

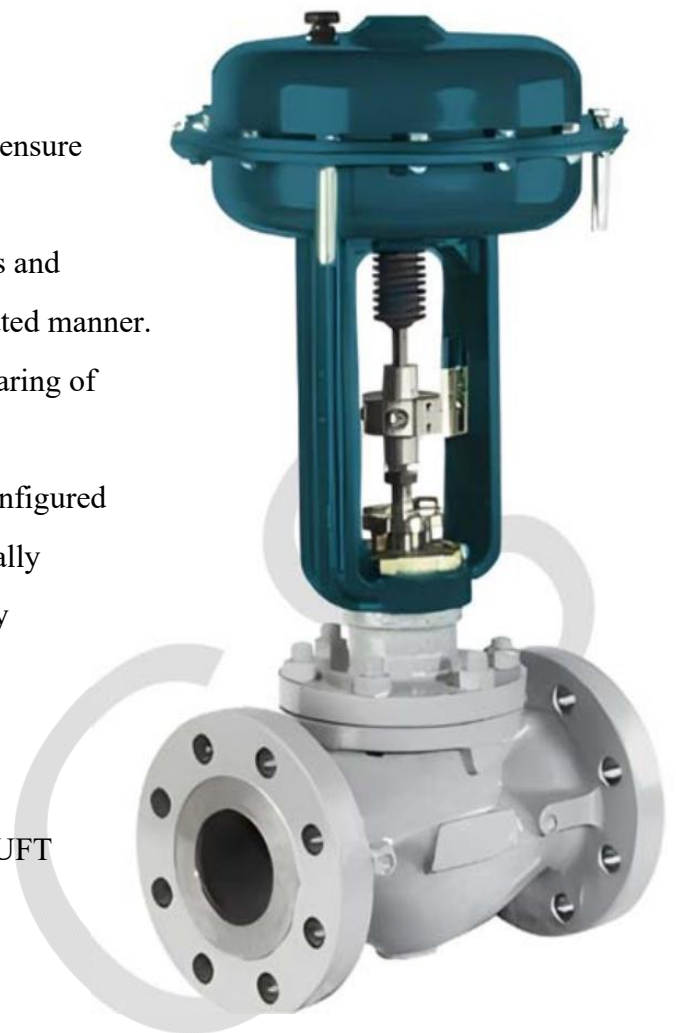
## MK-GS Type Control Valve

The MK - GS type control valve is a single - seat control valve. It is small in size and simple in structure. Incorporating the world's advanced technologies and systematic designs, it features a compact appearance, is easy to use, has a low maintenance cost, and is convenient for selection. It is specifically designed for controlling various liquids, gases, and steam. The special perforated sleeve and valve core can better adapt to harsh operating conditions.

This series of control valves can be optionally equipped with special structures such as bellows seal type, steam jacket type, and extended bonnet type.

### Product Features:

- The MK - GS type control valve complies with both European EN and American ANSI standards simultaneously.
- The wall thickness of the valve body adheres to ASME B16.34 - 2013. Each cavity of the valve body is optimized through 3D modeling and CFD (Computational Fluid Dynamics) simulation to ensure fluid stability.
- Modular design: The entire set of control valves and actuators adopts a modular design in a coordinated manner. With excellent design, it achieves maximum sharing of components among various specifications.
- Dynamically loaded packing: The standard - configured control valve system is equipped with dynamically loaded PTFE V - ring packing. The dynamically loaded design helps to reliably seal the process medium, greatly reducing the possibility of fugitive emissions from the valve stuffing box and meeting the ISO 15848 - 1 and TA - LUFT VDI2440 low - emission specifications.
- The valve body structure allows the material to comply with NACE 0175 - 2003.



**Table 1、 Standard Specifications - Body Part:**

Specifications	EN	ANSI
Nominal Diameter	DN 15,20,25,40,50,80,100,150	0.5,0.75,1,1.5,2,3,4,6 inches
Nominal Pressure	PN 10/16/25/40 compliant with EN 1092 - 1	Class 150/300 compliant with ASME B16.34
Connection Method	Requirements for raised face flanges of EN 1092 - 1 standard, HG/T 20592 - 2009	Requirements for raised face flanges of ASME B16.5 standard, HG/T 20615 - 2009; SH/T 3406 - 2013
Flange Distance	Compliant with EN 558 - 1	Compliant with ANSI/ISA 75.08.01
Bonnet Type	Standard type, low - temperature extended type, high - temperature extended type, bellows type, compact type	
Leakage Class	Metal seat: ANSI/FCI 70.2 Class IV, optional Class V; Soft valve core: Class VI	
Flow Direction	Upward flow	
Flow Characteristics	Equal percentage, linear	
Adjustable Ratio	50:1	
Trim Type	Orifice Diameter	Trim
	4.8mm	Small - flow trim
	9.5,14,22mm	Stem - guided trim, plunger - type valve core
	36,46,70,90,136mm	Seat - guided valve core
Operating Temperature	70,90,136mm	Balanced valve core, cage - guided valve core
	WCB:-29°C-232°C, LCB:-46°C-232°C。 Up to 371°C with extended bonnet	
	CF8/CF8M/CF3/CF3M stainless steel: - 29°C - 232°C. Up to - 46°C - 371°C with extended bonnet	

**Table 2. Standard Specifications - Actuator**

Description:	Pneumatic spring return diaphragm actuator
Working principle:	Air-to-close (fail open), air-to-open (fail close)
Working pressure range:	3.0-6.0 Bar
Ambient temperature:	-29-82°C
Pressure connection:	1/4 NPT internal thread connection
Coating:	Polyester powder coating

