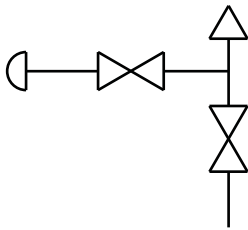


## Block &amp; Bleed, Soft Seat

## 2170 SERIES



Flow Schematic



- 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 instruments to be removed without disturbing the permanent piping installation
- The 1/4" NPT vent plug is located 90° to the left and may be removed and replaced with exhaust piping to direct the fluids to a safe location
- 100% helium leak tested to  $1 \times 10^{-4}$  ml/s for performance and reliability
- 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 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)

## SPECIFICATIONS

Materials	Zinc-Nickel plated Steel, electropolished 316 Stainless Steel*
Connection	1/2" & 1/4" NPT Male-female & Female-female configurations available, right venting optional
Pressure rating	6,000 psi @ 200 °F
Orifice size	0.187"
Flow coefficient	$C_v$ 0.76
Stem seal & type	All 316 Stainless Steel stems with FKM o-ring and PTFE back-up ring below the threads, PTFE packing optional
Length	4" standard and 5-3/8" extended length available
Options	Panel mountings, o-ring materials, handles, packings, regulating stem and stem tips
Weight	Approximately 2.0 lb., extended model 2.7 lb.

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

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:

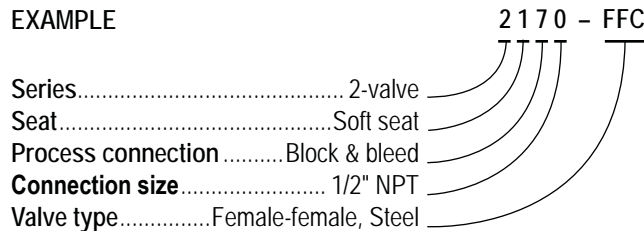


**WARNING:** This product can expose you to chemicals including Chromium (VI) and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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.

ORDERING INFORMATION			
SERIES	2 2-valve		
SEAT	1 Soft seat		
PROCESS TYPE	7 Block & bleed		
CONNECTION SIZES	0 1/2" NPT	2 1/4" NPT	
VALVE TYPES	MFC Male-Female, Steel	FMC Female-Male, Steel	FFCR Female-Female, Steel, Right Vent
	MFCR Male-Female, Steel, Right Vent	EFMC Extended Female-Male, Steel	EFFC Extended Female-Female, Steel
	EMFC Extended Male-Female, Steel	FMS Female-Male, Stainless Steel	FFS Female-Female, Stainless Steel
	MFS Male-Female, Stainless Steel	EFMS Extended Female-Male, Stainless Steel	FFSR Female-Female, Stainless Steel, Right Vent
	MFSR Male-Female, Stainless Steel, Right Vent	FFC Female-Female, Steel	EFFS Extended Female-Female, Stainless Steel
	EMFS Extended Male-Female, Stainless Steel		

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



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: 2170-FFC-PK1)

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

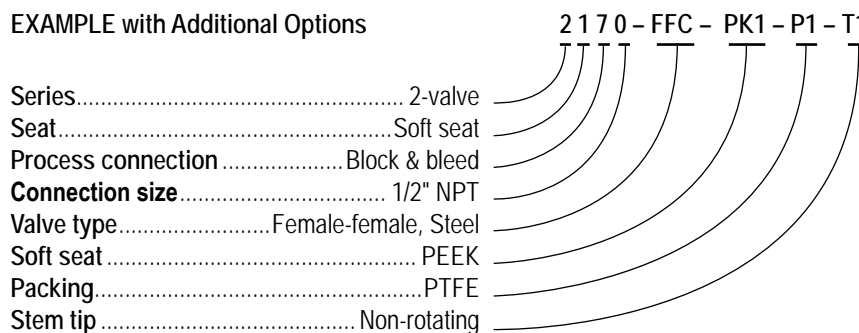
ORDERING INFORMATION - ADDITIONAL OPTIONS			
SOFT SEATS	PK1 PEEK	KF1 PCTFE	
PACKING	P1 PTFE		
STEM TIP	T1 Non-rotating (316 Stainless)		
O-RINGS*	EM1 EPDM	KZ1 FFKM (Kalrez® 3018 or equivalent)	NB1 NBR
HANDLES	HL1 1-13/16" Mini "T"	HL3 1" Round knurled	HL5 1-3/4" Phenolic
	HL2 2-1/2" "T"	HL4 1-3/8" Phenolic	

