

Vacuum Poppet Valves

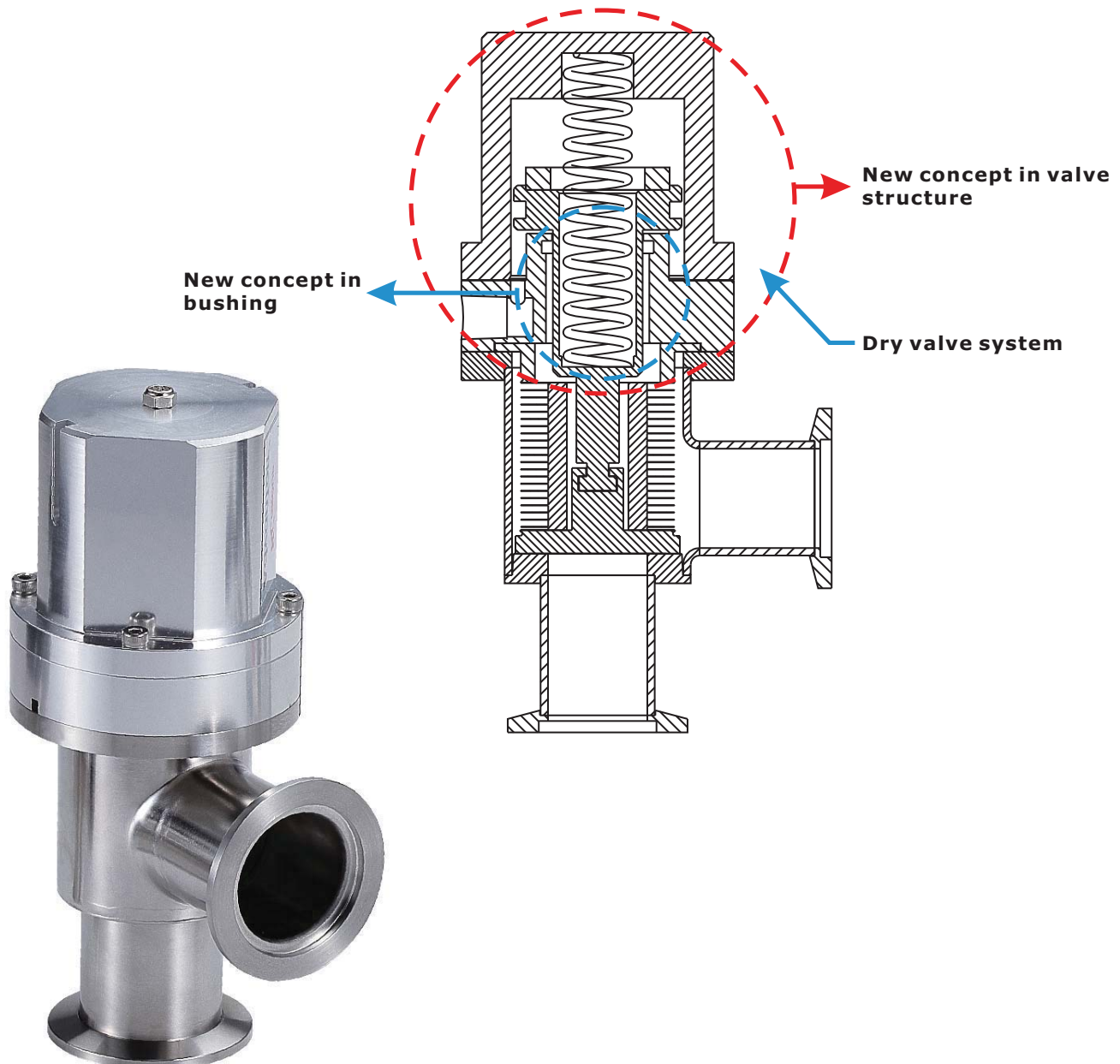
Product Introduction

Isolation Poppet Valves are usually installed in roughing or for line system. Most of application may connect to exhausting system, there is potential risk for contamination the chambers. Special design Dry valve brings the safety to protect chambers when pumping system in back streaming. The poppet valves use edge welded bellows, and provide highest conductance with small footprint design.