**Table 3: Material Combinations**

Valve body material:	A216WCB,A217-WC6,A217-WC9,A352-LCB		
Valve core:	316+RTFE	316	316+hardfacing welding
Valve seat:	316	316	316+ hardfacing welding
Valve seat allowable leakage:	Class VI	Class IV,V	Class IV,V
Gasket:	Spiral wound gasket (316L + PTFE, 316L + flexible graphite, etc.)		
Valve cover packing:	PTFE fiber braided packing & PTFE fiber & carbon fiber braided packing, flexible graphite packing		
Operating Temperature	WCB Valve Body	-29-200°C	-29-371°C
	WC6 Valve Body	-29-232°C	-29-371°C
	LCB Valve Body	-46-200°C	-46-371°C

Valve body material:	A351-CF8,A351-CF8M		
Valve core:	316+RTFE	316	316+ hardfacing



Valve seat:	316	316	316+ hardfacing
Valve seat allowable leakage:	Class VI	Class IV,V	Class IV,V
Gasket:	Spiral wound gasket (316L + PTFE, 316L + flexible graphite, etc.)		
Valve cover packing:	PTFE fiber braided packing & PTFE fiber & carbon fiber braided packing (oxygen service packing), flexible graphite packing		
Operating temperature	-80-200°C	-196-232°C	-196-371°C

**Note:**

- 1) For the temperature and pressure range of the material treatment of the valve internals, please refer to the selection criteria for the material treatment of the valve internals.
- 2) If cavitation and erosion may occur, please select a control valve that is resistant to cavitation and erosion.
- 3) If flash evaporation may occur, please choose the reduced cavity type, and the surface of the valve core and valve seat should be fully overlay welded with Stellite alloy.
- 4) For valve cores of 1/4" and below, only full overlay welding with Stellite alloy is available, and partial overlay welding with Stellite alloy is not provided.

**Table 4: Common Special Specification Requirements**

Special materials:	Super duplex stainless steel, Hastelloy, Inconel alloy, Monel alloy, 20 alloy, titanium alloy, zirconium materials, etc.
Special inspection of the main body part:	Material inspection (liquid penetrant testing (PT), radiographic testing (RT)), flow characteristic inspection, low-temperature test, steam test
Cleaning and degreasing treatment:	Complete oil prohibition and water removal treatment
Special specifications for the main body and electric actuator:	sand-proof, water-proof, salt corrosion-proof, for cold regions, for tropical regions, copper-free treatment, anti-hydrogen sulfide treatment, special air piping and special air connectors, for vacuum working conditions, bolts and nuts in contact with the atmosphere are made of stainless steel, special coating color.

**Table 5: Pressure Resistance Range of Valve Body Materials**

Temperature (°C)	Class 150					Class 300				
	LCB	WCB	WC6	CF8	CF8M	LCB	WCB	WC6	CF8	CF8M
-196~-45	-	A105	F11	F22	F316	-	A105	F11	F22	F316
-45~-29	1.84	-	-	1.9	1.9	4.8	-	-	4.96	4.96
-29~-38	1.84	1.96	2	1.9	1.9	4.8	5.11	5.17	4.96	4.96
50	1.82	1.92	1.95	1.83	1.84	4.75	5.01	5.17	4.78	4.81
100	1.74	1.77	1.77	1.57	1.62	4.53	4.66	5.15	4.09	4.22
150	1.58	1.58	1.58	1.42	1.48	4.39	4.51	4.97	3.70	3.85
200	1.38	1.38	1.38	1.32	1.37	4.28	4.38	4.80	3.45	3.57
250	1.21	1.21	1.21	1.21	1.21	4.08	4.19	4.63	3.25	3.34
300	1.02	1.02	1.02	1.02	1.02	3.87	3.98	4.29	3.09	3.16
325	0.93	0.93	0.93	0.93	0.93	3.76	3.87	4.14	3.02	3.09
350	0.84	0.84	0.84	0.84	0.84	3.64	3.76	4.03	2.96	3.03
375		0.74	0.74	0.74	0.74		3.64	3.89	2.90	2.999

Selection criteria for material treatment of valve internals

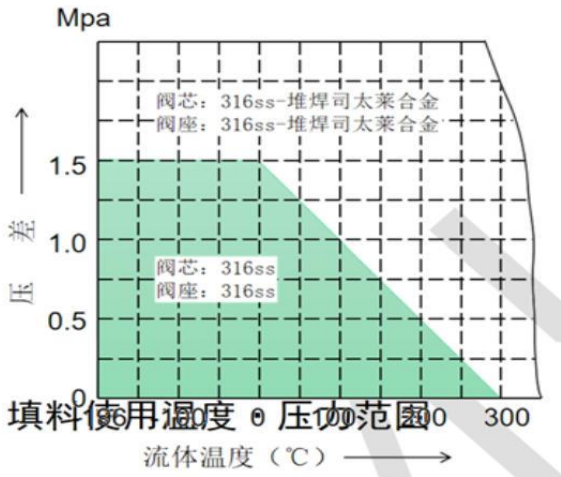


Figure 1 Metal seal

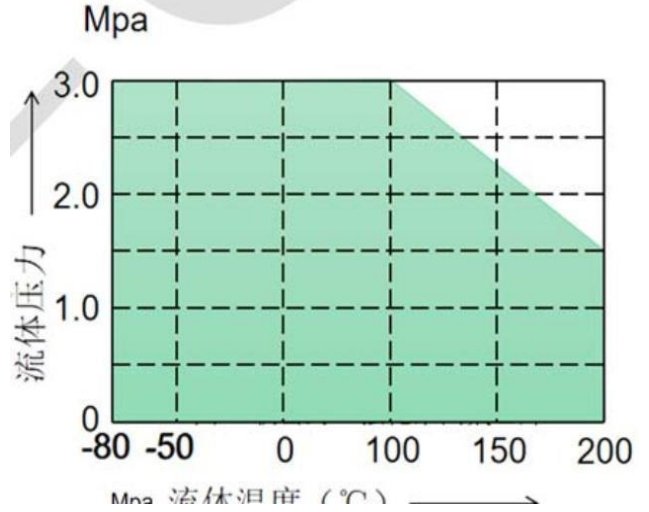


Figure 2 Soft seal (reinforced polytetrafluoroethylene)

