

Block & Bleed, Hard Seat & Soft Seat

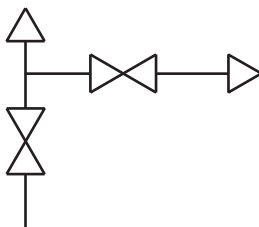
2000/2100 SERIES



Note: Packing option shown.

- Combines isolating and venting in a single valve, eliminating the need for tubing and fittings
- 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
- Block valve is located on the left side and the bleed valve is located on top in a 90° orientation, venting is to the right
- 100% helium leak tested to 1×10^{-4} ml/s for guaranteed performance and reliability
- 2000 Series hard seat valves have 10,000 psi pressure rating @ 200 °F
- 2100 Series soft seat valves have 6,000 psi pressure rating @ 200 °F
- 2100 Series valve also features a replaceable Delrin® seat, and straight through porting for bidirectional, high capacity flow and easy roddable cleaning
- Blow-out proof stem provides a secondary stem seal in the full open position
- FKM o-ring seal and PTFE back-up ring below the stem threads to protect from corrosion and galling; PTFE or Grafoil® packing optional
- All stems are 316 stainless steel
- Stem and bonnet threads are rolled for strength and ease of operation
- One-piece bonnet with a metal-to-metal seal to the valve body below the bonnet threads
- Slotted spring pin to prevent accidental loosening
- Vinyl dust caps for bonnets and stems (non-packing)
- Zinc-nickel plated high tensile strength 4140 steel mounting bolts included for flanged connections

Flow Schematic



SPECIFICATIONS

Materials	Zinc-nickel plated steel, electropolished 316 stainless steel
Connection	1/2" NPT, 1/4" NPT, NPT-flange, Flange-flange, NPT-NPT configurations available
Pressure ratings*	Hard seat: 10,000 psi @ 200 °F Soft seat: 6,000 psi @ 200 °F
Orifice size	0.187"
Flow coefficient	Hard seat: C_v 0.44 Soft seat: C_v 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
Weight	Approximately 2.2 lb.

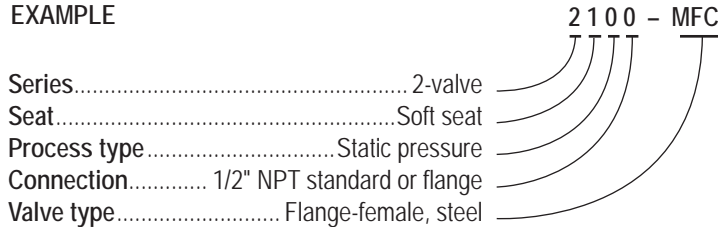
* If a packing option is chosen, maximum pressure rating is 6,000 psi. Refer to the "Pressure vs. Temperature: Packing Style with Compatible Fluid" chart at the back of this catalog.

NOTE: 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.

ORDERING INFORMATION			
SERIES	2 2-valve		
SEATS	0 Hard seat	1 Soft seat	
PROCESS TYPE	0 Static pressure		
CONNECTIONS	0 1/2" NPT standard or flange	2 1/4" NPT	
VALVE TYPES	MFC Flange-Female, Steel	MFS Flange-Female, Stainless Steel	MMC Flange-Flange, Steel
	FFC Female-Female, Steel	FFS Female-Female, Stainless Steel	MMS Flange-Flange, Stainless Steel

Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

EXAMPLE



To meet all of your specific application requirements, the following additional options are available for these manifold valves. To order all or any of these options, simply add them to the part number as shown in the diagram below.

NOTE 1: The example shown includes ALL possible additional options. Please include ONLY the options required for your application when building your part number. (EXAMPLE: 2100-MFC-P1)

NOTE 2: When a packing option is selected, an o-ring option is NOT available.

NOTE 3: T1 Hard non-rotating (316 SS standard) stem tip is the only option available on the 2100 Series soft seat version.

ORDERING INFORMATION - ADDITIONAL OPTIONS			
SOFT SEATS	PK1 PEEK	KF1 PCTFE	
PACKINGS†	P1 PTFE	P2 Grafoil***	
STEM TIPS	T1 Non-rotating (316 stainless)	T6 Ball (carbide)**	T8 Ball (Mone)**
	T5 Ball (440C stainless)**	T7 Ball (ceramic)**	T9 Regulating hard**
O-RINGS*	EM1 EPDM	KZ1 FFKM (Kalrez® 3018 or equivalent)	NB1 NBR
HANDLES	HL1 1-13/16" Mini "T"	HL4 1-3/8" Phenolic	
	HL3 1" Round knurled	HL5 1-3/4" Phenolic	

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† If a packing option is chosen, maximum pressure rating is 6,000 psi. Refer to the "Pressure vs. Temperature: Packing Style with Compatible Fluid" chart at the back of this catalog.

