

In-Axis Gate Valves



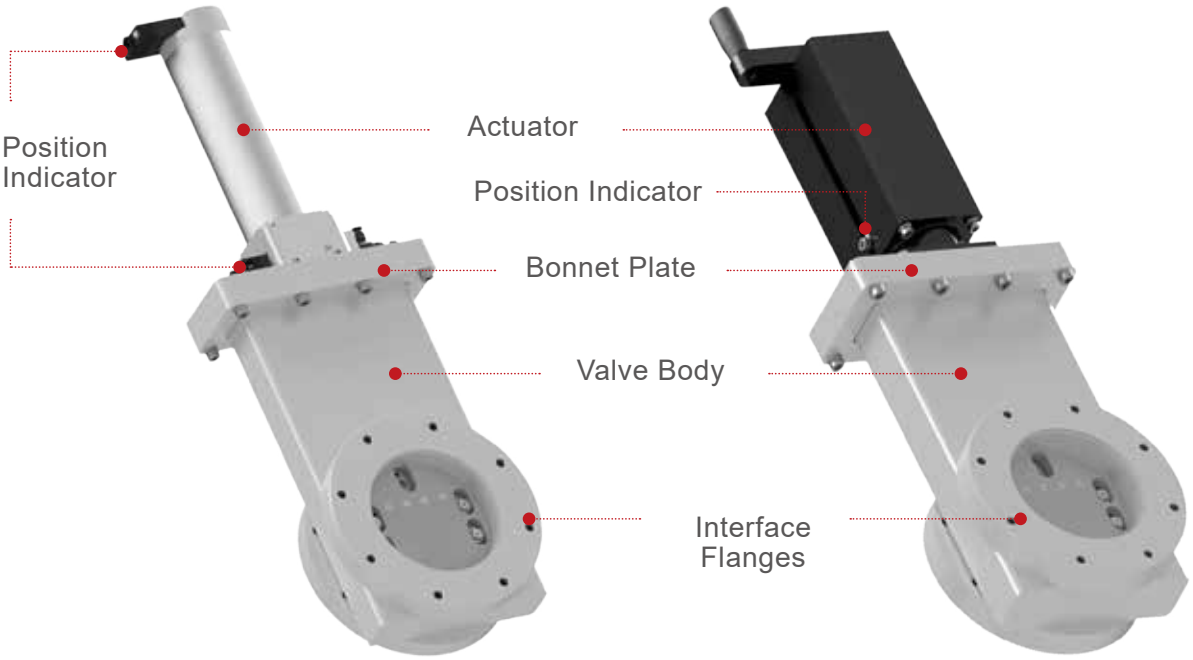
In-Axis Gate Valves



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

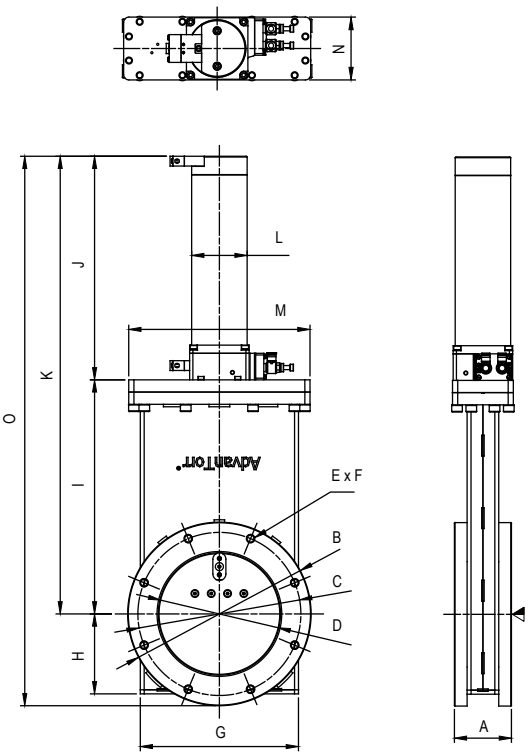
Pneumatic operating pressure	4 bar~ 8 bar / 400 kpa~ 800 kpa / 58 psi~ 116 psi
Position indicator (included as standard)	Visual indicator and micro switch with 7-pin connector
Solenoid (included as standard)	24V DC, standard option for 12V DC, 110V AC and 220V AC
Failure protection (included as standard)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