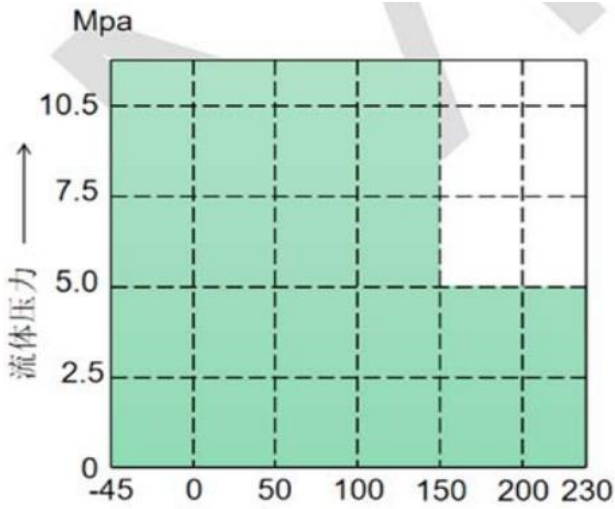


Figure 3 Tetrafluoroethylene fiber

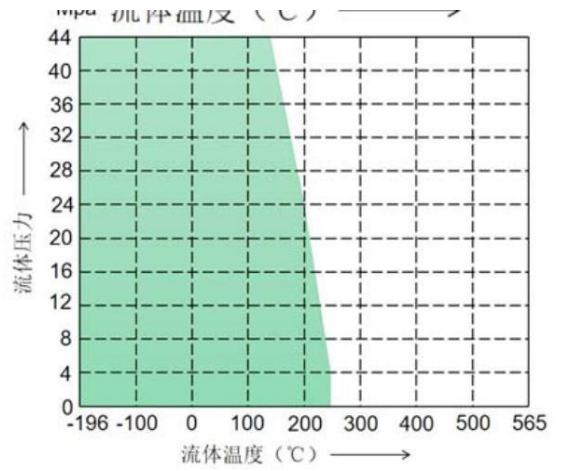


Figure 4 Fiber / Polytetrafluoroethylene fiber

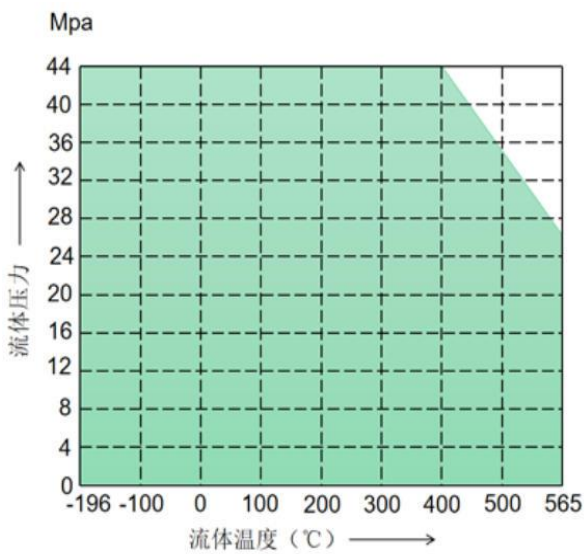


Figure 5 Flexible graphit

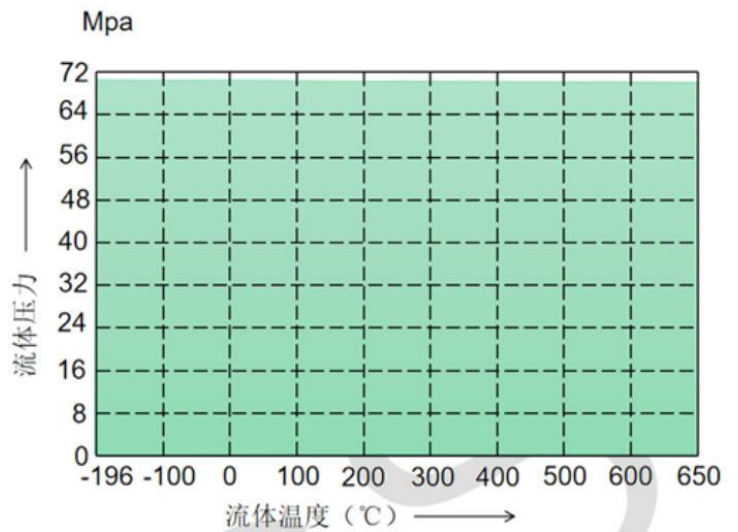


Figure 6 Super flexible graphite

**Operating Temperature and Pressure of Spiral Wound Gaskets**

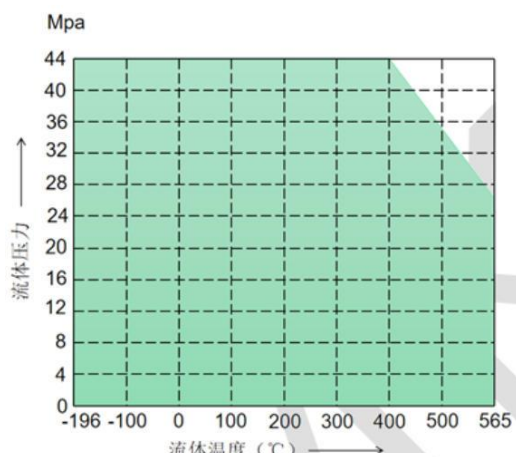


Figure 7 316L + flexible graphite

