Measurement Solutions Product Guide

Pressure & Level
Temperature
Needle Valves
Manifold Valves
Diaphragm Seals
Digital Indicators
At NOSHOK, we pride ourselves on being innovators in the industry by continually offering the latest technology and measurement solutions, and providing the best customer support in the marketplace.

Established in 1967, NOSHOK was one of the first companies to offer liquid filled pressure gauges. We also took a bold step by backing our quality gauges with an extended 3-year warranty. That unwavering standard of quality has endured for over 50 years, and as we have expanded our product offering we continue to provide industry-leading warranties. NOSHOK also leads the industry as one of the first companies to offer corrosion-resistant zinc nickel plating standard on our carbon Steel valves.

We have the capacity to put together special requirements which are so often hard to find. If you do not find what you need in this catalog, chances are we can still put a solution together.

NOSHOK is committed to providing excellence on every level. Thank you for choosing NOSHOK products.

Jeff N. Scott
President

NOSHOK Corporate Headquarters
Your Single Source Instrumentation Company

NOSHOK is a member and actively supports:

[Logos of different organizations]

NOSHOK is an ISO 9001:2015 registered company
### TABLE OF CONTENTS

#### PRESSURE AND LEVEL MEASUREMENT SOLUTIONS
- Pressure Gauges: 100, 200, 300, 400/500, 402/502, 600/700, 800, 900 and 1000 SERIES .............................................. 4-6
- Pressure Gauge Accessories & Options .................................................................................................................. 6-8
- Differential Pressure Gauges: 1000 and 1100 SERIES ............................................................................................... 8
- Digital Indicators: 1800, 1900C, 1950, 2000/2100 and 2200 SERIES ........................................................................ 9
- Pressure and Level Transmitters & Transducers: 100, 200, 300, 611, 612, 613, 615/616, 640, 650 and 660 SERIES .......... 10-13
- Hazardous Location Transmitters: 621/622, 623/624, 625/626, 627 and 628 SERIES ................................................. 11-12
- Pressure Switches & Switch/Transmitters: 100, 200, 300, 400 and 800 SERIES ......................................................... 13-14
- Sanitary Pressure Instruments: 10, 11, 20, 25 and 30 SERIES ............................................................................... 15-16
- Diaphragm Seals: Type 5, 10, 10L, 10H, 12, 20, 25, 25H, 29, 30, 30H, 30L and 40 ......................................................... 17-18
- Differential Pressure Gauges: ............................................................................................................................... 18
- Pressure and Level Transmitters & Transducers: ...................................................................................................... 19
- Digital Indicators: .................................................................................................................................................... 19
- Pressure Switches & Switch/Transmitters: ................................................................................................................. 20
- Sanitary Pressure Instruments: ............................................................................................................................... 21
- Diaphragm Seals: ....................................................................................................................................................... 22

#### TEMPERATURE MEASUREMENT SOLUTIONS
- Bimetal Thermometers: 100, 150, 300 (with Sanitary Options) and 350 SERIES ......................................................... 19
- Vapor Actuated Remote Thermometers: 300/400/600/700/900 SERIES ............................................................ 19
- Dial Indicating Thermometer Options ................................................................................................................... 20
- Temperature Transmitters, Digital Temperature Indicators & Switch/Transmitter: 800, 910, 920 and 950 SERIES .... 21
- Industrial Resistance Temperature Devices (RTD): 900, 910/915 and 920 SERIES ................................................... 22
- Thermowells 50/75/100 SERIES .......................................................................................................................... 22
- RTD Accessories ...................................................................................................................................................... 22

#### VALVE PRODUCT SOLUTIONS
- Needle Valves: 100/150, 200/300, 400/500, 600/700, 800/850, 2070/2170 and 3070 SERIES ........................................... 23-25
- 3-Valve Differential Pressure Manifolds 3010/3110, 3040, 3510 and 3610/3710 SERIES .............................................. 27-28
- 5-Valve Natural Gas Manifolds 5030/5130, 5040/5090 and 5530 SERIES ................................................................. 29
- Stabilized & Non-Stabilized Connectors, Direct Connect Assembly ........................................................................... 30
- Valve Accessories ...................................................................................................................................................... 31-32

- Force Products ........................................................................................................................................................... 33

- Canadian Registration Numbers .............................................................................................................................. 34

---

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

SPECIFICATIONS
SIZES: 1-1/2", 2", 2-1/2" and 4"
CONNECTION: Bottom, back, panel mount, 1/8" NPT or 1/4" NPT
CASE: 304 Stainless Steel, aluminum or steel
LENS: Acrylic, polycarbonate or glass
MEASURING ELEMENT: Phosphor bronze Bourdon tube or diaphragm capsule
MOVEMENT: Brass and nickel-silver
ACCURACY: ±1.6% full scale to ±2.5% full scale dependent on model
AVAILABLE RANGES: Vacuum and compound through 15,000 psi
OPTIONS AND ACCESSORIES: Panel mount options, cover rings, orifices, rubber case protectors, recalibrators, special connections and more
OPERATING LIMITATIONS WORKING PRESSURE:
DYNAMIC: 60% of dial range
STATIC: 90% of dial range
TEMPERATURE: -4 °F to 140 °F (-20 °C to 60 °C)

100 SERIES
NOSHOK STANDARD GAUGES are general purpose, non-fillable dry gauges designed to provide reliable service on applications not corrosive to Brass. They are used in almost every area of manufacturing and are especially suited for applications in hydraulics, pneumatics, medical, pumps & compressors, refrigeration controls, utilities and water management.

WARRANTY: One Year†

200 SERIES
NOSHOK LOW PRESSURE DIAPHRAGM GAUGES are sensitive, capsule-type, non-fillable dry gauges designed for extremely low pressure and vacuum measurement. The ultra sensitive phosphor bronze diaphragm capsules are rated for pressure as low as 0 inHg-O -10 inHg and as high as 0 psi -10 psi. Applications include filter monitoring, gas distribution, HVAC, leak detection, level indication and medical.

WARRANTY: One Year†

300 SERIES
NOSHOK BRASS CASE LIQUID FILLED GAUGES are high quality, heavy-duty liquid filled gauges. Their one piece die cast Brass case and heavy-duty Bourdon tube and movement enables them to stand up to shock and vibration encountered on the most demanding applications, including automotive, construction, hydraulics & pneumatics, mining, stamping & forming presses, and transportation.

WARRANTY: Three Years†

400/500 SERIES
NOSHOK ALL Stainless Steel DRY AND LIQUID FILLED GAUGES are corrosion-resistant fillable dry or liquid-filled gauges. They are used in corrosive service world-wide where ruggedness and reliability are critical. Typical applications include chemical processing, oil field & offshore, paper mills, agriculture plants, marine, and water & wastewater. Ammonia gauges available in certain ranges.

WARRANTY: 400 Series: One Year†
500 Series: Three Years†

†For further warranty information please consult your specific product catalogs.
**402/502 SERIES**

NOSHOK EXTREME HIGH PRESSURE ALL Stainless Steel, DRY AND LIQUID FILLED GAUGES are corrosion-resistant dry or liquid-filled gauges. They are built for extreme high pressure applications, and are used in corrosive service world-wide where ruggedness and reliability are critical. Typical applications include pumps & compressors, high pressure processing, test equipment & systems, and water jet cutting.

**WARRANTY:** 402 Series: One Year†
502 Series: Three Years†

**SPECIFICATIONS**

- **SIZES:** 4” and 6”
- **CONNECTION:** Bottom and lower back; 9/16”-18 UNF 2B high pressure core connection.
- **CASE:** Stainless Steel, solid front with blowout back
- **LENS:** Laminated safety glass
- **MEASURING ELEMENT:** NiFe alloy
- **MOVEMENT:** Stainless Steel
- **ACCURACY:** ±0.004,000 psi ±1.6% full scale, optional 1% increased accuracy; ±50.00 psi ±1% full scale (85,000 psi ±1.6% accuracy)
- **AVAILABLE RANGES:** 0 psi to 30,000 psi through 0 psi to 85,000 psi
- **OPTIONS AND ACCESSORIES:** Bayonet ring adjustable set pointer, laser marking, maximum indicating pointer, silicone fill, red set pointer, front flange, adjustable pointer and Stainless Steel tagging

**OPERATING LIMITATIONS WORKING PRESSURE:**

- **DYNAMIC:** 65% of dial range
- **STATIC:** 75% of dial range
- **TEMPERATURE:** 402 & 412 Series: -40°F to 392°F (-40 °C to 200 °C)
  502 Series: -4°F to 212°F (-20 °C to 100 °C) (Glycerin fill)

**600/700 SERIES**

NOSHOK PROCESS GAUGES are turftyle dry or liquid-filled gauges. These gauges are made with phosphor bronze, 316 Stainless Steel, and Brass wetted parts, and Polypropylene cases that are specifically designed for demanding service in chemical, petroleum and industrial processing industries. They are widely used throughout the world on applications including injection molding machines, laboratory & test equipment, power generation, oil field & offshore, utilities, and water & wastewater.

Extreme high pressure and extreme low pressure diaphragm ranges available.

**WARRANTY:** 640/740 Series: One Year†
660/760 Series: Three Years†

**SPECIFICATIONS**

- **SIZES:** 1-1/2”
- **CONNECTION:** Bottom, 1/4” NPT, 1/2” NPT
- **CASE:** Turret style black Polypropylene case, solid front, safety case with blow-out back
- **LENS:** Acrylic
- **MEASURING ELEMENT:** Phosphor bronze C-Type Bourdon tube, 316 SS C-Type or coiled Bourdon tube or 316 SS coiled safety Bourdon tube, depending on model
- **MOVEMENT:** Brass and nickel-silver
- **ACCURACY:** ±0.5% full scale
- **AVAILABLE RANGES:** Vacuum and compound through 6,000 psi
- **OPTIONS AND ACCESSORIES:** Panel mount options, lens options, MIP, orifices

**OPERATING LIMITATIONS WORKING PRESSURE:**

- **DYNAMIC:** 60% of dial range
- **STATIC:** 90% of dial range
- **TEMPERATURE:** 640/660 (Glycerin fill): -4°F to 150°F (-20 °C to 65 °C);
  740: -4°F to 212°F (-40 °C to 100 °C);
  760 (Glycerin fill): -4°F to 212°F (-20 °C to 100 °C)

**800 SERIES**

NOSHOK PRECISION TEST GAUGES are highly accurate dry gauges. They are used in laboratories, calibration stands, aerospace and wherever accuracy and sensitivity are critical parameters in measurement. The NOSHOK adjustable knife-edge pointer in conjunction with the mirror dial band eliminate parallax* error. (*The difference in apparent direction of an object as seen from two different points not on a straight line with the object.)

**WARRANTY:** One Year†

**SPECIFICATIONS**

- **SIZES:** 6”
- **CONNECTION:** Bottom, 1/4” NPT
- **CASE:** 304 Stainless Steel
- **COVER RING:** 304 Stainless Steel
- **LENS:** Instrument glass
- **MEASURING ELEMENT:** Beryllium copper Bourdon tube for ≤1,000 psi, 316 SS Bourdon tube for 1,500 to 6,000 psi
- **MOVEMENT:** Brass with jeweled bearings & nickel-silver pinion gear & shafts
- **ACCURACY:** ±0.25% full scale
- **AVAILABLE RANGES:** Vacuum and compound through 6,000 psi
- **OPTIONS AND ACCESSORIES:** Panel mount options, orifices, special connections, carrying cases and more

**OPERATING LIMITATIONS WORKING PRESSURE:**

- **STATIC:** 100% of dial range (Not recommended for dynamic applications)
- **TEMPERATURE:** -40°F to 180°F (-40 °C to 80 °C)

**900 SERIES**

NOSHOK ABS AND Stainless Steel CASE LIQUID FILLED GAUGES are high quality gauges that incorporate unique design features aimed at extended service life and reliability. They are used world-wide where pulsation, vibration and shock are present and the media is not corrosive to Brass, including automotive, construction, hydraulics & pneumatics, power generation, transportation and water management.