Vacuum
Valves

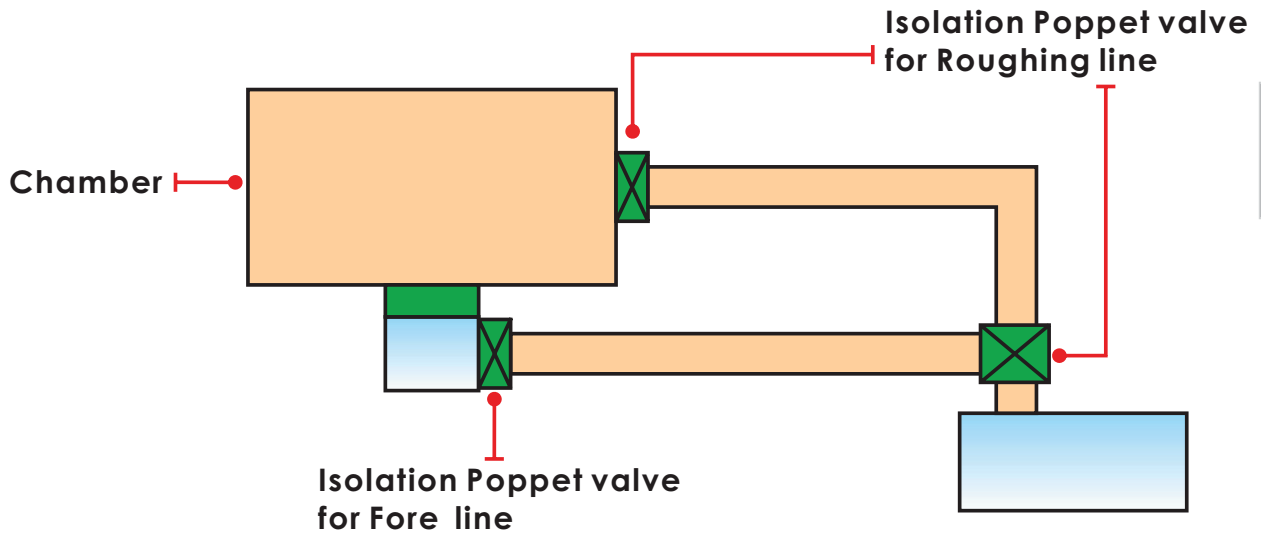
Product Features

- Spring return to closed, available from 3/4" orifice to 2".
- High Purity (Dry valve system), non-metal shaft bushing, less particle generation.
- Low profile design.
- Dry valve system, self lubricated mechanism, reducing particle generation.

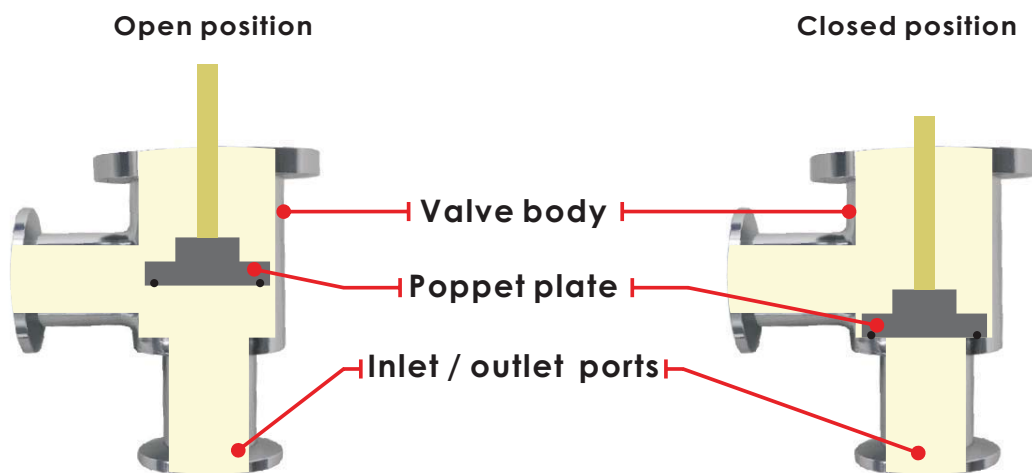


Product's Application

Poppet valves in the roughing & For line.

