

## 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 guaranteed performance and reliability
- 10,000 psi pressure rating @ 200 °F
- 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 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

Materials	Zinc-nickel plated steel, electropolished 316 stainless steel
Connections	1/4" & 1/2" NPT Male-female & Female-female configurations
Pressure rating*	10,000 psi @ 200 °F
Orifice size	0.187"
Flow coefficient	$C_v$ 0.44
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

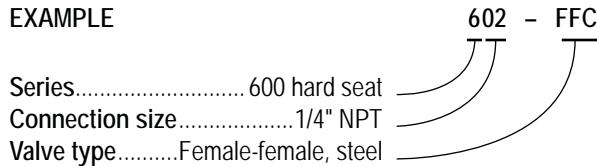
\* If a packing option is chosen, maximum pressure rating is 6,000 psi. Refer to the "Pressure vs. Temperature: Packing Style with Compatible Fluid" chart at the back of this catalog.

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	6	600 Series, hard seat	
CONNECTION SIZES	02	1/4" NPT	04 1/2" NPT
VALVE TYPES	MFC	Male-Female, Steel	MFS Male-Female, Stainless Steel
	FFC	Female-Female, Steel	FFS Female-Female, 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 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			
PACKINGS†	P1	PTFE	P2 Grafoil®
STEM TIPS	T1	Non-rotating (316 stainless)	T6 Ball (carbide)
	T5	Ball (440C stainless)	T7 Ball (ceramic)
			T8 Ball (Monel)
			T9 Regulating hard
O-RINGS*	EM1	EPDM	KZ1 FFKM (Kalrez® 3018 or equivalent)
			NB1 NBR
PANEL MOUNTINGS	PM1	Panel mount (1 nut)	PM2 Panel mount (2 nuts)
HANDLES	HL4	1-3/8" Phenolic	HL5 1-3/4" Phenolic

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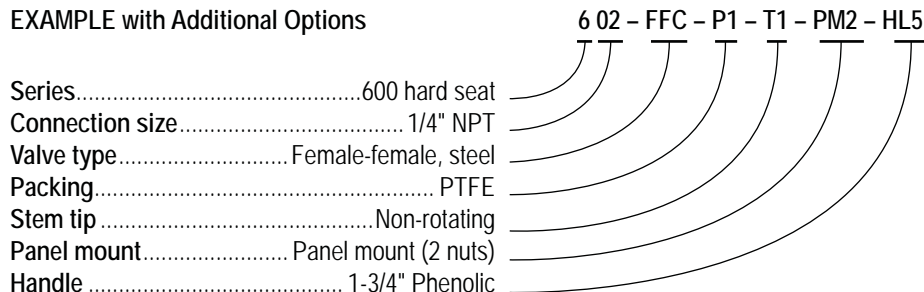
† If a packing option is chosen, maximum pressure rating is 6,000 psi. Refer to the "Pressure vs. Temperature: Packing Style with Compatible Fluid" chart at the back of this catalog.

\* Other o-ring materials available on request.

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

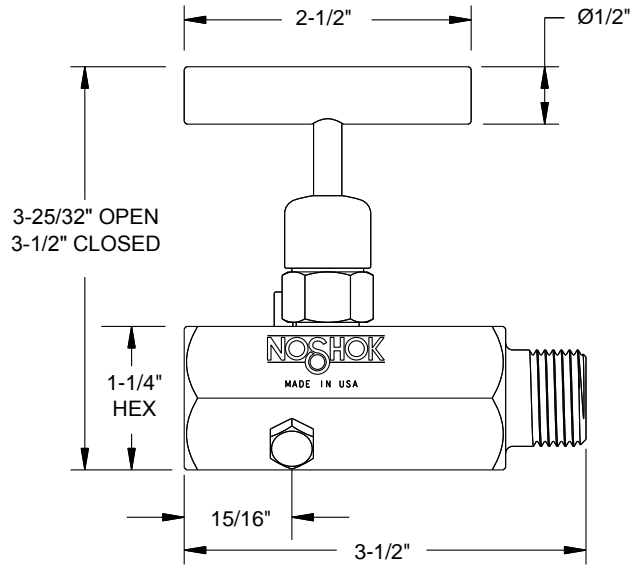
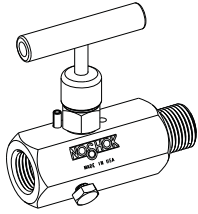
The handle material will always match the material of the valve, unless otherwise specified. For example, the "T" handle (HL2) on the 602-FFC will be steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

