

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.

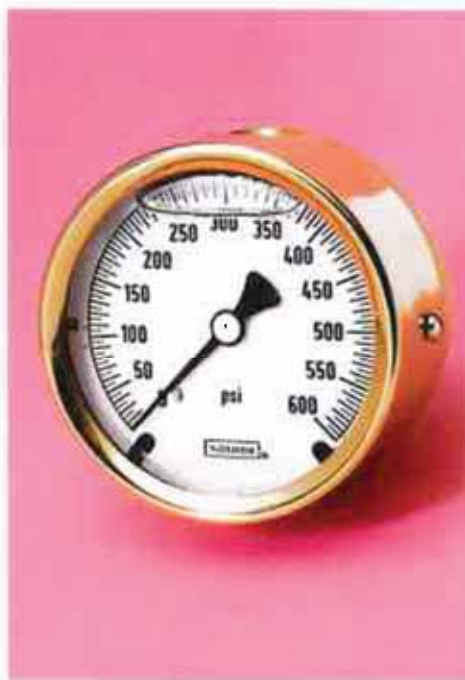
The vent pin should be removed after installation of the gauge to insure accurate indication.

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 ² 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 ² 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-cm² 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

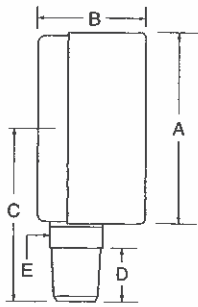


25.300 SST
7/16-20 Adjustable Straight Thread
(-4 SAE)

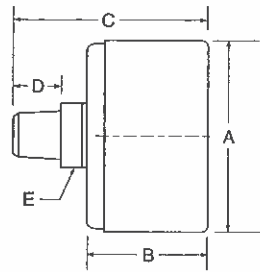


25.300 PSI/kPa

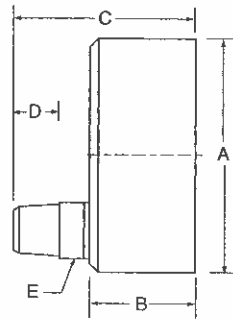
Consult factory for availability and minimum orders (if applicable) for all options & accessories.



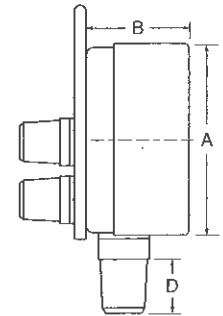
25.300, 40.300



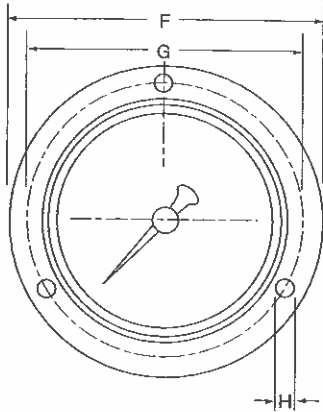
25.310



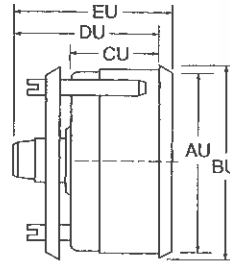
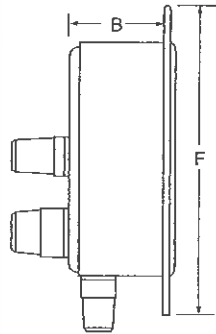
40.310



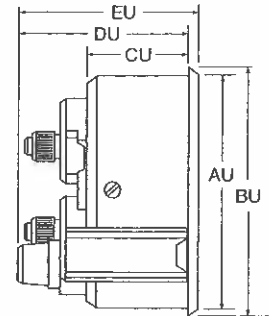
Rear Flange:**
All styles and sizes



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.