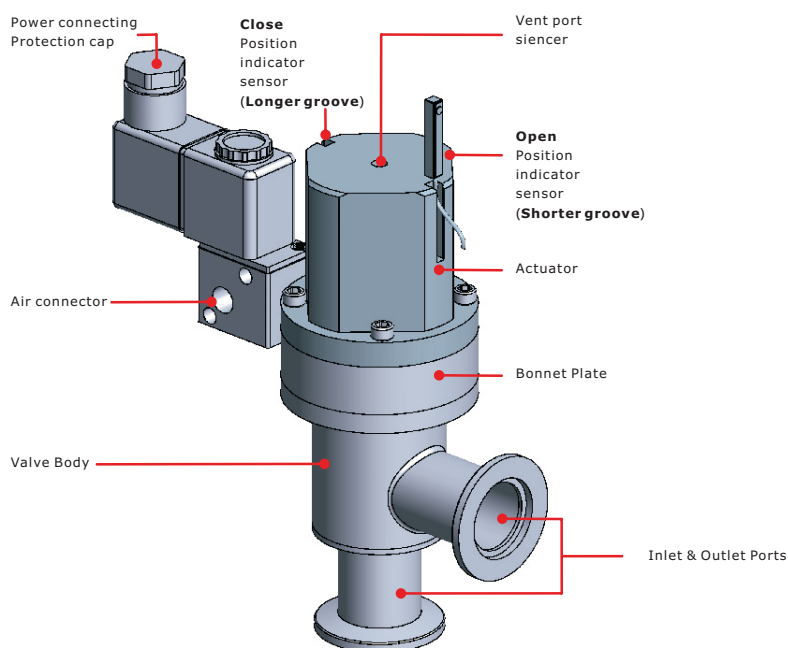


Valve's operation Concept



Part of Valve

Parts for Poppet Valves- Single acting



Vacuum Valves

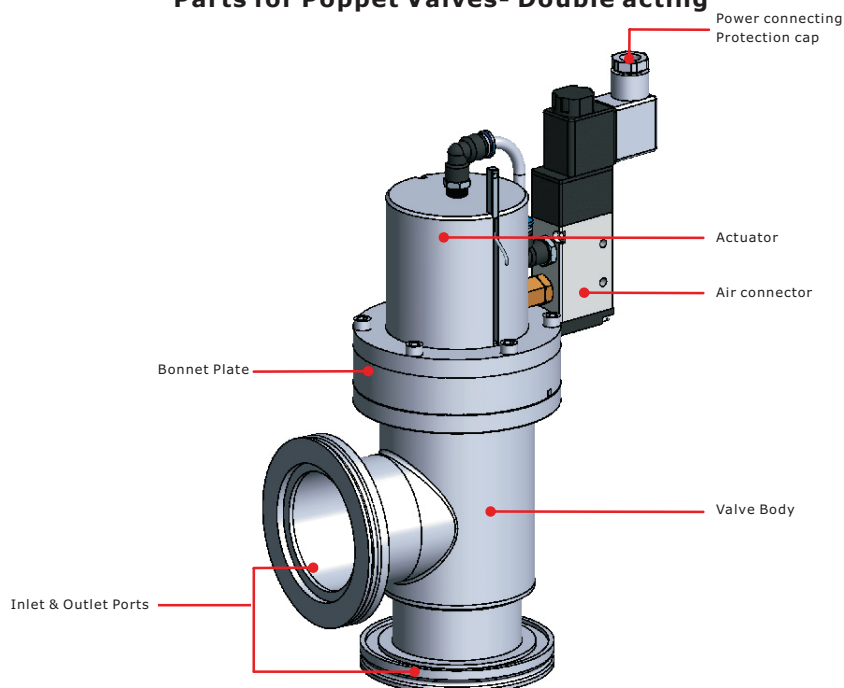
Technical Data for Poppet Angle / Inline valves