**WARRANTY:** Three Years†

*For further warranty information please consult your specific product catalogs.*
**PRESSURE GAUGES ACCESSORIES & OPTIONS**

**SPECIFICATIONS**
- **HOUSING MATERIAL:** Stainless Steel
- **DISPLAY:** 0.43" high liquid crystal display
- **DIGITS:** 4 standard up to 9999, 4-1/2 with enhanced software
- **WETTED MATERIALS:** ≤750 psig Stainless Steel, aluminum, Stainless Steel, thin-film measuring element
- **ACCURACY:** ±0.25% full scale (BFSL)
- **UPDATE RATE:** 5 times/second
- **PRESSURE RANGES:** Standard ranges to 10,000 psig; compound ranges available
- **TEMPERATURE RANGES:** Storage: -4 °F to 158 °F (20 °C to 70 °C), Media: -22 °F to 185 °F (-30 °C to 85 °C), Ambient: 14 °F to 140 °F (-10 °C to 60 °C)
- **PROOF PRESSURE:** 2 times full scale range, maximum 15,000 psi
- **POWER SUPPLY:** 2 x 1.5V AA battery 4,000 hrs (AA 2,000 mAh)
- **ON/OFF SWITCH:** Manual; auto shut-off optional
- **PROGRAMMABLE FUNCTIONS:** Adjustable through front key pad
  - Tare: ±20% of full scale range
  - On/Off: Adjustable automatic turn off
- **Measuring Unit:** bar, psi, MPa

CE Compliant to EN61326, EMI and ESD protection; NEMA 4X to EN60529/IEC529

---

**1000 SERIES**

**NOSHOK DIGITAL PRESSURE GAUGES** are designed to exceed the industry’s most demanding application requirements. Using the latest in reliable ceramic thick film strain gage technology combined with low power electronics, these gauges are accurate, stable and extremely reliable. The 1000 Series gauges are ideally suited for local indication.

Shown with enhanced software.

**WARRANTY:** Three Years†

---

**PIGTAIL STEAM SYPHONS** protect the instrument from the damaging effects of high temperature steam and should be used in all steam applications. They are available in 1/4" and 1/2" NPT sizes in welded Steel, welded 316 Stainless Steel or seamless 316 Stainless Steel with ratings to 3800 psi @ 850 °F.

**PISTON TYPE SNUBBERS** resist clogging and are self-cleaning. Five different sized pistons are included with each snubber to insure the correct amount of snubbing for virtually every application. They are available in Brass and 316 Stainless Steel in either 1/4" NPT, 1/2" NPT or 7/16-20 SAE-4.

**WARRANTY:** One Year†

**SINTERED SNUBBERS** are a cost-effective solution to protect expensive instrumentation. These snubbers increase gauge readability by smoothing out pressure surges, pulsations and spikes, and they eliminate instrument failure due to pressure shock. Five basic discs are available to accommodate 90% of applications. Snubbing action is achieved by utilizing a corrosion-resistant 316 Stainless Steel sintered element; exotic materials or intermediate disc grades are available on a per order basis. NOSHOK Sintered Snubbers provide long service life with no moving parts to wear out.

**SWIVEL ADAPTORS** are used with gauges and gauge valves to adjust the line of sight. The swivel adaptor rotates 360° to allow the connected instrument to be positioned in the desired direction and has temperature ratings of 15,000 psi @ 200 °F and 3,000 psi @ 1,000 °F. The pressure connection is achieved with a tapered cone style compression fitting simply by tightening the swivel hex nut. They feature all 316 Stainless Steel construction, and are standard with 1/2" NPT male process – 1/2" NPT female instrument connections. Also available with 1/4" NPT connections.

---

*For further warranty information please consult your specific product catalogs.*
PRESSURE GAUGES ACCESSORIES & OPTIONS

PANEL MOUNTING
Many panel mounting options are available and can be installed in the field. Options include polished Brass front flanges (BFF), black painted Steel front flanges (BLFF), chrome front flanges (CFF), polished Stainless Steel front flanges (SSFF), chrome triangular bezel front flanges with U-clamp (CBU), black painted Steel triangular bezels with U-clamp (BBU-clamp), polished Stainless Steel narrow bezel front flanges (SSBU), and panel mount clamps (PMC). Chrome-plated Steel adapter rings (AP) are available in conjunction with several of these flanges to adapt to oversized panel cut outs. A selection of flange rings are also offered: polished Stainless Steel flange rings (SSFR), chrome plated Steel flange rings (CFR), and black or chrome panel mount rings (BPMR & CPMR). Rear flanges (RF) and black rear flanges (BLRF) for front of panel mounting are also available on some models. Rear Flanges are a factory installed option.

CASES AND COVER RINGS
Black painted Steel, chrome plated Steel and 304 Stainless Steel cases and cover rings are available on many models as production options.

LENSES
Instrument glass lenses, laminated safety glass lenses, acrylic lenses, and homalite lenses (resistant to many industrial solvents) are available on many models. NOTE: A Steel or Stainless Steel case and cover ring is required when other than acrylic lenses are utilized. Some models are also available with a solid front, safety case configuration as a production option.

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 ±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.

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

RUBBER CASE PROTECTORS (RCP) Rubber case protectors (RCP) are ideal for gauges that are subjected to direct physical shock. 2-1/2" covers are blue and 4" covers are black.

ORIFICES
Press-fit Brass orifices or threaded 316 Stainless Steel orifices are available on all NOSHOK pressure gauges. They are standard with .012”I.D or .032”I.D, depending on the model. Orifices are used in 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 for all dynamic applications.

RECALIBRATORS
The option of an adjustment screw accessible through the dial facilitates re-setting the zero point without disassembling the gauge.

OVER PRESSURE PROTECTION
Over pressure protection of up to 200% of the dial range is available on some models as a production option.

AMMONIA REFRIGERATION GAUGES
Ammonia refrigeration gauges with dials reading in both pressure and temperature are available in 400/500 Series 2-1/2” and 4” sizes.

LIQUID FILLING OPTIONS
Many NOSHOK gauges are available with liquid filling options. Our standard fill is Glycerin and water; however, optional fill liquids include Dow Corning® 200 silicone and Halocarbon®.

SPECIAL CONNECTIONS
Special connections are available on most NOSHOK 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.

*For further warranty information please consult your specific product catalogs.
DIFFERENTIAL PRESSURE GAUGES

SPECIFICATIONS
SIZES: 2-1/2", 4-1/2", 6"
CASE MATERIAL: Engineered plastic
LENS: Shatter-resistant acrylic - standard; safety glass and MIP optional
SENSOR HOUSING MATERIAL: Clear anodized aluminum - standard; 316 Stainless Steel optional
PROCESS CONNECTION: 1/4" NPT female, back connection
ACCURACY: ±3/2/3% of full scale on rising pressure
RANGES: 0 psid to 5 psid through 0 psid to 110 psid
OPTIONAL FILL FLUIDS: Glycerin, Silicone
OPERATING LIMITATIONS: TEMPERATURE: -40 °F to 200 °F (-40 °C to 93 °C)
MAXIMUM WORKING STATIC PRESSURE: Aluminum 3,000 psig; Stainless Steel 6,000 psig

1000 SERIES
NOSHOK PISTON TYPE DIFFERENTIAL GAUGES are designed for measuring pressure drops across filters, strainers, separators and valves. The single piece construction of the ceramic magnet/piston is designed to reduce “blow by” and increase gauge accuracy. These gauges can be found in applications requiring high differential pressure from 0 psid to 5 psid through 0 psid to 110 psid with maximum working/static pressure to 3,000 psig (Aluminum) and 6,000 psig (Stainless Steel).

WARRANTY: Five Years†

1100 SERIES
NOSHOK DIAPHRAGM TYPE DIFFERENTIAL GAUGES are designed for applications where higher levels of solids are present in the measuring media. The magnetic piston and polymeric diaphragm are utilized to measure the low to high differential pressure. The isolation of the high and low inlets prevents fluid movement between the ports. They are used in measuring pressure drops across filters, strainers, separators, heat exchangers and more.

WARRANTY: Five Years†

†For further warranty information please consult your specific product catalogs.
|**INPUT SIGNALS:**| Lower 9 digit, 0.35”, green LED |
|**DISPLAY:**| Upper 6 digit, 0.71”, tri-color LED (red, green, orange); |
|**SPECIFICATIONS**| ESD protection; NEMA 4X/IP65 sealed bezel only and 0 Vdc to 10 Vdc inputs over the range of 18 °C to 28 °C |
|**ACCURACY:**| ±0.2% full scale, ±1 digit |
|**UPDATE RATE:**| 5 times/sec |

## 1800 SERIES

**NOSHOK ATTACHABLE LOOP-POWERED DIGITAL INDICATORS** utilize a transmitter’s 4 mA to 20 mA output signal and the Hirschmann connector for local pressure indication. It is simply inserted between the transmitter body and the connector without the need for additional wiring or power source. The indicator is programmable to display a range of -999 to 9999 and may be tilted for better viewing. There is a user selectable digital filtering to improve readability in rapidly varying pressure pulsations. Available with optional relay that is programmable through the front of the meter.

**WARRANTY:** One Year†

## 1900C SERIES

**NOSHOK COMPACT LOOP-POWERED DIGITAL INDICATORS** provide digital display of any desired unit of pressure, temperature, level, and force or flow measurement. Their 3-1/2” digit display has a span range of 0 to 1999 and has a positive image reflective LCD.

**WARRANTY:** Two Years†

## 1950 SERIES

**NOSHOK COMPACT SMART SYSTEM DIGITAL INDICATORS** offer all the features of a full size panel meter compressed into a small design for ease of installation in almost any application. The 5 digit display has a span range of -9999 to 99999 and is available in reflective LCD and selectable red or green backlit versions. The display can accept a variety of process signals for applications in pressure, flow, level, force and temperature. All programming can be done easily through the front of the meter. The display is fully expandable to accommodate applications requiring relays, dual sinking outputs, and serial communications by RS232 or RS485. NOSHOK calibrates all of its indicators to your transducer requirements at no additional cost.

**WARRANTY:** Two Years†

## 2000/2100 SERIES

**NOSHOK SMART SYSTEM “INTELLIGENT” DIGITAL INDICATORS** are field upgradeable digital process indicators with single or dual input which suit a wide range of indication and control requirements. They can accept a variety of standard process signals and precisely scale them into any desired unit of measure. The indicator employs advanced technology for stable, drift free readout, while incorporating added features them into any desired unit of measure. The indicator employs advanced technology for stable, drift free readout, while incorporating added features

**WARRANTY:** Two Years†

## 2200 SERIES

**NOSHOK DUAL DISPLAY DIGITAL INDICATORS** accept a wide variety of input signals including thermocouples or RTDs, current, voltage, resistance & process signals, and feature a dual display with tri-color and variable intensity digits. The NOSHOK 2200 Series Dual Display Digital Indicator has a universal power input accepting either AC or DC voltage, along with a 24 Vdc sensor excitation, as well as a built-in USB port for configuring with a computer. Plug-in option cards are available for field upgrading. Interface software available upon request.

**WARRANTY:** Two Years†

---

*For further warranty information please consult your specific product catalogs.
PRESSURE AND LEVEL TRANSMITTERS AND TRANSDUCERS

100 SERIES

NOSHOK CURRENT OUTPUT PRESSURE TRANSMITERS are designed utilizing advanced diffused semiconductor and proven sputtered thin film sensor technology for maximum stability. They are highly repeatable, shock resistant and extremely stable over long periods of time. CE compliance, which includes substantial levels of RFI, EMI and ESD protection combined with reverse polarity and over-voltage protection, ensures that these transmitters perform well in the most demanding applications.

WARRANTY: Three Years†

200 SERIES

NOSHOK VOLTAGE OUTPUT PRESSURE TRANSMITERS are highly repeatable, shock resistant and extremely stable over long periods of time. Utilizing advanced diffused semiconductor and proven sputtered thin film sensor technology they are highly accurate and stable. CE compliant.

WARRANTY: Three Years†

300 SERIES

NOSHOK COMPACT OEM PRESSURE TRANSDUCERS‘ rugged, compact design delivers solid durability and long term stability during operation. Engineered for use in general industrial applications, it features technical specifications exceeding those of competitors‘ transducers costing much more. A wide variety of electrical and mechanical connections are available for easy installation into most applications, along with most popular analog output signals. All electrical components carry a high degree of EMC protection compliant with EN 61326, which makes it ideal for areas where RFI, EMI or ESD signals are present. Its high quality Stainless Steel construction is compatible with chemically aggressive media.

WARRANTY: Three Years†

611 SERIES

NOSHOK SMALL DIAMETER SUBMERSIBLE PRESSURE & LEVEL TRANSMITTERS provide hydrostatic level measurement for use in applications including bore holes and wells with small diameters (outer diameter 0.87). Low power output signals are available for battery-powered applications, and optional temperature output is available. Features a 5:1 turndown using optional HART® signal. ATEX, CSA and IECex certifications pending.

WARRANTY: Three Years†

612 SERIES

NOSHOK SUBMERSIBLE LEVEL TRANSMITTERS offer a previously unequalled level of performance. Utilizing diffused semiconductor and proven sputtered thin film sensor technology they are highly accurate, shock resistant and extremely stable for long periods of time. Reverse polarity protection and short circuit protection have been installed as standard features. Lighting protection is optional.

