In-Axis Mini Gate Valves



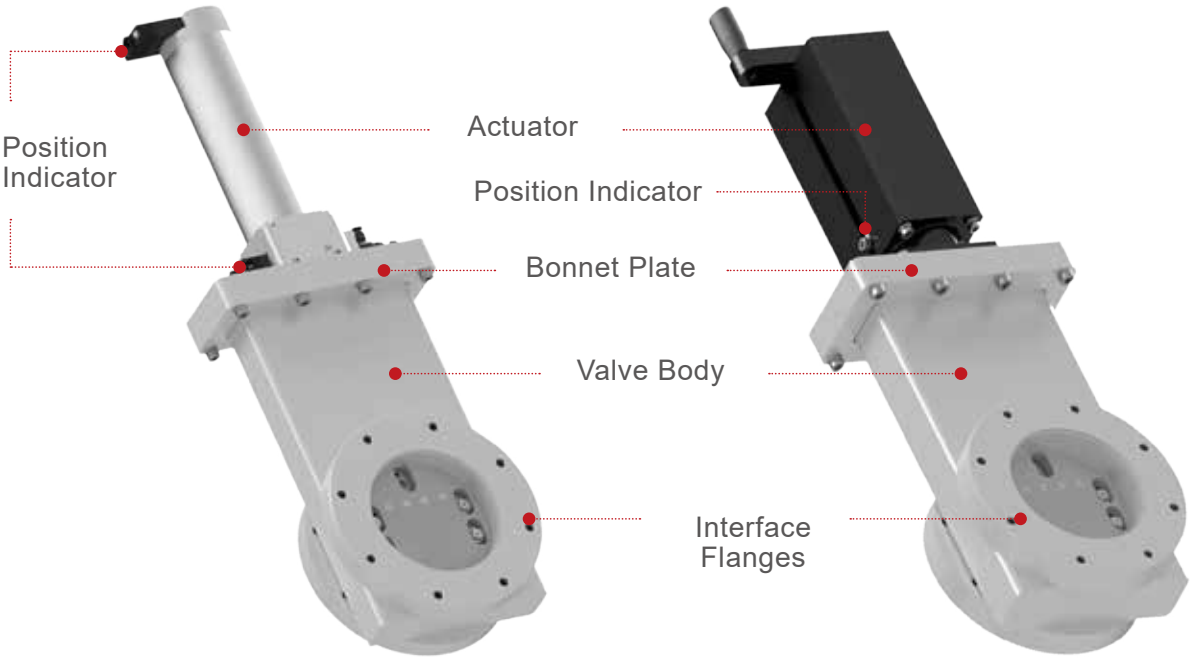
In-Axis Gate Valves



AdvanTorr® "In-Axis" series of SMART gate valves features a vertically oriented drive mechanism with pneumatic or manual actuation, making them an excellent choice when a small footprint is necessary within a system. These valves provide a reliable and efficient solution for applications where space is at a premium.

Features

- Edge Welded Bellows Sealing: Prevents any leakage, ensuring the system remains contamination free
- Low Particle Generation: Ideal for use in clean environments
- Long Service Life: Reduced maintenance and replacement costs
- Easy Operation: Smooth and reliable opening and closing actions



Technical Data for In- Axis Gate Valve

	Ultra High Vacuum	High Vacuum
Feedthrough	Welded bellows in AM350	O-ring shaft seal
Gate seal	FKM O-ring (Optional for FFKM)	FKM O-ring (Optional for FFKM)
Bonnet seal	OFHC metal gasket	FKM O-ring (Optional for FFKM)
Operate pressure range	760 Torr ~ $1x10^{-10}$ Torr 1,013 mbar~$1.33x10^{-10}$ mbar 101 kPa~ $1.33x10^{-11}$ kPa	760 Torr ~ $1 x 10^{-8}$ Torr 1,013 mbar ~ $1.33 x 10^{-8}$ mbar 101 kPa ~ $1.33 x 10^{-9}$ kPa
Leak rate	$1 x 10^{-10}$ Torr l/s, He $1.33x10^{-10}$ mbar l/s, He $1.33x10^{-11}$ kPa l/s, He	$1 x 10^{-9}$ Torr l/s, He $1.33 x 10^{-9}$ mbar l/s, He $1.33 x 10^{-10}$ kPa l/s, He
Cycle life	>50,000 Cycles	>200,000 Cycles
Temperature for valve body	0°C~250°C (32°F~482°F) Open, 0°C~200°C (32°F~392°F) Closed	
Temperature for actuator	0°C~100°C (32°F~212°F)	
Temperature for solenoid / position indicator	0°C~80°C 32°F~176°F	
Bake temperature	200°C (392°F) for FKM gate seal	100°C (212°F) for FKM gate seal
Valve body material	SS304 (Optional for SS316L)	
Mechanism material	SS304	
Actuator material	SS304, Aluminum	
Mounting position	Any	

