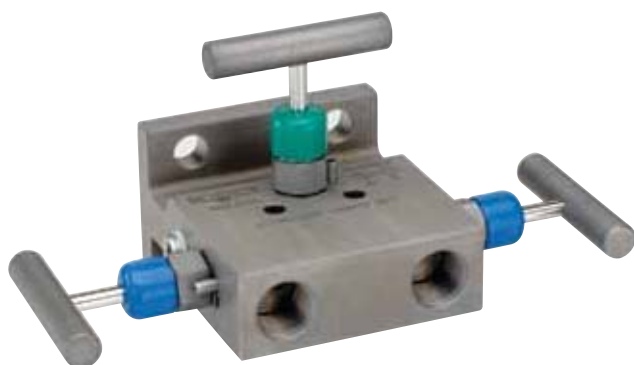


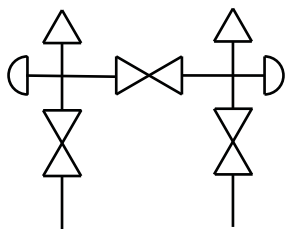
Hard Seat & Soft Seat

3010/3110 SERIES



- Available in block, single flange, or double flange connection for remote or direct installation
- Designed for use with differential pressure transmitters incorporating two isolation valves and an equalizing valve in differential pressure measurement
- 100% helium leak tested to 1×10^{-4} ml/s for guaranteed performance and reliability
- 3010 Series hard seat valves have 10,000 psi pressure rating @ 200 °F
- 3110 Series soft seat valves have 6,000 psi pressure rating @ 200 °F
- 3110 Series soft seat valves also feature 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
- All stem 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

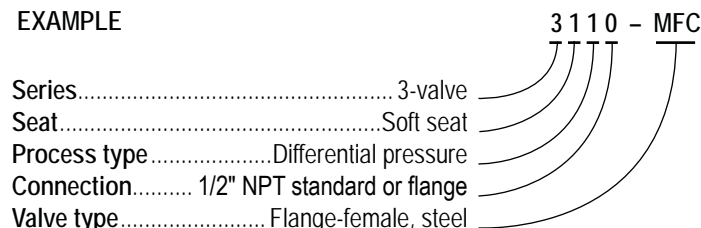
Materials	Zinc-nickel plated steel, electropolished 316 stainless steel
Connection	Flange-flange, 1/2" NPT-flange, 1/2" NPT-1/2" NPT
Pressure ratings	Hard seat: 10,000 psi @ 200 °F Soft seat: 6,000 psi @ 200 °F
Orifice size	0.187"
Flow coefficient	Hard seat: C_v 0.44 Soft seat: C_v 0.76
Stem seal & type	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

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	3	3-valve				
SEATS	0	Hard seat		1	Soft seat	
PROCESS TYPE	1	Differential pressure				
CONNECTION	0	1/2" NPT standard or flange				
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: 3110-MFC-P1)

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

NOTE 3: The standard o-ring in all the NOSHOK manifold valves is FKM and T1 hard non-rotating (316SS standard) stem tip is the only option available on the 3110 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 (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.

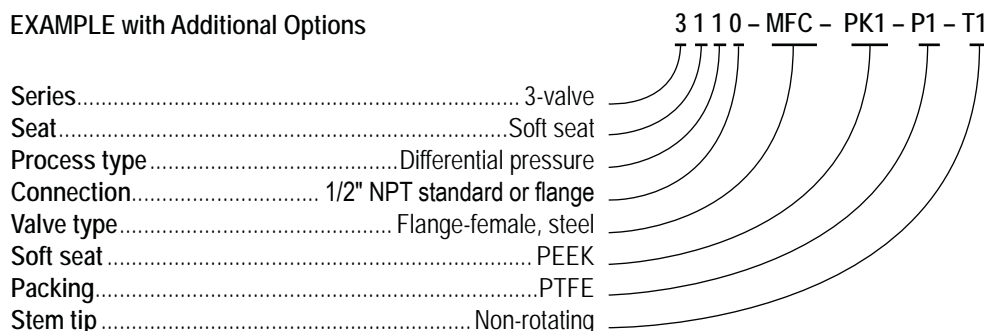
* Other o-ring materials available on request.

