

MINIATURE NEEDLE VALVE



Miniature valves isolate instruments from system pressure in order that instruments can be removed without shutting down or disrupting the system. They are a compact, economical solution while still being rugged enough for demanding process conditions, and they can be added to other valve assemblies to provide convenient bleed-off capability.

FEATURES / BENEFITS

- Complies with MSS SP-99 and MSS SP-132 Standards Where Applicable
- Rolled Threads for Strength, Durability, and Ease of Use
- 316SS Body Option Complies with NACE MR0175
- Leak Tested Before Shipping
- Available Factory-Installed on Reotemp Instruments

SPECIFICATIONS

Body Materials Available	316 Stainless Steel, Carbon Steel, Monel, Hastelloy C276, Brass
Max Pressure Rating Available	Hard Seat - 10,000 psi at 200°F, Soft Seat - 6,000 psi at 200°F.
Min/Max Temperature Ratings Available	-67°F to 1000°F
Seats Available	Hard, POM, PCTFE
Connections Available	1/4" NPT, 1/8" NPT
Bore	Soft Seat - 0.138" Bore Hard Seat - 0.172" Bore



Unidirectional Flow (Hard Seat)



Bidirectional Flow (Soft Seat or Soft Tip)

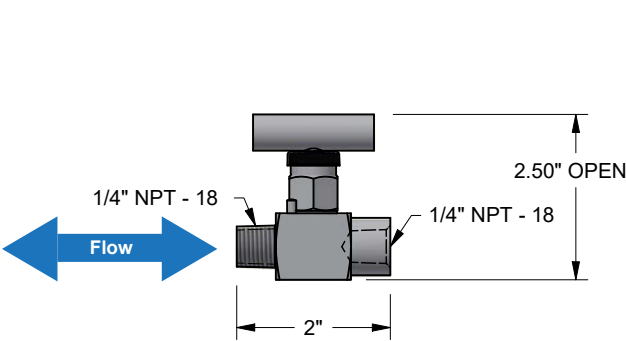
MINIATURE NEEDLE VALVE

HOW TO ORDER: Choose options to build a part number. For example: **M12SFP44S-HT**

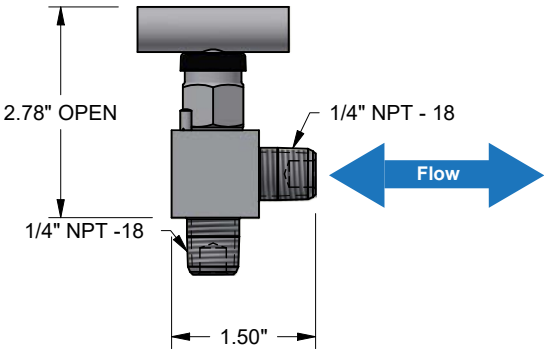
M12	S	F	P	44	S	-HT
MODEL	SEAT	SEAT SEAL	SEAT/TIP	CONNECTIONS	BODY MATERIAL	OPTIONS
M12 = Process Mini Needle Valve MA2 = Angled Process Mini Needle Valve	H = Hard Seat (Integral) S = Soft Seat	T = PTFE Packing V = HP FKM O-Ring Seal - Standard for Hard Seat F = FKM O-Ring Seal - Standard for Soft Seat G = Graphite Packing ² F = FEPM O-Ring Seal ² Only available in hard seat with no soft tips.	X = Hard Seat (Integral) P = POM - Standard Soft Seat ⁴ C = PCTFE Soft Seat ⁵ R = Hard Seat with POM Tip L = Hard Seat with PCTFE Tip E = Hard Seat with PEEK Tip ⁴ POM comparable to Delrin. ⁵ PCTFE is equivalent to Kel-F.	44 = 1/4" MxF NPT 4F = 1/4" FxF NPT 4M = 1/4" MxM NPT 88 = 1/8" MxF NPT 8F = 1/8" FxF NPT 8M = 1/8" MxM NPT	S = 316SS M = Monel 400 H = Hastelloy C-276 C = Carbon Steel B = Brass ¹ ¹ Brass comes with a round handle as standard.	OX = Cleaned for Oxygen Service ³ M4 = Panel Mounting HT = Internal Hydrostatic Test PM = Positive Material Test MR = MTR for Body HS = SS Round Handle HA = Aluminum Round Handle T1 = Non-rotating Stem Tip TS = Stainless Steel Tag ³ Max pressure is 6,000 psi at 140°F.

Note: Not all combinations in the above table are possible. Conversely, if a combination is desired but not seen, ask your Reotemp Sales Representative. Additional configurations and options are available upon request.