WARRANTY: Three Years†

†For further warranty information please consult your specific product catalogs.
## 613 SERIES

NOSHOK CAGE-PROTECTED SUBMERSIBLE LEVEL TRANSMITTERS are ideal for a wide variety of industrial and municipal liquid level measurement applications requiring watertight protection. These anti-clogging transmitters are designed for severe high solids environments such as sewage, lift stations, storm canals, wet wells and slurry tanks where sludge, slurry or turbulence may be present. It features durable all 316 Stainless Steel construction and a large 2.14” diameter diaphragm which is extremely responsive, even when monitoring low levels or buried in media.

**WARRANTY:** Three Years†

---

## SPECIFICATIONS

**OUTPUT SIGNALS:** 4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc; 0 Vdc to 10 Vdc; 1 Vdc to 5 Vdc; 1 Vdc to 6 Vdc & 1 Vdc to 11 Vdc, 3-wire

**RANGES:** Standard gauge ranges from vacuum to 145,000 psi; absolute ranges also available

**ACCURACY:** ±0.25% full scale (BFSL); Optional ±0.125% full scale (BFSL)

**POWER SUPPLY:** 10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire); 10 Vdc to 30 Vdc (1 Vdc to 5 Vdc, 3-wire); 10 Vdc to 30 Vdc (0 Vdc to 6 Vdc, 3-wire); 14 Vdc to 30 Vdc (1 Vdc to 10 Vdc, 3-wire)

**ADJUSTMENT:** ±10% for zero and span

CE compliant to EMC norm EN 61326: 1997/A1

1998 RFI, EMI and ESD protection / ANSI/ISA-12.27.01-2003 approved single seal

1998 CE compliant to EMC norm EN 61326: 1997/A1

NPT male conduit electrical connection

6 in long 2.14” dia. stainless steel diaphragm

623/624 SERIES

NOSHOK NON-INCENDIVE PRESSURE TRANSMITTERS combine advanced diffused semiconductor and proven sputtered thin film sensor technology to provide outstanding performance and value in a hazardous environment transmitter. All wetted parts are made of Stainless Steel and Elgiloy welded with no internal o-rings, gaskets or seals.

**WARRANTY:** Three Years†

---

## 615/616 SERIES

NOSHOK HIGH ACCURACY HEAVY-DUTY PRESSURE TRANSDUCERS are designed for heavy-duty applications requiring high accuracy and durability. Utilizing advanced diffused semiconductor and proven sputtered thin film sensor technology they are stable, accurate, shock resistant and extremely durable. The durability is coupled with the mechanical integrity of the case, process connection, and wetted parts constructed of corrosion-resistant Stainless Steel.

**WARRANTY:** Three Years†

---

## SPECIFICATIONS

**OUTPUT SIGNALS:** 4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc; 0 Vdc to 10 Vdc; 1 Vdc to 5 Vdc; 1 Vdc to 6 Vdc & 1 Vdc to 11 Vdc, 3-wire

**RANGES:** From vacuum to 15,000 psi-gauge, compound or absolute

**ACCURACY:** ±0.25% full scale (BFSL); optional ±0.125% full scale (BFSL)

**POWER SUPPLY:** 10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire); 10 Vdc to 30 Vdc (1 Vdc to 5 Vdc, 3-wire); 10 Vdc to 30 Vdc (0 Vdc to 6 Vdc, 3-wire); 14 Vdc to 30 Vdc (1 Vdc to 10 Vdc, 3-wire)

**ADJUSTMENT:** ±10% for zero and span

CE compliant to EMC norm EN 61326: 1997/A1

1998 RFI, EMI and ESD protection IP65, NEMA 4X

FM and CSA approved; XP / Class I / Division 1 / Groups A, B, C and D; DIP / Class II and III / Division 1 / Groups E, F and G

613/614 SERIES

NOSHOK CAGE-PROTECTED PRESSURE TRANSMITTERS are ideal for a wide variety of industrial and municipal pressure measurement applications requiring watertight protection. These anti-clogging transmitters are designed for severe high solids environments such as sewage, lift stations, storm canals, wet wells and slurry tanks where sludge, slurry or turbulence may be present. It features durable all 316 Stainless Steel construction and a large 2.14” diameter diaphragm which is extremely responsive, even when monitoring low levels or buried in media.

**WARRANTY:** Three Years†

---

## SPECIFICATIONS

**OUTPUT SIGNALS:** 4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc; 0 Vdc to 10 Vdc; 1 Vdc to 5 Vdc; 1 Vdc to 6 Vdc & 1 Vdc to 11 Vdc, 3-wire

**RANGES:** From vacuum to 15,000 psi-gauge, compound or absolute

**ACCURACY:** ±0.25% full scale (BFSL); optional ±0.125% full scale (BFSL)

**POWER SUPPLY:** 10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire); 10 Vdc to 30 Vdc (1 Vdc to 5 Vdc, 3-wire); 10 Vdc to 30 Vdc (0 Vdc to 6 Vdc, 3-wire); 14 Vdc to 30 Vdc (1 Vdc to 10 Vdc, 3-wire)

**ADJUSTMENT:** ±10% for zero and span

CE compliant to EMC norm EN 61326: 1997/A1

1998 RFI, EMI and ESD protection / ANSI/ISA-12.27.01-2003 approved single seal

1998 CE compliant to EMC norm EN 61326: 1997/A1

NPT male conduit electrical connection

FM and CSA approved; approximately 2.14” dia. stainless steel diaphragm

---

**For further warranty information please consult your specific product catalogs.**
PRESSURE AND LEVEL TRANSMITTERS & TRANSDUCERS

HAZARDOUS LOCATION PRESSURE TRANSMITTERS

625/626 SERIES
NOSHOK INTRINSICALLY SAFE PRESSURE TRANSMITTERS combine the reliability and long life of diffused semiconductor or proven sputtered thin film strain gage sensors with safe electronics to provide outstanding performance and value. These transmitters are designed for applications that require pressure measurement in hazardous locations. Multiple pressure connections, ranges and electrical connections are available. Low pressure ranges are also available for vapor recovery applications.

WARRANTY: Three Years†

627 SERIES
NOSHOK INTRINSICALLY SAFE SUBMERSIBLE LEVEL TRANSMITTERS combine the reliability and life of diffused semiconductor or proven sputtered thin film strain gage sensors with safe electronics to provide outstanding performance and value in a liquid level transmitter designed for hazardous environments. They are available with a Stainless Steel nosecone, weighted Stainless Steel nosecone or NPT adapter and ranges to suit most applications.

WARRANTY: Three Years†

628 SERIES
NOSHOK INTRINSICALLY SAFE HAMMER UNION TRANSMITTERS Constructed with a heavy-duty Inconel X-750 diaphragm and connection, the NOSHOK Intrinsically Safe Hammer Union Transmitter offers ranges from 5,000 psig through 20,000 psig and has a 4 mA to 20 mA, 2-wire output signal. Each sensor comes with a Certificate of Calibration. This transmitter is CSA compliant for hazardous location equipment, and is ideal for applications including acidizing, choke & kill manifold, fracturing & cementing, mud logging & mud pumps, oil field & offshore and wellhead measurement. Optional electrical connector cage is available to protect the electrical connection during installation or removal.

WARRANTY: One Year†

640 SERIES
NOSHOK PRECISION HEAVY-DUTY PRESSURE TRANSDUCERS have been designed for industrial and laboratory applications requiring high accuracy and repeatability with excellent compensation for temperature.

WARRANTY: Three Years†

For further warranty information please consult your specific product catalogs.

Specifications:
- **Output Signals**: 4 mA to 20 mA, 2-wire
- **Ranges**: From vacuum to 15,000 psi-gauge, compound or absolute
- **Wetted Parts**: Stainless Steel standard, welded
- **Accuracy**: ±0.25% full scale (BFSL)
- **Power Supply**: 10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire) - Unregulated
- **Pressure Supply**: Optional ±0.025% full scale (BFSL)
- **Accuracy**: ±0.05% full scale (BFSL)
- **Cable**: PUR jacketed cable, PTFE cable optional
- **Connector Cage**: Shown with Electrical
- **Connecting During Installation or Removal**: Optional electrical connector cage is available to protect the electrical connection during installation or removal.

Three Years† Warranties are offered on these products.

For further warranty information, please consult your specific product catalogs.
650 SERIES

NOSHOK HIGH VOLUME OEM PRESSURE TRANSDUCERS combine high performance with off road vehicle reliability under severe process and environmental conditions. They are designed to handle high pressure spikes and process pulsation. Utilize advanced diffused semiconductor and proven sputtered thin film sensor technology for maximum stability.

WARRANTY: Three Years†

660 SERIES

NOSHOK MICRO-SIZE PRESSURE TRANSDUCERS are designed with high overpressure capability to provide long service life and reliability in hydraulic and pneumatic applications containing process pulsations and high vibration. Utilizes proven sputtered thin film sensor technology for maximum stability and accuracy.

WARRANTY: Three Years†

100 SERIES

NOSHOK MECHANICAL COMPACT SPST SWITCHES are available in vacuum, low pressure and high pressure models. These creep action, low current switches are intended to be laboratory set, and feature Silver-plated contacts with switch adjustment ranges from vacuum through 6,000 psi. The 100 Series switch series offers Brass and Zinc-nickel housing material options with Buna-N and Polyimide wetted parts depending on the model. A wide variety of process connections and electrical connections are available.

WARRANTY: One Year†

200 SERIES

NOSHOK MECHANICAL COMPACT SPDT PRESSURE SWITCHES are SPST or SPDT snap-action switches with solid Silver contacts. These switches provide adjustment ranges from vacuum through 6,000 psig, and feature Brass or Zinc-nickel housing material with Buna-N diaphragm wetted parts. A wide variety of process connections and electrical connections are available.

WARRANTY: One Year†

PRESSURE SWITCHES

SPECIFICATIONS

- **Case:** Brass or Zinc-nickel depending on model
- **Measuring Element:** 100V: Brass, Buna-N diaphragm
- **100H:** Zinc-nickel plated Steel, Buna-N diaphragm
- **Switching Function:** SPST N.O. or N.C.
- **Contact Rating:** 100 VA Max. Voltage 42 Vdc
- **Switch Type:** Creep action
- **Available Ranges:** Vacuum through 6,000 psi depending on model
- **Connections:** 1/8" NPT male, 1/4" NPT male, G 1/4B, 9/16-15 SAE Male, Non-Adjustable, G 1/8B and 7/16-20 SAE Male, Non-Adjustable
- **Electrical Connections:** Spade Terminals (1/4 x 1/32), Deutsch Integral 2-Pin (DT04-2P), 18" Flying Leads, 6-32 Terminal Screws, Weatherpack Tower, 2-Pin Female or Male, Weatherpack Shroud, 2-Pin Female or Male, Deutsch 2-Pin Male or Female
- **Media Temperature:** -13 °F to 185 °F (-25 °C to 85 °C)

1/8 NPT male, 1/4 NPT male, G 1/4 B, 9/16-15 SAE Male, Non-Adjustable, G 1/8 B and 7/16-20 SAE Male, Non-Adjustable

**Electrical Connections:** Spade Terminals (1/4 x 1/32)

Hirschmann (DIN EN 175301-803 Form A), Packard 3-Pin, Deutsch Integral 3-Pin (DT04-3P), Deutsch Integral 2-Pin (DT04-2P), M12 x 1 3-Pin, 18" Flying Leads, 6-32 Terminal Screws, Weatherpack Tower, 2-Pin Female or Male, Weatherpack Shroud, 2-Pin Female or Male, Deutsch 2-Pin Male (DT04-2P), Deutsch 3-Pin Male (DT04-3P), Deutsch 2-Pin Female Socket (DT05-2S), Deutsch 3-Pin Female Socket (DT05-3S), Weatherpack Tower, 3-Pin Female or Male, Weatherpack Shroud, 3-Pin Female or Male

**Media Temperature:** -4 °F to 176 °F (-20 °C to 80 °C)

For further warranty information please consult your specific product catalogs.
PRESSURE SWITCHES & SWITCH/TRANSMITTERS

SPECIFICATIONS
CASE: Zinc-nickel
MEASURING ELEMENT: Buna-N
SWITCHING FUNCTION: SPDT with adjustable hysteresis
CONTACT RATING: 6A @ 125/250 Vac, 6A @ 12/24 Vdc
SWITCH TYPE: Snap action with adjustable hysteresis
AVAILABLE RANGES: Vacuum through 4,600 psig depending on model
CONTACTS: 1/4" NPT male, 1/4" NPT female, G 1/4B, G 1/8B and 7/16-20 SAE Male, Non-Adjustable
ELECTRICAL CONNECTIONS: Hirschmann, M12 x 1 4-Pin, 3' Integral Cable, Deutsch Integral 2-Pin (DT04-2P), Weatherpack Tower, 2-Pin Female or Male, Weatherpack Shroud, 2-Pin Female or Male, Deutsch 2-Pin Male (DT04-2P), Deutsch 3-Pin Male (DT04-3P), Deutsch 2-Pin Female Socket (DT06-2S), Deutsch 3-Pin Female Socket (DT06-3S), Weatherpack Tower, 3-Pin Female or Male, and Weatherpack Shroud, 3-Pin Female or Male.
MEDIA TEMPERATURE: -4 °F to 176 °F (-20 °C to 80 °C)

WARRANTY: One Year†

300 SERIES
NOSHOK MECHANICAL COMPACT SPDT PRESSURE SWITCHES WITH ADJUSTABLE HYSTERESIS is a SPST or SPDT snap-action switch with solid Silver contacts. The 300 Series offers switch adjustment ranges from vacuum through 4,600 psig depending on model and a standard Zinc-nickel housing with Buna-N diaphragm wetted parts. The NOSHOK 300 Series switch provides an excellent contact rating of 6A 125V/250VAC, and 6A 12/24VDC. Multiple process connection and electrical connection options are available.

