

The background of the entire page is a composite image of an oil and gas facility. It features a tall, dark derrick structure on the left, a pumpjack in the middle ground, and a worker in a blue uniform and white hard hat on the right, working on a large red valve. The scene is set against a warm, orange and yellow sky, suggesting a sunrise or sunset. The overall tone is industrial and professional.

NOSHOK

**MEASUREMENT SOLUTIONS FOR
THE OIL & GAS INDUSTRY**

WELL SERVICING UPSTREAM MIDSTREAM DOWNSTREAM OFFSHORE



Our broad offering of instrumentation for the oil & gas industry addresses applications including:

- Conventional Oil & Gas Plays
- Unconventional Oil & Gas Plays
 - Oil Sands
 - Coal Bed
 - Shale
 - Offshore

APPLICATION ASSEMBLIES



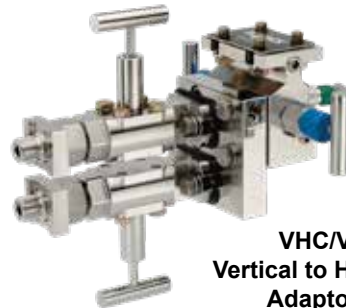
Direct Connect Assembly

Provides an installation that keeps the meter close to the orifice taps for accurate flow measurements.

- Reduces traditional remote mount installation costs by eliminating tube ends, tube fittings, stainless steel tubing, pipe stands and mounting brackets
- Decreases leak points by reducing NPT connections
- Minimizes or eliminates gauge line error
- Can include 2- or 5-valve manifolds including the NOSHOK Flare Pattern™ 5-Valve Natural Gas Manifold, as well as Stabilized Connectors, Stabilized Connectors with Integral Valve, Non-Stabilized Connectors and Dielectric Kits
- Wide variety of adapter options including Δ Pressure to Δ Pressure Adaptor, Δ Pressure to Static Pressure Plate, Static Adaptors and Horizontal to Vertical Adaptors



DP2DP2-CS
 Δ Pressure to Δ Pressure Adaptor



VHC/VHS
Vertical to Horizontal
Adaptor Kit



DK1 Dielectric Kit



Indication, Output and Block & Bleed Assembly

Three components with one process connection provide local indication, analog output and block/bleed isolate with bleed function.

- Easily isolates instruments
- Available in a wide variety of pressure ranges up to 10,000 psi
- Other options include bleed plug and bleed valve



804-MFS
Bleed Valve

Your Single Source Instrumentation Company

NOSHOK

PRESSURE MEASUREMENT SOLUTIONS

Pressure Gauges

Full offering to address vacuum and pressure from 10 inH₂O through 145,000 psig, as well as differential pressure applications.

3 YEAR WARRANTY

- Vibration, shock, pulsation and chemical resistant
- Available in dial sizes of 1-1/2" to 6", bottom and back connected, with wetted parts in copper alloy or 316L stainless steel
- High quality construction including heavy Bourdon tubes for longer life
- Liquid filled and dry configurations available

Transmitters and Transducers

Available in vacuum, absolute and gauge pressure ranges up to 145,000 psig.

3 YEAR WARRANTY

- Explosion-proof, non-incendive, intrinsically safe vapor recovery & intrinsically safe hammer union models
- Vibration & chemical resistant with a full array of outputs (4-20 mA, 0-0 Vdc, .5-4.5 Vdc, etc.)
- Extremely stable zero and span
- Full offering in the low power units when used with solar power or battery power
- NACE Compliant
- High RFI, EMI & ESD protection



LEVEL MEASUREMENT SOLUTIONS

Includes low pressure gauges, transducers and submersible transducers designed to measure head pressures from inches of water, feet of water, to psig.

3 YEAR WARRANTY

- Reliable and cost-effective approach to level measurement
- Pressurized vessels and well sites can be accurately measured using a dual transducer approach
- Available in hazardous location versions