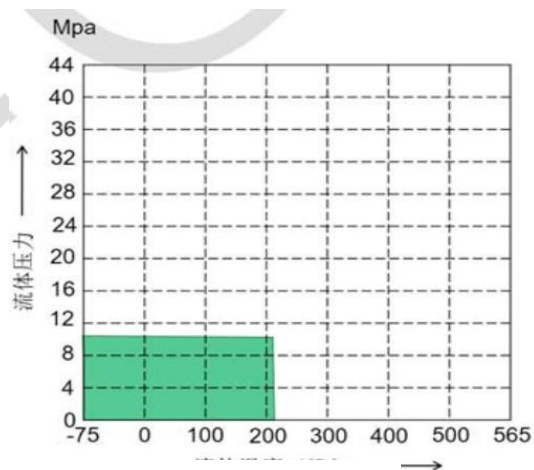


Figure 8 316L + pure polytetrafluoroethylene

**Structural diagram of the main body:**

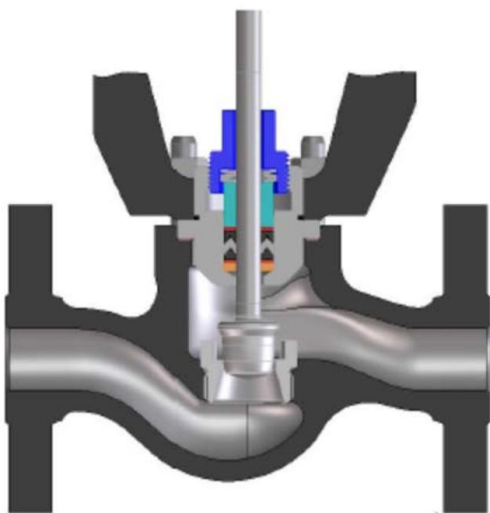


Figure 9 Schematic diagram (4.8 mm - 22 mm)

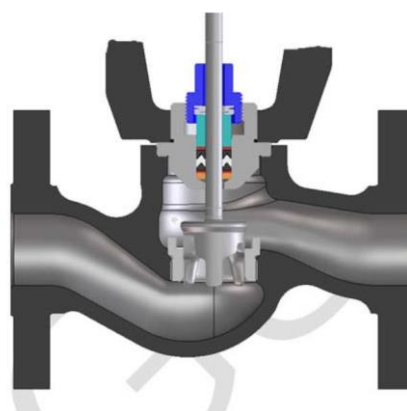


Figure 10 Schematic diagram of valve body structure (36 mm - 136 mm)

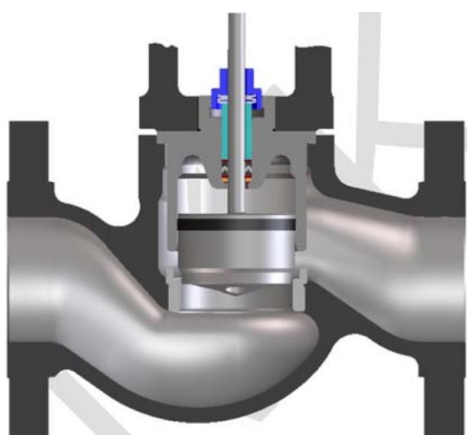


Figure 11 MK-GS Valve Body Structure Diagram (70mm - 136mm)

