

## Block &amp; Bleed, Hard Seat

## 600 SERIES



- Block & bleed design allows pressure to be bled off without disturbing the permanent piping installation, allowing quick and easy removal or replacement of instruments
- 100% helium leak tested to  $1 \times 10^{-4}$  ml/s for performance and reliability
- 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
- 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 cap for bonnet and stem (non-packing)
- 0.090" bleed hole located on the bottom is controlled by a 1/4"-20 UNF-2A bleed screw

## SPECIFICATIONS

<b>Materials</b>	Zinc-Nickel plated Steel, electropolished 316 Stainless Steel*
<b>Connections</b>	1/4" & 1/2" NPT Male-female & Female-female configurations
<b>Pressure rating**</b>	10,000 psi @ 200 °F
<b>Orifice size</b>	0.187"
<b>Flow coefficient</b>	$C_v$ 0.44
<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 1.3 lb. up to 1/2" Approximately 4.5 lb. Large Hex, Female-Female Approximately 6 lb. Large Hex, Male-Female

\* 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.



**WARNING:** This product can expose you to chemicals including Lead 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>	6 600 Series, hard seat
<b>CONNECTION SIZES</b>	02 1/4" NPT
<b>VALVE TYPES</b>	MFC Male-Female, Steel FFC Female-Female, Steel
	MFS Male-Female, Stainless Steel FFS Female-Female, Stainless Steel

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

**EXAMPLE**

Series..... 600 hard seat  
Connection size..... 1/4" NPT  
Valve type..... Female-female, Steel

602 - FFC

To meet all of your specific application requirements, the following **additional options** are available for these needle 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: 602-FFC-P2)

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

**ORDERING INFORMATION - ADDITIONAL OPTIONS**

<b>PACKINGS<sup>†</sup></b>	P1 PTFE	P2 Graphite
<b>STEM TIPS</b>	T1 Non-rotating (316 Stainless) T5 Ball (440C Stainless)	T6 Ball (carbide) T7 Ball (ceramic)
<b>O-RINGS*</b>	EM1 EPDM	KZ1 FFKM (Perfluoroelastomer)
<b>PANEL MOUNTINGS</b>	PM1 Panel mount (1 nut)	PM2 Panel mount (2 nuts)
<b>HANDLES</b>	HL4 1-3/8" Phenolic	HL5 1-3/4" Phenolic

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

<sup>†</sup>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.

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 602-FFC will be Steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

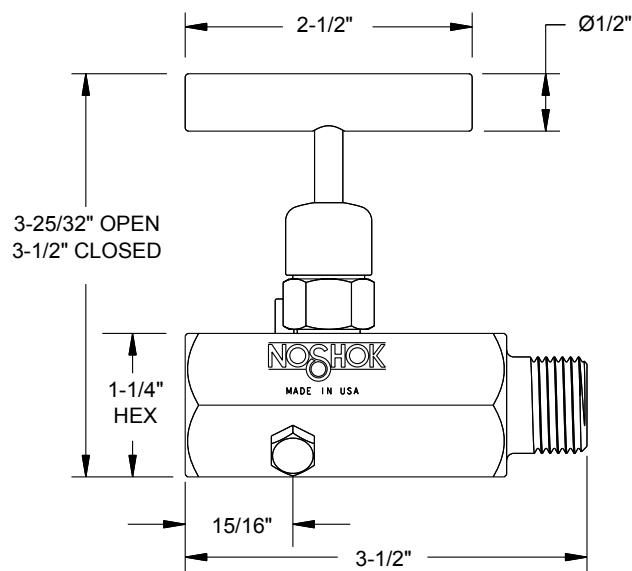
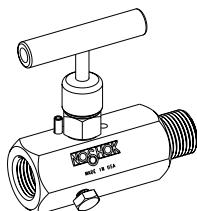
**EXAMPLE with Additional Options**

Series..... 600 hard seat  
Connection size..... 1/4" NPT  
Valve type..... Female-female, Steel  
Packing..... PTFE  
Stem tip..... Non-rotating  
Panel mount..... Panel mount (2 nuts)  
Handle..... 1-3/4" Phenolic