Your Single Source Instrumentation Company

NEEDLE VALVE & MANIFOLD VALVE SOLUTIONS



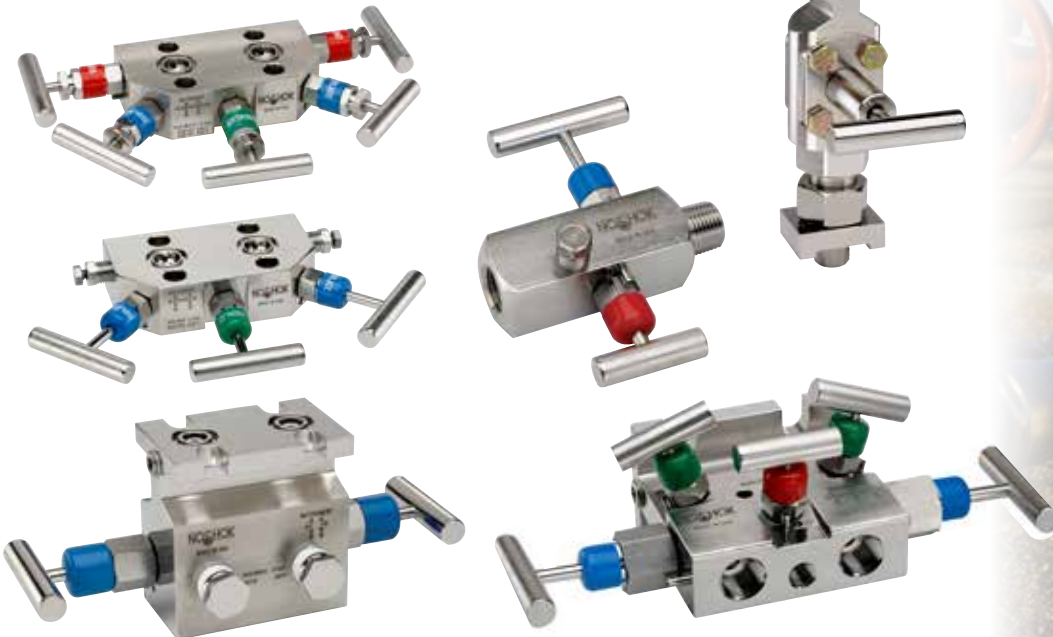
NOSHOK carbon steel valves are among the first in the industry to come standard with zinc nickel plating, an alloy which provides exceptional corrosion resistance. Other benefits of zinc nickel plating include:

- Increased deposit hardness
- Extended wear resistance
- Longer service life
- WEEE & RoHS compliant



3 YEAR WARRANTY

- Standard bore & large bore manifold valves, needle valves, and block & bleed valves with hard or soft seat/tip designs
- Mini valves feature a patented design which significantly increases the pressure rating up to 10,000 psi without compromising the flow coefficient (Cv)
- Flare Pattern™ option on 5-valve manifolds allows maximum finger clearance during operation
- 90° Angle option on 2- and 5-valve manifolds
- Stabilized Connectors & Stabilized Connectors with Integral Valve reinforce the installation by shifting radial-stress load away from the NPT connections; Non-Stabilized also available
- Carbon Steel, Stainless Steel & Brass material options
- 3- & 5-Valve Compact Manifolds with MSS SP-99 and Coplanar™ spacing; 5-valve option is available with power pattern or natural gas flow path
- Custom designs available



NOSHOK

TEMPERATURE MEASUREMENT SOLUTIONS

Bimetal and Vapor Actuated Thermometers

Vapor actuated thermometers and bimetal thermometers to address temperatures from -100°F to $1,000^{\circ}\text{F}$.

1 - 8 YEAR WARRANTIES

- Reliable and cost effective temperature measurement
- Full offering of thermowells to address corrosive and erosive fluids, high volume flow lines and tanks
- High volume producer of vapor actuated thermometers to the oil and gas industry, offering a full array of options including capillary length, dial sizes, panel mount configurations and temperature ranges

Temperature Transmitters, Transducers & RTDs

NOSHOK temperature transmitters, transducers & RTDs address temperatures from -40°F up to $1,100^{\circ}\text{F}$.

3 YEAR WARRANTY

- Simple RTD primary element with or without built-in amplifier
- Hazardous location, explosion proof models available
- Full offering of stem lengths and options for electrical connections
- Can be used in conjunction with a thermowell to address harsh applications

Thermowells

NOSHOK offers thermowells with a $1/2"$ NPSM instrument connection, $3/4"$ NPT process connection (standard), $1/2"$ NPT and $1"$ NPT. Flanged and sanitary process connections are also available.

1 YEAR WARRANTY



FORCE MEASUREMENT SOLUTIONS

NOSHOK provides load cells and force sensors for most applications, that include:

- Hydraulic load cells
- Tension compression load cells
- Load pins
- Silo kit systems for tank weighing

1 YEAR WARRANTY

- Local or remote indication
- Fully amplified output signals including 4 to 20 mA, 0 to 10 Vdc, etc.
- Silo kit package offers a turn key solution for tank or vat weighing



NOSHOK is an industry leader in providing high quality, reliable & robust instrumentation to the oil & gas market. For over four decades, we have offered expertise in providing measurement solutions for a variety of applications, such as:

PRESSURE, TEMPERATURE & LEVEL MEASUREMENT

- Well automation (tubing & casing pressure)
- Compressor packages & compressor stations
- Mobile and stationary equipment control panels
- Hydraulic measurement
- Vapor recovery
- Hammer union
- Pump suction & discharge
- Engine monitoring
- Injection systems
- Local indication on distribution lines, tanks & vessels
- Remote measurement on service vehicles including blending, frac, cementing, wireline, workover etc.
- True water level measurement in coal bed natural gas wells
- Tank level
- BOP and subsea controls
- Filtration diagnostics

NEEDLE & MANIFOLD VALVES

- Safety shutoff
- Block, bleed and isolation of critical instrumentation
- Retrofit manifold make up for use on pneumatic recorders and meters
- Manifolds for differential pressure measurement and flow measurement

FORCE MEASUREMENT

- Pump jacks
- Pulling units
- Overhead cranes, chain hoists and cable hoists



Corporate Headquarters

1010 West Bagley Road

Berea, Ohio 44017

Ph: 440.243.0888

Fax: 440.243.3472

E-mail: noshok@noshok.com

Web: www.noshok.com



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