Valve's operation data

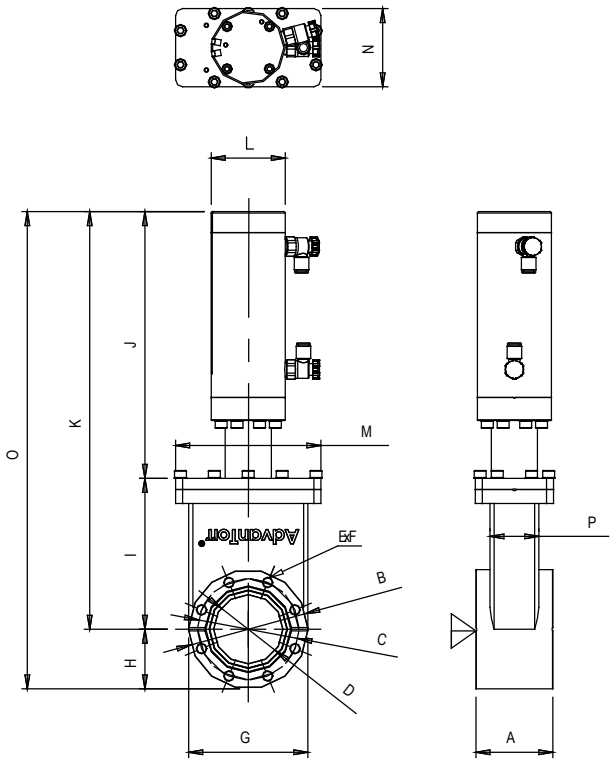
Pneumatic operating pressure	4 bar~ 8 bar / 400 kpa~ 800 kpa / 58 psi~ 116 psi
Position indicator (included as standard)	Visual indicator and micro switch with 7-pin connector
Solenoid (included as standard)	24V DC, standard option for 12V DC, 110V AC and 220V AC
Failure protection (included as standard)	SMART lock system (Valve position remains and locked)

Valve's performance data

	CF6"/ISO-F100	CF8"/ISO-F160	CF10"/ISO-F200	CF12"/ISO-F250
Maximum differential pressure against gate	<817 Torr <1,090 mbar < 109kpa			
Maximum differential pressure at opening	<22.5 Torr <30 mbar <3 kPa	<18.7 Torr <25 mbar <2.5 kPa	<15 Torr <20 mbar <2 kPa	<11.2 Torr <15 mbar <1.5 kPa
Pneumatic valve open / close time	1.5(s)	2(s)	2.5(s)	3(s)
Valve's conductance (molecular flow)	1,700(l/s)	5,100(l/s)	12,000(l/s)	22,000(l/s)

01. Pneumatic In-Axis Gate Valves, UHV CF Flange





Material SS 304

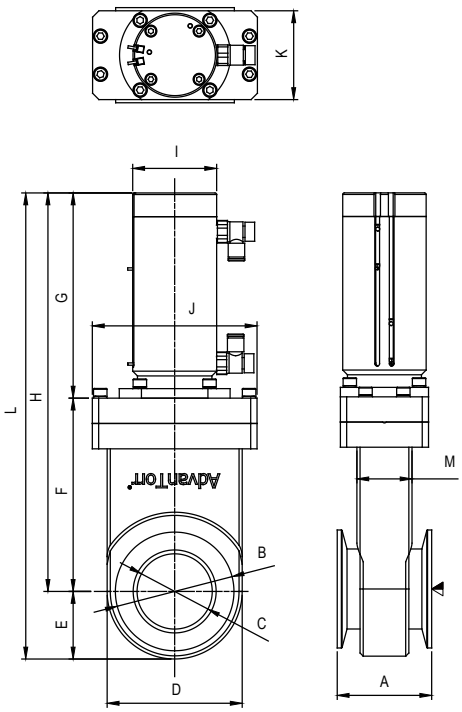
Part Number	Tube OD	CF	A	B(OD)	C(PCD)	D(ID)	EXF	G	H
MGVP-UHV-CF275M	1.5"	40	55	69	59	40	6XM6	85	43
MGVP-UHV-CF338M	2"	50	55	85	72	49	8XM8	85	43

Part Number	Tube OD	CF	I	J	K	L	M	N	O	P
MGVP-UHV-CF275M	1.5"	40	108	191	299	53	104	56	342	35
MGVP-UHV-CF338M	2"	50	108	191	299	53	104	56	342	35

- Dimension in mm

02. Pneumatic In-Axis Gate Valves, HV KF Flange





Material SS 304

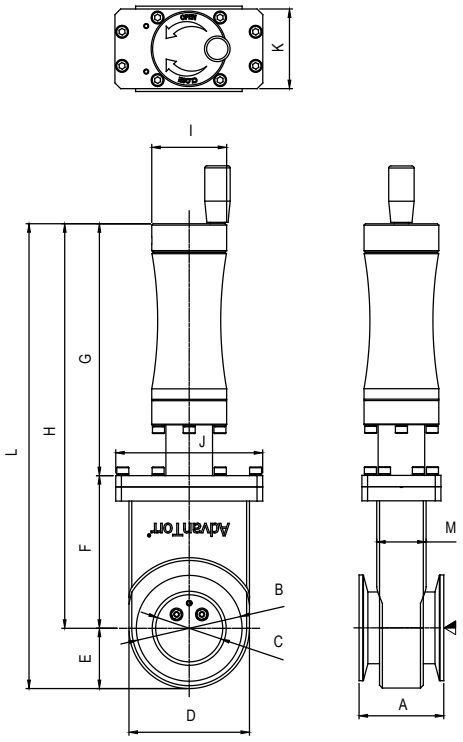
Part Number	Tube OD	KF	A	B(OD)	C(ID)	D	E	F
MGVP-HV-KF40	1.5"	40	60	55	41	85	43	122
MGVP-HV-KF50	2"	50	60	75	48	85	43	122