** For 3010 only.

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

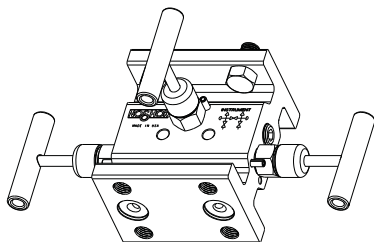
The handle material will always match the material of the valve, unless otherwise specified. For example, the "T" handle (HL2) on the 3110-MFC will be steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

EXAMPLE with Additional Options

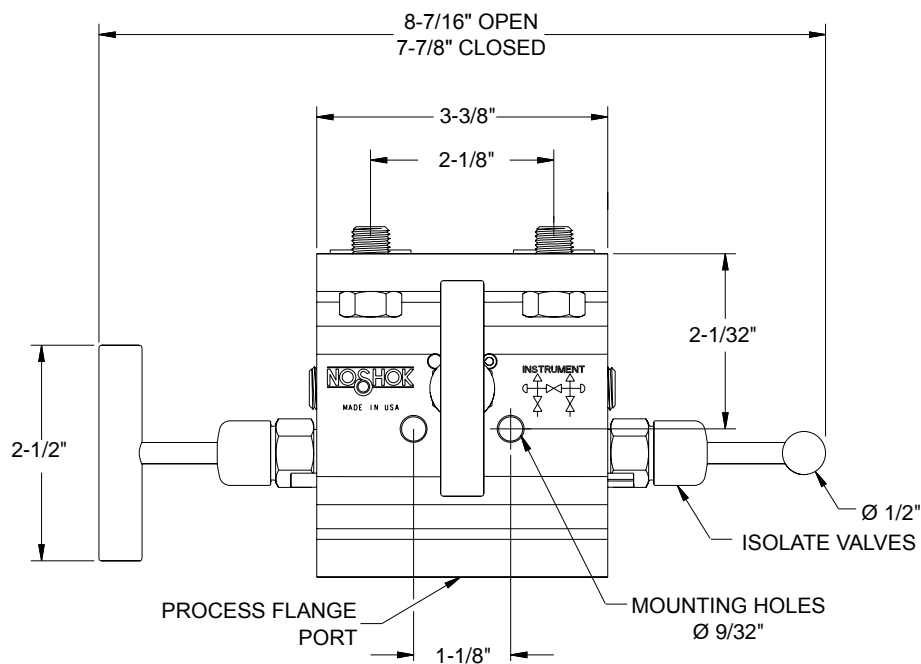


Dimensions

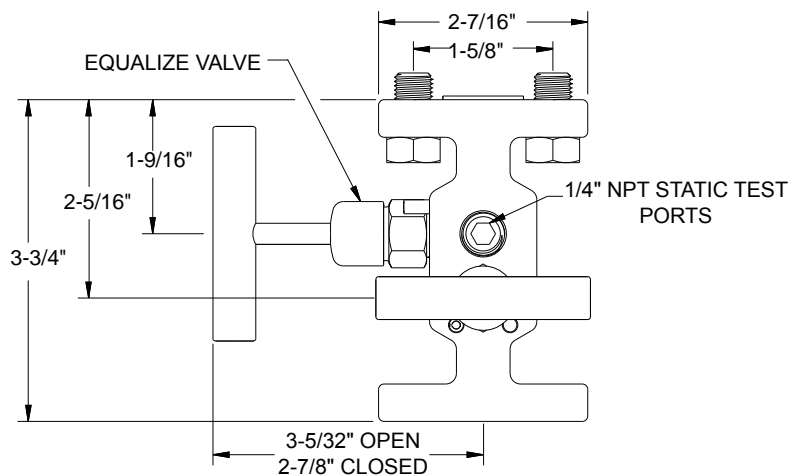
Flange-Flange



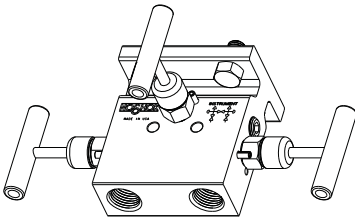
Top View



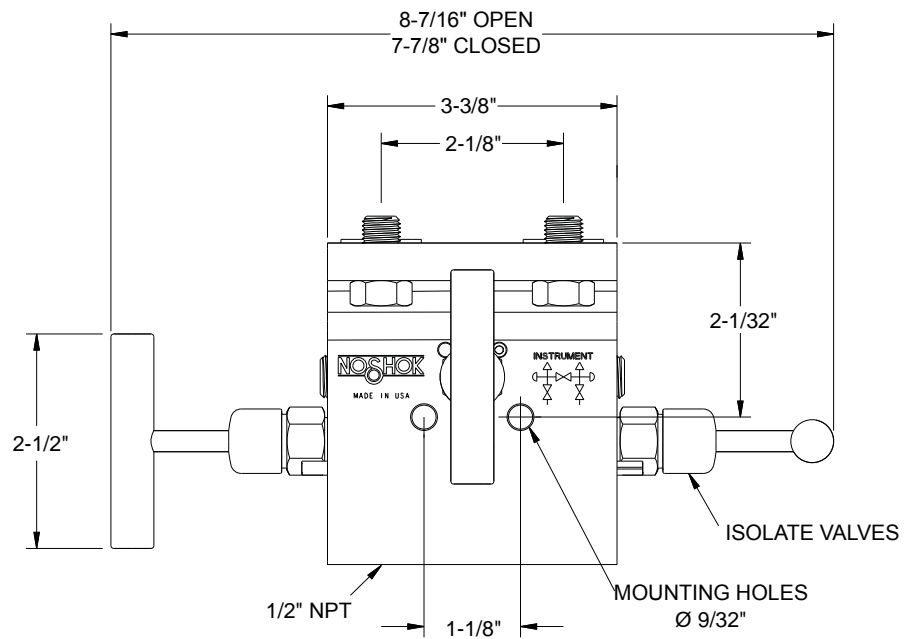
