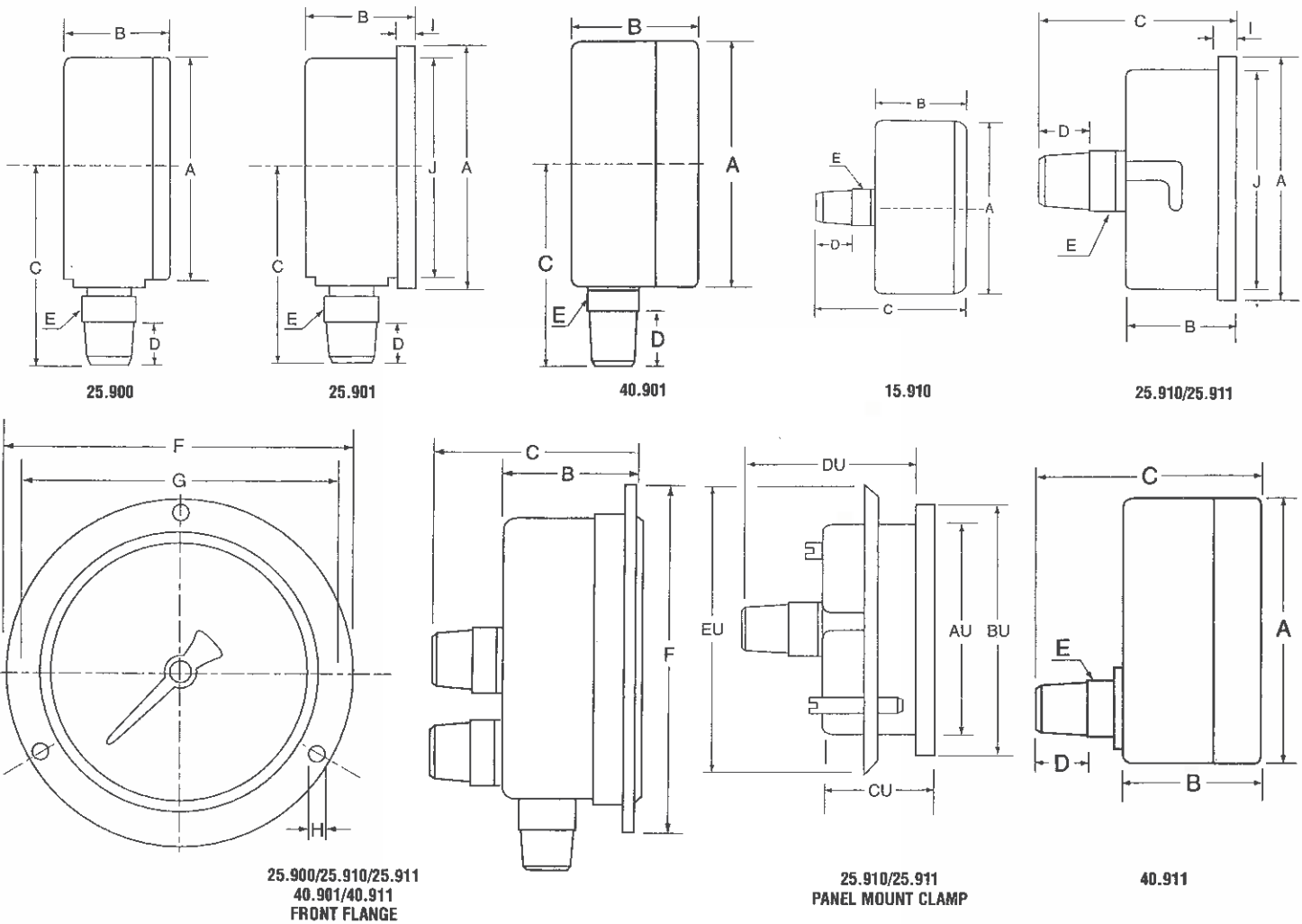


25.911 LIQUID FILLED  
W/SS FRONT FLANGE



25.900 RCP

Consult factory for availability and minimum orders (if applicable) for all options & accessories.