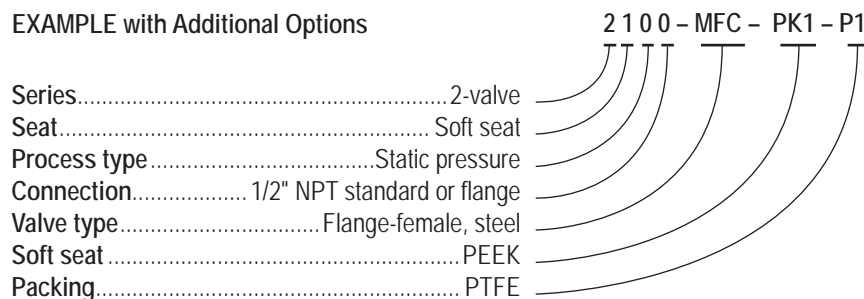
* Other o-ring materials available on request.

** For 2000 Series only.

Please note that the standard o-ring in all the NOSHOK valves is FKM and the standard handles are block "T" handles (HL2) and bleed 1-3/8" mini "T" handle (HL7).

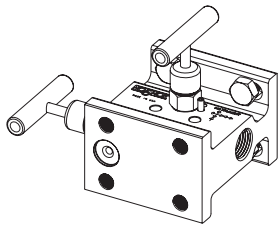
The handle material will always match the material of the valve, unless otherwise specified. For example, the "T" handle (HL2) on the 2100-MFC will be steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