Side View



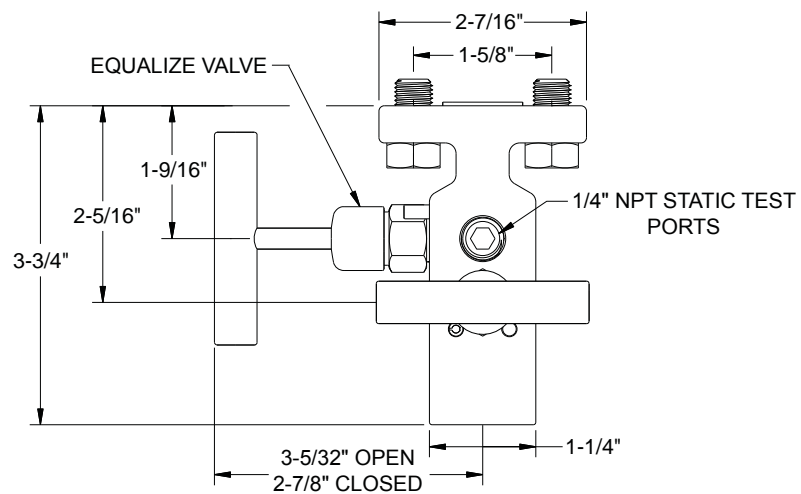
Flange-Female



Top View

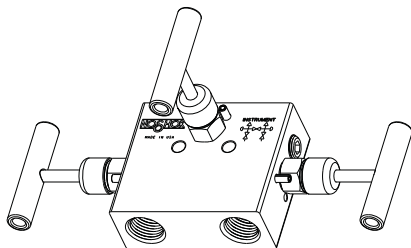


Side View

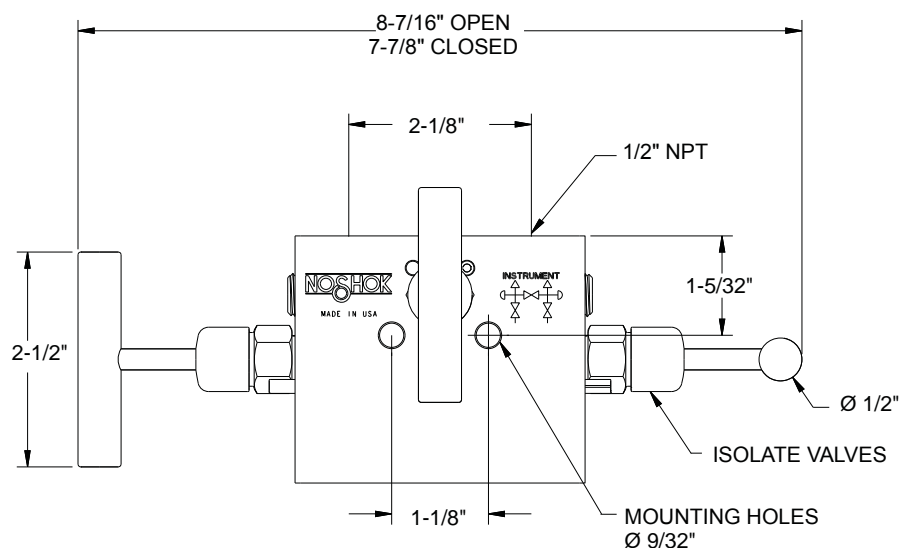


Dimensions

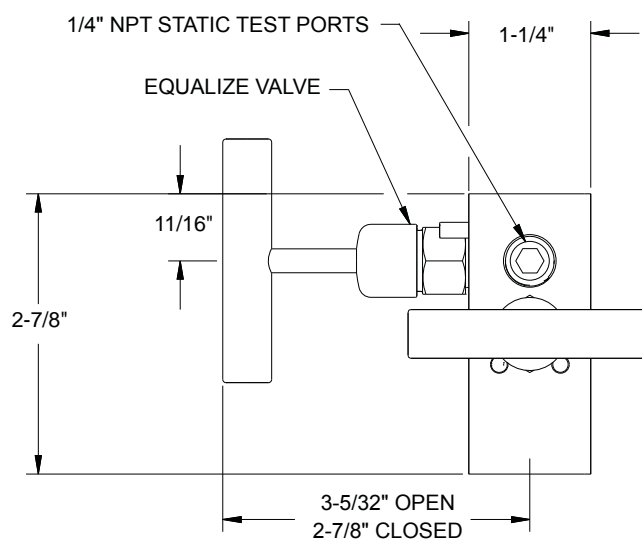
Female-Female



Top View