	Ultra High Vacuum	High Vacuum
Feedthrough	Welded Bellows in AM350	Welded Bellows in Am350
Gate seal	FKM o-ring (Optional for FFKM)	FKM o-ring (Optional for FFKM)
Bonnet seal	OFHC metal gasket	FKM
Operate pressure range	2,500 Torr ~ 1×10^{-10} Torr 2,000 mbar ~ 1.33×10^{-10} mbar 200 kPa ~ 1.13×10^{-11} kPa	2,500 Torr ~ 1×10^{-8} Torr 2,000 mbar ~ 1.33×10^{-8} mbar 200 kPa ~ 1.13×10^{-9} kPa
Leak rate	1×10^{-10} Torr l/s, He 1.33×10^{-10} mbar l/s, He 1.13×10^{-11} kPa	1×10^{-9} Torr l/s, He 1.33×10^{-9} mbar l/s, He 1.13×10^{-10} kPa
Cycle life	>1,000,000 Cycles	
Temperature for Valve body	250°C(482°F) Open, 200°C(392°F) Closed	
Temperature for Actuator	100°C(212°F)	
Temperature for solenoid / position indicator	80°C 176°F	
Bake Temperature	200°C (392°F) for FKM gate seal	100°C (212°F) for FKM gate seal
Valve body material	SUS304/L (Optional for SUS316/L)	
Mechanism material	SUS304/L	
Actuator material	Aluminum	
Mounting position	Any	

Valve's operation data

Pneumatic operating pressure	4 bar ~ 5.5 bar 400 kpa ~ 550 kpa 58 psi ~ 80 psi
Position indicator (Optional)	Optional Magnetic sensor with wire end
Solenoid (optional)	Optional for 24V DC, standard
Failure protection (Build in)	Build in Spring closed for KF16, KF25, KF40, KF50, CF1.33", CF2.75

Parts for Poppet Valves- Double acting



Vacuum Valves

Valve's Performance data

	KF16/CF1.33"	KF25	KF40/CF2.75"	KF50	ISO-K63/CF4.5"
Maximum differential pressure against gate	2,025 Torr 2,700 mbar 270 kpa	1,800 Torr 2,400 mbar 240 kpa	1,725 Torr 2,300 mbar 230 kpa	1,500 Torr 2,000 mbar 200 kpa	2,925 Torr 3,900 mbar 390 kpa
Maximum differential pressure at opening	1,500 Torr 2,000 mbar 200 kpa				
Pneumatic valve open / close time	0.5(s)	0.6(s)	0.8(s)	0.9(s)	0.7(s)
Valve's Conductance Angle type (Molecular flow)	6(l/s)	15(l/s)	48(l/s)	82(l/s)	170(l/s)
Valve's Conductance Inline type (Molecular flow)	5(l/s)	12(l/s)	44(l/s)	66(l/s)	135(l/s)

	ISO-K 80	ISO-K 100/CF6"	ISO-K 160/CF8"	ISO-K 200	ISO-K 250
Maximum differential pressure against gate	2,925 Torr 3,900 mbar 391 kpa	2,925 Torr 3,900 mbar 392 kpa	3,300 Torr 4,400 mbar 440 kpa	3,300 Torr 4,400 mbar 441 kpa	3,300 Torr 4,400 mbar 442 kpa
Maximum differential pressure at opening	1,500 Torr 2,000 mbar 200 kpa				
Pneumatic valve open / close time	0.7(s)	0.8(s)	1.5(s)	2.5(s)	2.8(s)
Valve's Conductance Angle type (Molecular flow)	220(l/s)	490(l/s)	1090(l/s)	1,600(l/s)	2,650(l/s)
Valve's Conductance Inline type (Molecular flow)	184(l/s)	406(l/s)	N/A	N/A	N/A

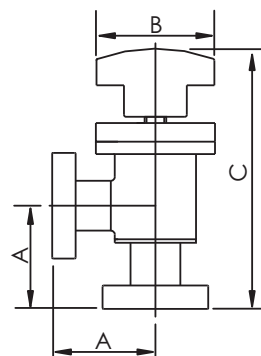
Product Order Information

Vacuum
Valves

Manual wheel Angle poppet valves, UHV, CF Flange

Catalogue PN	Tube OD	A	B	C
MAV-UHV-CF-133	3/4"	41	60	124
MAV-UHV-CF-133-1	3/4"	55	60	139
MAV-UHV-CF-275	1-1/2"	63	60	162
MAV-UHV-CF-275-1	1-1/2"	67	60	193