EXAMPLE with Additional Options

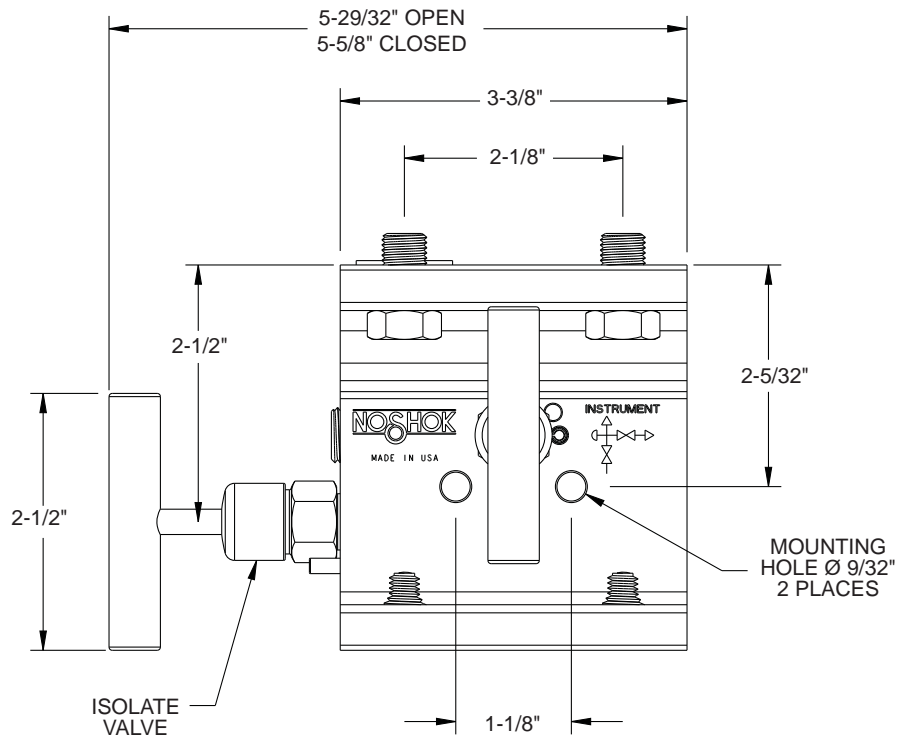


Dimensions

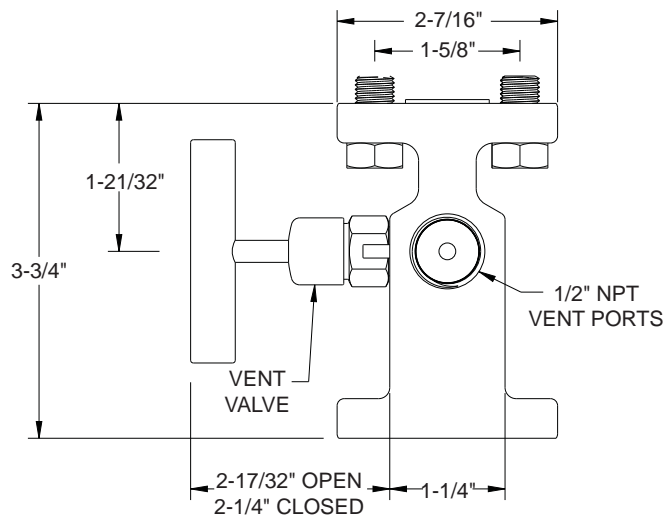
Flange-Flange



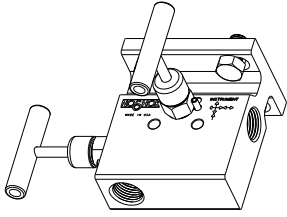
Top View



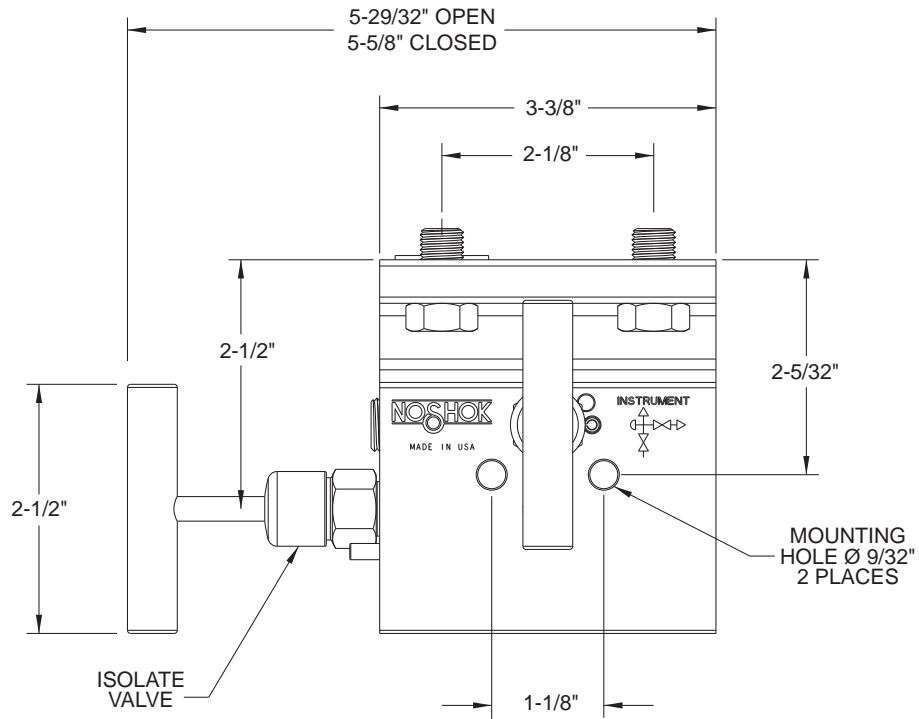
Side View



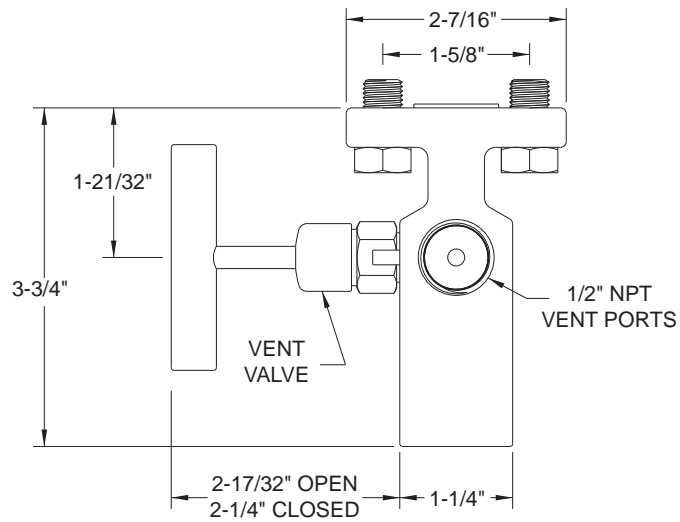
Flange-Female



Top View

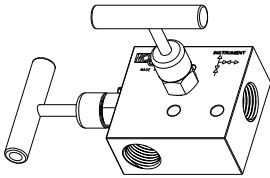


Side View

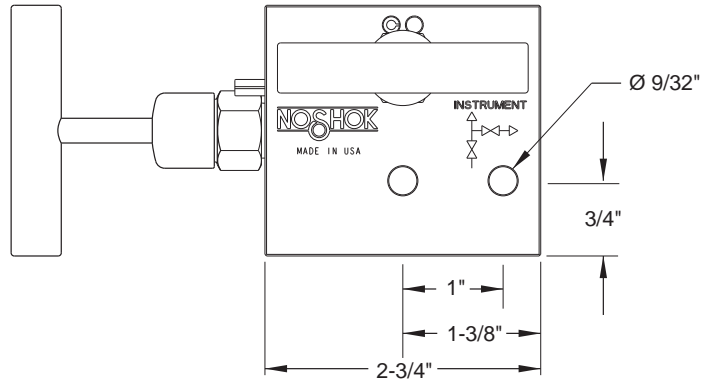