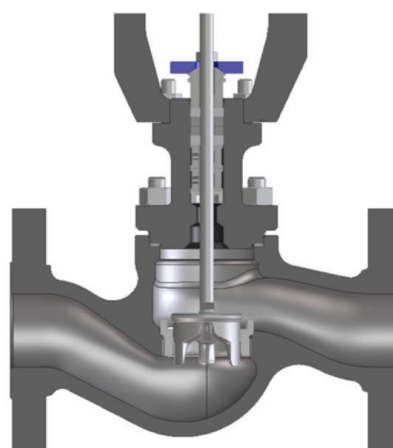


Figure 12 Diagram of the MK-GS Standard Valve Cover Structure



Figure 13 Diagram of the MK-GS Extended Valve Cover Structure



Figure 14 Schematic Diagram of MK-GS Bellows Type Valve Cover Structure

**Table 6: MK-GS Equal Percentage Flow Characteristics,FTO**

Valve size	Valve port diameter (mm)	Itinerary (mm)	Valve opening - percentage of total stroke									
			10	20	30	40	50	60	70	80	90	100
1/2" DN15	9.5 <sub>1</sub>	20	0.118	0.191	0.309	0.457	0.607	0.941	1.39	2	2.77	3.34
	9.5	20	0.089	0.109	0.153	0.213	0.289	0.393	0.552	0.754	1.03	1.43
3/4" DN20	9.5 <sub>1</sub>	20	0.128	0.206	0.325	0.479	0.629	0.984	1.46	2.14	3.06	3.75
	9.5	20	0.127	0.149	0.176	0.222	0.311	0.44	0.599	0.828	1.14	1.65
	14	20	0.154	0.192	0.311	0.505	0.763	1.18	1.91	3.05	4.93	6.41
1" DN25	9.5 <sub>1</sub>	20	0.133	0.222	0.347	0.501	0.699	1.04	1.5	2.15	2.98	3.57
	9.5	20	0.127	0.149	0.176	0.222	0.311	0.44	0.599	0.828	1.14	1.65
	14	20	0.139	0.186	0.315	0.511	0.776	1.23	1.97	3.28	5.35	6.89
	22	20	0.673	0.937	1.32	1.89	2.25	3.13	5.05	7.39	10.5	13.7
1 1/2" DN40	14	20	0.103	0.141	0.254	0.44	0.689	1.11	1.84	3.12	5.12	6.87
	22	20	0.591	0.85	1.20	1.79	2.51	3.50	4.93	7.07	11.0	14.3
	36	20	1.01	1.91	2.74	4.24	6.13	8.25	11.5	16.7	22.0	27.2
2" DN50	22	20	0.591	0.85	1.20	1.79	2.51	3.50	4.93	7.07	11.0	14.3
	36	20	1.08	2.01	2.8	4.26	6.31	8.38	11.6	17.2	23.1	28.6
	46	20	1.08	1.75	3.75	6.04	9.50	14.9	21.8	30.9	37.7	43.7
3" DN80	36	20	1.08	2.01	2.8	4.26	6.31	8.38	11.6	17.2	23.1	28.6
	46	20	0.873	1.66	3.41	5.66	8.75	13.8	20.7	30.5	37.1	43.7
	70	40	2.38	6.92	11.5	16.4	22.4	31.9	46.5	63.6	80.6	95.1
	70 <sup>(2)</sup>	40	2.71	4.63	7.6	11.3	17.1	23.7	35.3	50.4	61.6	75.7
4" DN100	46	20	1.02	1.76	3.58	5.76	8.85	14.1	21.4	30.6	37.9	44
	70	40	2.04	5.78	10.6	15.3	20.8	29.8	43.3	61.9	80.6	97.7
	90	40	5.56	13.6	21.1	29.1	40.8	55.8	77.5	117	145	165
	90 <sup>(2)</sup>	40	1.18	4.5	7.46	11	14.1	16.8	20.3	24.4	28.8	32
	90 <sup>(3)</sup>	40	1.41	2.76	4.2	5.76	7.3	8.85	10.5	12.9	15.1	17.2
6" DN150	90	40	7.9	16.0	23.0	33.0	45.0	60.0	81.0	126.0	159.0	192.0
	136	60	13.8	25.0	40.0	60.0	90.0	139.0	201	271	344	401
	136	60	19.5	35.0	49.0	65.0	92.0	133.0	194.0	252.0	322.0	374.0

**Note:**

- 1) Unbalanced flow coefficient reducing valve internals
- 2) Balanced valve internals
- 3) Balanced flow coefficient reducing valve internals

**Table 7: MK-GS Linear Flow Characteristics, FTO**

Valve size	Valve port diameter (mm)	Itinerary (m)	Valve opening - percentage of total stroke									
			10	20	30	40	50	60	70	80	90	100
1/2"DN15	9.5	20	0.179	0.415	0.713	1.030	1.350	1.700	2.090	2.530	3.010	3.450
3/4" DN20	9.5	20	0.219	0.488	0.794	1.13	1.48	1.85	2.31	2.85	3.43	3.84
	14	20	0.775	1.57	2.38	3.10	3.79	4.51	5.34	6.23	7.05	7.58
1" DN25	9.5	20	0.187	0.453	0.769	1.10	1.42	1.79	2.22	2.73	3.29	3.70
	14	20	0.685	1.46	2.28	3.05	3.81	4.56	5.42	6.34	7.21	7.8
	22	20	1.72	3.06	4.50	7.04	8.52	9.74	11.1	12.7	14.6	15.5
1 1/2" DN40	14	20	0.676	1.55	2.27	3.03	3.77	4.55	5.44	6.47	7.36	8.25
	22	20	1.41	2.76	4.20	5.76	7.32	8.85	10.5	12.9	15.1	17.2
	36	20	1.18	4.5	7.46	11.0	14.1	16.8	20.3	24.4	28.8	32.0
2" DN50	22	20	1.58	3.01	4.51	6.02	7.63	9.10	10.9	13.1	15.1	17.2
	36	20	1.69	5.05	8.37	11.6	14.8	17.9	20.9	24.7	29.2	33.9
	46	20	2.90	7.53	12.6	17.5	22.1	27.8	34.1	41.6	45.7	48.6
3" DN80	36	20	1.17	4.87	7.76	11.1	14.3	17.3	19.3	23.2	27.8	33.3
	46	20	2.09	7.74	12.0	16.5	21.2	26.6	33.0	40.6	46.5	51.8
	70	40	9.74	20.9	32.9	46.2	59.6	74.3	87.5	97.2	109	117
	70 <sup>(2)</sup>	40	10.6	21.3	31.9	42.7	53.6	63.8	74.1	85	94.4	102
4" DN100	46	20	2.37	7.98	13.1	17.3	21.9	27.1	33.2	40.3	46.8	52.2
	70	40	9.04	22.1	33.8	47	60.8	76.9	92	107	119	128
	90	40	18.2	39.6	59	82.4	104	124	141	156	171	184
	90 <sup>(2)</sup>	20	12.3	28.5	44.6	60.2	77.6	95.4	112	130	143	151
	90 <sup>(3)</sup>	20	5.99	13.6	22.3	31.5	40.4	49.6	59.2	69	79.6	92.3
6" DN150	90	40	22.1	46	65	88	111	136	160	187	209	233
	136	60	48.9	83	114	144	179	212	248	308	370	413
	136	60	59	105	153	203	249	301	334	362	375	391