**EXAMPLE with Additional Options**

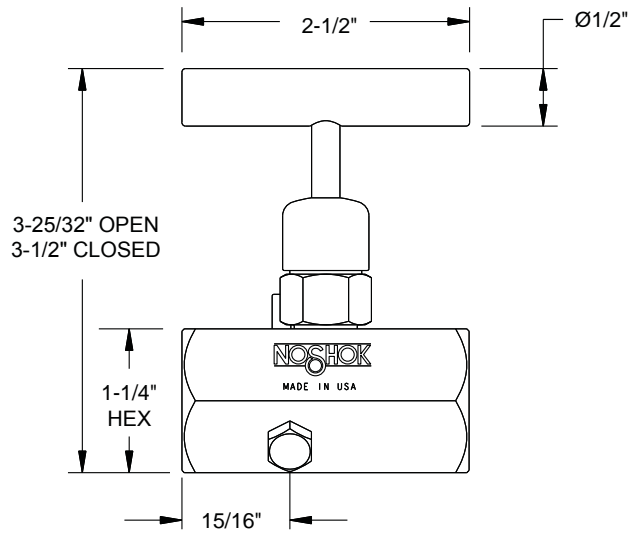
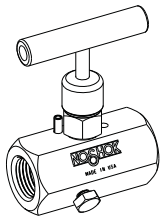


# Dimensions

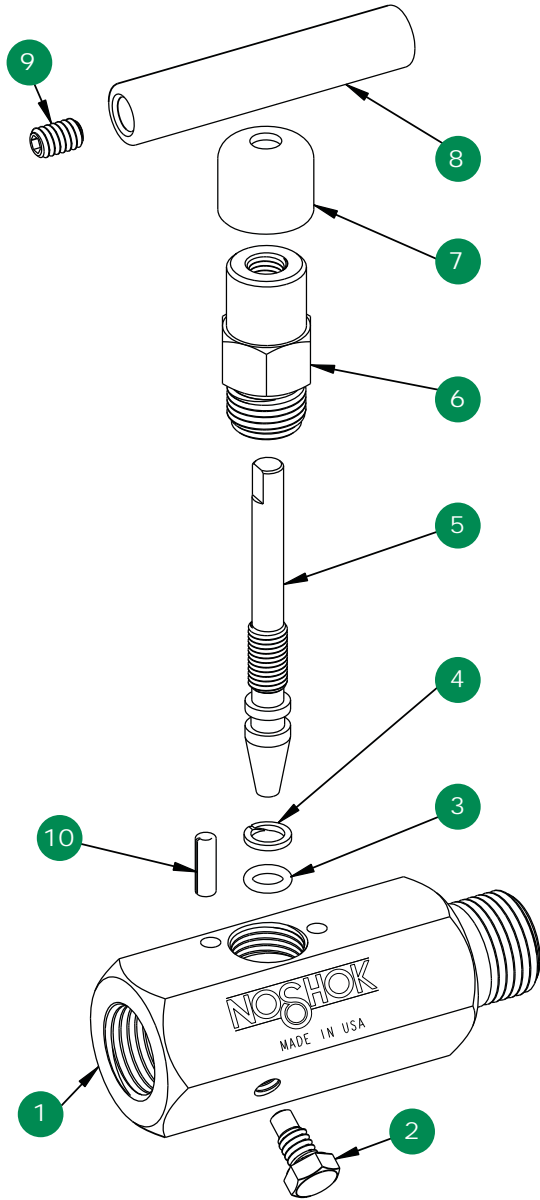
## Male-Female



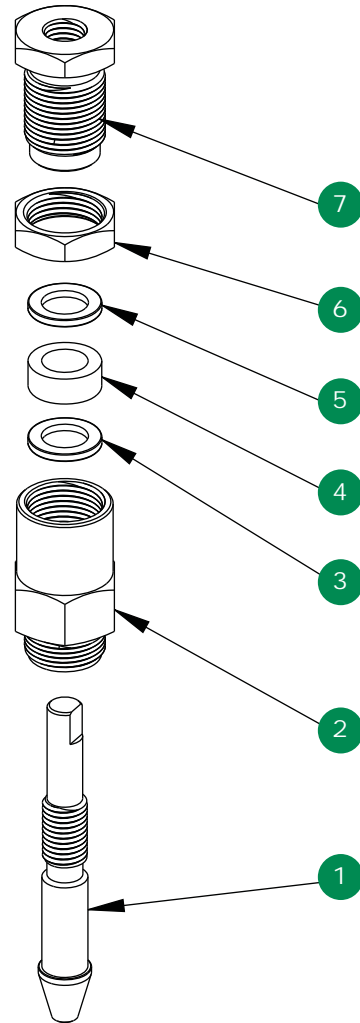
## Female-Female



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