\*A Flange Ring is available as a stock option for use with 25.910 and 25.911 with Panel Mount Clamp (PMC). The Flange Ring has the same outside diameter as the front flange but does not have mounting holes.

MODEL		A	B	C	D	E	F	G	H	I	J
15.910	IN	1.61	1.06	1.69	0.39	0.47	—	—	—	—	1.54
	MM	41	27	43	10	12	—	—	—	—	39
25.900	IN	2.44	1.18	2.24	0.55	0.55	3.35	2.95	0.14	—	—
	MM	62	30	57	14	14	85	75	3.6	—	—
25.910 25.911	IN	2.72	1.26	2.24	0.55	0.55	3.35	2.95	0.14	0.20	2.44
	MM	69	32	57	14	14	85	75	3.6	5	62
25.901	IN	2.72	1.26	2.24	0.55	0.55	—	—	—	0.20	2.44
	MM	69	32	57	14	14	—	—	—	5	62
40.901	IN	3.98	2.01	3.43	0.55	0.87	5.20	4.57	0.19	—	—
	MM	101	51	87	14	22	132	116	4.8	—	—
40.911	IN	3.98	2.01	3.35	0.55	0.87	5.20	4.57	0.19	—	—
	MM	101	51	85	14	22	132	116	4.8	—	—

#### GAUGES WITH PANEL MOUNT CLAMP

MODEL		AU	BU	CU	DU	EU
25.910 25.911	IN	2.44	2.72	1.06	2.05	2.95
	MM	62	69	27	52	75

# PISTON TYPE PRESSURE SNUBBERS & PIGTAIL STEAM SYPHONS

## PISTON TYPE PRESSURE SNUBBERS

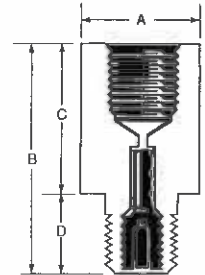
While NOSHOK fluid filled pressure gauges and machined orifices greatly reduce the effects of vibration and pulsation, there is occasional need for additional inline snubbing. Traditionally, pressure snubbers are expensive and results are sometimes questionable. However, NOSHOK offers a piston type snubber that breaks that tradition.

Unlike sintered metal snubbers, NOSHOK piston type snubbers resist clogging and are self-cleaning. Five different size pistons are included with each snubber and provide the correct amount of snubbing for virtually every application. Changing the piston is easily accomplished by removing a set screw, removing the existing piston, inserting the new piston and replacing the set screw.

NOSHOK snubbers are available in both brass and stainless steel in both 1/4" NPT and 1/2" NPT. A suggested application chart with piston size recommendations is included with each snubber.



	1/4" NPT		1/2" NPT
	IN MM		
A	0.812 20.6		1.125 28.6
B	1.562 39.7		1.875 47.6
C	1.062 27		1.25 31.8
D	0.531 13.5		0.625 15.9



PISTON	SUGGESTED USE
A, B*	Gases
B, C	Water
C, D	Light Oil
E	Heavy Oil

MODEL NO.	SIZE	MATERIAL	PRESSURE RATING
1325	1/4" NPT	Brass	6000 PSI
1335	7/16-20 SAE-4	Brass	6000 PSI
1350	1/2" NPT	Brass	6000 PSI
5025	1/4" NPT	316 Stainless Steel	15000 PSI
5050	1/2" NPT	316 Stainless Steel	15000 PSI

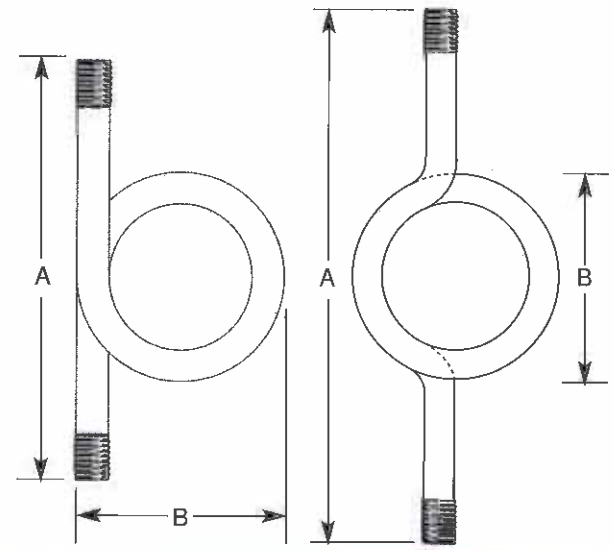
\*Snubber assembled and shipped with the B piston installed.