**Note:**

- 1) Unbalanced flow coefficient reducing valve internals<sup>(1)</sup>
- 2) Balanced valve internals
- 3) Balanced flow coefficient reducing valve internals<sup>(2)</sup>

**Table 9: Rated CV Values of MK-GS Micro Flow Control Valve, FTO**

Valve size	Valve port diameter (mm)	Itinerary (mm)	Valve opening - percentage of total stroke									
			10	20	30	40	10	60	70	80	10	100
1/2" DN15	4.8-1°8'	20	0.0037	0.0055	0.0085	0.0121	0.0163	0.0205	0.0246	0.0284	0.0326	0.0389
	4.8-2°15'	20	0.0437	0.0512	0.0597	0.0694	0.0806	0.0929	0.105	0.116	0.126	0.139
	4.8-4°39'	20	0.0356	0.0524	0.0736	0.0984	0.127	0.158	0.191	0.224	0.257	0.294
	4.8-9°30'	20	0.036	0.088	0.16	0.246	0.341	0.436	0.524	0.618	0.726	0.785
3/4" DN20	4.8-1°8'	20	0.0037	0.0055	0.0085	0.0121	0.0163	0.0205	0.0246	0.0284	0.0326	0.0389
	4.8-2°15'	20	0.0437	0.0512	0.0597	0.0694	0.0806	0.0929	0.105	0.116	0.126	0.139
	4.8-4°39'	20	0.0356	0.0524	0.0736	0.0984	0.127	0.158	0.191	0.224	0.257	0.294
	4.8-9°30'	20	0.036	0.088	0.16	0.246	0.341	0.436	0.524	0.618	0.726	0.785
1" DN25	4.8-1°8'	20	0.0037	0.0055	0.0085	0.0121	0.0163	0.0205	0.0246	0.0284	0.0326	0.0389
	4.8-2°15'	20	0.0437	0.0512	0.0597	0.0694	0.0806	0.0929	0.105	0.116	0.126	0.139
	4.8-4°39'	20	0.0356	0.0524	0.0736	0.0984	0.127	0.158	0.191	0.224	0.257	0.294
	4.8-9°30'	20	0.036	0.088	0.16	0.246	0.341	0.436	0.524	0.618	0.726	0.785

**Table 10: Rated CV Values of MK-GS Multiport Valve Cage, FTO**

Valve size	Valve port diameter (mm)	Itinerary (mm)	Valve opening - percentage of total stroke									
			10	20	30	40	10	60	70	80	10	100
1" DN25	22	20	0.4	1.1	2	2.9	3.7	4.6	5.2	5.9	6.5	7.1
1 1/4" DN40	36	20	0.4	1.7	4.2	6.6	9.2	11.2	13.6	15.6	17.5	19.4
2" DN50	46	20	0.8	3.2	5.9	9.1	12.6	15.3	17.8	20.4	22.8	25.2

**Table 11: Rated CV Values of MK-GS Porous Valve Core, FTO**

Valve size	Valve port diameter (mm)	Itinerary (mm)	Valve opening - percentage of total stroke									
			10	20	30	40	10	60	70	80	10	100
3" DN80	70	40	2.2	11.2	22.4	31.6	40.4	51.2	60.2	68.5	76.9	85.5
4" DN100	70	40	2.2	11.2	22.4	31.6	40.4	51.2	60.2	68.5	76.9	85.5
	90	40	2.6	14	29.1	41.5	53.6	67.9	81.3	93.8	107	119
6" DN150	90	40	2.6	14	29.1	41.5	53.6	67.9	81.3	93.8	107	119
	136	60	53.8	89	124	166	201	233	263	296	315	324

**Table 12: Maximum Allowable Pressure Difference for MK-GS Series Control Valves**

Unit: MPa

Valve port diameter	Valve core size (mm)	Maximum stroke (mm)	Actuator	Air source pressure	Type of packing material	Maximum allowable pressure difference for air-open operation	Maximum pressure difference that the air shut-off can withstand
DN15~DN25 (1/2~1 inch)	4.8	20	225	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
	9.5	20	225	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
DN20~DN40 (3/4~1 1/2 inch)	14	20	225	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
DN25~DN50 (1~2 inch)	22 <sup>(1)</sup>	20	225	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
DN40~DN50 (1 1/2~2 inch)	36 <sup>(1)</sup>	20	225	4Bar	ULF	2.83	4.72
					PTFE	3.37	5.17
			750	4Bar	ULF	5.17	-
					PTFE	5.17	-
DN50 (2 inch)	46 <sup>(1)</sup>	20	225	4Bar	ULF	1.73	2.89
					PTFE	2.07	3.23
			750	4Bar	ULF	4.65	-
					PTFE	4.99	-
DN80 (3 inch)	36	20	750	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
DN80~DN100 (3~4 inch)	46	20	750	4Bar	ULF	4.55	5.17
					PTFE	4.84	5.17
DN80 (3 inch)	70 <sup>(2)</sup>	20	750	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
DN80~DN100 (3~4 inch)	70	40	750	4Bar	ULF	3.19	3.69
					PTFE	3.31	3.82
	90 <sup>(2)</sup>	20	750	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
	90	40	750	4Bar	ULF	1.93	2.23
					PTFE	2.00	2.31
DN150 (6 inch)	90	40	1200	4Bar	ULF	2.64	3.72
					PTFE	2.78	2.87
	136 <sup>(2)</sup>	60	1200	4Bar	ULF	5.17	5.17
					PTFE	5.17	5.17
	136	60	1200	4Bar	ULF	0.84	1.25
					PTFE	0.91	1.31

