

High-temperature Valve (250°)

■ Features

- ◎ All metal components of the valve enable use at 250°C.
- ◎ KITZ SCT's design minimizes sharp drops in the Cv value in a high temperature environment and realizes high performance, a compact size, and a low price.
- ◎ Because all of the component parts of the valve, including the actuator, and not just the parts that come into contact with the gas, can be used in a high-temperature environment, the valves can be used optimally in metal-organic processes where thermal uniformity is essential.

■ Specifications

Size		KD4K (1/4")	KD8K (1/2")
Cv	Room Temperature	0.25	0.7
	250°C (Reference Value)	0.23	0.5
	250°C Internal Vacuum (Reference Value)	0.2	0.35
Maximum Operating Pressure		142psig (0.98MPa(G))	
Wetted Area Volume		0.073in ³ (1.2cm ³)	0.458in ³ (7.5cm ³)
Fluid Temperature		Straight flow, CVC male, OPEN state 20°C~250°C	
Leak Rates	Across the Seat He Leak Test Rates	$\leq 3 \times 10^{-9}$ sccs ($\leq 3 \times 10^{-10}$ Pa·m ³ /sec)	
	Inbord He Leak Test Rates	$\leq 3 \times 10^{-9}$ sccs ($\leq 3 \times 10^{-10}$ Pa·m ³ /sec)	
Actuation Pressure		58~101psig (0.5~0.7MPa(G))	
Cycle Life (N2 Charged, Own Test)		50,000 cycles	

■ Product Grade

Grade	EP
Body Material	SUS316L
Surface Roughness	$\leq R_z 0.7 \mu m$
Polish	Electro Polished
Cleaning	Degreasing + Precision cleaning
Clean Room Environment	Class 10 (some products, Class 100)
Packaging	Double bagged package

■ Wetted Area Material

Body	SUS316L
Seat	Metal (body material)
Diaphragm	Cobalt alloy

■ Precautions

- ① The valves are designed to be used under atmospheric pressure. Usage such as under vacuum vessels are not guaranteed.
- ② For high temperature applications, please select appropriate material for air-fittings and tubes to assure proper performance.



■ Product Code Table

Model	Size		Operation	Valve shape	Connection	Seat material	Grade + Body material
KD	4	K	C	S	V	M	EP-316L
KD-type diaphragm valve 4: 1/4" 6: 3/8" 8: 1/2" High-temperature type C: Normally closed O: Normally open S: Straight A: Angle (Option) B: Branch (Option) V: CVC male VF: CVC female W: Butt weld M: Metal EP-316L : Electro Polished + SUS316L *1							

*1 For the grade and material, we handle EP-316L only.

■ Dimensions

Unit: inch (mm)

Model	Type	Connection	L	H	H ₁	H ₂	A	B	C	P	M	M ₁
	KD4KCS-VM	1/4" CVC Male	2.24 (57.0)	4.00 (101.5)	0.43 (11.0)	2.78 (70.5)	2.05 (52.0)	1.02 (26.0)	0.98 (25.0)	1/8" Compression fittings	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	KD4KOS-VM-66		2.24 (57.0)	3.72 (94.5)	0.43 (11.0)	2.50 (63.5)	2.44 (62.0)	1.02 (26.0)	0.98 (25.0)	1/8" Compression fittings	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	KD8KCS-VM	1/2" CVC Male	3.03 (77.0)	5.12 (130.0)	0.63 (16.0)	3.70 (94.0)	2.44 (62.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD8KOS-VM-18		3.03 (77.0)	4.80 (122.0)	0.63 (16.0)	3.39 (86.0)	2.68 (68.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD4KCS-VFM	1/4" CVC Female	2.78 (70.6)	4.00 (101.5)	0.43 (11.0)	2.78 (70.5)	2.05 (52.0)	1.02 (26.0)	0.98 (25.0)	1/8" Compression fittings	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	KD4KOS-VFM		2.78 (70.6)	3.72 (94.5)	0.43 (11.0)	2.50 (63.5)	2.44 (62.0)	1.02 (26.0)	0.98 (25.0)	1/8" Compression fittings	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	KD8KCS-VFM	1/2" CVC Female	3.27 (83.0)	5.12 (130.0)	0.63 (16.0)	3.70 (94.0)	2.44 (62.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD8KOS-VFM		3.27 (83.0)	4.80 (122.0)	0.63 (16.0)	3.39 (86.0)	2.68 (68.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD4KCS-WM	1/4" Butt Weld	2.13 (54.0)	4.00 (101.5)	0.43 (11.0)	2.78 (70.5)	2.05 (52.0)	1.02 (26.0)	0.98 (25.0)	1/8" Compression fittings	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	KD4KOS-WM		2.13 (54.0)	3.72 (94.5)	0.43 (11.0)	2.50 (63.5)	2.44 (62.0)	1.02 (26.0)	0.98 (25.0)	1/8" Compression fittings	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	KD6KCS-WM	3/8" Butt Weld	2.72 (69.0)	5.12 (130.0)	0.63 (16.0)	3.70 (94.0)	2.44 (62.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD6KOS-WM		2.72 (69.0)	4.80 (122.0)	0.63 (16.0)	3.39 (86.0)	2.68 (68.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD8KCS-WM	1/2" Butt Weld	2.72 (69.0)	5.12 (130.0)	0.63 (16.0)	3.70 (94.0)	2.44 (62.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	KD8KOS-WM		2.72 (69.0)	4.80 (122.0)	0.63 (16.0)	3.39 (86.0)	2.68 (68.0)	1.42 (36.0)	1.42 (36.0)	1/8" Compression fittings	1.10 (28.0)	2-M5 Depth 0.20 (5.0)