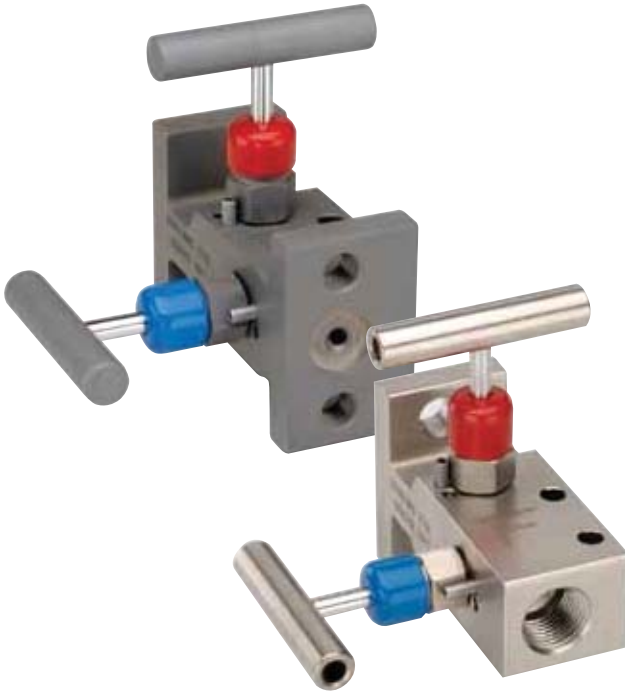


# Narrow Block & Bleed, Hard Seat & Soft Seat

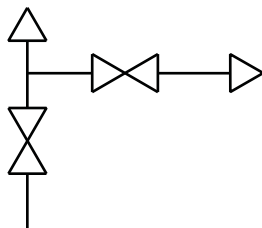
## 200002/210002 SERIES

## 200402/210402 SERIES



- 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  $1 \times 10^{-4}$  ml/s for guaranteed performance and reliability
- 200002/200402 Series hard seat valves have 10,000 psi pressure rating @200 °F
- 210002/210402 Series soft seat valves have 6,000 psi pressure rating @200 °F
- 210002/210402 Series valves also feature a replaceable Delrin® seat, and straight through porting for bidirectional, high capacity flow and easy roddable cleaning
- PCTFE or PEEK soft seat optional
- 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)

### Flow Schematic



### SPECIFICATIONS

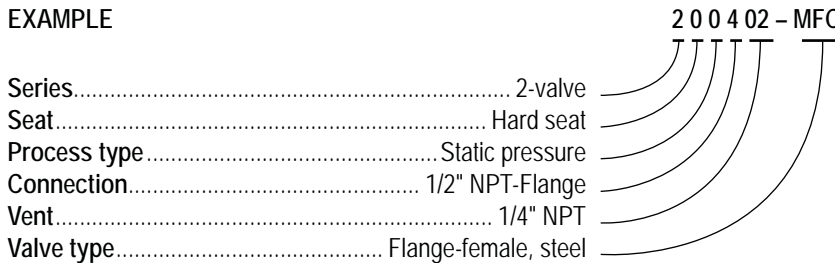
<b>Materials</b>	Zinc-nickel plated steel, electropolished 316 stainless steel
<b>Connection</b>	200002/210002 Series: Flange-flange, 1/4" NPT vent 200402/210402 Series: 1/2" NPT-flange, 1/4" NPT vent 200202/210202 Series: 1/4" NPT-flange, 1/4" NPT vent Left venting optional
<b>Pressure ratings</b>	Hard seat: 10,000 psi @ 200 °F Soft seat: 6,000 psi @ 200 °F
<b>Orifice size</b>	0.187"
<b>Flow coefficient</b>	Hard seat: $C_v$ 0.44 Soft seat: $C_v$ 0.76
<b>Stem seal &amp; type</b>	All 316 stainless steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE or Grafoil® packing optional
<b>Options</b>	Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips

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 Flange-flange	2 1/4" NPT-flange	4 1/2" NPT-flange (standard)
VENT	02 1/4" NPT		
VALVE TYPES	MFC Flange-Female, Steel	MMS Flange-Flange, Stainless Steel	MMCL Flange-Flange, Steel, Left Vent
	MFS Flange-Female, Stainless Steel	MFCL Flange-Female, Steel, Left Vent	MMSL Flange-Flange, Stainless Steel, Left Vent
	MMC Flange-Flange, Steel	MFSL Flange - Female, Stainless Steel, Left Vent	

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: 200402-MFC-P1)

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

**NOTE 3:** T1 Hard non-rotating (316 stainless standard) stem tip is the only option available on the 210002/210402 Series soft seat version.