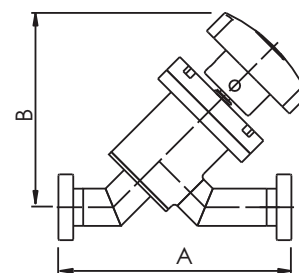
* Bonnet by OFC Gasket sealed



Manual wheel Inline poppet valves, UHV, CF Flange

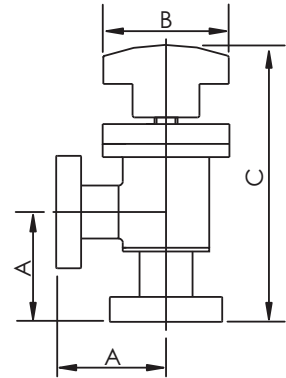
Catalogue PN	Tube OD	A	B
MIV-UHV-CF-133	3/4"	119	100
MIV-UHV-CF-275	1-1/2"	133	123

* Bonnet by OFC Gasket sealed



Manual wheel Angle poppet valves, HV, CF Flange

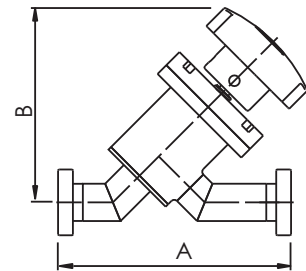
Catalogue PN	Tube OD	A	B	C
MAV-HV-CF-133	3/4"	41	60	124
MAV-HV-CF-133-1	3/4"	55	60	138
MAV-HV-CF-212	1"	50	60	131
MAV-HV-CF-212-1	1"	53	60	133
MAV-HV-CF-275	1-1/2"	63	60	162
MAV-HV-CF-275-1	1-1/2"	67	67	165
MAV-HV-CF-338	2"	72	60	193
MAV-HV-CF-338-1	2"	78	78	199



* Bonnet by FKM O-Ring sealed

Manual wheel Inline poppet valves, HV, CF Flange

Catalogue PN	Tube OD	A	B
MIV-HV-CF-133	3/4"	119	100
MIV-HV-CF-212	1"	107	97
MIV-HV-CF-275	1-1/2"	133	123
MIV-HV-CF-338	2"	182	152



*Bonnet by FKM O-Ring sealed

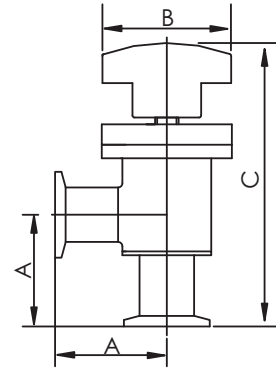


Product Order Information

Vacuum
Valves

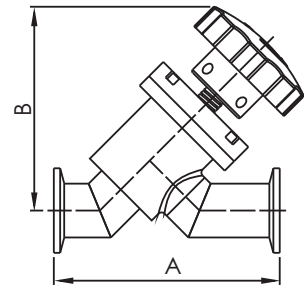
Manual wheel Angle poppet valves, HV, KF Flange

Catalogue PN	Tube OD	A	B	C
MAV-HV-KF-16	3/4"	40	60	123
MAV-HV-KF-16-1	3/4"	55	60	138
MAV-HV-KF-25	1"	50	60	130
MAV-HV-KF-25-1	1"	52	60	132
MAV-HV-KF-40	1-1/2"	65	60	164
MAV-HV-KF-50	2"	70	60	191
MAV-HV-KF-50-1	2"	76	60	198



Manual wheel Inline poppet valves, HV, KF Flange

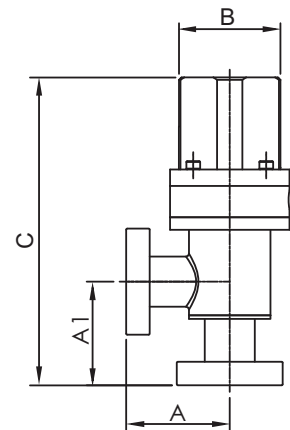
Catalogue PN	Tube OD	A	B
MIV-HV-KF-16	3/4"	102	100
MIV-HV-KF-25	1"	107	97
MIV-HV-KF-40	1-1/2"	130	123
MIV-HV-KF-50	2"	178	152