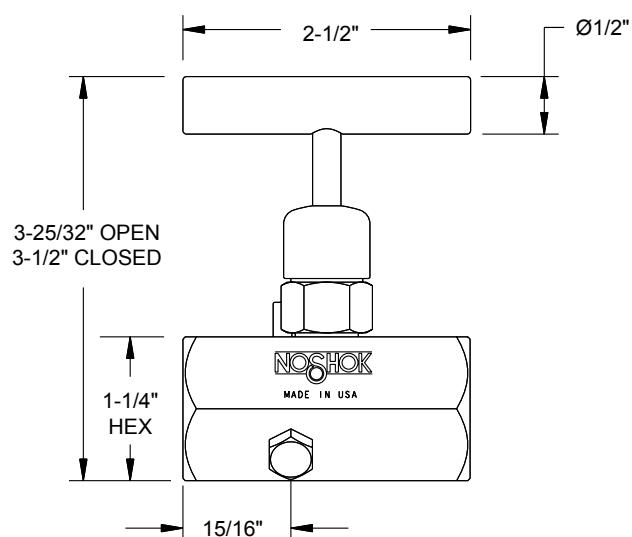
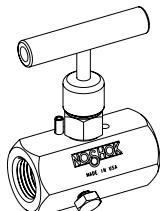
6 02 - FFC - P1 - T1 - PM2 - HL5

## Dimensions

## Male-Female

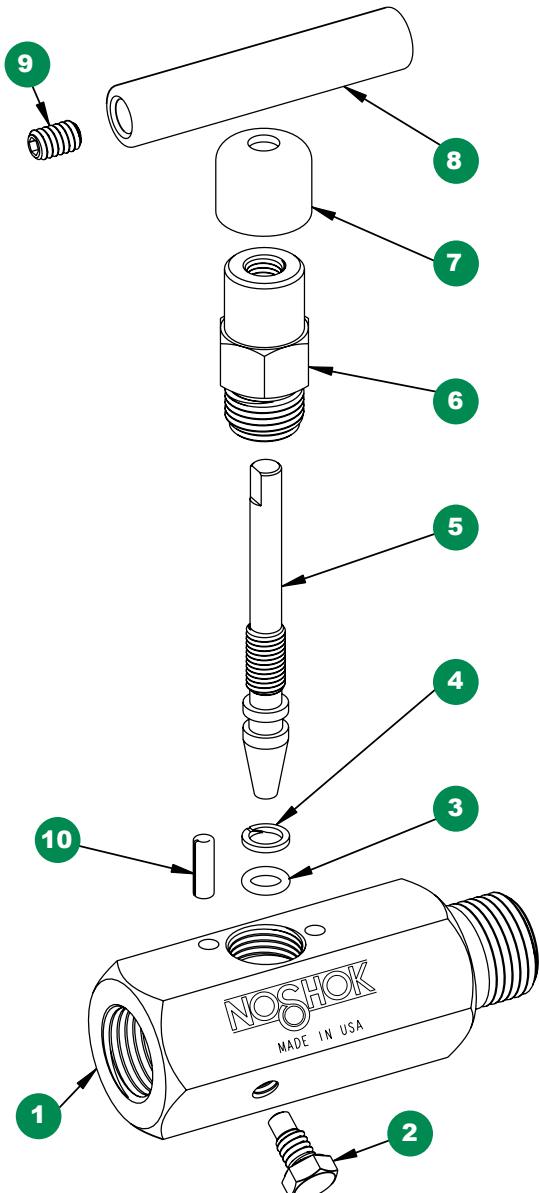


## Female-Female

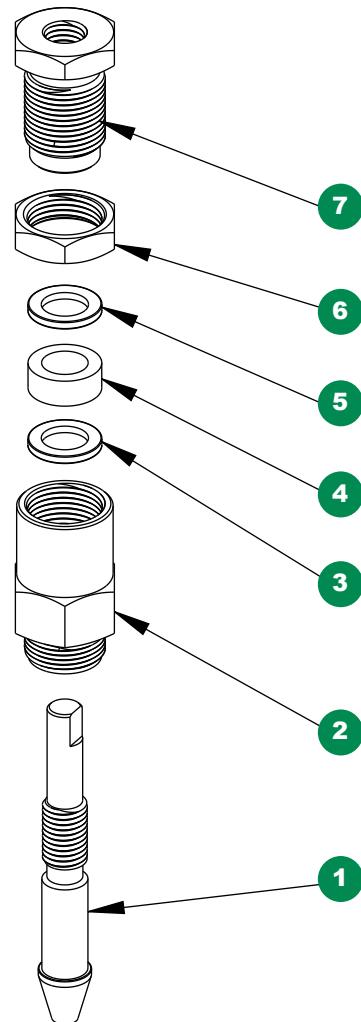


Block & Bleed, Hard Seat

Option With Packing



- 1 Valve body
- 2 Bleed screw
- 3 FKM o-ring
- 4 PTFE back-up ring
- 5 Valve stem
- 6 Valve bonnet
- 7 Dust cap
- 8 Valve "T" handle
- 9 Set screw
- 10 Slotted spring pin



- 1 Valve packing stem
- 2 Valve packing bonnet
- 3 Packing washer
- 4 Packing
- 5 Packing washer
- 6 Jam nut
- 7 Packing adjustment screw