Material SS 304

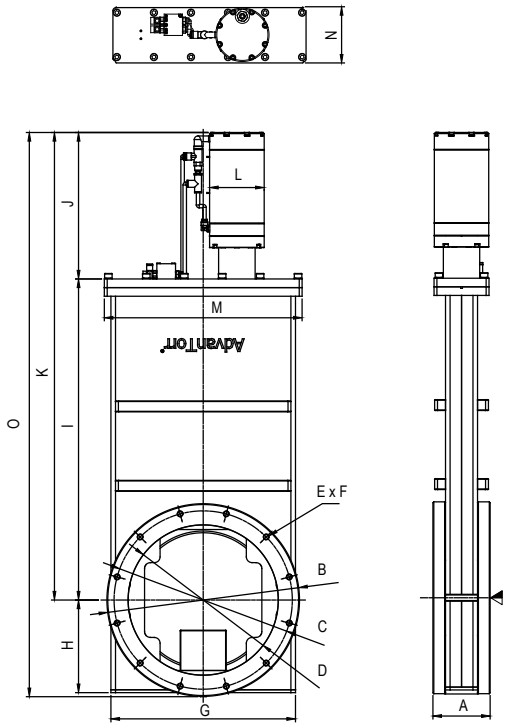
Part Number	Tube OD	ISO-F	A	B	C	D	EXF	G	H
KAGVP-HV-ISO63M	2.5“	ISO63	70	130	110	70	4XM8	112	54
KAGVP-HV-ISO80M	3“	ISO80	70	145	125	76	8XM8	121	61
KAGVP-HV-ISO100M	4"	ISO100	70	165	145	100	8XM8	142	73
KAGVP-HV-ISO160M	6"	ISO160	70	225	200	150	8XM10	194	98
KAGVP-HV-ISO200M	8"	ISO200	80	285	260	200	12XM10	244	121

Part Number	Tube OD	ISO-F	I	J	K	L	M	N	O
KAGVP-HV-ISO63M	2.5“	ISO63	160	186	346	55	128	70	411
KAGVP-HV-ISO80M	3“	ISO80	175	199	374	55	157	70	446
KAGVP-HV-ISO100M	4"	ISO100	219	222	440	55	178	70	523
KAGVP-HV-ISO160M	6"	ISO160	287	274	561	68	222	75	673
KAGVP-HV-ISO200M	8"	ISO200	363	325	687	75	279	75	830

- Dimension in mm

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





Material SS 304

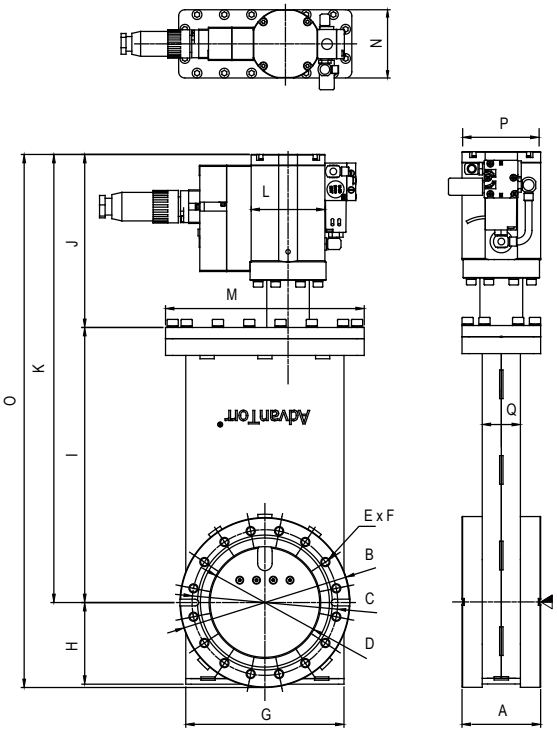
Part Number	Tube OD	ISO-F	A	B(OD)	C(PCD)	D(ID)	EXF	G	H
KAGVP-HV-ISO250M	10"	ISO250	100	335	310	261	12XM10	321	161