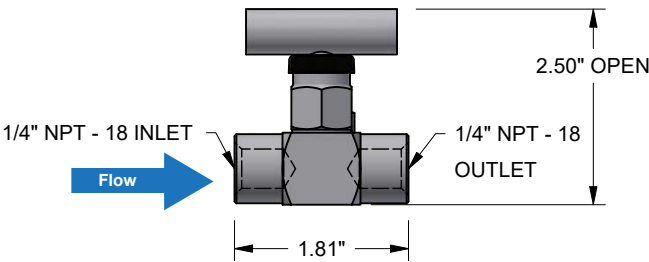
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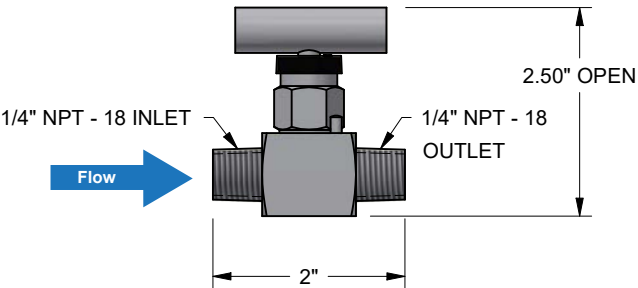
M12SFP44S



MA2SFP4MS



M12HVX4FS



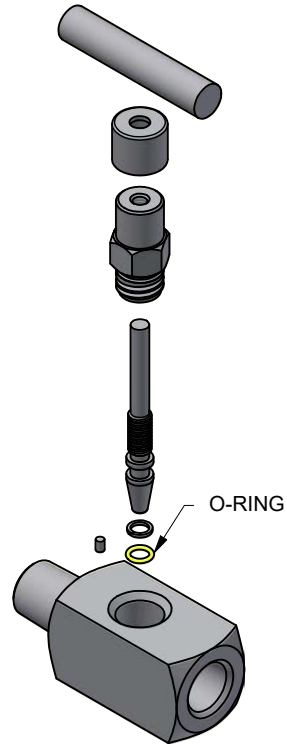
M12HVX4MS

Note: Dimensions are given as examples for reference. Contact your Reotemp sales representative for more exact and detailed drawings.

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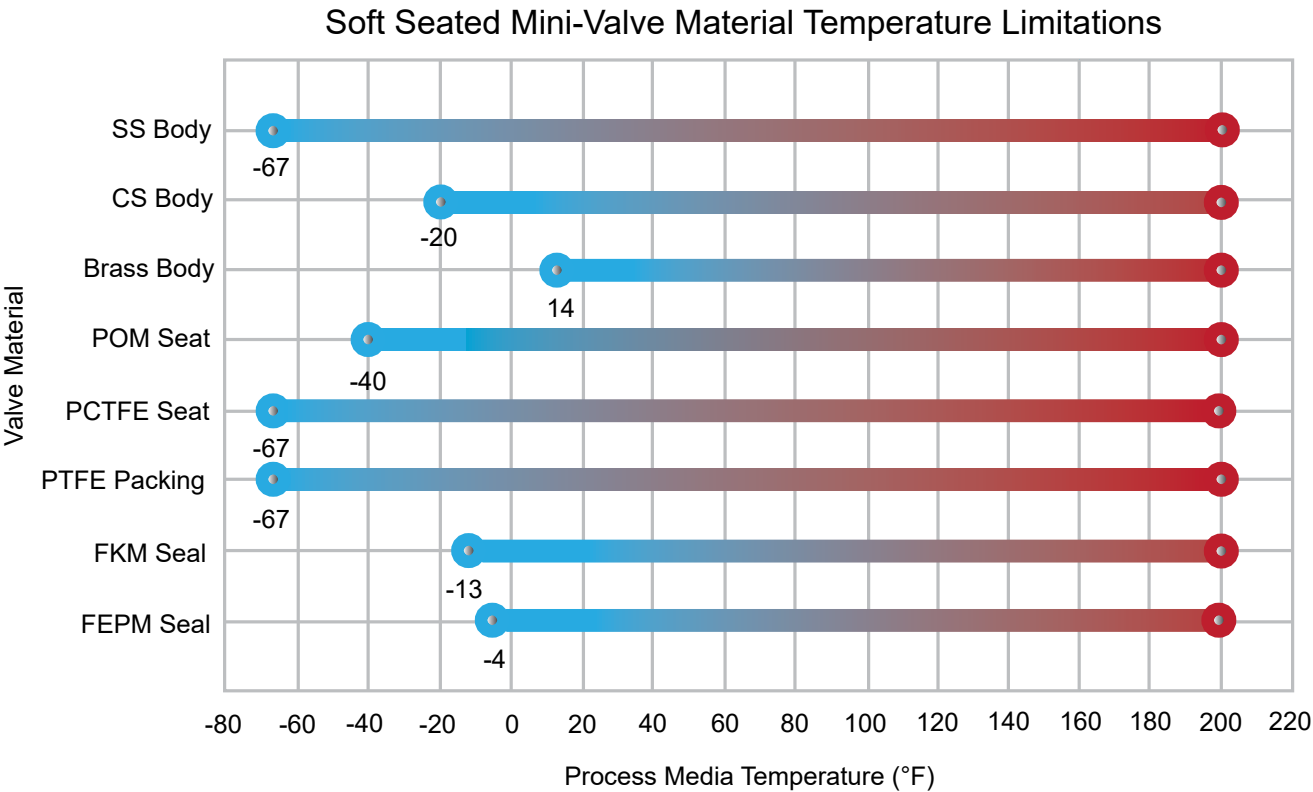
Packed Bonnet Seal Example



