

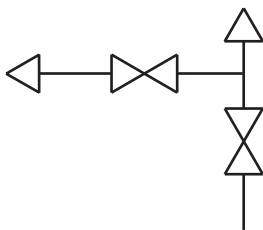
# Mini Block & Bleed, Hard Seat & Soft Tip (0.141" Orifice)

## 2602/2702 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
- Valves are located on the top to fit into compact spaces and two holes are provided for mounting, venting is to the left
- 100% helium leak tested to  $1 \times 10^{-4}$  ml/s for performance and reliability
- Soft tip valves feature a patented Acetal non-rotating soft tip stem, and a back-up metal-to-metal seal (**U.S. Patent 6,820,857**)
- 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 Graphite packing optional
- 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
- Color coded vinyl dust caps for bonnets and stems (non-packing)
- Patented body-to-bonnet, metal-to-metal seal is designed to significantly increase the pressure range of the valve (**U.S. Patent 7,758,014**)

### Flow Schematic



### SPECIFICATIONS

<b>Materials</b>	Zinc-Nickel plated Steel, electropolished 316 Stainless Steel*
<b>Connections</b>	1/4" NPT, 1/8" NPT, right venting optional
<b>Pressure ratings**</b>	Hard seat: 10,000 psi @ 200 °F Soft tip: 6,000 psi @ 200 °F
<b>Orifice size</b>	0.141"
<b>Flow coefficient</b>	Hard seat: $C_v$ 0.38 Soft tip: $C_v$ 0.38
<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 Graphite packing optional
<b>Options</b>	Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips
<b>Weight</b>	Approximately 1.4 lb.

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

\*\* 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.

For NOSHOK Valves with Steel valve types:



**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

For NOSHOK Valves with Stainless Steel valve types:



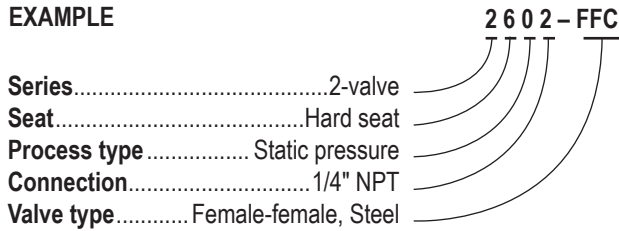
**WARNING:** This product can expose you to chemicals including Chromium (VI) and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**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.

<b>SERIES</b>	2 2-valve	
<b>SEATS</b>	6 Hard seat	7 Soft tip
<b>PROCESS TYPE</b>	0 Static pressure	
<b>CONNECTIONS</b>	1 1/8" NPT	2 1/4" NPT
<b>VALVE TYPES</b>	FFC Female-Female, Steel	FFCR Female-Female, Steel, Right Vent
	FFS Female-Female, Stainless Steel	FFSR Female-Female, Stainless Steel, Right 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: 2602-FFC-P1)

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

ORDERING INFORMATION - ADDITIONAL OPTIONS				
<b>PACKINGS†</b>	P1 PTFE	P2 Graphite**		
<b>STEM TIPS</b>	T1 Non-rotating (316 Stainless)	T4 PEEK***	T7 Ball (ceramic)**	T10 Regulating Acetal***
	T2 Acetal (Acetal)***	T5 Ball (440C Stainless)**	T8 Ball (Monel)**	T11 Regulating PCTFE***
	T3 PCTFE***	T6 Ball (carbide)**	T9 Non-rotating regulating (316 Stainless)**	T12 Regulating PEEK***
<b>O-RINGS*</b>	EM1 EPDM	KZ1 FFKM (Perfluoroelastomer)	NB1 NBR	
<b>HANDLES</b>	HL3 1" Round knurled			

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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.

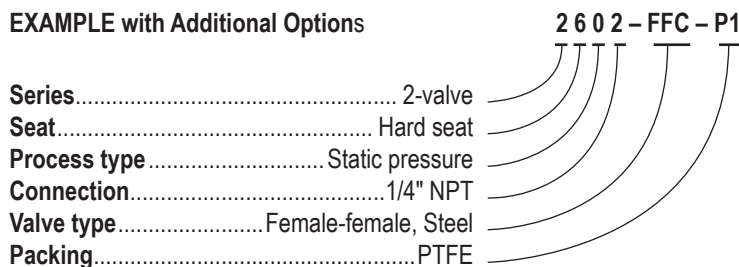
\*\* Hard seat only.

\*\*\* Soft tip only.

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

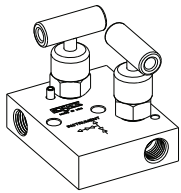
The handle material will always match the material of the valve, unless otherwise specified. For example, the 1-3/8" mini "T" handle (HL7) on the 2602-FFC will be Steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