Part Number	Tube OD	ISO-F	I	J	K	L	M	N	O
KAGVP-HV-ISO250M	10"	ISO250	558	255	813	95	344	96	981

- Dimension in mm

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





Material SS 304

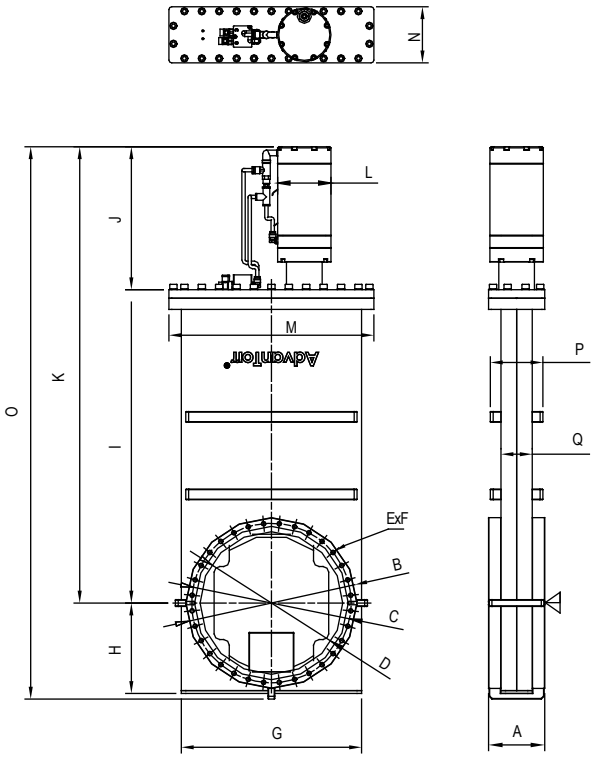
Part Number	Tube OD	CF-F	A	B(OD)	C(PCD)	D(ID)	EXF	G	H	I
KAGVP-UHV-CF100M	4"	CF100	70	152	130	100	16XM8	142	73	246
KAGVP-UHV-CF160M	6"	CF160	70	202	181	150	20XM8	194	98	336
KAGVP-UHV-CF200M	8"	CF200	80	253	232	200	24XM8	244	121	429

Part Number	Tube OD	CF-F	J	K	L	M	N	O	P	Q
KAGVP-UHV-CF100M	4"	ISO100	155	401	66	178	70	477	70	34
KAGVP-UHV-CF160M	6"	ISO160	185	521	76	222	75	622	70	39
KAGVP-UHV-CF200M	8"	ISO200	191	620	86	280	80	748	80	41

- Dimension in mm

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





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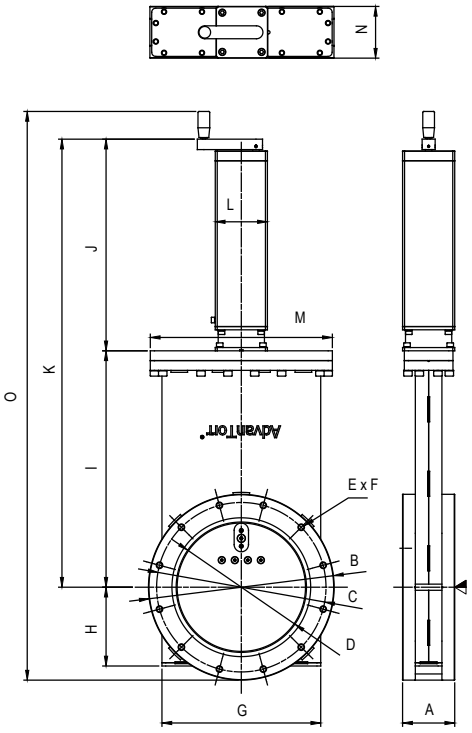
Part Number	Tube OD	CF-F	A	B(OD)	C(PCD)	D(ID)	EXF	G	H	I
KAGVP-UHV-CF250M	10"	CF250	100	304	284	254	32xM8	321	161	558

