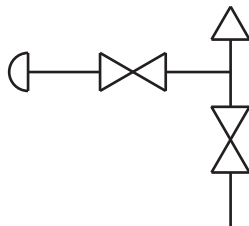


2170 SERIES



- 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 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 1×10^{-4} ml/s for guaranteed performance and reliability
- 6,000 psi pressure rating @ 200 °F
- 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 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)

Flow Schematic



SPECIFICATIONS

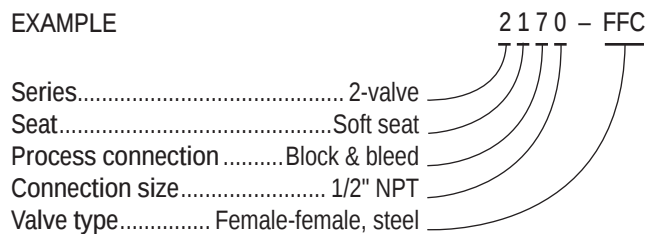
Materials	Zinc-nickel plated steel, electropolished 316 stainless steel
Connection	1/2" & 1/4" NPT Male-female & Female-female configurations available, right venting optional
Pressure rating	6,000 psi @ 200 °F
Orifice size	0.187"
Flow coefficient	C _v 0.76
Stem seal & type	All 316 stainless steel stems 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.

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

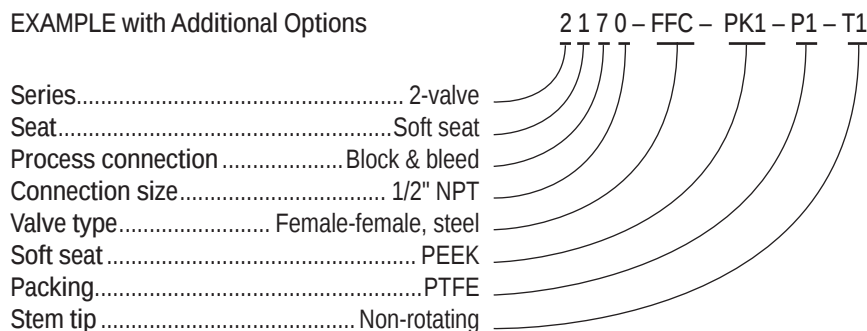
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

* 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).

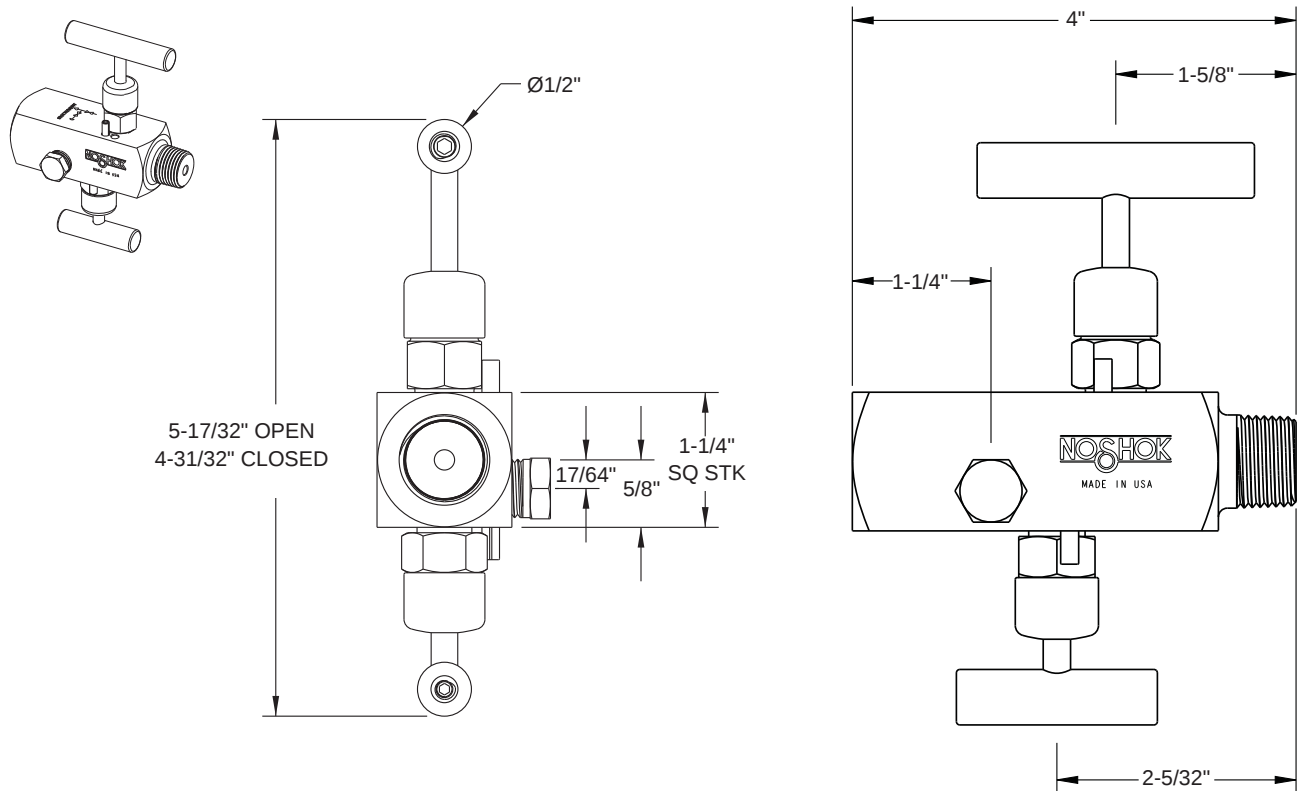
The handle material will always match the material of the valve, unless otherwise specified. For example, the "T" handle (HL2) on the 2170-FFC will be steel. When only the standard configuration is needed, no additional designations are necessary. Please consult the factory for special application requests.