**EXAMPLE with Additional Options**

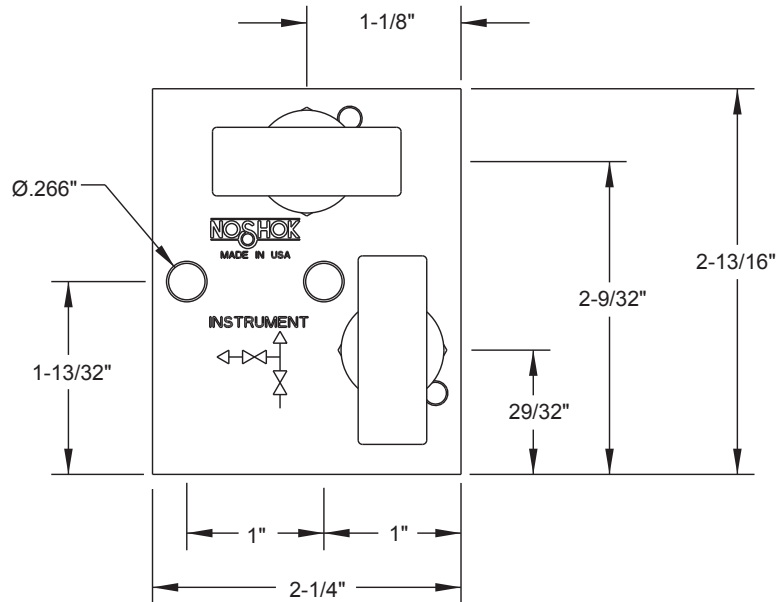


# Dimensions

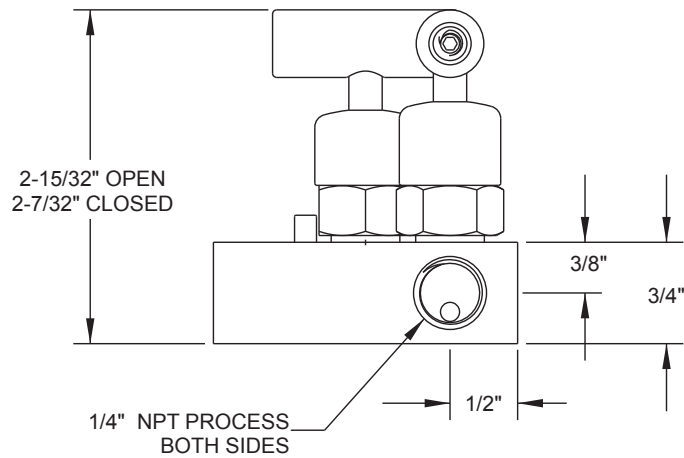
## Female-Female



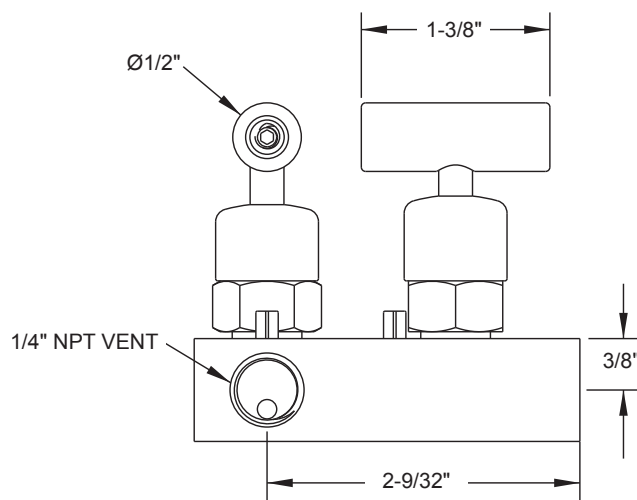
Top View



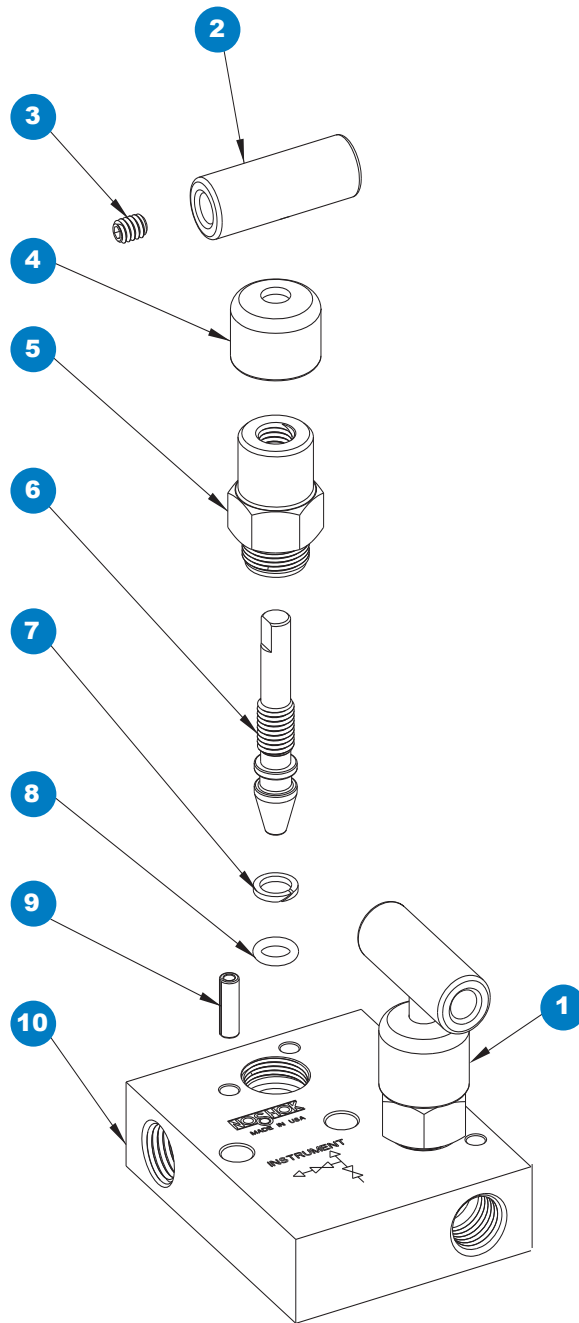
Front View



Side View



For panel mount or packing dimensions, see pg. 66.



- 1 Blue dust cap
- 2 Mini valve "T" handle
- 3 Set screw
- 4 Red dust cap
- 5 Mini valve bonnet
- 6 Soft tip stem or mini valve stem
- 7 PTFE back-up ring
- 8 FKM o-ring
- 9 Slotted spring pin
- 10 Valve body