WARRANTY: One Year†

SPECIFICATIONS
CASE: Stainless Steel
MEASURING ELEMENT: NBR diaphragm ≤ 230 psig, Stainless Steel piston with NBR seal ≥ 500 psig, 1/4" NPT and 7/16-20 SAE zinco-plated Steel connections standard, others available on request
SWITCHING FUNCTION: SPST or SPDT snap-action micro switch
CONTACT RATING: 6A @ 125/250 Vac, 6A @ 12/24 Vdc
SWITCH TYPE: Snap action
AVAILABLE RANGES: Vacuum through 4,600 psig depending on model
CONTACTS: 1/4" NPT male, 1/4" NPT female, G 1/4B male, G 1/8B female, and 7/16-20 SAE Male, Non-Adjustable
ELECTRICAL CONNECTIONS: Hirschmann (DIN EN 175301-803 Form A), M12 x 1 4-Pin, Hirschmann with LED Status Indicator
REPEATABILITY: ±2% of full scale of adjustment range

WARRANTY: One Year†

400 SERIES
NOSHOK MECHANICAL HEAVY-DUTY PRESSURE SWITCHES are snap action, high current devices that offer field adjustability. The 400 Series offers switch adjustment ranges from vacuum through 4,600 psig with a Standard Zinc-nickel with Buna-N diaphragm wetted parts. This switch also provides an excellent contact rating of 6A 125V/250VAC, and 6A 12/24VDC. Multiple process connection and electrical connection options are available.

WARRANTY: One Year†

SPECIFICATIONS
CASE: Stainless Steel
WETTED PARTS: ≤150 psi: 316L, ≥150 psi: 316L, PH grade Steel
CONTACT: 1/4" NPT standard, other options available
ELECTRICAL CONNECTION: M12 x 1 (4-pin or 5-pin)
ACCURACY: ±0.5 % of span
AVAILABLE RANGES: Vacuum and compound ranges through 0 psig to 7,500 psig, absolute ranges available
SWITCHING FUNCTIONS: 1 or 2 N.O. or N.C. (PNP or NPN)
POWER SUPPLY: 15 Vdc to 35 Vdc
ANALOG OUTPUT: 4 mA to 20 mA and/or 0 Vdc to 10 Vdc; programmable and freely adjustable
CE compliant to EMC norm EN 61326: 1997/A1 1998
RFI, EMI and ESD

WARRANTY: Three Years‡

800 SERIES
NOSHOK’S ELECTRONIC INDICATING PRESSURE TRANSMITTER/SWITCHES are available in vacuum and compound ranges through 0 psig to 7,500 psig, with current and voltage output options. This Pressure Transmitter/Switch features a display and electrical connection that can be rotated independently and offers seven different output configurations.

The new 800 Series NOSHOK Electronic Indicating Transmitter/Switch is constructed with 316L Stainless Steel wetted parts and is RoHS compliant, and CE compliant to suppress RFI, EMI and ESD.

WARRANTY: Three Years‡

*For further warranty information please consult your specific product catalogs.
CAUTION: NOSHOK pressure transmitters are not to be used in heat sterilization systems as stated in 3A Standard 74-03 paragraph D10.1.2. Diaphragm seal must be installed facing downward or in a vertical position for drainability. Do not install diaphragm seal facing in an upward position.

WARRANTY:
- (dry): One Year†
- (liquid filled): Three Years

SPECIFICATIONS
- SIZE: 2"
- CASE MATERIAL: 304 Stainless Steel
- COVER RING: 304 Stainless Steel
- LENS: Polycarbonate – standard; safety glass – optional
- BOURDON TUBE: 316 Stainless Steel
- ACCURACY: ±2.5% full scale
- PROCESS CONNECTION: 3/4" clamped-style
- SEAL MATERIAL: 316L Stainless Steel
- DIAPHRAGM MATERIAL: 316L Stainless Steel
- SEAL FILL: Glycerin, USP grade
- RANGES: 0 psig to 30 psig through 0 psig to 600 psig
- TEMPERATURE: -40 °F to 150 °C

10 SERIES FRACTIONAL
NOSHOK FRACTIONAL SANITARY PRESSURE GAUGES are designed for compact applications within the food & beverage, dairy, pharmaceutical, and biomedical industry while meeting the current 3A standards and ASME BPE-2009. The wetted materials are 316L Stainless Steel and electropolished to 32 μin Ra or better. Gauges can be cleaned in place (CIP), steamed in place (SIP) or Autoclaved to reduce system shutdown time.

WARRANTY: (dry): One Year†; (liquid filled): Three Years†

SPECIFICATIONS
- SIZE: 2-1/2" or 4"
- CASE MATERIAL: 304 Stainless Steel
- COVER RING: 304 Stainless Steel
- LENS: Safety glass – standard
- BOURDON TUBE: 316 Stainless Steel
- ACCURACY: ±1.5% full scale on 2-1/2” sizes; ±1% full scale on 4” sizes
- OPTIONAL FILL FLUID: Glycerin or silicone
- PROCESS CONNECTION: 1-1/2" or 2" clamped-style
- SEAL MATERIAL: 316L Stainless Steel
- DIAPHRAGM MATERIAL: 316L Stainless Steel
- SEAL FILL: Glycerin, USP grade
- RANGES: Vacuum and compound through 0 psig to 600 psig
- TEMPERATURE: -40 °F to 150 °C

10 SERIES HEAVY-DUTY
NOSHOK HEAVY-DUTY SANITARY PRESSURE GAUGES meet the current standards for 3A and ASME BPE-2009. They are designed for applications throughout the pharmaceutical industry, food & beverage, dairy and biomedical industries. The available 1-1/2” or 2” clamped-style connections are constructed of 316L Stainless Steel welded to the all Stainless Steel 2-1/2” or 4” gauge for greater strength and durability. Wetted parts are electropolished to 32 μin Ra or better. Gauges can be cleaned in place (CIP), steamed in place (SIP) or Autoclaved to reduce system shutdown time.

WARRANTY: (dry): One Year†; (liquid filled): Three Years†

SPECIFICATIONS
- OUTPUT SIGNALS: 4 mA to 20 mA, 2-wire: 0 Vdc to 5 Vdc, 0 to 10 Vdc, 1 Vdc to 5 Vdc, 1 Vdc to 6 Vdc & 1 Vdc to 11 Vdc, 3-wire
- ACCURACY: ±0.25% full scale (BFSL); Optional ±0.125% full scale (BFSL)
- POWER SUPPLY: 10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire); 10 Vdc to 30 Vdc (0 Vdc to 5 Vdc, 3-wire); 10 Vdc to 30 Vdc (1 Vdc to 5 Vdc, 3-wire); 10 Vdc to 30 Vdc (1 Vdc to 6 Vdc, 3-wire); 14 Vdc to 30 Vdc (0 Vdc to 10 Vdc, 3-wire); 14 Vdc to 30 Vdc (1 Vdc to 11 Vdc, 3-wire) - Unregulated
- PROCESS CONNECTION: 1-1/2" or 2" clamped-style
- SEAL MATERIAL: 316L Stainless Steel
- DIAPHRAGM MATERIAL: 316L Stainless Steel
- SEAL FILL: White oil, USP grade
- RANGES: Vacuum and compound through 0 psig to 400 psig
- TEMPERATURE: -40 °F to 150 °C

11 SERIES
NOSHOK CLAMPED-STYLE SANITARY PRESSURE TRANSMITTERS utilize diffused semiconductor and proven sputtered thin film sensor technology to produce a highly accurate, stable, shock resistant and durable pressure transmitter. They are suited for applications in the food & beverage, dairy, biotechnology and pharmaceutical industries and meet the current 3A standards as well as ASME BPE-2009 and CE compliant. Wetted parts are 316L Stainless Steel and electropolished to 32 μin Ra or better. Can be cleaned in place (CIP) and steamed in place (SIP).

WARRANTY: Three Years†

*For further warranty information please consult your specific product catalogs.
SPECIFICATIONS

OUTPUT SIGNALS: 4 mA to 20 mA 2-wire, 4 mA to 20 mA 2-wire and Hart® signal

ACCURACY: 0.1% of adjusted span

POWER SUPPLY: 12 Vdc to 36 Vdc - Unregulated


HOUSING: All polished 316 Stainless Steel

RANGES: 16 inH2O to 58 psig (1,600 inH2O)

TEMPERATURE: -4 °F to 212 °F (-20 °C to 100 °C); 293 °F (145 °C) for 45 min.

20 SERIES

NOSHOK INTELLIGENT SILO AND TANK LEVEL TRANSMITTERS feature programming via standard onboard display, and food, beverage and dairy specific process connections. Pressure and temperature sensors are mounted directly behind the diaphragm which minimizes fill fluid and allows the use of a smaller diaphragm. This provides active temperature compensation at the point of measurement to minimize temperature and position error. Turndown ratios up to 10:1 allow greater range adjustment, minimizing required inventory. Accuracies are based on adjusted span, not full scale range. Other features include all polished Stainless Steel construction and a 360° rotatable display.

WARRANTY: Three Years†

SPECIFICATIONS

OUTPUT SIGNALS: 4 mA to 20 mA 2-wire, 4 mA to 20 mA 2-wire and Hart® signal

ACCURACY: 0.2% of adjusted span

POWER SUPPLY: 12 Vdc to 36 Vdc - Unregulated

TRI-CLAMP SIZES: 1-1/2", 2 & 3"

HOUSING: All polished 316 Stainless Steel

RANGES: -160 inH2O vac to 1,160 psig

TEMPERATURE: -4 °F to 212 °F (-20 °C to 100 °C); 293 °F (145 °C) for 45 min.

25 SERIES

NOSHOK INTELLIGENT PRESSURE AND LEVEL TRANSMITTERS feature programming via standard onboard display and a compact, flush diaphragm. Pressure and temperature sensors are mounted directly behind the diaphragm which minimizes fluid and allows the use of a smaller diaphragm. This provides active temperature compensation at the point of measurement to minimize temperature and position error. Turndown ratios up to 4:1 allow greater range adjustment, minimizing required inventory. Accuracies are based on adjusted span, not full scale range. Other features include all polished Stainless Steel construction, and a 360° rotatable display.

WARRANTY: Three Years†

SPECIFICATIONS

OUTPUT SIGNALS: 4 mA to 20 mA 2-wire, 4 mA to 20 mA 2-wire and Hart® signal

ACCURACY: 300 & 302 Series: 0.2% of adjusted span,

301 & 304 Series: 0.1% of adjusted span

POWER SUPPLY: 12 Vdc to 36 Vdc - Unregulated

TRI-CLAMP SIZES: 1-1/2", 2 & 3"

HOUSING: All polished 316 Stainless Steel

RANGES: 300 Series: Ranges from 40 inH2O to 60 psig

302 Series: Adjustable ranges from 40 inH2O to 1,160 psig

304 Series: Adjustable ranges from 16 inH2O to 1,450 psig

TEMPERATURE: 300 Series 14 °F to 158 °F

(-10 °C to 70 °C)

302/304 Series: -4 °F to 212 °F (-20 °C to 100 °C); 293 °F (145 °C) for 45 min.

30 SERIES

NOSHOK “SNORKEL” PRESSURE AND LEVEL TRANSMITTERS are developed for wash down applications and where space restricts easy adjustment. Electronics can be remotely mounted in a safe and convenient location. The vented electrical cable connects the sensor to the electronics housing with no fill fluid. Pressure and temperature sensors are mounted directly behind the diaphragm which minimizes fill fluid and allows the use of a smaller diaphragm. This provides active temperature compensation at the point of measurement to minimize temperature and position error. Turndown ratios up to 10:1 allow greater range adjustment, minimizing required inventory. Accuracies are based on adjusted span, not full scale range. Other features include all polished Stainless Steel construction.