ORDERING INFORMATION - Additional Options			
PACKINGS	P1 PTFE	P2 Grafoil**	
STEM TIPS	T1 Non-rotating (316 stainless)	T6 Ball (carbide)**	T8 Ball (Monel)**
	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	

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

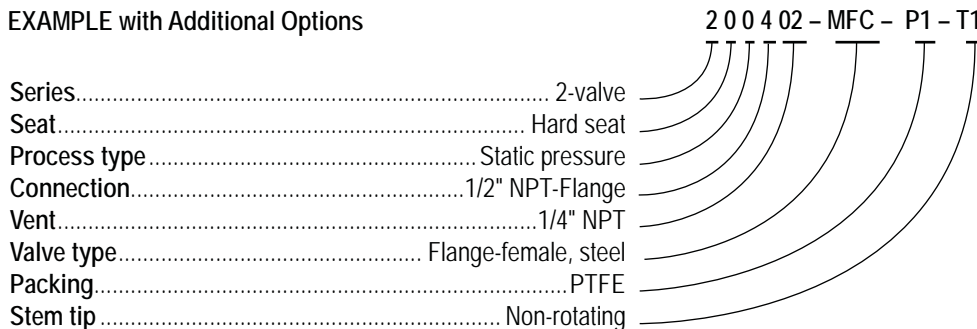
\* Other o-ring materials available on request.

\*\* For hard seat only.

Please note that the standard o-ring in all the NOSHOK valves is FKM and the standard handles are "T" handles (HL2).

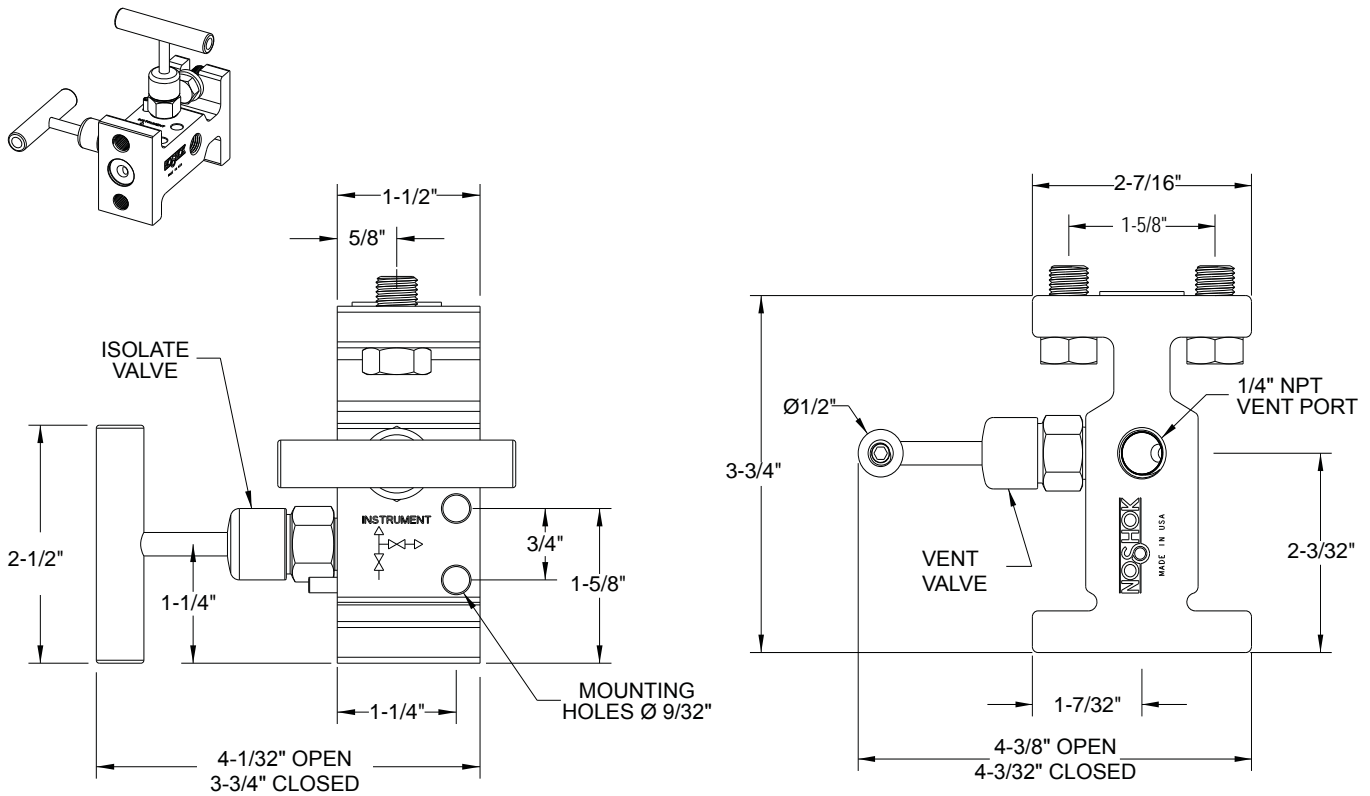
The handle material will always match the material of the valve, unless otherwise specified. For example, the "T" handle (HL2) on the 200402-MFC will be steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