Pneumatic Angle poppet valves, UHV, CF Flange Single acting

Catalogue PN	Tube OD	A	A1	B	C
PAV-UHV-CF-133	3/4"	41	41	52	147
PAV-UHV-CF-133-1	3/4"	55	55	52	162
PAV-UHV-CF-275	1-1/2"	63	63	65	174
PAV-UHV-CF-275-1	1-1/2"	67	67	65	178

* Bonnet by OFC Gasket sealed

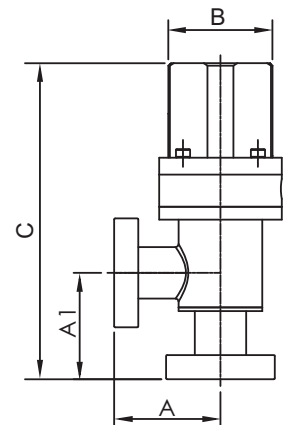


Vacuum
Valves

Pneumatic Angle poppet valves, UHV, CF Flange Double acting

Catalogue PN	Tube OD	A	A1	B	C
PAV-UHV-CF-450	2-1/2"	91	91	70	251
PAV-UHV-CF-450-1	2-1/2"	86	86	70	246
PAV-UHV-CF-600	4"	113	113	89	342
PAV-UHV-CF-600-1	4"	118	118	89	348

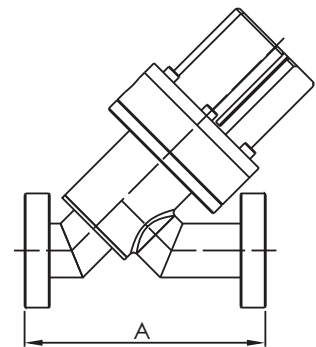
*Bonnet by OFC Gasket sealed



Pneumatic Inline poppet valves, UHV, CF Flange Single acting

Catalogue PN	Tube OD	A
PIV-UHV-CF-133	3/4"	119
PIV-UHV-CF-275	1-1/2"	133

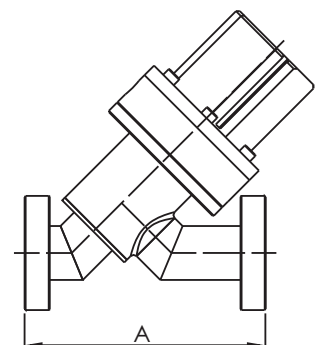
* Bonnet by OFC Gasket sealed



Pneumatic Inline poppet valves, UHV, CF Flange Double acting

Catalogue PN	Tube OD	A
PIV-UHV-CF-450	2-1/2"	216
PIV-UHV-CF-600	4"	355

* Bonnet by OFC Gasket sealed

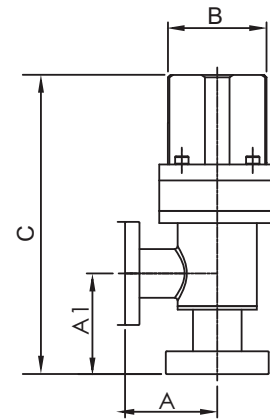


Product Order Information

Vacuum Valves

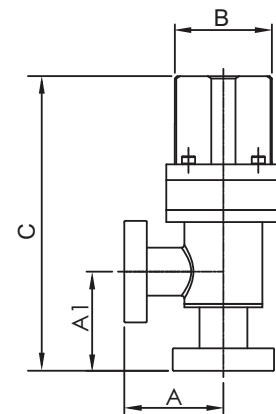
Pneumatic Angle poppet valves, HV, CF Flange Single acting

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-CF-133	3/4"	41	41	52	147
PAV-HV-CF-133-1	3/4"	55	55	52	162
PAV-HV-CF-212	1"	50	50	52	154
PAV-HV-CF-212-1	1"	53	53	52	156
PAV-HV-CF-275	1-1/2"	63	63	65	174
PAV-HV-CF-275-1	1-1/2"	67	67	65	178
PAV-HV-CF-338	2"	72	72	67	234
PAV-HV-CF-338-1	2"	78	78	67	240