WARRANTY: Three Years†

*For further warranty information please consult your specific product catalogs.
**SPECIFICATIONS**

**UPPER HOUSING:** Universal Housing w/polypropylene, glass fiber reinforced  
**LOWER HOUSING:** PVC, PP or PVDF  
**DIAPHRAGM:** EPDM-PTFE coated on process side  
**MAX WORKING PRESSURE:** 160 psi

---

**TYPE 5**

**NOSHOK ALL NON-METALLIC, NON-REPLACEABLE DIAPHRAGM SEALS** are designed for wastewater and chemical feed applications, or any application with a corrosive media. These seals protect pressure or vacuum instruments used on ultra-pure or highly corrosive fluid lines such as demineralized water, sulfuric acid, hydrochloric acid, and caustics. Available 100% non-metallic construction assures maximum chemical and temperature compatibility.  
**WARRANTY:** One Year†

---

**TYPE 10**

**NOSHOK STANDARD PRESSURE BOLTED REPLACEABLE DIAPHRAGM SEALS** are designed to utilize a replaceable diaphragm clamped between the metal housings. They are rated to 2,000 psi with a displacement capability of 3.2 ml.  
**WARRANTY:** One Year†

---

**TYPE 10L**

**NOSHOK REDUCED PRESSURE, NON-METALLIC LOWER, BOLTED REPLACEABLE DIAPHRAGM SEALS** utilize a replaceable diaphragm and non-metallic lower housing. They are rated to 200 psi with a displacement capability of 3.2 ml.  
**WARRANTY:** One Year†

---

**TYPE 10H**

**NOSHOK ELEVATED PRESSURE BOLTED REPLACEABLE DIAPHRAGM SEALS** are a threaded connection, off-line seal with a replaceable diaphragm. They are designed for high pressure applications and are rated to 5,000 psi. Displacement capability is 1.4 ml.  
**WARRANTY:** One Year†

---

**TYPE 12**

**NOSHOK SANITARY, CLAMPED-STYLE, ASME-BPE NON-REPLACEABLE DIAPHRAGM SEALS** feature a flush mount diaphragm and all welded construction, making them ideal for food & beverage, pharmaceutical and sanitary markets. They can accommodate process connection pipes from 1-1/2" through 3" sizes. Their clamped connection allows ease of installation and removal of seal for maintenance and cleaning.  
**WARRANTY:** One Year†

---

**TYPE 20**

**NOSHOK FRONT FLUSH NON-REPLACEABLE DIAPHRAGM SEALS** are constructed with a 316 Stainless Steel housing and diaphragm. Maximum pressure rating is 9,000 psi. Available instrument connection sizes are 1/4 and 1/2" NPT male to 2" NPT male.  
**WARRANTY:** One Year†

---

**TYPE 25**

**NOSHOK STANDARD PRESSURE NON-REPLACEABLE DIAPHRAGM SEALS** utilize an all welded, all metallic housing design, pressure rated to 2,500 psi. The housing and diaphragm are offered in a variety of materials to suit most applications. A flushing port is offered as an option.  
**WARRANTY:** One Year†

---

*For further warranty information please consult your specific product catalogs.*
DIAPHRAGM SEALS

**SPECIFICATIONS**

**TYPE 25H**
NOSHOK ELEVATED PRESSURE NON-REPLACEABLE DIAPHRAGM SEALS utilize an all welded, all metallic housing design pressure rated to 5,000 psi. The housing and diaphragm are offered in a variety of materials to suit most applications. A flushing port is offered as an option.

**WARRANTY:** One Year

**SPECIFICATIONS**

**TYPE 29**
NOSHOK HIGH VOLUMETRIC DISPLACEMENT NON-REPLACEABLE DIAPHRAGM SEALS are an all welded, all metallic housing design that does not utilize an o-ring or gasket. Displacement is limited to 1.5 ml requiring the use of gauges with less than 4-1/2” dial size and Bourdon tube range no lower than 0 psi to 15 psi. Pressure rating is 2,500 psi.

**WARRANTY:** One Year

**SPECIFICATIONS**

**TYPE 30**
NOSHOK STANDARD PRESSURE, BOLTED, NON-REPLACEABLE DIAPHRAGM SEALS utilize an all metallic diaphragm welded to the upper housing with a displacement capability of 1.5 ml. Standard pressure rating is 2,500 psi with a wide variety of instrument and process connections available. A flushing connection is offered as an option.

**WARRANTY:** One Year

**SPECIFICATIONS**

**TYPE 30H**
NOSHOK ELEVATED PRESSURE, BOLTED, NON-REPLACEABLE DIAPHRAGM SEALS utilize an all metallic diaphragm welded to the upper housing with a displacement capability of 1.5 ml. Pressure rating is 5,000 psi with a wide variety of instrument and process connections available. A flushing port is offered as an option.

**WARRANTY:** One Year

**SPECIFICATIONS**

**TYPE 30L**
NOSHOK REDUCED PRESSURE, NON-METALLIC LOWER, BOLTED, NON-REPLACEABLE DIAPHRAGM SEALS utilize an all metallic diaphragm welded to the upper housing. Displacement capability is 1.5 ml with a 2.4” diameter diaphragm. Maximum pressure rating is 200 psi with non-metallic lower housing materials.

**WARRANTY:** One Year

**SPECIFICATIONS**

**TYPE 40**
NOSHOK FLOW-THROUGH ANNULAR STYLE REPLACEABLE DIAPHRAGM SEALS are frequently used in abrasive media applications such as slurries, heavy sludges, chemical (synthetic polymers), and diffusers (flow measurement). Process liquid flowing through the pipe exerts pressure onto a flush-mounted flexible inner cylinder containing clean, captive liquid; completely isolating instrumentation from the process flow and preventing plugging.

**WARRANTY:** One Year

*For further warranty information please consult your specific product catalogs.*
SPECIFICATIONS
SIZE: 1-3/4", 2", 3" and 5"
CASE & BEZEL: 304 Stainless Steel, 316 Stainless Steel optional
WETTED PARTS: 304 Stainless Steel, 316 Stainless Steel optional
LENSES: Instrument glass
CONNECTION: Center back
ACCURACY: ±1% full scale, Grade A, ASME B40.3
RANGES: -100 °F to 100 °F through 200 °F to 1,000 °F;
(-75 °C to 175 °C through 100 °C to 550 °C);
Single scale °F, single scale °C, and dual scales available
A silicone liquid filled option is available for applications where severe vibration may be a factor.

100 SERIES
NOSHOK INDUSTRIAL TYPE BIMETAL THERMOMETERS are heavy-duty, industrial thermometers with a weather resistant, tamper proof case. These thermometers feature a highly sensitive bimetallic helix coil which is heat-treated for stress relief, and silicone-coated to minimize pointer vibration and maximize heat transfer and response time.

WARRANTY: One Year†

SPECIFICATIONS
SIZE: 2", 3" and 5"
CASE & BEZEL: 304 Stainless Steel
WETTED PARTS: 304 Stainless Steel, 316 Stainless Steel optional; 316 Stainless Steel for Sanitary options
LENSES: Instrument glass
STEMS: 304 Stainless Steel, 2.5" to 24" lengths available
CONNECTION: Center back; bottom connection; adjustable angle connection
CONNECTION SIZE: 2" Dial 1/4" NPT, 3" & 5" Dial 1/2" NPT; 3/4"Tri-Clamp through 4" Tri-Clamp for Sanitary options
ACCURACY: ±1% full scale, Grade A, ASME B40.3
RANGES: -100 °F to 100 °F through 50 °F to 500 °F;
(-75 °C to 175 °C through 0 °C to 250 °C);
Single scale °F, single scale °C, and dual scales available
A silicone liquid filled option is available for applications where severe vibration may be a factor.

150 SERIES
NOSHOK TESTING AND GENERAL PURPOSE BIMETAL THERMOMETERS are designed for general purpose testing applications, and feature a weather-resistant, tamper-proof case. A pocket sized model is available for use by inspectors, service and maintenance personnel for spot checking.

WARRANTY: One Year†

SPECIFICATIONS
SIZE: 1", 1-3/4" and 2"
CASE & BEZEL: 304 Stainless Steel
WETTED PARTS: 304 Stainless Steel
LENSES: Instrument glass
CONNECTION: Center back (plain stem)
ACCURACY: ±1% full scale, Grade A, ASME B40.3
RANGES: -100 °F to 100 °F through 200 °F to 1,000 °F;
(-75 °C to 175 °C through 100 °C to 550 °C);
Single scale °F, single scale °C, and dual scales available
A silicone liquid filled option is available for applications where severe vibration may be a factor.

300 SERIES
NOSHOK INDUSTRIAL TYPE BIMETAL THERMOMETERS WITH EXTERNAL RESET, SANITARY OPTIONS are the highest quality thermometers available on the market. They feature a sturdy, corrosion resistant 304 Stainless Steel case and bezel which provides a hermetic seal to prevent lens fogging and damage caused by moisture. 1/16" Allen key adjustment offers field calibration for maximum accuracy at a selected range. Sanitary Tri-Clamp® options are available.

WARRANTY: Eight Years†

SPECIFICATIONS
SIZE: 1", 1-3/8", 1-3/4", 2" and 3"
CASE & BEZEL: 304 Stainless Steel, 316 Stainless Steel optional
WETTED PARTS: 304 Stainless Steel, 316 Stainless Steel optional
LENSES: Convex polycarbonate on 1-3/8" model; Instrument glass on all other models
CONNECTION: Center back (plain stem)
ACCURACY: ±1% full scale, Grade A, ASME B40.3
RANGES: -100 °F to 100 °F through 200 °F to 1,000 °F;
(-75 °C to 175 °C through 100 °C to 550 °C);
Single scale °F, single scale °C, and dual scales available
A silicone liquid filled option is available for applications where severe vibration may be a factor.

350 SERIES
NOSHOK TESTING AND GENERAL PURPOSE BIMETAL THERMOMETERS WITH EXTERNAL RESET are designed for general purpose testing applications, and feature a weather-resistant, tamper-proof case. A pocket sized model is available for use by inspectors, service and maintenance personnel for spot checking. A friction adjustment nut design offers easy field calibration for maximum accuracy at a selected range. Adjustable pan clips are standard on 1-3/4", 2" and 3" models with 5" and 8" stems.

WARRANTY: One Year†

SPECIFICATIONS
SIZE: 2-1/2", 4", 4-1/2" and 6"
CASE MATERIAL: Brass, Stainless Steel or phenolic
CONNECTION: Bottom connection; back connection; lower back connection
OPTIONAL FILL FLUIDS: Glycerin, -40° service and silicone
MOUNTING OPTIONS: Front or rear flange, bezel & U-clamp
RANGES: -40 °F to 60 °F through 100 °F to 350 °F/C
CAPILLARY MATERIAL: Plain or armored copper or Stainless Steel
BULB MATERIAL & DIMENSIONS: Plain or 1/2" NPT union copper or Stainless Steel; 2-5/8" x 3/8" through 9" x 3/8"

300/400/600/700/900 SERIES
NOSHOK VAPOR ACTUATED REMOTE THERMOMETERS operate using a temperature actuated liquid in the sensing element and a highly accurate, high quality pressure gauge to indicate media temperature. As the media temperature increases the capillary fill fluid vaporizes, causing an increase of pressure within the Bourdon tube, and activates the movement and pointer for proper indication. Dial scale graduations are non linear, therefore, the highest degree of accuracy and readability is found in the upper half of the scale.

WARRANTY: One Year†

*For further warranty information please consult your specific product catalogs.
ADJUSTABLE UNION CONNECTION
Can be used to reposition the dial face for better viewing. Also helpful when installing a thermometer where space is limited.

CERTIFIED CALIBRATION
Certified calibration is available on all NOSHOK thermometers, and provides the user with a serial numbered thermometer along with a calibration sheet against a primary temperature standard, which is traceable to the National Institute of Standards and Technology.

CONNECTIONS
In addition to our standard 1/2" NPT connection, 1/4" or 3/8" NPT and metric connections are also available. If a special connection is required, please consult the factory. Other options include a plain stem with an adjustable compression fitting, or left, right or top connections.

GLOW DIAL
Allows up close daylight and/or distant night time viewing. 5" Adjustable angle or back connected. Includes reflective pointer and two reflective clips included to indicate custom minimum and maximum limits.

LENSES
Laminated safety glass lenses are available on all 3" and 5" NOSHOK bimetal thermometers. Acrylic and polycarbonate lenses are available on all NOSHOK bimetal thermometers also, however they should not be used where case temperature exceeds 300 °F/150 °C.

