

# 真空角阀

## Vacuum Angle Valve

真空角阀在真空系统中主要用于前级泵和抽气管道上进行真空隔绝，又称真空挡板阀。真空角阀常用是 90°直角阀，也有 180° Y 型水平安装阀门。真空角阀的连接法兰有 KF、ISO、CF 标准真空法兰。真空阀门的驱动方式有手动和气动，气动是通过气缸的往复运行开启和关闭阀门。根据开启和关闭方式有单作动和双作动二种，单作动是通过气缸开启阀门，内置弹簧关闭阀门。双作动阀门的开启和关闭都是通过气缸运行来实现。

真空角阀的密封方式有轴封式 (O-ring)、成型波纹管、焊接波纹管。不同工况选择不同的阀门密封方式，轴封式 (O-ring) 适合比较严苛和工作节拍快的工况。超高真空系统需要选择成型波纹管或焊接波纹管，能够保证真空系统更好的漏率。焊接波纹管的伸缩量要优于成型波纹管，更有利于阀门的大开度，没有流导的影响。

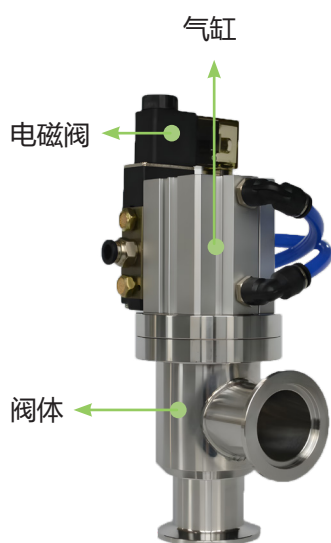
Vacuum angle valves are primarily used for vacuum isolation on forepumps and pipelines in vacuum systems. Commonly used types of vacuum angle valves include 90° right-angle valves and 180° Y-shaped valves. The connecting flanges of vacuum angle valves include KF, ISO, and CF standard vacuum flanges. The driving methods for vacuum valve include manual and pneumatic operations. Pneumatic operation involves the reciprocal movement of air to open and close the valve. There are two types of actuation according to the opening and closing methods, single-action and double-action. Single-action valves are opened by a cylinder and closed by an internal spring. Double-action valves are opened and closed by the operation of a cylinder.

The sealing methods for vacuum angle valves include shaft sealing (O-ring), bellows, and welded bellows. Different valve sealing methods are selected for different working conditions. Shaft sealing (O-ring) is suitable for harsh working conditions and fast working rhythms. Ultra-high vacuum systems require the selection of molded bellows or welded bellows to ensure better leak rates in the vacuum system. The expansion and contraction of welded bellows is superior to that of molded bellows, which is more conducive to large valve openings without the influence of flow conductance.

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项目	高真空	超高真空
密封方式	轴封 / 成型波纹管 / 焊接波纹管	成型波纹管 / 焊接波纹管
阀板密封	丁晴橡胶 / 氟橡胶	OFHC 无氧铜金属密封
工作压力范围	2000~1.33x10 <sup>-7</sup> mbar	2000~1.33x10 <sup>-9</sup> mbar
漏率	1.33x10 <sup>-8</sup> mbar l/s	1.33x10 <sup>-9</sup> mbar l/s
使用寿命	1000000 次	
密封圈耐温	80° C (丁晴橡胶)、150° C (氟橡胶)、180° C (全氟)、250° C (无氧铜)	
阀体耐温	180° C (开启时)、200° C (关闭时)	
气缸耐温	90° C	
电磁阀耐温	80° C	
阀体材质	sus304、sus316L	
气缸材质	铝合金	
安装角度	任意角度	
气源压力	0.4~0.6Mpa	
电磁阀电源	AC220V, AC110V, DC24V, DC12V	