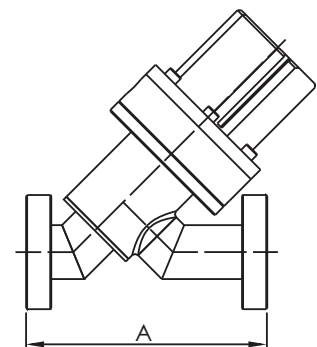
Pneumatic Angle poppet valves, HV, CF Flange Double acting

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-CF-450	2-1/2"	91	91	70	251
PAV-HV-CF-450-1	2-1/2"	86	86	70	246
PAV-HV-CF-600	4"	113	113	89	342
PAV-HV-CF-600-1	4"	118	118	89	348
PAV-HV-CF-800	6"	144	144	140	449
PAV-HV-CF-800-1	6"	165	165	140	469



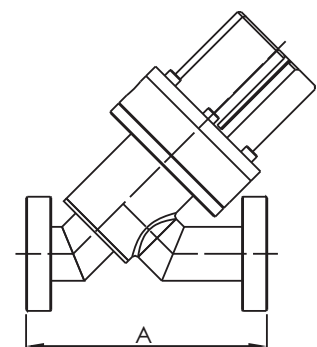
Pneumatic Inline poppet valves, HV, CF Flange Single acting

Catalogue PN	Tube OD	A
PIV-HV-CF-133	3/4"	119
PIV-HV-CF-212	1"	107
PIV-HV-CF-275	1-1/2"	133
PIV-HV-CF-338	2"	182



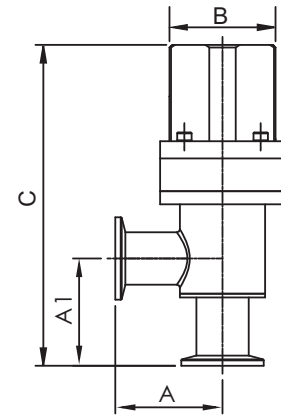
Pneumatic Inline poppet valves, HV, CF Flange Double acting

Catalogue PN	Tube OD	A
PIV-HV-CF-450	2-1/2"	216
PIV-HV-CF-600	4"	355
PIV-HV-CF-800	6"	394



**Pneumatic Angle poppet valves, HV, KF Flange
Single acting**

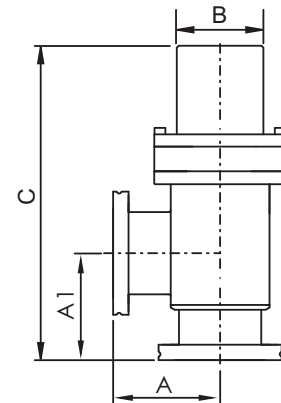
Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-KF-16	3/4"	40	40	52	147
PAV-HV-KF-16-1	3/4"	55	55	52	161
PAV-HV-KF-25	1"	50	50	52	154
PAV-HV-KF-25-1	1"	52	52	52	156
PAV-HV-KF-40	1-1/2"	65	65	65	176
PAV-HV-KF-50	2"	70	70	67	232
PAV-HV-KF-50-1	2"	76	76	67	238



Vacuum
Valves

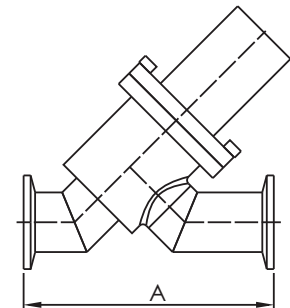
**Pneumatic Angle poppet valves, HV, ISO-K Flange
Double acting**