MINIMUM OR MAXIMUM INDICATING POINTER
The MIP allows you to view your minimum or maximum temperatures for visual clarification of safe operation. Available only on 30-310 and 50-310 models.

MINIMUM AND MAXIMUM INDICATING POINTER
The MIP2 allows you to view your minimum and maximum temperatures for visual clarification of safe operation. Available only on 30-310 and 50-310 models.

MOUNTING FLANGES
Various sizes and types of mounting flanges are available.

SILICONE FILLED
All 2", 3" and 5" NOSHOK industrial bimetal thermometers are offered in a silicone filled version. This fill is used for applications where severe vibration may be a factor. Silicone dampens and lubricates the internal mechanism thus reducing pointer oscillation and premature wear. A polycarbonate lens is standard with a silicone filled thermometer. Maximum case temperature not to exceed 300 °F (150 °C).

SPECIAL DIALS
Special ranges and dials with company names, company logos, part numbers, telephone numbers, and custom layouts are available.

STEM TYPES
Multiple stem diameters, stem lengths up to 120", sharp tip options and optional 316SS wetted parts are available.

*For further warranty information please consult your specific product catalogs.
**SPECIFICATIONS**

**OUTPUT SIGNALS:** 4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc, 3-wire; 1 Vdc to 5 Vdc, 3-wire and 0 Vdc to 10 Vdc, 3-wire

**RANGES:** Standard ranges from -40 °F to 120 °F to 50/550 °F

**ACCURACY:** Class B (±0.5% full scale)

**POWER SUPPLY:** 10 Vdc to 30 Vdc for 4 mA to 20 mA, 2-wire, and 0 Vdc to 5 Vdc, 3-wire, and 1 Vdc to 5 Vdc, 3-wire for 0 Vdc to 10 Vdc, 3-wire.

**HOUSING MATERIAL:** 316 Stainless Steel

**WETTED MATERIAL:** 316 Stainless Steel

**STEM LENGTHS:** From 2-1/2” to 12” – Stock

**PROCESS CONNECTION:** 1/2" NPT Male; 1/4" NPT Male and 1/4" NPT Male with adjustable compression fitting available

CE compliant to suppress RFI, EMI, and ESD.

**WARRANTY:** Three Years

---

**800 SERIES**

**NOSHOK PLATINUM RESISTANCE TEMPERATURE TRANSMITTERS** use the proven reliability and stability of the platinum 100 Ω sensor to provide unbeatable performance at an economical price.

Shown with 1800 Series Attachable Loop Indicator.

**WARRANTY:** Three Years

---

**810 SERIES**

**NOSHOK COMPACT TEMPERATURE TRANSMITTERS** feature a proven PT1000 platinum resistance sensor that provides reliability, stability and unbeatable performance.

Other features include a 316 Stainless Steel housing and wetted parts. A 4 mA to 20 mA transmitter is included. CE compliant to suppress RFI, EMI, and ESD.

**WARRANTY:** Three Years

---

**820/821 SERIES**

**NOSHOK DIGITAL TEMPERATURE INDICATORS** are an ideal replacement for bimetal, liquid bulb and glass thermometers in applications including pharmaceutical, food preparation, utilities and municipal, refineries, chemical and petrochemical plants, paper mills and hydraulics. Featuring a large 4-digit LED display, they are field re-programmable with optional PC interface module and software, which includes a security feature to prevent accidental reprogramming. NOSHOK Digital Indicators utilize a self-calibration feature for accurate and stable performance, and allow easy installation with various mounting configurations.

**WARRANTY:** Three Years

---

**822/823 SERIES**

**NOSHOK BATTERY POWERED DIGITAL TEMPERATURE INDICATORS** are an ideal replacement for bimetal, liquid bulb and glass thermometers in applications including pharmaceutical, food preparation, utilities and municipal, refineries, chemical and petrochemical plants, paper mills and hydraulics. These indicators provide a 5 year minimum battery life, and feature a large 4-digit LCD display.

**WARRANTY:** Three Years

---

**850 SERIES**

**NOSHOK ELECTRONIC INDICATING TEMPERATURE TRANSMITTER/SWITCHES** measure and display temperature, and have one or two switching outputs as well as optional current and voltage outputs. The three buttons on top allow simple adjustment of the temperature set points, reset points, switching functions and the measuring range of the optional analog output. A variety of process connections, including sliding compression fittings, add to the versatility of this sensor. All wetted parts, as well as the housing, are made of Stainless Steel.

**WARRANTY:** Three Years

---

*For further warranty information please consult your specific product catalogs.*
900 SERIES

NOSHOK PROBE TYPE INDUSTRIAL RTDs are general purpose RTD probes with PVC or PTFE lead wires. They are ideal for OEM applications, and are offered in 2, 3, or 4-wire circuit types. Many options are available, including adjustable and welded fittings, a variety of fitting sizes and probe diameters, and custom designs. RTD PT100 Ω is standard, others are available on request. Multiple electrical connections are available.

WARRANTY: Three Years†

910/915 SERIES

NOSHOK PROBE TYPE INDUSTRIAL RTD WITH CONNECTION HEAD are available in 2, 3 or 4-wire circuit configurations and they can be ordered with a fixed probe or spring loaded, depending on the application. These RTDs are available with a variety of NEMA 4 and NEMA 4X head types, including aluminum cast, explosion proof aluminum cast, polypropylene, Stainless Steel cast, and explosion proof Stainless Steel cast. Explosion proof versions are Class I, Division I, Groups B, C and D; Class II, Division I, Groups E, F and H.

WARRANTY: Three Years†

920 SERIES

NOSHOK RTD TRANSMITTERS are high accuracy (±0.1%) transmitters with a 2-wire loop-powered 4 ma to 20 mA output. They feature a PT100 input with 3-wire compensation, and have an analog design with an adjustable potentiometers. These RTD transmitters are factory calibrated for a fixed range, and fit standard heads. An optional model is fully field re-programmable with module and PC-based software.

WARRANTY: Three Year†

THERMOWELLS

NOSHOK THERMOWELLS are recommended whenever the process being measured may be under pressure, is corrosive, abrasive or may be at a high velocity. They are also recommended as protection to the operator. The correct thermowell will reduce the possibility of damage to the temperature instrument and allows an instrument to be removed and replaced without shutting down and possibly draining the process. Standard thermowells are supplied with 1/2” NPSM instrument connection. The female thread will accept the 1/2” NPT male thread without galling or seizing.

WARRANTY: One Year†

RTD TERMINAL BLOCKS

These terminal blocks are provided with a steatite ceramic base. Brass terminal pieces and Stainless Steel screws, and can be used in the temperature sensor or low voltage Class 2 circuits. Material options include Bakelite and ceramic, and multiple configurations are available including 2, 3, 4 and 6 position.

†For further warranty information please consult your specific product catalogs.
**SPECIFICATIONS**

**MATERIALS:** Zinc-nickel plated Steel, electropolished 316 Stainless Steel, 360 Brass  
**CONNECTIONS:** 1/8” NPT, 1/4” NPT, 7/16”-20 UNF-2B, 9/16”-18 UNF-2B, Male-male, Male-female, Female-female, in-line and angled configurations  
**PRESSURE RATING:** Brass: 6,000 psi @ 200 °F; zinc-nickel plated Steel: 10,000 psi @ 200 °F; Stainless Steel: 10,000 psi @ 200 °F  
**ORIFICE SIZE:** 0.172”  
**FLOW COEFFICIENT:** Cv 0.42  
**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional  
**OPTIONS:** Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips  

All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ ml/s for guaranteed performance and reliability.

100/140 Series: U.S. Patent 7,758,014  
150/190 Series: U.S. Patent 6,820,857 and 7,758,014

---

**SPECIFICATIONS**

**MATERIALS:** Zinc-nickel plated Steel, electropolished 316 Stainless Steel  
**CONNECTIONS:** 1/2” NPT to 3/4” NPT Male-female  
**PRESSURE RATING:** 200 Series: 10,000 psi @ 200 °F; 300 Series: 6,000 psi @ 200 °F  
**ORIFICE SIZE:** 200/300 Series: 0.187”  
**FLOW COEFFICIENT:** Cv 0.44  
**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional  
**OPTIONS:** Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips  

All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ ml/s for guaranteed performance and reliability.

200/300 SERIES

**SPECIFICATIONS**

**MATERIALS:** Zinc-nickel plated Steel, electropolished 316 Stainless Steel  
**CONNECTIONS:** 1/4”-3/8”, 1/2”, 3/4”, 1”, 1-1/4” & 1-1/2” NPT, 7/16”-20 UNF (94 SAE, J1926); Male-male, Female-female, in-line and angled configurations  
**PRESSURE RATING:** 400 Series: 10,000 psi @ 200 °F; 500 Series: 6,000 psi @ 200 °F  
**ORIFICE SIZES:** 400 Series: 1/4”-1/2” NPT: 0.187” with Cv: 0.44-3/4”-1-1/2” NPT: 0.438” with CV 2.70  
**ORIFICE SIZES:** 500 Series: 1/4”-1/2” NPT: 0.187”; with Cv: 0.44; 3/4”-1-1/2” NPT: 0.438” with Cv: 4.0  
**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional for 1/4”, 3/8” & 1/2” NPT only  
**OPTIONS:** Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips  

All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ ml/s for guaranteed performance and reliability.

400/500 SERIES

---

**NOSHK MINI VALVES** are small in size but deliver maximum strength and durability. Available in zinc nickel-plated Steel, electropolished Stainless Steel and Brass, these rugged mini valves are equipped with an FKM o-ring and PTFE back-up ring below the stem threads to protect against corrosion and galling. Stem threads are rolled for greater strength and ease of operation. 100 Series feature a metal-to-metal hard seat, and have a maximum pressure of 10,000 psi for Stainless Steel and Steel models, and 6,000 psi for Brass. 150 Series valves feature a patented Delrin® non-rotating soft tip stem. They have a max pressure of 6,000 psi for Stainless Steel and Steel models, and 3,000 psi for Brass.

**WARRANTY:** Three Years†

**NOSHK MULTIPIORT VALVES** reduce the number of gauge and other instrument connections to permanent piping installations, therefore decreasing possible leak points (paths). Optional bleed plugs further allow pressure to be bled off without disturbing the permanent piping installation. The metal-to-metal hard seat design has a maximum pressure rating to 10,000 psi @ 200 °F. The soft seat design, with the replaceable Delrin® seat, is pressure rated to 6,000 psi @ 200 °F.

**WARRANTY:** Three Years†

---

**NOSHK STANDARD NEEDLE VALVES** are the work horses of the industry. The 400 Series’ metal-to-metal hard seat design is pressure rated to 10,000 psi @ 200 °F and helium leak tested to 1x10⁻⁴ ml/s for guaranteed performance and reliability. The 500 Series valves are fitted with a precision molded, replaceable Delrin® soft seat which is the key to the bubble tight seal. They have a maximum pressure rating of 6,000 psi @ 200 °F with straight through porting for bi-directional, high capacity flow and easy roddable cleaning. The all 316 Stainless Steel blow out proof stem provides greater service life and provides a secondary stem seal in the full open position. On the 400 Series, the stem and the one piece bonnet threads are rolled for greater strength and ease of operation. Both the 400 and 500 Series feature stem seat below the threads to protect against corrosion and galling.

**WARRANTY:** Three Years†

All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.  
*For further warranty information please consult your specific product catalogs.*
NEEDLE VALVES

SPECIFICATIONS
MATERIALS: Zinc-nickel plated Steel, electropolished 316 Stainless Steel
CONNECTIONS: 1/4" & 1/2" NPT
Female-female & Female-female configurations available, right venting optional
PRESSURE RATING: 2070 Series: 10,000 psi @ 200 °F; 2170 Series: 6,000 psi @ 200 °F
ORIFICE SIZE: 2070/2170: 0.159" (both series)
FLOW COEFFICIENT: 2070 Series: C, 0.44; 2170 Series: C, 0.76
STEM SEAL & TYPE: All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional
OPTIONS: Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips

All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ mls for guaranteed performance and reliability.

HARD SEAT & SOFT SEAT

600/700 SERIES

NOSHOK BLOCK & BLEED NEEDLE VALVES allow pressure to be bled off without disturbing the permanent piping installation thereby enabling the user to quickly and easily remove and/or replace instruments. The metal-to-metal hard seat design is pressure rated to 10,000 psi @ 200 °F and the soft seat design, with a replaceable Delrin® seat, is rated to 6,000 psi @ 200 °F. The all 316 Stainless Steel blow out proof stem provides greater service life and a secondary stem seal in the full open position. Stem seals, with the FKM o-ring and PTFE back up ring, are below the threads and protect against galling and corrosion.

