

NTD Series

Valve for 1.125" C-Seal



The NTD series are compatible for 1.125" C-Seal substrate that achieves high durability and Cv consistency.

Features

High durability

Rated 10 Million or greater cycles, realized as a result of our unique technology.

* Our test performance (test conditions) : Automatic valve, fluid N2, charged pressure 145psig (1.0MPa (G))

Stable Cv

Consistent gas flow rates are obtained because fluctuations, due to machining differences, are minimized and reduces differences in Cv among all valves.

Min. variation in Cv ($\pm 10\%$) among all valves, and also over the 10 million cycles.

* Performance values according to our testing methods

Specifications

Model	NTD4C (N.C)	NTD40 (N.O)	NTD4CH (Hybrid (manual + N.C.))
Size	1/4" (1.125")		
Cv *1	0.3 (Room temperature)		
Maximum Operating Pressure	145 psig (1.0 MPa(G))		
Wetted Area Volume *2	0.05 in ³ (0.82 cm ³)		
Fluid Temperature *3	+20 ~ +50 °C		
Atmospheric Temperature	+20 ~ +50 °C		
Actuation pressure	65 ~ 102 psig (0.45 ~ 0.7 MPa (G))	73 ~ 87 psig (0.5 ~ 0.6 MPa (G))	65 ~ 102 psig (0.45 ~ 0.7 MPa (G))
Leak Rates	Across the Seat He Leak Rates	$\leq 1 \times 10^{-9}$ SCCS ($\leq 1 \times 10^{-10}$ Pa · m ³ /s)	
	Inboard He Leak Rates	$\leq 1 \times 10^{-9}$ SCCS ($\leq 1 \times 10^{-10}$ Pa · m ³ /s)	
Cycle life *4	10 million cycles	10 million cycles	10 million cycles (Manual : 10,000 cycles)

*1 Performance value of a single "C-seal" valve at room temperature based on SEMASPEC-90120394B-STD

*2 Calculated value

*3 Max. bakeout temperature at valve open : 120°C

*4 Lab tested : Nitrogen pressurized at 145psig (1.0MPa (G))

Grade	STD	EP	SEP
Body Material	SUS316L		SUS316LE (Double melt material)
Seat Material	PCTFE		
Diaphragm material	Cobalt alloy		
Surface Roughness	$\leq R_z 126\mu\text{in}$ (3.2 μm) $\leq R_a 20\mu\text{in}$ (0.5 μm)		$\leq R_z 28\mu\text{in}$ (0.7 μm) $\leq R_a 5\mu\text{in}$ (0.13 μm)
Polish	Mechanical polished		Electro polished
Cleaning	Degreasing + Precision cleaning		
Packaging	Single bagged package		Double bagged package

Type

Model	Size	Operation	Valve Shape	Connection	Seat Material	Option	Grade
NTD	4	C	S	G	C	****	EP-316L
NTD : Diaphragm valve	4 : 1/4"	C : Normally closed O : Normally open CH : Hybrid	S : Straight B : Branch	G : C-seal Surface Mount V : CVC male VF : CVC female W : Tube end S : Compression	C : PCTFE	Type no. : Special spec, etc.	STD-316L : Mechanical polished + SUS316L EP-316L : Electro polished + SUS316L SEP-316LE : Electro polished + SUS316LE (Double melt material)

Dimensions

Unit : mm
inch

Model	Type	Connection	H	H1	J	A	B	C	D	E	F	M	N	Q
	NTD4CS-GC	C-1.125" Surface Mount	(85) (3.346)	(77) (3.021)		28.5 1.122								
	NTD4OS-GC	C-1.125" Surface Mount	(80) (3.150)	(72) (2.886)	6.6 0.26	27 1.063	28.6 1.125	12.7 0.5	7.75 0.305	21.74 0.856	4.75 0.187	5.2 0.205	1.55 0.061	1/8" tube
	NTD4CHS-GC	C-1.125" Surface Mount	(127) (5.015)	(116) (4.566)		28.5 1.122								



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