Dimensions

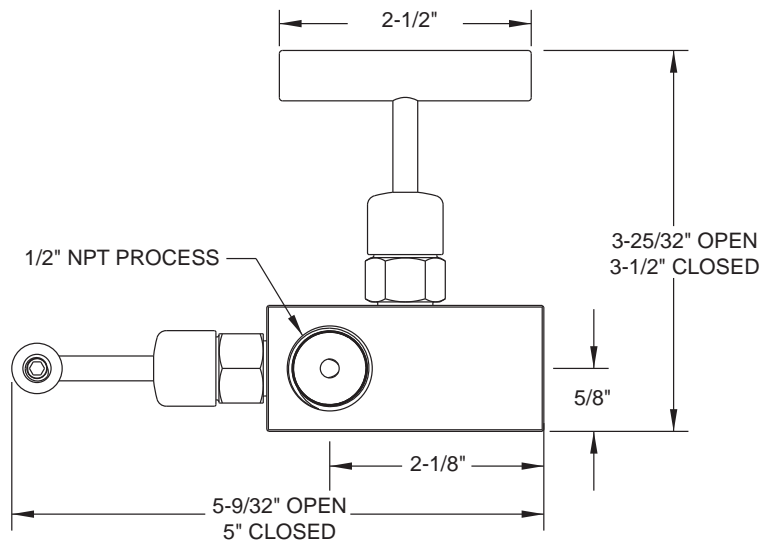
Female-Female



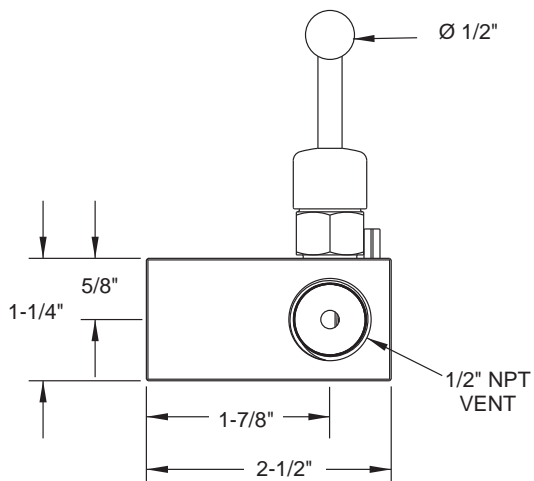
Top View



Front View



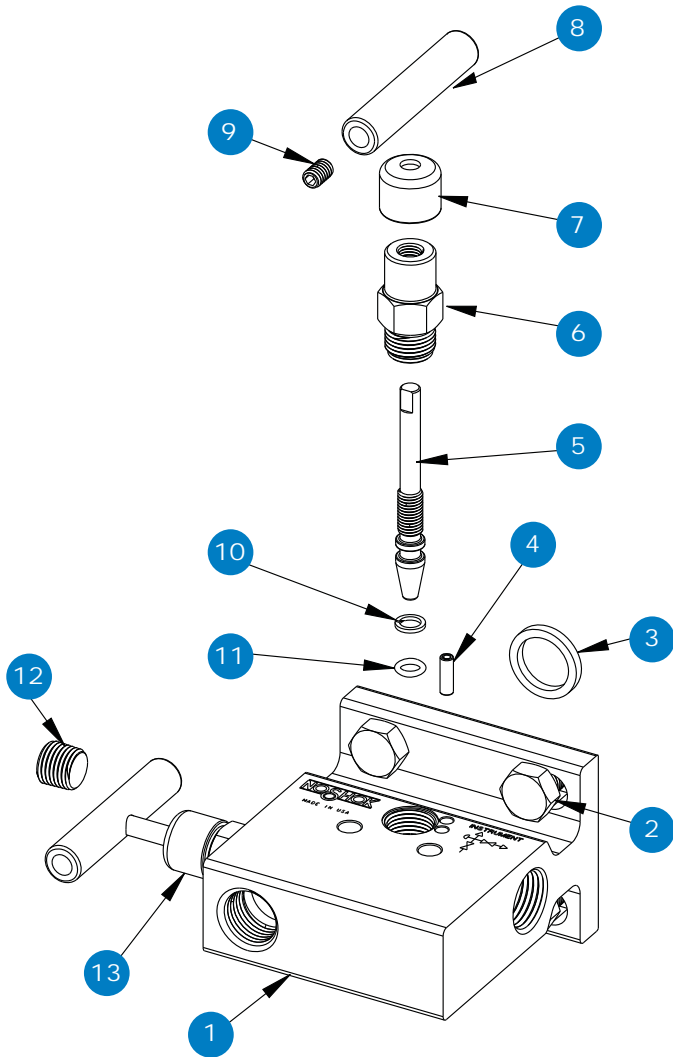
Side View



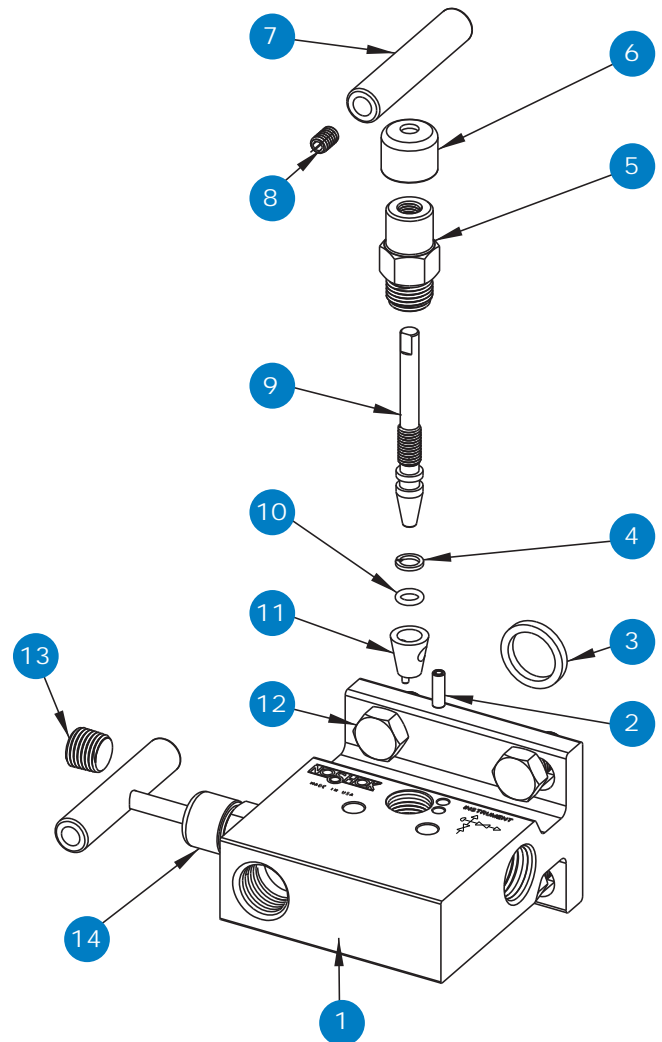
For panel mount and packing dimensions, see pgs. 64-65.

Hard Seat

Soft Seat



- 1 Valve body
- 2 Head bolt
- 3 Gasket ring
- 4 Slotted spring pin
- 5 Valve stem
- 6 Valve bonnet
- 7 Red dust cap
- 8 Valve "T" handle
- 9 Set screw
- 10 PTFE back-up ring
- 11 FKM o-ring
- 12 Plug
- 13 Blue dust cap



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- 2 Slotted spring pin
- 3 Gasket ring
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- 5 Valve bonnet
- 6 Red dust cap
- 7 Valve "T" handle
- 8 Set screw
- 9 Valve stem
- 10 FKM o-ring
- 11 Delrin® seat
- 12 Head bolt
- 13 Plug
- 14 Blue dust cap