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

\* Other o-ring materials available on request.

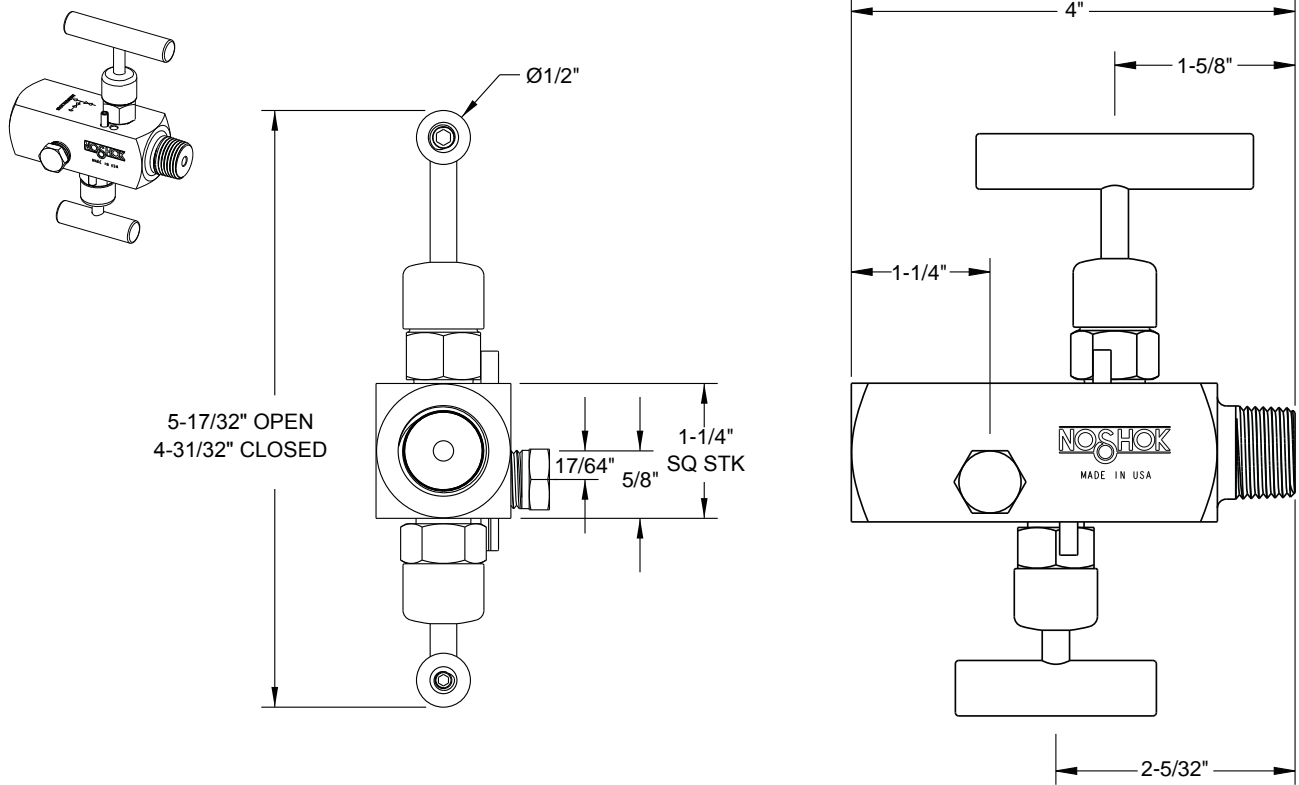
Please note that the standard o-ring in all the NOSHOK valves is FKM and the standard handles are block "T" handles (HL2) and bleed 1-3/8" mini "T" handle (HL7).