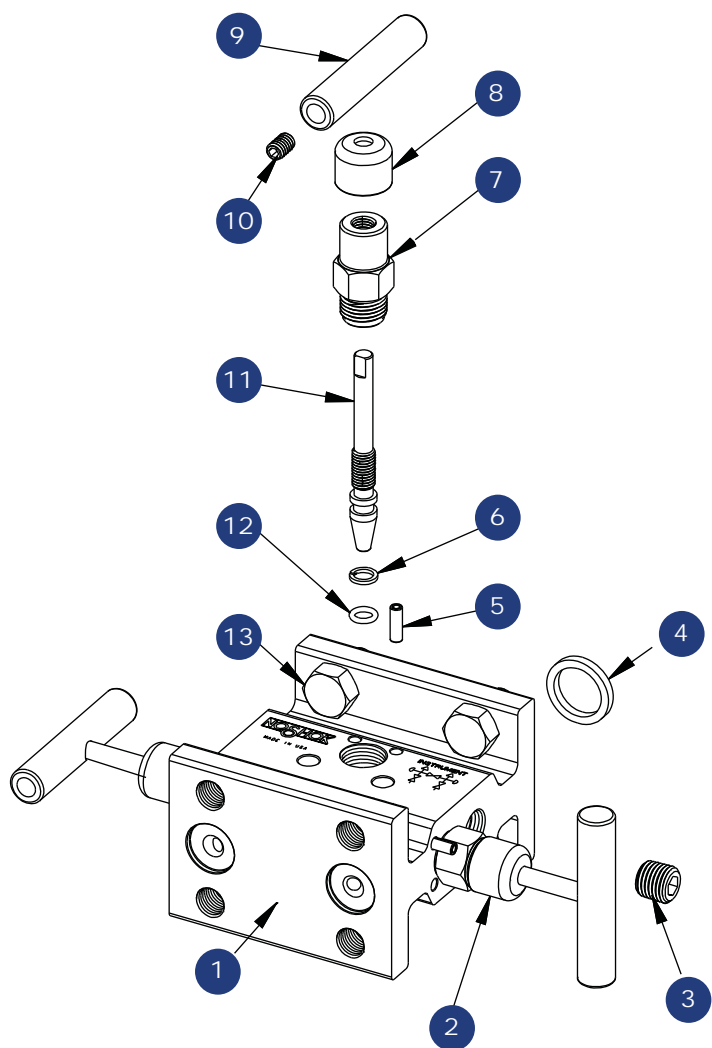
Side View



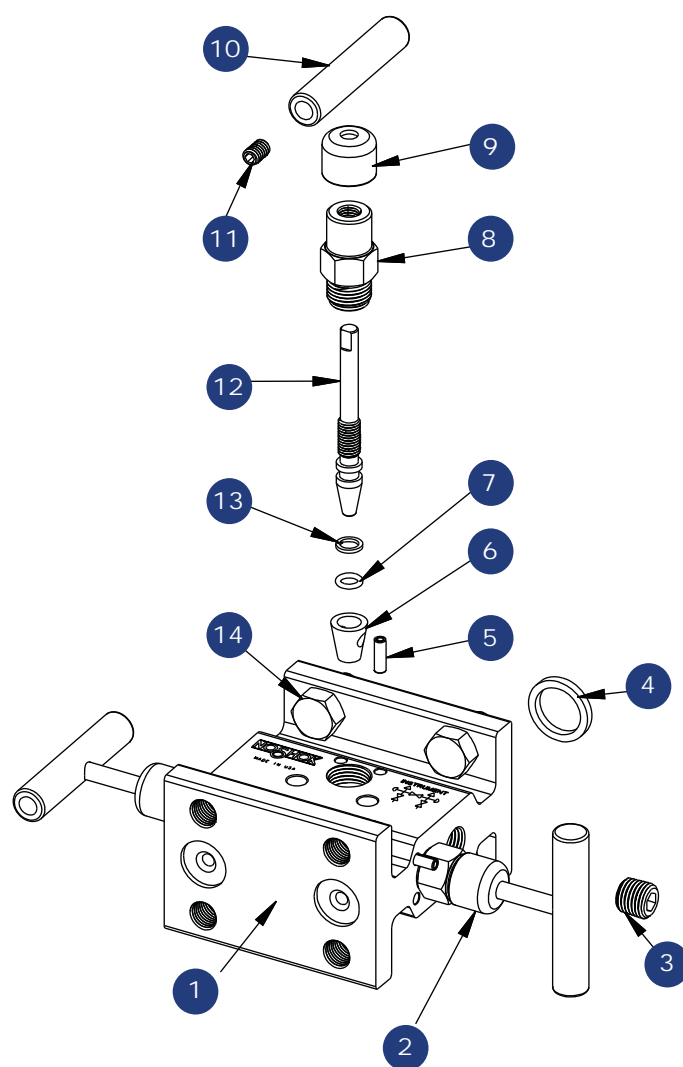
For panel mount and packing dimensions, see pgs. 64-65.

Hard Seat

Soft Seat



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



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