Part Number	Tube OD	CF-F	J	K	L	M	N	O	P	Q
KAGVP-UHV-CF250M	10"	CF250	255	813	95	365	100	984	94	56

- Dimension in mm

05. Manual In-Axis Gate Valves, HV ISO Flange





Material SS 304

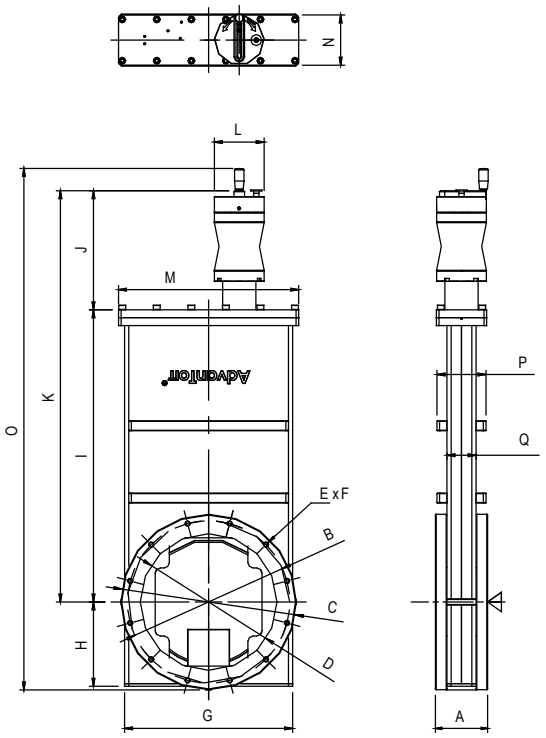
Part Number	Tube OD	ISO-F	A	B(OD)	C(PCD)	D(ID)	EXF	G	H
KAGVM-HV-ISO63M	2.5"	ISO63	70	130	110	70	4XM8	112	54
KAGVM-HV-ISO80M	3"	ISO80	70	145	125	76	8XM8	121	61
KAGVM-HV-ISO100M	4"	ISO100	70	165	145	100	8XM8	142	73
KAGVM-HV-ISO160M	6"	ISO160	70	225	200	150	8XM10	194	98
KAGVM-HV-ISO200M	8"	ISO200	80	285	260	200	12XM10	244	121

Part Number	Tube OD	ISO-F	I	J	K	L	M	N	O
KAGVM-HV-ISO63M	2.5"	ISO63	160	190	350	70	128	70	458
KAGVM-HV-ISO80M	3"	ISO80	175	204	379	70	157	70	494
KAGVM-HV-ISO100M	4"	ISO100	219	227	445	70	178	70	568
KAGVM-HV-ISO160M	6"	ISO160	287	286	573	75	222	75	728
KAGVM-HV-ISO200M	8"	ISO200	363	330	692	80	279	80	877