WARRANTY: Three Years†

SPECIFICATIONS
MATERIALS: Zinc-nickel plated Steel, electropolished 316 Stainless Steel, 360 Brass
CONNECTIONS: 1/4" & 1/2" NPT
HARD SEAT PRESSURE RATINGS: Brass: 6,000 psi @ 200 °F; Steel: 10,000 psi @ 200 °F; Stainless Steel: 10,000 psi @ 200 °F
SOFT TIP PRESSURE RATINGS: Brass: 3,000 psi @ 200 °F; Steel: 6,000 psi @ 200 °F; Stainless Steel: 6,000 psi @ 200 °F
BLEED PORT: 800/850 Series: 0.159" (both series)
STEM SEAL & TYPE: All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional
OPTIONS: Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips

All NOSHOK 316SS valve products meet the requirements of NACE MR0175/ISO 15156-3.
All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.

†For further warranty information please consult your specific product catalogs.
3070 SERIES

NOSHOK DOUBLE BLOCK & BLEED 2-VALVE NEEDLE VALVES combine double isolation and venting in a single valve, eliminating the need for tubing and fittings. The double block and bleed valve isolates the downstream process fluids, or isolates the upstream instrument pressure. The bleed valve exhausts either upstream or downstream fluid pressure depending on which block valve is used. The 1/4" NPT vent port is located on the opposite side of the process block valve and 90° from the instrument block valve. 10,000 psi hard seat pressure rating @ 200 °F. Blow-out proof stem provides a secondary stem seal in the full open position. All stem threads are rolled for strength and ease of operation. These valves feature a one-piece bonnet with a metal-to-metal seal to the valve body below the bonnet threads, and a slotted spring pin to prevent accidental loosening.

WARRANTY: Three Years†

2000/2100 SERIES

NOSHOK BLOCK & BLEED 2-VALVE STATIC PRESSURE MANIFOLD VALVES combine isolating and venting in a single manifold eliminating the need for tubing and fittings. The block valve isolates the downstream process fluids and the bleed valve exhausts upstream fluids enabling static pressure transmitters, switches or gauges to be removed without disturbing the permanent piping installation. The block valve is located on the side and the bleed valve is located on top in a 90° orientation. Venting is to the right. The all 316 Stainless Steel blow out proof stem provides longer service life and a secondary stem seal in the full open position. The stem seal, with the FKM o-ring and PTFE back up ring, is below the threads and protects against galling and corrosion.

WARRANTY: Three Years†

2020/2120 SERIES

NOSHOK 2-VALVE LIQUID LEVEL MANIFOLD VALVES are designed for use with differential pressure transmitters in liquid level applications. These valves are available in either single flange or double flange connection for direct installation. The soft seat design features a replaceable Delrin® seat with straight through porting for bi-directional flow and easy roddable cleaning.

WARRANTY: Three Years†
**2-VALVE STATIC PRESSURE & NATURAL GAS MANIFOLDS**

### HARD SEAT & SOFT SEAT

**200002/210002 SERIES**

**200402/210402 SERIES**

**NOSHOK NARROW BLOCK & BLEED 2-VALVE STATIC PRESSURE MANIFOLD VALVES** combine isolating and venting in a single manifold eliminating the need for tubing and fittings. The block valve isolates the downstream process fluids and the bleed valve exhausts upstream fluids enabling static pressure transmitters, switches or gauges to be removed without disturbing the permanent piping installation. The block valve is located on the side and the bleed valve is located on top in a 90° orientation. Venting is to the right. The all 316 Stainless Steel blow out proof stem provides greater service life and a secondary stem seal in the full open position. The stem seal, with the FKM o-ring and PTFE back up ring, is below the threads and protects against galling and corrosion.

**WARRANTY:** Three Years†

### SOFT SEAT (0.375” ORIFICE)

**2530 SERIES**

**NOSHOK LARGE BORE, 90° ANGLE NATURAL GAS MANIFOLD VALVES** incorporate two isolation valves for natural gas applications. These valves feature a double flange 90° angle connection for remote or direct installation. The soft seat design features a replaceable Delrin® seat with straight through porting for bi-directional flow and easy rotatable cleaning.

**WARRANTY:** Three Years†

### HARD SEAT & SOFT TIP (0.141” ORIFICE)

**2602/2702 SERIES**

**NOSHOK MINI BLOCK & BLEED 2-VALVE STATIC PRESSURE MANIFOLD VALVES** combine isolating and venting in a single manifold eliminating the need for tubing and fittings. The block valve isolates the downstream process fluids and the bleed valve exhausts upstream fluids enabling static pressure transmitters, switches or gauges to be removed without disturbing the permanent piping installation. The valves are located on the top to fit into compact spaces and two holes are provided for mounting. Venting is to the left. The all 316 Stainless Steel blow out proof stem provides greater service life and a secondary stem seal in the full open position. The stem seal, with the FKM o-ring and PTFE back up ring, is below the threads and protects against galling and corrosion.

**WARRANTY:** Three Years†

---

**SPECIFICATIONS**

**MATERIALS:** Zinc-nickel plated Steel, electropolished 316 Stainless Steel

**CONNECTIONS:** Flange-flange 90° Angle

**PRESSURE RATINGS:**

- 200002 & 200402 Series: CV 0.38; Orifice size: 0.375” ORIFICE
- 200002 & 200402 Series: CV 0.44; Orifice size: 0.38 ORIFICE

**FLOW COEFFICIENT:**

- 200002 & 200402 Series: Cv 0.44
- 200002 & 200402 Series: Cv 0.76

**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional

**OPTIONS:** O-ring materials and soft seats

All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ mls for guaranteed performance and reliability.

---

All NOSHOK valve products meet the requirements of NACE MR0175/ISO 15156-3.

All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.

*For further warranty information please consult your specific product catalogs.*
2-VALVE STATIC PRESSURE & NATURAL GAS MANIFOLDS

SPECIFICATIONS
MATERIALS: Zinc-nickel plated Steel, electropolished 316 Stainless Steel
CONNECTIONS: 2603/2703: 3/8” NPT; 2604/2704: 1/2” NPT, right venting optional
PRESSURE RATINGS: 2603 & 2604 Series: 10,000 psi @ 200 °F; 2703 & 2704 Series: 6,000 psi @ 200 °F
ORIFICE SIZE: 0.156”
FLOW COEFFICIENT: C = 0.44
STEM SEAL & TYPE: All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional
OPTIONS: O-ring materials, handles, packings, regulating stem and stem tips

All NOSHOK valves are 100% helium leak tested to 1 X 10^-4 mls for guaranteed performance and reliability.

U.S. Patent 6,820,857; U.S. Patent 7,758,014

WARRANTY: Three Years†

2603/2703 SERIES
2604/2704 SERIES
NOSHOK BLOCK & BLEED 2-VALVE STATIC PRESSURE MANIFOLDS combine isolating and venting in a single manifold eliminating the need for tubing and fittings. The block valve isolates the downstream process fluids and the bleed valve exhausts upstream fluids enabling static pressure transmitters, switches or gauges to be removed without disturbing the permanent piping installation.

The block valve is located on the side and the bleed valve is located on top in a 90° orientation. Venting is to the left. The all 316 Stainless Steel blow out proof stem provides greater service life and a secondary stem seal in the full open position. The stem seal, with the FKM o-ring and PTFE back up ring, is below the threads and protects against galling and corrosion.

WARRANTY: Three Years†

SOFT SEAT

2180 SERIES
NOSHOK 2-VALVE STATIC PRESSURE NATURAL GAS METER MANIFOLDS are designed for use with orifice meters. These manifolds feature a replaceable Delrin® seat and straight through porting for bidirectional, high capacity flow and easy roddable cleaning. A blow-out proof stem provides a secondary stem seal in the full open position, and all stem threads are rolled for strength and ease of operation. These valves feature a one-piece bonnet with a metal-to-metal seal to the valve body below the bonnet threads, and a slotted spring pin to prevent accidental loosening. Vinyl dust caps are included for bonnets and stems (non-packing).

WARRANTY: Three Years†

Optional 3 and 5 valve configurations also shown. Additional needle valves sold separately.

3-VALVE DIFFERENTIAL PRESSURE MANIFOLDS

SPECIFICATIONS
MATERIALS: Zinc-nickel plated Steel, electropolished 316 Stainless Steel
CONNECTION: Flange-flange, 1/2” NPT-flange, 1/2” NPT-1/2” NPT
PRESSURE RATINGS: 3010 Series: 10,000 psi @ 200 °F; 3110 Series: 6,000 psi @ 200 °F
ORIFICE SIZE: 0.187”
FLOW COEFFICIENT: 3010 Series: C = 0.44; 3110 Series: C = 0.76
STEM SEAL & TYPE: All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional
OPTIONS: O-ring materials, handles, packings, regulating stem and stem tips

All NOSHOK valves are 100% helium leak tested to 1 X 10^-4 mls for guaranteed performance and reliability.

All NOSHOK 316SS valve products meet the requirements of NACE MR0175/ISO 15156-3.

All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.

*For further warranty information please consult your specific product catalogs.
3-VALVE DIFFERENTIAL PRESSURE MANIFOLDS

**SPECIFICATIONS**

**MATERIALS:** Zinc-nickel plated Steel, electropolished 316 Stainless Steel

**CONNECTION:** 1/2" NPT-flange

**PRESSURE RATINGS:** 6,000 psi @ 200 °F

**ORIFICE SIZE:** 0.125"

**FLOW COEFFICIENT:** C=0.44

**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the thread, PTFE or Grafoil® packing optional

**OPTIONS:** O-ring materials, handles, packings, regulating stem and stem tips

*All 316SS products meet the requirements of NACE MR0175/ISO 15156-3.

All NOSHOK valves are 100% helium leak tested to 1 X 10^-4 ml/s for guaranteed performance and reliability.

**3040 SERIES**

NOSHOK 3-VALVE DIFFERENTIAL PRESSURE COMPACT STYLE MANIFOLD VALVES are designed for use with differential pressure transmitters incorporating two isolation valves and an equalizing valve in differential pressure measurement. These valves are available in block, single flange or double flange connection for remote or direct installation. The soft seat design features a replaceable Delrin® seat with straight through porting for bi-directional flow and easy roddable cleaning.

**WARRANTY:** Three Years†

---

**SPECIFICATIONS**

**MATERIALS:** Zinc-nickel plated Steel, electropolished 316 Stainless Steel

**CONNECTION:** Flange-flange, 1/2" NPT-flange, 1/2" NPT-1/2" NPT

**PRESSURE RATINGS:** 6,000 psi @ 200 °F

**ORIFICE SIZE:** 0.375"

**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the thread

**OPTIONS:** O-ring materials, handles, packings, regulating stem and stem tips

All NOSHOK valves are 100% helium leak tested to 1 X 10^-4 ml/s for guaranteed performance and reliability.

**3510 SERIES**

NOSHOK 3-VALVE DIFFERENTIAL PRESSURE MANIFOLD VALVES are designed for use with differential pressure transmitters incorporating two isolation valves and an equalizing valve in differential pressure measurement. These valves are available in block, single flange or double flange connection for remote or direct installation. The soft seat design features a replaceable Delrin® seat with straight through porting for bi-directional flow and easy roddable cleaning.

**WARRANTY:** Three Years†

---

**SPECIFICATIONS**

**MATERIALS:** Electropolished 316 Stainless Steel*

**CONNECTION:** 1/2" NPT-flange

**PRESSURE RATINGS:** 6,000 psi @ 200 °F

**ORIFICE SIZE:** 0.125"

**FLOW COEFFICIENT:** C=0.44

**STEM SEAL & TYPE:** All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional

**OPTIONS:** O-ring materials, handles, packings, regulating stem and stem tips

*All 316SS products meet the requirements of NACE MR0175/ISO 15156-3.

All NOSHOK valves are 100% helium leak tested to 1 X 10^-4 ml/s for guaranteed performance and reliability.

**3610/3710 SERIES**

NOSHOK 3-VALVE DIFFERENTIAL PRESSURE COMPACT STYLE MANIFOLD VALVES are identical to the 3000/3100 Series Manifold Valves, but in miniature version. They are designed for use with differential pressure transmitters incorporating two isolation valves and an equalizing valve in differential pressure measurement. These manifolds provide instrument port spacing that is compatible with either standard SP-99 or the Rosemount™ Coplanar™ platform. Optional packings, stem tips, o-rings and handle types are available. Labeled and color coded vinyl dust caps for bonnets and stems are included.

**WARRANTY:** Three Years†

---

All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.