**Note:**

- 1) Soft-seated valve seats achieve VI level;
- 2) For hardened valve internals, the closing grade is not applicable;
- 3) Balanced valve internals

**Table 12: Shut-off Grades of MK-GS Series Control Valves**

Valve port diameter	Valve core size (mm)	Maximum stroke (mm)	Actuator	Air source pressure	Type of packing material	Air-open can reach the closed level	Air-off can reach the closing level
DN15~DN25 (1/2~1 inch)	4.8	20	225	4Bar	ULF	IV,V,VI	IV,V,VI
					PTFE		
DN20~DN40 (3/4~1 1/2 inch)	14	20	225	4Bar	ULF	IV,V,VI	IV,V,VI
					PTFE		
DN25~DN50 (1~2 inch)	22	20	225	4Bar	ULF	IV,V,VI <sup>(2)</sup>	IV,V,VI
					PTFE		
DN40~DN50 (1 1/2~2 inch)	36	20	225	4Bar	ULF	IV,V <sup>(2)</sup> ,VI	IV,V,VI
					PTFE	IV,V,VI	
			750	4Bar	ULF	IV,V,VI	-
					PTFE		-
DN50 (2inch)	46	20	225	4Bar	ULF	IV, VI	IV,V <sup>(2)</sup> ,VI
					PTFE		
			750	4Bar	ULF	IV,V,VI	-
					PTFE		
DN80 (3 inch)	36	20	750	4Bar	ULF	IV,V,VI	IV,V,VI
					PTFE		
DN80~DN100 (3~4 inch)	46	20	750	4Bar	ULF	IV,V,VI	IV,V,VI
					PTFE		
DN80 (3 inch)	70 <sup>(3)</sup>	20	750	4Bar	ULF	IV	IV
					PTFE		
DN80~DN100 (3~4 inch)	70	40	750	4Bar	ULF	IV,V,VI	IV,V,VI
					PTFE		
DN100 (4 inch)	90 <sup>(3)</sup>	20	750	4Bar	ULF	IV	IV
					PTFE		
	90	40	750	4Bar	ULF	IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI
					PTFE		
DN150 (6 inch)	90	40	1200	4Bar	ULF	IV,V,VI	IV,V,VI
					PTFE		
	136 <sup>(3)</sup>	60	1200	4Bar	ULF	IV	IV
					PTFE		
	136	60	1200	4Bar	ULF	IV,VI	IV,V <sup>(2)</sup> ,VI
					PTFE		

**Note:**

- 1) The soft seal seat achieves VI level.
- 2) The hard-faced valve internals are not applicable for the shutoff class.
- 3) Balanced valve internals.