The handle material will always match the material of the valve, unless otherwise specified. For example, the "T" handle (HL2) on the 2170-FFC will be Steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

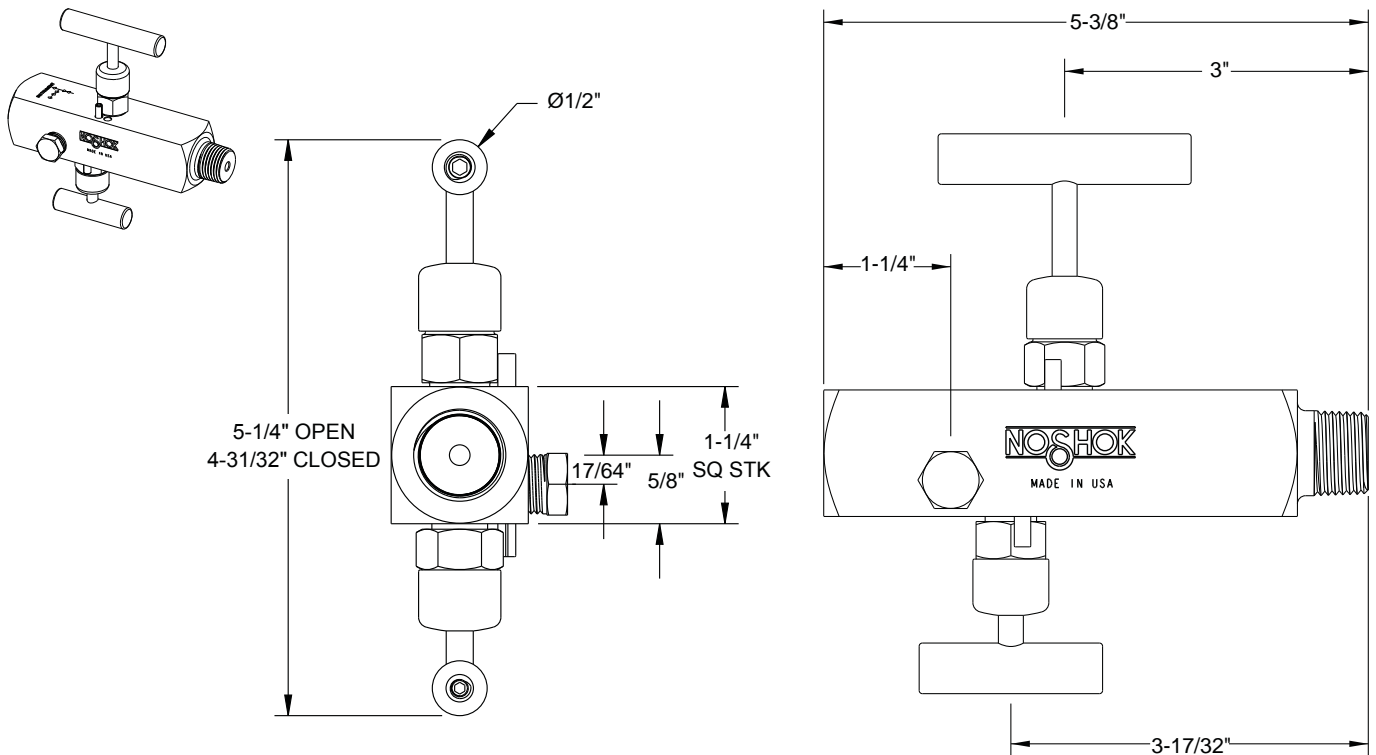


# Dimensions

## Male-Female

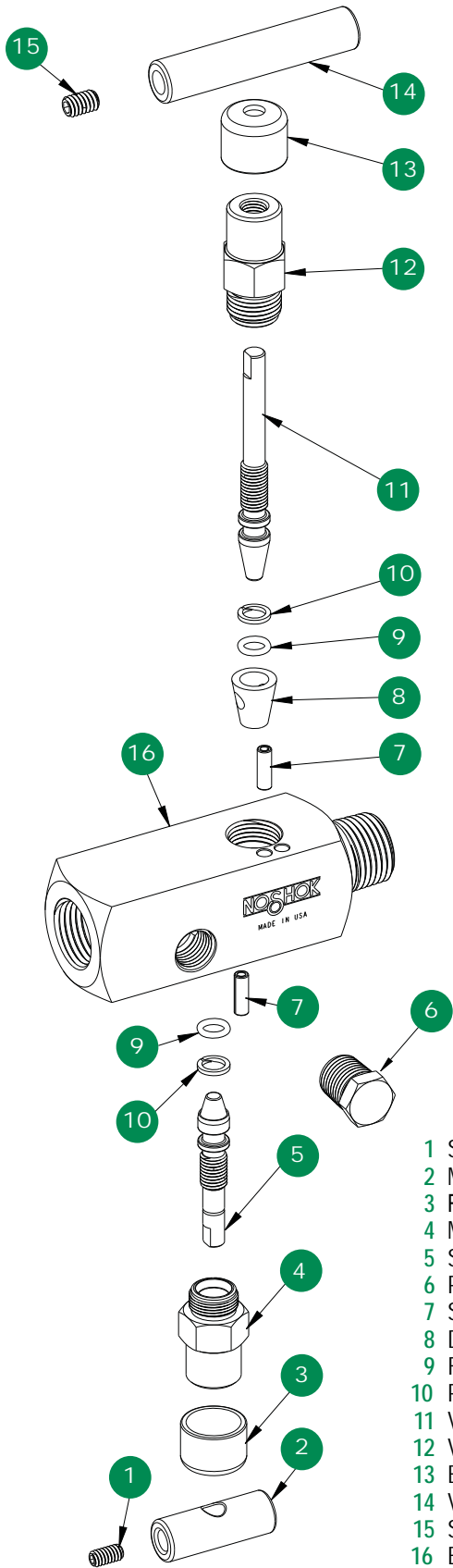


## Extended Male-Female

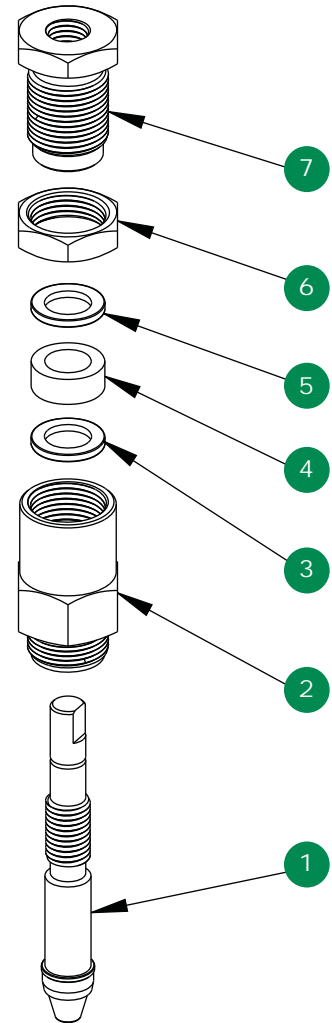


For panel mount, packing, & stem tip dimensions, see pgs. 64-67.

## Block & Bleed, Soft Seat      Option With Packing



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



- 1 Soft tip packing stem and valve packing stem
- 2 Mini valve packing bonnet and valve packing bonnet
- 3 Packing washer
- 4 Packing
- 5 Packing washer
- 6 Mini valve bonnet
- 7 Packing adjustment screw