†For further warranty information please consult your specific product catalogs.
5-VALVE NATURAL GAS MANIFOLDS

SPECIFICATIONS
MATERIALS: Zinc-nickel plated carbon Steel, electropolished 316 SS
CONNECTION: Flange-flange, 1/2" NPT-flange, 1/2" NPT-1/2" NPT
PRESSURE RATINGS:
5030 Series: 10,000 psi @ 200° F; 5130 Series: 6,000 psi @ 200° F
ORIFICE SIZE: 0.187"
FLOW COEFFICIENT:
5030 Series: Cv: 0.44; 5130 Series: Cv: 0.76
STEM SEAL & TYPE: All 316 SS stems with FKM o-ring and PTFE back-up ring below the threads.
ADDITIONAL FEATURES: Two static (test) ports, color coded vinyl bonnet and stem dust cap, patented soft seat/tip stem design on equalizing and vent valves
OPTIONS: O-ring materials, handles, packings, regulating stem and stem tips seal
All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ ml/s for guaranteed performance and reliability.
U.S. Patent 6,820,857; U.S. Patent 7,758,014

WARRANTY: Three Years†

SPECIFICATIONS
MATERIALS: Electropolished 316 Stainless Steel™
CONNECTION: 1/2" NPT-flange
PRESSURE RATINGS: 6,000 psi @ 200° F
ORIFICE SIZE: 0.125"
FLOW COEFFICIENT: Cv: 0.30
STEM SEAL & TYPE: All 316 SS stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional
OPTIONS: O-ring materials, handles, packings, regulating stem and stem tips seal
* All 316SS products meet the requirements of NACE MR0175/ISO 15156-3.
All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ ml/s for guaranteed performance and reliability.

WARRANTY: Three Years†

SPECIFICATIONS
MATERIALS: Zinc-nickel plated Steel, electropolished 316 Stainless Steel
CONNECTIONS: Flange-flange, 1/2" NPT-flange, 1/2" NPT-1/2" NPT, Flange-flange 90° Angle
PRESSURE RATINGS: 6,000 psi @ 200° F
ORIFICE SIZE: 0.375"
STEM SEAL & TYPE: All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads.
ADDITIONAL FEATURES: Two static (test) ports, color coded vinyl bonnet and stem dust cap, patented soft seat/tip stem design on equalizing and vent valves
All NOSHOK valves are 100% helium leak tested to 1 X 10⁻⁴ ml/s for guaranteed performance and reliability.
U.S. Patent 6,820,857

WARRANTY: Three Years†

5030/5130 SERIES
NOSHOK 5-VALVE NATURAL GAS MANIFOLDS are designed for use with differential pressure transmitters incorporating two isolation valves, two equalizing valves and a vent valve in natural gas applications. These valves are available in block, single flange or double flange connection for remote or direct installation. A Flare Pattern™ valve configuration is optional, which provides maximum clearance for fingers during operation. The soft seat design features a replaceable Delrin® seat with straight through porting for bi-directional flow and easy roddable cleaning*
*Isolation valves only

5040/5090 SERIES
NOSHOK 5-VALVE DIFFERENTIAL POWER PATTERN AND NATURAL GAS COMPACT STYLE MANIFOLDS provide instrument port spacing that is compatible with either standard SP-99 or the Rosemount™ Coplanar™ platform. Compact style, power pattern is designed for use with differential pressure transmitters incorporating two isolation valves, one equalizing valve and two vent valves in power pattern applications. Compact style, natural gas flow is designed for use with differential pressure transmitters incorporating two isolation valves, two equalizing valves and a vent valve in natural gas applications. Optional packings, stem tips, o-rings and handle types are available. Labeled and color coded vinyl dust caps for bonnets and stems are included.

5530 SERIES
NOSHOK 5-VALVE NATURAL GAS MANIFOLDS are designed for use with differential pressure transmitters incorporating two isolation valves, two equalizing valves and a vent valve for natural gas applications. These valves are available in block, single flange, double flange, or double flange 90° angle connection for remote or direct installation. Flare Pattern™ configurations are optional, which provides maximum clearance for fingers during operation. Soft seat design features a replaceable Delrin® seat with straight through porting for bi-directional flow and easy roddable cleaning*. *Isolation valves only

WARRANTY: Three Years†
**SZ SERIES**

NOSHOK STABILIZED & NON-STABILIZED CONNECTORS are designed to reinforce the entire installation by shifting radial-stress load away from the NPT connections, and are available in 3-3/8” and 5” lengths.

SZ Series Stabilized & Non-Stabilized Connectors are available in zinc-nickel plated carbon Steel and 316 Stainless Steel, and feature slotted bolt holes that allow for 2-1/8” and 2-1/4” bolt spacings.

A single piece dielectric gasket (DK1) is available as an option to create a non-conductive shield between the process piping and the instrument. A two piece dielectric kit (DK2) is also available as an alternative when a separate sealing gasket or o-ring is required.

**SPECIFICATIONS**

- **MATERIALS:** Zinc-nickel plated carbon Steel, 316 Stainless Steel
- **CONNECTION:** 1/2” NPT-flange

---

**SV SERIES**

NOSHOK STABILIZED CONNECTORS WITH INTEGRAL VALVE are also designed to reinforce an installation by shifting radial-stress load away from the NPT connections, but also feature a block valve that can be installed on either side of stabilized body, allowing 1/2 turn installation.

SV Series Stabilized Connectors with Integral Valve are available in zinc-nickel plated carbon Steel and 316 Stainless Steel, and feature slotted bolt holes that allow for 2-1/8” and 2-1/4” bolt spacings. The integral valve has a 0.375” bore for unrestricted passage of process gas, and a standard non-rotating stem tip. This application will work on both flat surfaces (orifice fitting) and round surfaces (orifice flange) with flange adaptor.

A single piece dielectric gasket (DK1) is available as an option to create a non-conductive shield between the process piping and the instrument. A two piece dielectric kit (DK2) is also available as an alternative when a separate sealing gasket or o-ring is required. Stainless Steel bolts are also available.

**SPECIFICATIONS**

- **MATERIALS:** Zinc-nickel plated carbon Steel, 316 Stainless Steel
- **CONNECTION:** 1/2” NPT-flange

---

All NOSHOK 316SS valve products meet the requirements of NACE MR0175/ISO 15156-3.

All NOSHOK valve products conform to the MSS SP-99 Instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.
**DIELECTRIC KITS**

The dielectric kit is designed to maintain the integrity and reliability of the pipeline and piping system through safety and corrosion protection. Dielectric kits provide a non-conductive barrier between the process piping and the instrument and isolate components from the effects of electrical current. By eliminating metal-to-metal contact, current is halted to prevent corrosion and aid in the cathodic protection of the system.

**DK1**
- Single piece design combining a Delrin® sealing gasket and dielectric
- Bolts, washers and dielectric bushings are included with the kits
- Cannot be used in conjunction with seal rings or o-rings

**DK2**
- Used as an alternative to a one piece design when a separate sealing gasket or o-ring is required
- Two piece design consisting of a PTFE sealing gasket and PVC dielectric shim
- Bolts, washers and dielectric bushings are included with the kits

**SPECIFICATIONS**
- **MATERIAL:** Delrin®, PVC
- **MAX OPERATING TEMP:** 150°F (66°C)
- **DIELECTRIC STRENGTH:** Exceeds 1/32 air arc gap approx 2,500 Vdc

---

**50FA1 SERIES FUTBOLS**

Futbols (flange adapters) bolt to the process side of a flange-flange manifold to allow connection of process flange taps or process root valves. Futbols also allow flanges to be connected to threaded process piping while maintaining the ease of removal or repair of the manifold if maintenance is required.

The futbols provide a 1/16” offset connection from the bolt holes to give connection centers of 2”, 2-1/8”, or 2-1/4”.

**SPECIFICATIONS**
- **MATERIAL:** Zinc-nickel plated Steel, 316 Stainless Steel
- **CONNECTIONS:** 1/2” NPT
- **KIT INCLUDES:** (2) Futbols, (4) hex bolts 7/16-20, (2) PTFE face seals

---

**SA SERIES STATIC ADAPTORS**

Static adaptors are used to join threaded ports to a flange style connection. They are often used to join the NPT port of a static transmitter with a flange mounted connection on a differential pressure to static adaptor plate. They are available in zinc-nickel plated Steel and electropolished Stainless Steel.

**SPECIFICATIONS**
- **MATERIAL:** Zinc-nickel plated Steel, electropolished Stainless Steel
- **CONNECTIONS:** 1/2” NPT Male - flange, 1/2” NPT Female-flange

---

**DIELECTRIC KITS**

All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.
MANIFOLD MOUNTING KIT
Designed for direct or remote mounting to a 2” pipe stand, can be utilized with any NOSHOK 2, 3 or 5 valve manifold by mounting a Steel or Stainless Steel bracket directly to the manifold body.

Δ PRESSURE TO STATIC ADAPTOR
Used in direct mount systems for gas pipelines, the pressure to static adaptor plate is used to mount a differential pressure transmitter and a static pressure transmitter to a five valve flange-flange manifold. They are available in zinc-nickel plated Steel or electropolished Stainless Steel. An integral mini style bleed valve is incorporated in the plate and a 1/4” NPT vent plug is provided. The mini style bleed valve is equipped with a FKM o-ring and PTFE back up ring below the stem threads to protect against corrosion and galling. Stem threads are rolled for greater strength and ease of operation and all NOSHOK valves are 100% helium leak tested for guaranteed reliability. Maximum pressure rating of 10,000 psi for Steel & Stainless Steel models.

Δ PRESSURE TO Δ PRESSURE ADAPTORS
NOSHOK differential pressure to differential pressure adaptors allow two differential pressure transmitters to be mounted on a single set of orifice taps. This configuration is ideal for applications such as bi-directional flow, and custody transfer where only a single set of orifice taps is available. Multiple adaptors are available for various application configurations and space restrictions.

VERTICAL TO HORIZONTAL ADAPTOR KIT
The Vertical to Horizontal Adaptor Kit converts vertically mounted Stabilized Connectors to a horizontal position for mounting additional valves and instrumentation.

All NOSHOK 316SS valve products meet the requirements of NACE MR0175/ISO 15156-3.
All NOSHOK valve products conform to the MSS SP-99 instrument valves standards, and valves supplied with packing also conform to MSS SP-132 compression packing systems for instrument valves standard.
NOSHOK FORCE PRODUCTS

NOSHOK offers mechanical and electronic force measurement instrumentation, including hydraulic load cells, load pins, tension and compression force transducers, S-type force transducers, custom force sensors, and chain hoist and weld force test kits.

Applications for NOSHOK Force Measurement Solutions include industrial weighing, spot welding, printing equipment, control systems, robotic equipment, extruders, vices, weight and level measurement for tanks, bunkers and silos, measurement of bearing and support forces for bridges (supporting framework and lifting gear), rock thrust measurement in fore poles in mines and tunnel construction, shear force measurement and many more.

Contact your NOSHOK Regional Sales Manager or the NOSHOK Customer Support Team for more information.
### CANADIAN REGISTRATION NUMBERS

CRN documents are available at www.noshok.com.

<table>
<thead>
<tr>
<th>Category:</th>
<th>C. Valves</th>
<th>F. Measuring Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Fitting:</td>
<td>All line valves</td>
<td>Including pressure gauges, level gauges, sight glasses, level or pressure transmitters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Province</th>
<th>CRN Number</th>
<th>CRN Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta</td>
<td>0C15217.52</td>
<td>0F15217.52</td>
</tr>
<tr>
<td>British Columbia</td>
<td>Exempt</td>
<td>0F15217.51</td>
</tr>
<tr>
<td>Manitoba</td>
<td>0C15217.54</td>
<td>0F15217.54</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>0C15217.57</td>
<td>0F15217.57</td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>0C15217.50</td>
<td>0F15217.50</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>0C15217.5T</td>
<td>0F15217.5T</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>0C15217.58</td>
<td>0F15217.58</td>
</tr>
<tr>
<td>Nunavut</td>
<td>0C15217.5N</td>
<td>0F15217.5N</td>
</tr>
<tr>
<td>Ontario</td>
<td>0C15217.5</td>
<td>0F15217.5</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>0C15217.59</td>
<td>0F15217.59</td>
</tr>
<tr>
<td>Quebec</td>
<td>CSA-0C15217.56</td>
<td>CSA-0F15217.56</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>CSA-0C15217.56</td>
<td>CSA-0F15217.56</td>
</tr>
<tr>
<td>Yukon Territory</td>
<td>0C15217.5Y</td>
<td>0F15217.5Y</td>
</tr>
</tbody>
</table>
Quality Policy

NOSHOK is committed to providing a high degree of value and continually improving processes to enhance customer satisfaction by focusing on customer requirements for the design, manufacture and distribution of pressure, level, temperature, and force measurement instrumentation, needle, manifold valves, custom manifold systems for industrial applications and compressed air filters.
All from world class technology.

Combined with real-world stamina.

The highest value with the industry’s best warranty.

And all from a company with a 50+ year record of customer satisfaction.

All from your Single Source Instrumentation Company.