KF 系列



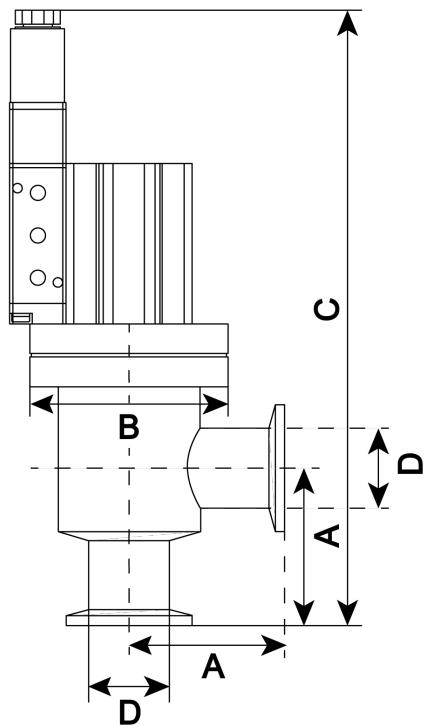
ISO 系列



CF 系列

# Vacuum Angle Valve

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高真空气动角阀

HV Pneumatic Angle Valve

KF 法兰连接 KF Flange

双作动 (D) Double Acting

密封方式 S/B/WB

轴封 Shaft seal

成型波纹管 bellow

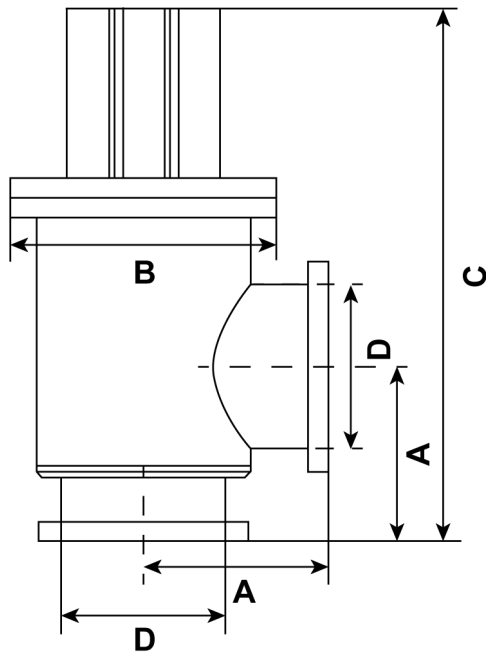
焊接波纹管 welded bellow

材质 sus304/sus316L

型号	法兰接口	A	B	C	D(φ)
SPAV-KF16-D-S	KF16	40	60	185	19.0
SPAV-KF25-D-S	KF25	50	60	195	25.4
SPAV-KF40-D-S	KF40	65	78	245	38.1
SPAV-KF50-D-S	KF50	70	88	280	50.8
SPAV-KF16-D-B	KF16	40	60	185	19.0
SPAV-KF25-D-B	KF25	50	60	195	25.4
SPAV-KF40-D-B	KF40	65	78	245	38.1
SPAV-KF50-D-B	KF50	70	88	280	50.8
SPAV-KF16-D-WB	KF16	40	60	185	19.0
SPAV-KF25-D-WB	KF25	50	60	195	25.4
SPAV-KF40-D-WB	KF40	65	78	245	38.1
SPAV-KF50-D-WB	KF50	70	88	280	50.8

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高真空气动角阀

HV Pneumatic Angle Valve

ISO F 法兰连接 ISO F Flange

双作动 (D) Double Acting

密封方式 S/B/WB

轴封 Shaft seal

成型波纹管 bellow

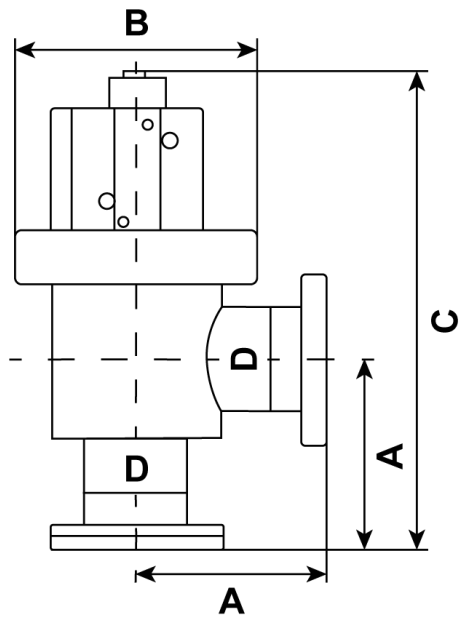
焊接波纹管 welded bellow

材质 sus304/sus316L

型号	法兰接口	A	B	C	D(φ)
SPAV-ISOK63-D-S	ISOK63	88	256	275	63.5
SPAV-ISOK80-D-S	ISOK80	98	273	325	76.20
SPAV-ISOK100-D-S	ISOK100	108	323	355	101.60
SPAV-ISOK160-D-S	ISOK160	138	380	485	152,40
SPAV-ISOK63-D-B	ISOK63	88	256	275	63.5
SPAV-ISOK80-D-B	ISOK80	98	273	325	76.20
SPAV-ISOK100-D-B	ISOK100	108	323	355	101.60
SPAV-ISOK160-D-B	ISOK160	138	380	485	152,40
SPAV-ISOK63-D-WB	ISOK63	88	256	275	63.5
SPAV-ISOK80-D-WB	ISOK80	98	273	325	76.20
SPAV-ISOK100-D-WB	ISOK100	108	323	355	101.60
SPAV-ISOK160-D-WB	ISOK160	138	380	485	152,40

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高真空气动角阀

HV Pneumatic Angle Valve

CF 法兰连接 CF Flange

双作动 (D) Double Acting

密封方式 B/WB

成型波纹管 bellow

焊接波纹管 welded bellow

材质 sus304/sus316L

型号	法兰接口	A	B	C	D(φ)	安装孔
SPAV-CF16-D-B	CF16	40	60	185	19.0	6-φ4
SPAV-CF25-D-B	CF25	50	60	195	25.4	6-φ6
SPAV-CF40-D-B	CF40	65	78	245	38.1	6-φ6
SPAV-CF50-D-B	CF50	70	88	280	50.8	8-φ8
SPAV-CF16-D-WB	CF16	40	60	185	19.0	6-φ4
SPAV-CF25-D-WB	CF25	50	60	195	25.4	6-φ6
SPAV-CF40-D-WB	CF40	65	78	245	38.1	6-φ6
SPAV-CF50-D-WB	CF50	70	88	280	50.8	8-φ8