O-Ring Example

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Soft Seat

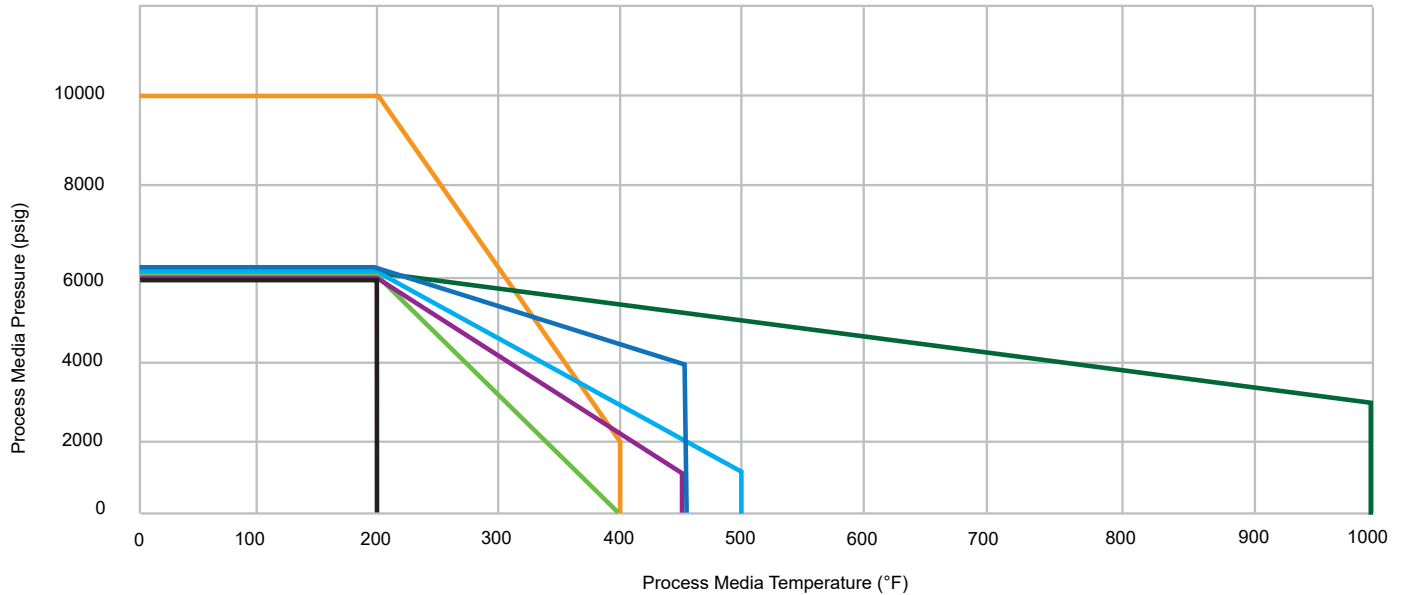


Soft Seat Ratings Mini Valve	
Brass Body	3,000psi at 200°F
All Other Standard Materials	6,000psi at 200°F

MINIATURE NEEDLE VALVE

Hard Seat

Pressure Vs. Temperature



VALVES

Hard Seat Ratings Mini Valve

PTFE Packing SS or CS Body	6,000psi at 200°F 4,000psi at 450°F
HP FKM O-Ring Bonnet and SS or CS Body	10,000psi at 200°F 2,000psi at 392°F
HP FKM O-Ring Bonnet and Brass Body	6,000psi at 200°F
PTFE or Graphite Packing and Brass Body	6,000psi at 200°F 1,000psi at 450°F
Graphite Packing and SS Body	6,000psi at 200°F 1,500psi at 1,000°F
Graphite Packing and CS Body	6,000psi at 200°F 1,500psi at 500°F
Soft Tip (POM, PCTFE, or PEEK)	6,000psi at 200°F