**Dimensions and weights of MK-GS series control valves**

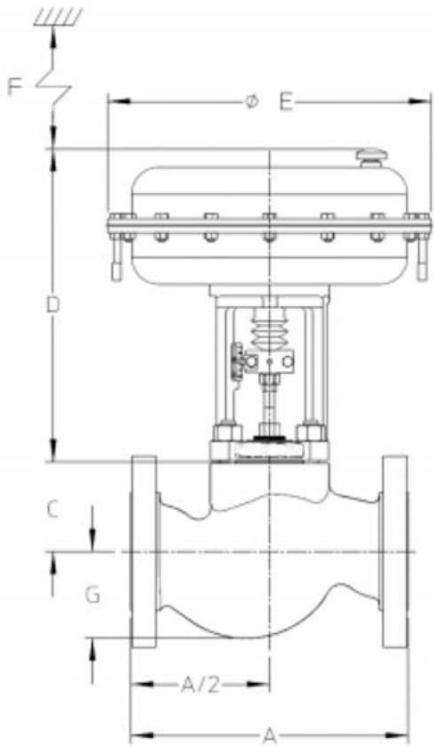


Figure 15 Compact bonnet size diagram of MK-GS valve

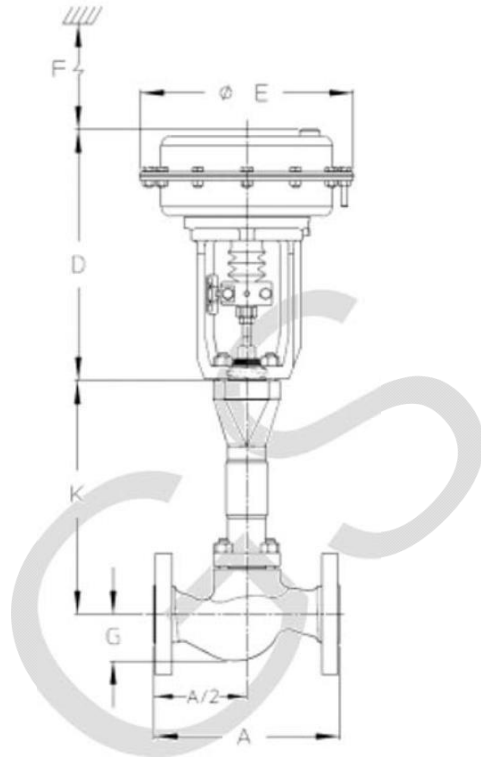


Figure 16 MK-GS Extended Bonnet Valve Dimension Drawing

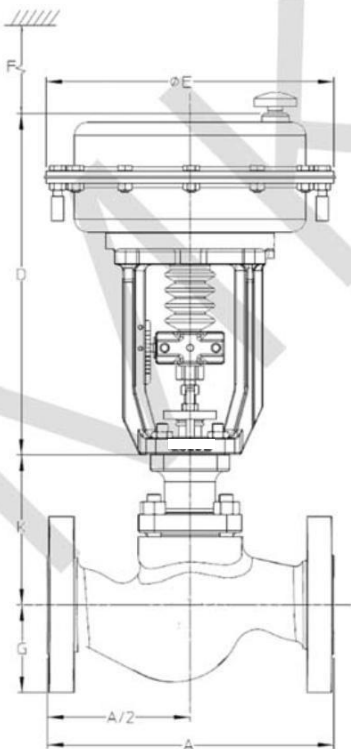


Figure 17 MK-GS Standard Valve Cover Dimension Drawing

**Table 13: Valve Dimensions and Weights (Standard Type and Extended Bonnet Type)**

unit: mm

Valve port diameter	Valve seat diameter	Size of the actuator	Compact bonnet C	Actuator D	Extended height K			Membrane cover diameter E	Disassembly interval	Weight (KG)
					Low-temperature bel lows	High temperature	Standard type			
1/2 inch	9.5,14,22	225	64	321	303	222	139	270	115	20
3/4 inch	9.5,14,22	225	64	321	303	222	131	270	115	21
1 inch	9.5,14,22	225	56	321	295	214	131	270	115	22
1 1/2 inch	14,22,36	225	60	321	299	218	134	270	115	25
	36	750	60	373	299	218	134	430	115	52
2 inch	22,36,46	225	66	321	305	224	141	270	115	29
	46	750	66	373	305	224	141	430	115	56
3 inch	36,46,70	225	103	342	368	336	231	270	125	53
		750	103	394	368	336	231	430	125	80
4 inch	46	750	119	398	389	336	231	430	130	98
	70,90	750	119	398	389	336	231	430	130	101
6 inch	90,136	1200	200	559	—	—	—	566	225	239

**Note:**

- 1) The dimensions of A and G in the figure can be referred to Table 14. There is no extended bonnet option for 6-inch valves.
- 2) F represents the reserved space distance required for disassembling the actuator from the installed valve body.
- 3) The values listed in the table already include the weight of the actuator. The actual weight of the product may vary depending on different configurations.

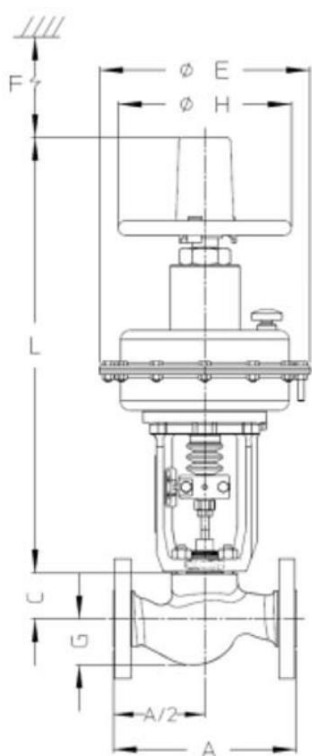


Figure 18 The size of the MK-GS pneumatic top-mounted handwheel valve in the open position

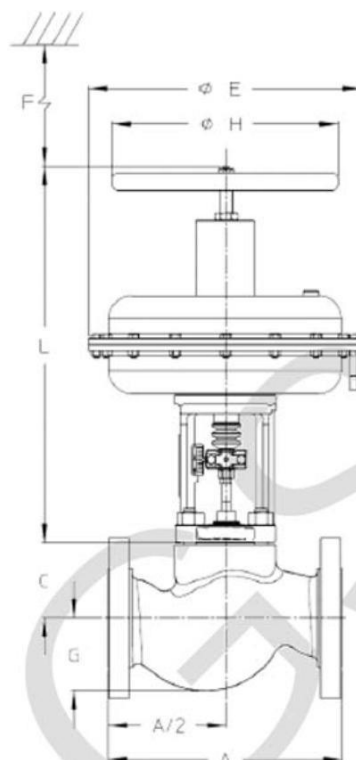


Figure 19 MK-GS Valve Pneumatic Close Top-mounted Handwheel Dimension Drawing

**Table 14: Valve Dimensions and Weights (Top-mounted Handwheel Diagram)**

Unit: mm

Valve port diameter	Valve seat diameter	Size of the actuator	PN10/16/25/40	CL150	CL300	G	ATO	ATC	Handwheel diameter	Weight (KG)
			A				L			
1/2 inch	9.5,14,22	225	130	184	190	36	321	495	222	28
3/4 inch	9.5,14,22	225	150	184	194	36	321	495	222	29
1 inch	9.5,14,22	225	160	184	197	49	534	495	222	30
1 1/2 inch	14,22,36	225	200	222	235	60	534	495	222	32
	36	750	200	222	235	60	586	547	355	65
2 inch	22,36,46	225	230	254	267	71	534	495	222	37
	46	750	230	254	267	71	586	547	355	69
3 inch	36,46,70	225	310	298	318	94	570	565	222	62
		750	310	298	318	94	622	617	355	92
4 inch	46	750	350	352	368	115	626	621	355	111
	70,90	750	350	352	368	115	626	621	355	114
6 inch	90,136	1200	480	451	473					

**Note:**

- 1) The dimensions of C, E and F in the figure can be referred to Table 13;
- 2) The values listed in the table already include the weight of the actuator. The actual weight of the product may vary depending on different configurations.

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MK-GS

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