- Dimension in mm

06. Manual In-Axis Gate Valves, HV ISO Flange





Material SS 304

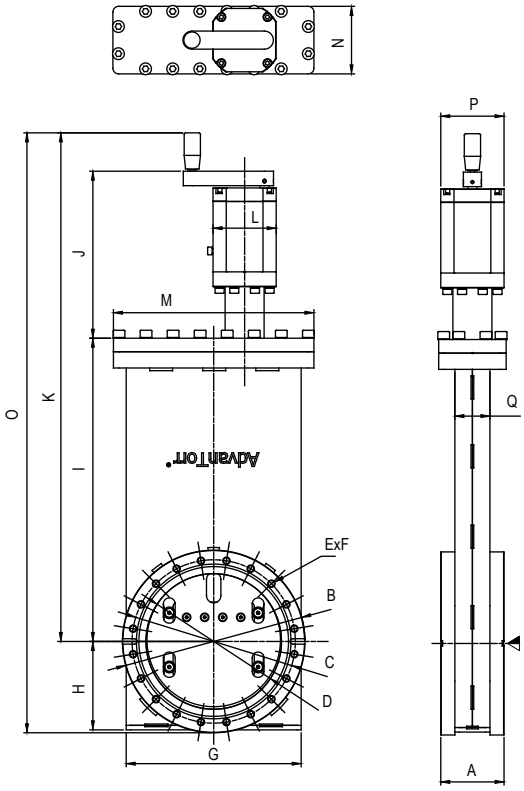
Part Number	Tube OD	ISO-F	A	B(OD)	C(PCD)	D(ID)	EXF	G	H
KAGVM-HV-ISO250M	10"	ISO250	100	335	310	261	12XM10	321	161

Part Number	Tube OD	ISO-F	I	J	K	L	M	N	O
KAGVM-HV-ISO250M	10"	ISO250	558	228	786	95	344	96	995

- Dimension in mm

07. Manual In-Axis Gate Valves, UHV, CF Flanges





Material SS 304

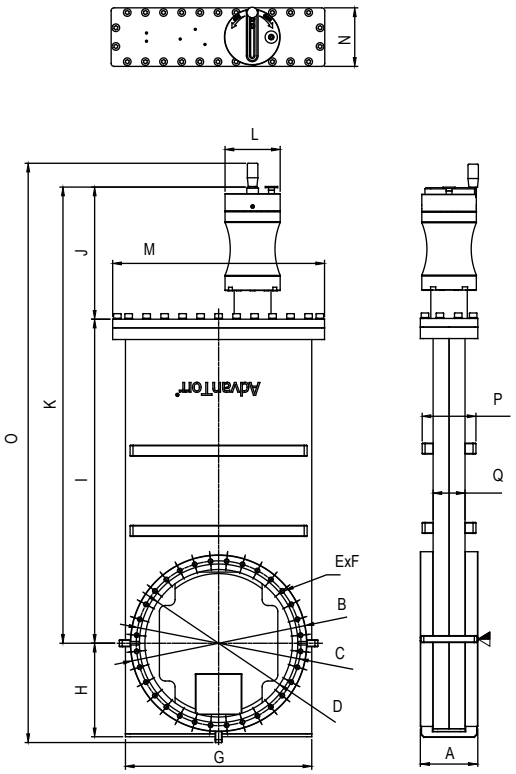
Part Number	Tube OD	CF	A	B(OD)	C(PCD)	D(ID)	EXF	G	H	I
KAGVM-UHV-CF100M	4"	CF100	70	152	130	100	16XM8	142	73	246
KAGVM-UHV-CF160M	6"	CF160	70	202	181	150	20XM8	194	98	336
KAGVM-UHV-CF200M	8"	CF200	80	253	232	200	24XM8	244	121	429

Part Number	Tube OD	CF	J	K	L	M	N	O	P	Q
KAGVM-UHV-CF100M	4"	CF100	176	463	68	178	70	540	70	34
KAGVM-UHV-CF160M	6"	CF160	190	567	70	222	75	670	70	39
KAGVM-UHV-CF200M	8"	CF200	208	678	70	280	80	807	70	41

- Dimension in mm

08. Manual In-Axis Gate Valves, UHV, CF Flanges





Material SS 304

Part Number	Tube OD	CF	A	B(OD)	C(PCD)	D(ID)	EXF	G	H	I
KAGVM-UHV-CF250	10"	CF250	100	304	284	254	32xM8	321	161	558

Part Number	Tube OD	CF	J	K	L	M	N	O	P	Q
KAGVM-UHV-CF250	10"	CF250	228	786	95	365	100	998	94	56

- Dimension in mm