EXAMPLE with Additional Options

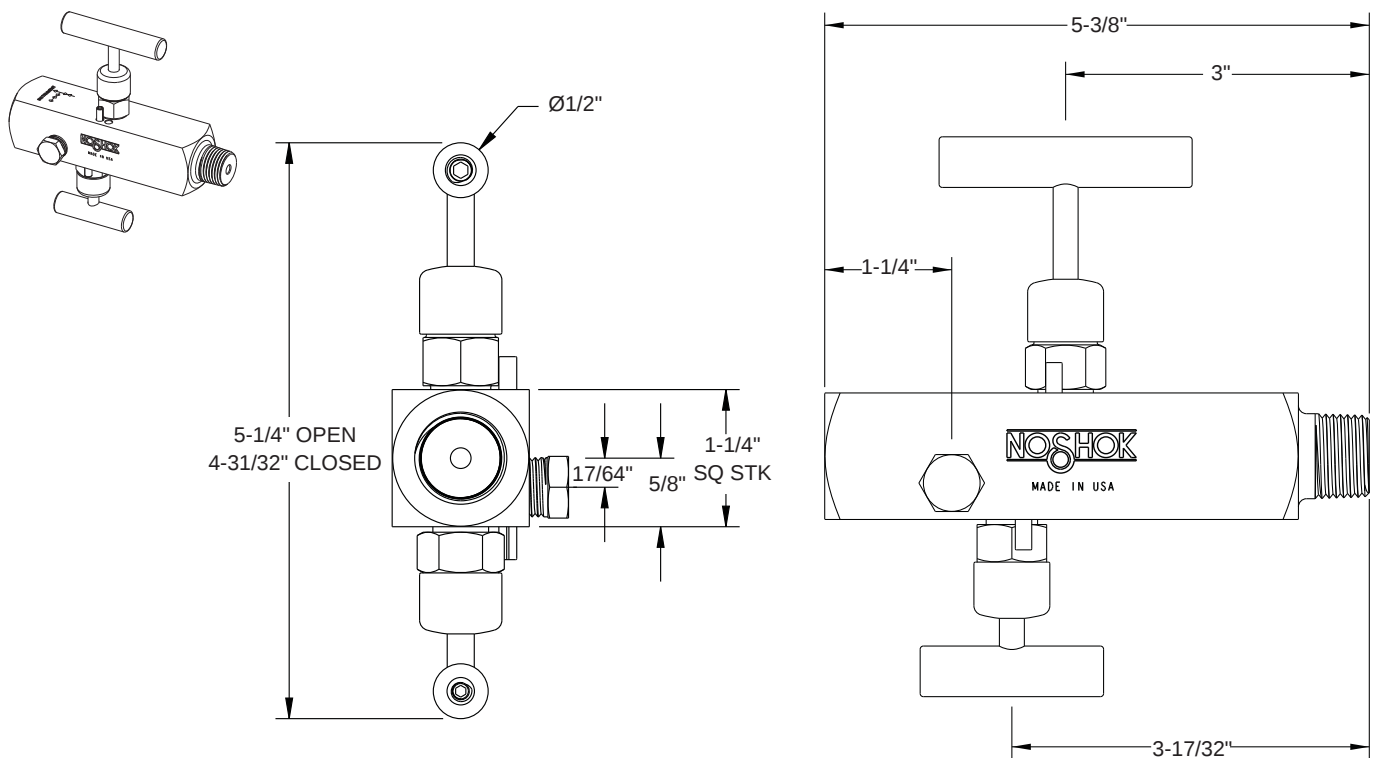


Dimensions

Male-Female

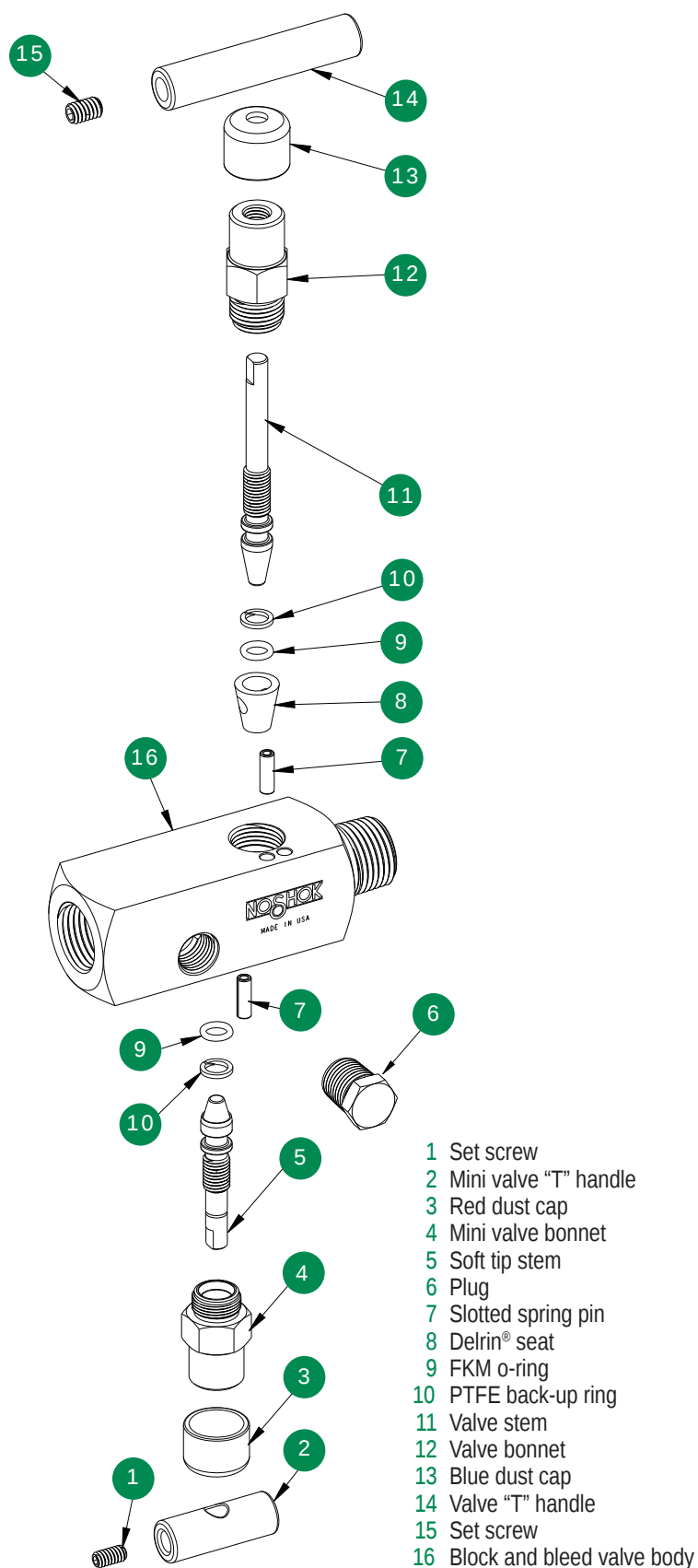


Extended Male-Female

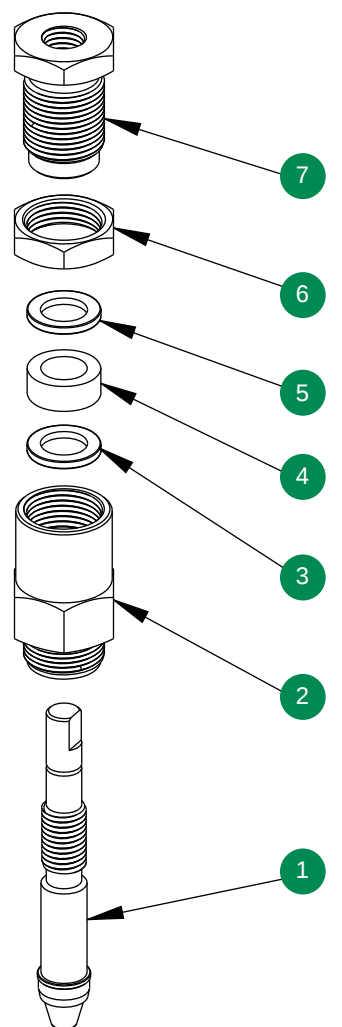


For panel mount, packing,
& stem tip dimensions,
see page 61-67

Block & Bleed, Soft Seat



Option With Packing



- 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 Jam nut
7 Packing adjustment screw