Catalogue PN	Tube OD	A	A1	B	C
PAV-HV-ISOK-63	2-1/2"	88	88	70	248
PAV-HV-ISOK-63-1	2-1/2"	83	83	70	243
PAV-HV-ISOK-80	3"	90	90	82	284
PAV-HV-ISOK-80-1	3"	89	89	82	283
PAV-HV-ISOK-100	4"	108	108	89	338
PAV-HV-ISOK-100-1	4"	114	114	89	344
PAV-HV-ISOK-160	6"	138	138	140	442
PAV-HV-ISOK-160-1	6"	159	159	140	463
PAV-HV-ISOK-200	8"	178	178	140	648
PAV-HV-ISOK-200-1	8"	210	210	140	659
PAV-HV-ISOK-250	10"	208	208	202	668
PAV-HV-ISOK-250-1	10"	260	260	202	720



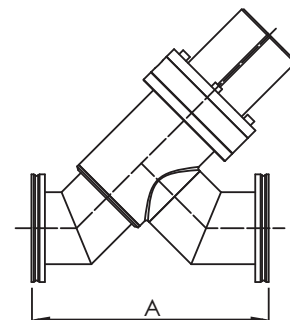
**Pneumatic Inline poppet valves, HV, KF Flange
Single acting**

Catalogue PN	Tube OD	A
PIV-HV-KF-16	3/4"	102
PIV-HV-KF-25	1"	107
PIV-HV-KF-40	1-1/2"	130
PIV-HV-KF-50	2"	178



**Pneumatic Inline poppet valves, HV, ISO-K Flange
Double acting**

Catalogue PN	Tube OD	A
PIV-HV-ISOK-63	2-1/2"	209
PIV-HV-ISOK-80	3"	268
PIV-HV-ISOK-100	4"	345
PIV-HV-ISOK-160	6"	381

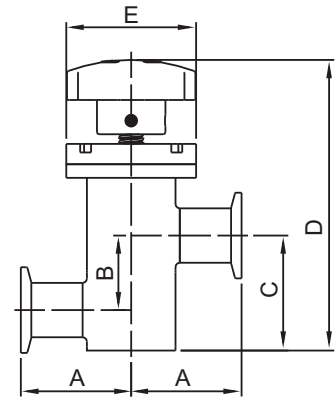


Product Order Information

Vacuum
Valves

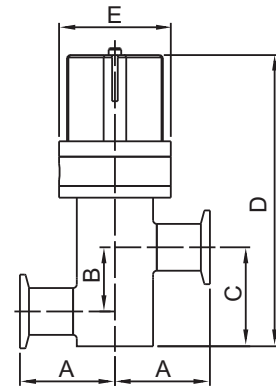
Manual Wheel Inline Poppet Valves, Z- Type, HV, KF Flange

Catalogue PN	Tube OD	A	B	C	D	E
MZV-HV-KF-16	3/4"	55	29	47	132	61
MZV-HV-KF-25	1"	52	35	54	134	61
MZV-HV-KF-40	1-1 /2"	61	48	74	172	77



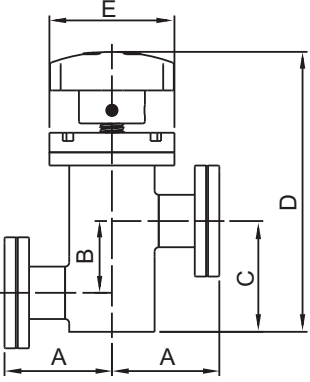
Pneumatic Inline Poppet Valves, Z-Type, HV, KF Flange Single Acting

Catalogue PN	Tube OD	A	B	C	D	E
PZV-HV-KF-16	3/4"	55	29	47	156	61
PZV-HV-KF-25	1"	52	35	54	158	61
PZV-HV-KF-40	1-1 /2"	61	48	74	184	77



Manual Wheel Inline Poppet Valves, Z- Type, HV, CF Flange

Catalogue PN	Tube OD	A	B	C	D	E
MZV-HV-CF-133	3/4"	55	29	47	132	61
MZV-HV-CF-212	1"	52	35	54	134	61
MZV-HV-CF-275	1-1 /2"	62	48	74	172	77



**Pneumatic Inline Poppet Valves, Z-Type, HV, CF Flange
Single Acting**

Catalogue PN	Tube OD	A	B	C	D	E
PZV-HV-CF-133	3/4"	55	29	47	156	61
PZV-HV-CF-212	1"	52	35	54	158	61
PZV-HV-CF-275	1-1 /2"	62	48	74	184	77