Part Number	Tube OD	KF	G	H	I	J	K	L	M
MGVP-HV-KF40	1.5"	40	130	252	53	104	56	294	35
MGVP-HV-KF50	2"	50	130	252	53	104	56	294	35

- Dimension in mm

03. Manual In-Axis Gate Valves, HV KF Flange (Bellows)





Material SS 304

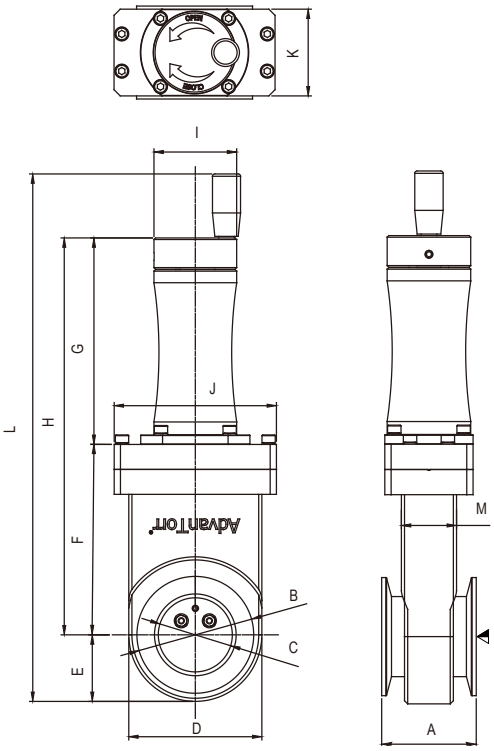
Part Number	Tube OD	KF	A	B	C	D	E	F	G
MGVM-HV-KF40	1.5"	40	60	55	41	85	43	108	178
MGVM-HV-KF50	2"	50	60	75	52	85	43	108	178

Part Number	Tube OD	KF	H	I	J	K	L	M
MGVM-HV-KF40	1.5"	40	286	53	104	56	370	35
MGVM-HV-KF50	2"	50	286	53	104	56	370	35

- Dimension in mm

04. Manual In-Axis Gate Valves, HV KF Flange





Material SS 304

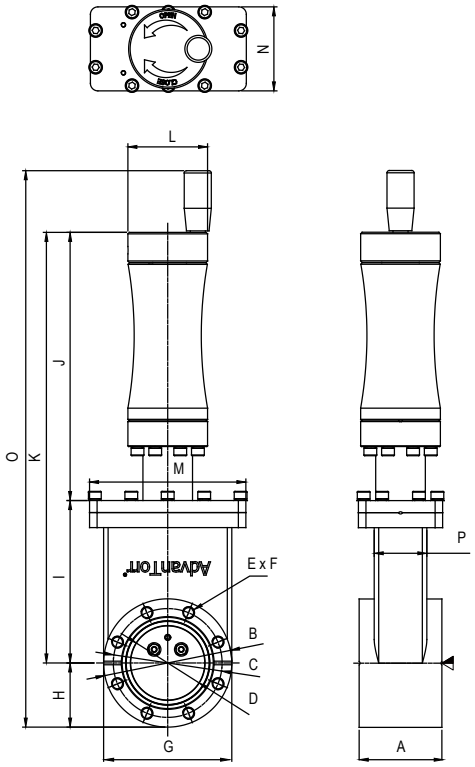
Part Number	Tube OD	KF	A	B(OD)	C(ID)	D	E	F	G
MGVP-HV-KF-275	1.5"	40	60	55	41	85	43	122	132
MGVP-HV-KF-338	2"	50	60	75	48	85	43	122	132

Part Number	Tube OD	KF	H	I	J	K	L	M
MGVP-HV-KF-275	1.5"	40	254	53	104	56	339	35
MGVP-HV-KF-338	2"	50	254	53	104	56	339	35

- Dimension in mm

05. Manual In-Axis Gate Valves, UHV CF Flange





Material SS 304

Part Number	Tube OD	CF	A	B(OD)	C(PCD)	D(ID)	EXF	G	H
MGVP-UHV-CF-275	1.5"	40	55	69	59	40	6XM6	85	43
MGVP-UHV-CF-338	2"	50	55	85	72	49	8XM8	85	43

Part Number	Tube OD	CF	I	J	K	L	M	N	O	P
MGVP-UHV-CF-275	1.5"	40	108	178	286	53	104	56	371	35
MGVP-UHV-CF-338	2"	50	108	178	286	53	104	56	371	35

- Dimension in mm