## PIGTAIL STEAM SYPHONS

Pigtail (or coiled pipe) steam syphons should be used in all steam applications. Pigtail steam syphons protect the instrument from damaging effects of direct exposure to high temperature steam.

To properly install and use a pigtail steam syphon, install the syphon in the pressure port, fill the syphon with water and install the pressure gauge. The water will fill the lower half of the coil and will act as a protective barrier between the high temperature steam and the pressure gauge.

We recommend pigtail steam syphons for all steam applications.



MODEL NO.	COIL STYLE	SIZE	MATERIAL	PRESSURE RATING
1025	180°	1/4" NPT	Welded Steel, Schedule 40	500 PSI @ 400°F
1050		1/2" NPT	Welded Steel, Schedule 80	1097 PSI @ 650°F
2025		1/4" NPT	Welded 316 SS, Schedule 40	529 PSI @ 400°F
2050		1/2" NPT	Seamless 316 SS, Schedule 80	1967 PSI @ 400°F
1525	360°	1/4" NPT	Welded Steel, Schedule 40	500 PSI @ 400°F
1550		1/2" NPT	Welded Steel, Schedule 80	1097 PSI @ 650°F
2525		1/4" NPT	Welded 316 SS, Schedule 40	500 PSI @ 400°F
2550		1/2" NPT	Welded 316 SS, Schedule 80	2650 PSI @ 500°F

CONNECTION SIZE		1/4" NPT	1/2" NPT	
180°	A	IN MM	5.5 139.7	8.875 225.425
	B	IN MM	2.5 63.5	4.0 101.6
360°	A	IN MM	7.25 184.15	12.0 304.8
	B	IN MM	2.625 66.675	4.125 104.775

NOSHOK Magnetic Spring Contact Switches (MSCS) are an excellent choice when an accurate pressure switch is required in addition to a high quality reliable pressure gauge.

These magnetic spring contact switches are fully adjustable by the user with the advantage of accurate field adjustment because they are actuated by the pressure gauge pointer. A removable adjustment key also makes them tamper proof.

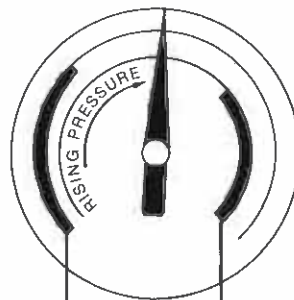
They operate with an extremely broad power supply, AC or DC up to 250V max. This feature allows them to be used virtually anywhere in the world in addition to very remote applications with only DC battery pack power available.

The standard units consist of (2) two magnetic spring contact switches. Switch (1) one is normally closed and switch (2) two is normally open with operation referenced on rising (or increasing) pressure. Either one or both switches may be used.

Magnetic spring contact switches are available as a factory installed option on models 40.105, 40.115, 40.400 and 40.410. The lowest full scale pressure range it may be used on is 0-60 PSI because of the increased load on the pointer and bourdon tube.

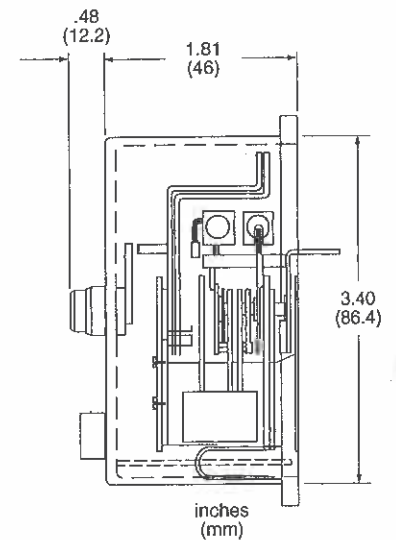
Typical applications include air compressors, gas compressors, hydraulic and pneumatic circuitry, die-cast machinery, plastic injection molding machinery, and anywhere accurate off/on switching capabilities based on pressure are required.