**EXAMPLE with Additional Options**

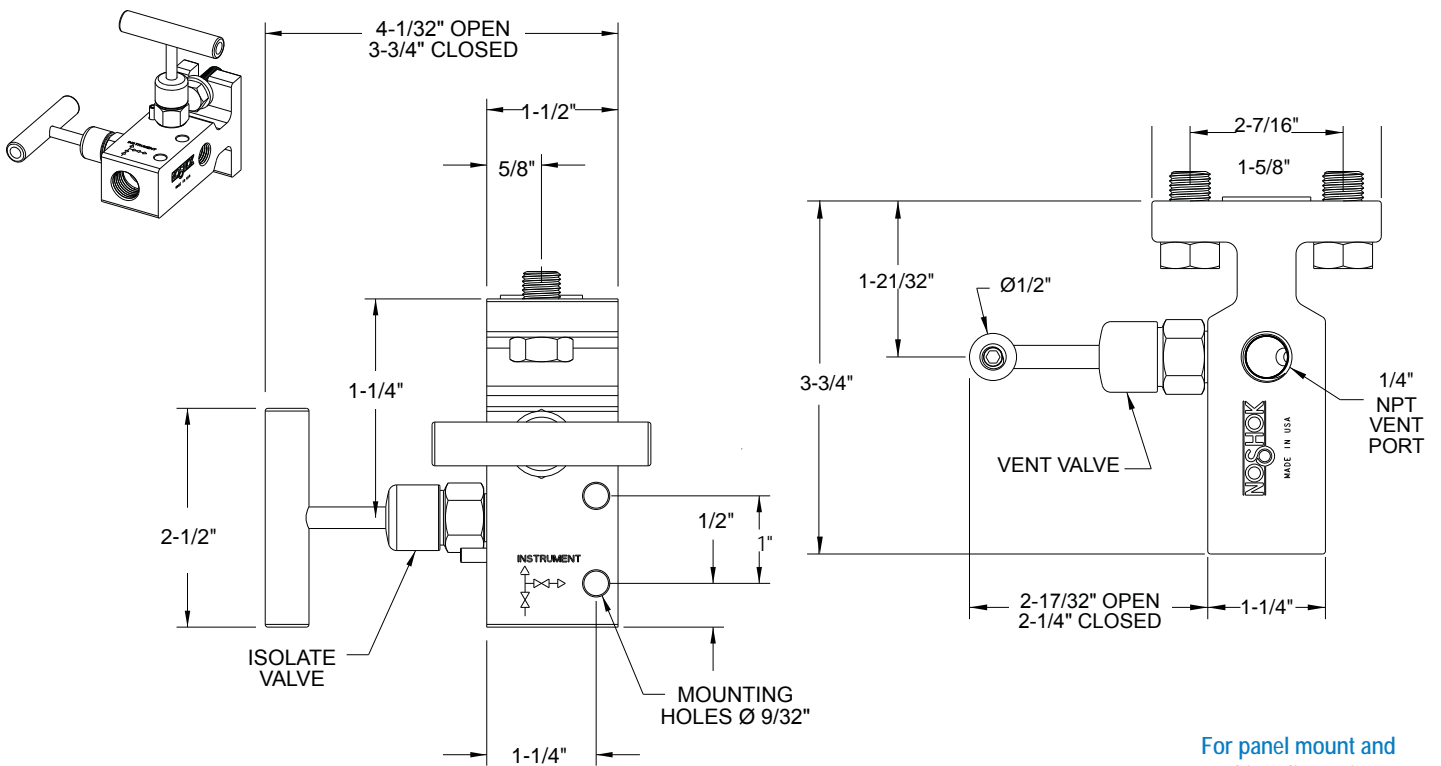


# Dimensions

## Flange-Flange

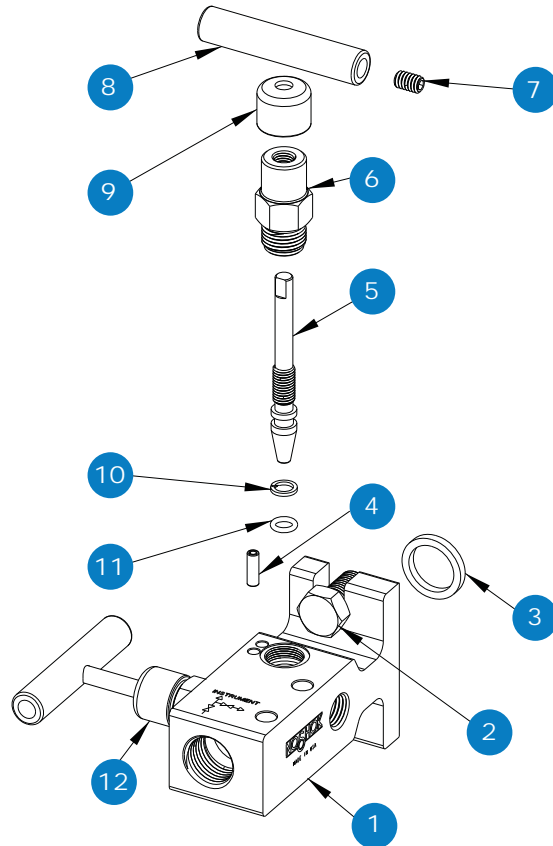


## Flange-Female



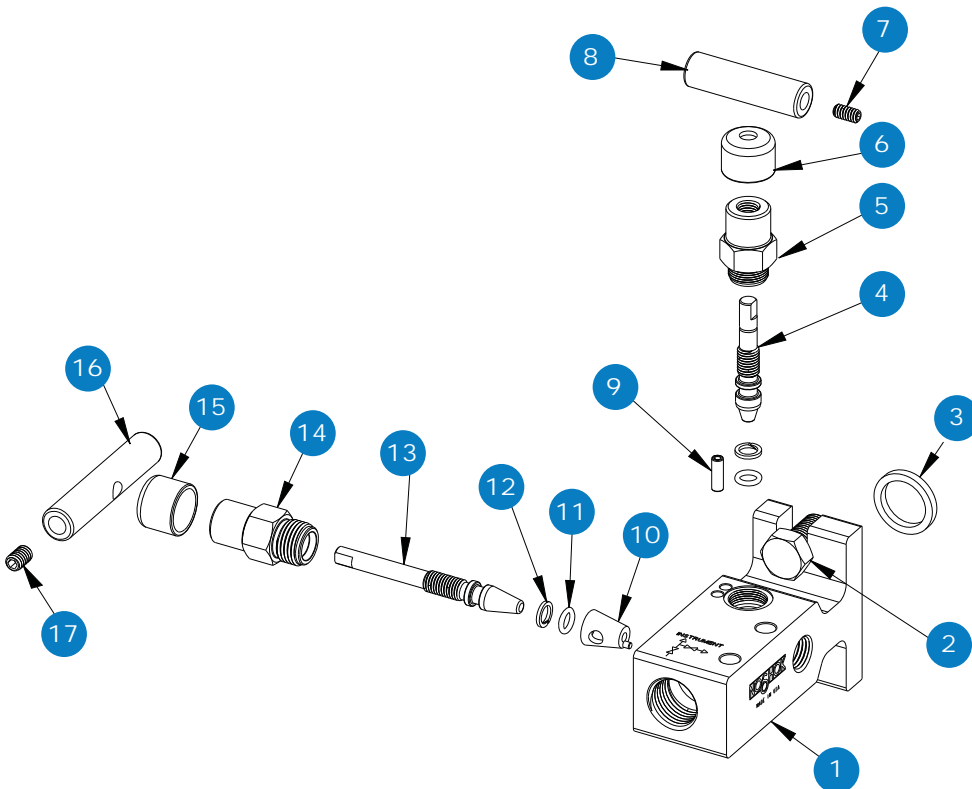
For panel mount and packing dimensions, see pgs. 64-65.

**Hard Seat**



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

**Soft Seat**



- 1 Valve body
- 2 Head bolt
- 3 Gasket ring
- 4 Soft tip valve stem
- 5 Valve bonnet
- 6 Red dust cap
- 7 Set screw
- 8 Valve "T" handle
- 9 Slotted spring pin
- 10 Delrin® seat
- 11 FKM o-ring
- 12 PTFE back-up ring
- 13 Valve stem
- 14 Valve bonnet
- 15 Blue dust cap
- 16 Valve "T" handle
- 17 Set screw