The NOSHOK MSCS is pre-wired with a matching 4-pin connector in its standard configuration but is also available with an optional connector with 5 feet of 4-wire, color coded shielded cable.

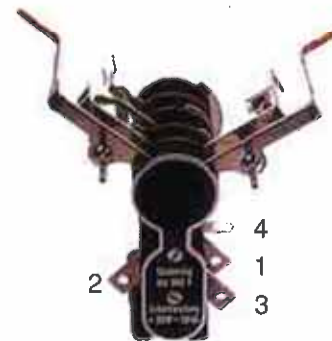


**CONTACT NO. 1**  
Normally Closed,  
Opens on Rising  
Pressure

**CONTACT NO. 2**  
Normally Open,  
Closes on Rising  
Pressure.



SPECIFICATIONS	
Type of Power	A.C. or D.C. 24 to 250V max
Maximum Amps	1.0 A
Maximum Switching Capacity	30W/50 VA
Gauge Accuracy	Add an additional $\pm 2\%$ Error on Full Scale Ranges of 0-160 PSI and Above. For Full Scale Ranges of 0-60 PSI and 0-100 PSI Add an additional $\pm 3\%$ Error.
Minimum Magnet Holding Force	1g
Contact Pin Material	Silver Tungsten
Ambient Temperature Limitation	0°F to 140°F (-18°C to 61°C)
Minimum Full Scale Pressure Range	0-60 PSI



### WIRING AND TERMINAL LOCATION

1. Contact Switch No. 1; Red or Black
2. Contact Switch No. 2; Blue
3. Power; Green or Brown
4. Ground; Yellow/Green Stripe

PRESSURE & VACUUM CONVERSIONS							
Lbs. per Sq. in.	Bar	Kilopascals	Kilograms per Sq. cm	Ounces per Sq. in.	Inches of Mercury	Millimeters of Mercury	Inches of Water
psi	bar	kPa	Kg/cm <sup>2</sup>	osi	in. Hg	mm Hg*	in. H <sub>2</sub> O
1	.0689476	6.89476	.0703069	16	2.03602	51.71486	27.6807
14.5038	1	100	1.019716	232.0608	29.530	750.0626	401.8596
.145038	.01	1	.0101972	2.320608	.295299	7.500610	4.014742
14.2233	.9806649	98.06649	1	227.5739	28.95901	735.5588	393.7118
.0625	.0043092	.4309223	.0043942	1	.1272513	3.23218	1.73004
.4911542	.0338639	3.386389	.0345316	7.85847	1	25.4	13.59548
.0193368	.0013332	.1333225	.0013595	.3093888	.0393701	1	.535255
.0361263	.0024908	.2490819	.0025422	.578020	.0735539	1.868268	1

\* 1 kPa = 1 kN/m<sup>2</sup>, 1 mmg Hg = 1 Torr, 1 Kg/cm<sup>2</sup> = 1 kp/cm<sup>2</sup>  
 (Conversions of: H<sub>2</sub>O are at 39.2°F (4°C); Hg are at 32°F (0°C))

CONVERSIONS FOR HYDRAULIC RAM CAPACITY		
PSI x AREA = (LBS.) FORCE	TONS = $\frac{\text{PSI} \times .7854 \times D^2}{2000}$	PSI = $\frac{\text{TONS}}{D^2 \times .0003927}$

For further assistance with conversions please consult the factory.

### NOSHOK DIAPHRAGM SEALS

The NOSHOK Diaphragm Seal is a device which isolates the measuring element of an instrument from the pressure media. The area between the top of the diaphragm and the instruments' measuring element is completely filled with a suitable liquid. Displacement of the liquid through movement of the diaphragm transmits pressure changes to the instrument.

For further information and application assistance please consult factory.







**Additional literature and brochures are available by contacting our customer service team at 440-243-0888 or visit our website at [www.noshok.com](http://www.noshok.com)**

