Madeco Control Valve
Model : MDCV1030

COMMITMENT TO QUALITY & ENGINEERING EXCELLENCED

Designed for Precision. Built for Reliability.
This product has been engineered with a strong focus on accuracy, operational stability, and long service life, reflecting FACTS' commitment to professional engineering, superior manufacturing quality, and dependable performance in demanding industrial applications.
Compliance with International StandardsTo ensure full conformity with international technical requirements, FACTS control valves are designed and manufactured in accordance with globally recognized standards:

- IEC 60534 – Functional design and performance requirements for control valves
- ASME B16.34 – Design requirements for pressure-containing components
- API 598 – Inspection and testing procedures for valves
- ISO 9001 – Quality

Management System governing manufacturing and quality assurance processes
Reliable Solutions for Industrial Applications
At FACTS, innovation, consistent quality, and professional responsibility are at the core of everything we do. Through rigorous engineering practices, strict quality control, and continuous improvement, we provide reliable control solutions that meet the needs of a wide range of process and industrial applications.
FACTS — Precision Control, Proven Reliability.

Standard Specifications

Item	Description
Valve Body	
Type	Straight-through single-seat casting ball valve
Nominal Diameter	32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600 mm
Nominal Pressure	Class 150, 300, 600, 900, 1500, 2500; PN16, 20, 25,40, 50, 63, 100, 110, 150, 160, 220, 250, 260, 320, 420
Connection Type	Flange type: FF, RF, RJ, TG, MFM Welded type: Class150~Class600, PN16~PN110: SW（32～50mm）; BW（65～600mm） Welded type: Class900/1500/2500, PN150~PN420: SW (40～80mm) ; BW (80～600mm)
Flange Standard	JIS B2201, JB/T79.1(PN16); JB/T79.2 (PN40, PN63); ASME B16.5; HG20592, HG20615
Dimensions	Refer to Table 4
Valve body and Upper Bonet Material	WCB, WC6, CF8, CF8M, CF3M, Ti and other alloys. See Table 1 and Table 2 for the use temperature and pressure ranges of different materials.
Type of Upper Bonet	Normal temperature type (P): －17～＋250℃ Extension type I (EI): －45～－17℃ and ＋250～＋566℃ Extension type II (EII): －100～－45℃ and ＋566～＋650℃; *Note: The working temperature shall not exceed the allowable range of materials.*
Type of gland	Bolt-down type
Packing	V-type PTFE packing, graphite packing- refer to Figure 2
Washer	Toothed lock type (stainless steel (316L), wound type (316L+PTFE/graphite)
Coating	Black (epoxy resin). If the valve body is made of stainless steel, the body is not coated.
Valve Subassembly	
Valve spool type	Pressure balanced valve spool with combined sealing ring or piston ring
Material of Valve Inner Parts and Treatment	Refer to Table 1 and Figure 1 for standard material combination and use temperature and pressure range.
Flow characteristics	See Figure 4-1 for high capacity flow characteristics and quick opening flow characteristics (ON/OFF).

	Equal percentage flow characteristic (%F) and linear flow characteristic (LF)& quick opening flow characteristic (ON/OFF) See Figure 4-2 for high-precision flow characteristics *Equal percentage characteristic (%) and linear characteristic (L)* **Note:** Refer to Figure 1 for the scope of application of stellite surfacing.

Actuator Specifications

Purpose	Pneumatic Diaphragm HA type, Multi-spring	Cylinder Piston HV type, single/double-acting piston
	Adjustment	
Air supply pressure or supply voltage	Air supply pressure (spring range) 400（80～240）kPa	Air supply pressure 400～700kPa
Interface	Air supply pipe: NPT 1/4（HA11~HA41 NPT 1/2（HA51）	Air supply pipe: NPT 1/4（HV21~31） NPT 3/8（HV41~51） NPT 1/2（HV61~71） NPT 3/4（HV81）
Direct acting	Air pressure increasing, valve closing	Air pressure increasing, valve closing
Reverse acting	Air pressure increasing, valve opening	Air pressure increasing, valve opening
Basic error	±1.5%	
Return difference	1.5%	
Ambient temperature	Standard type: -30～＋70℃ High temperature type: -15～+120℃ Low temperature type: -40～+70℃	Standard type: -20～+80℃ High temperature type: -15～+120℃ Low temperature type: -40～+80
Paint color	Black (color code RAL)	
Accessories	Locator, air filter pressure reducer, lock-up valve, valve conveyor, handwheel mechanism, etc.	

Performance

CV value and stroke	Refer to Table 3
Valve seat leakage	Refer to Table 1
Adjustable range	50:1
Allowable pressure difference	Refer to Table 4
Product weight	Refer to Table 5

Table 1 Material Combination and Service Temperature of Valve Body and Inner Parts

Allowable Leakage of Valve Seat

R.TFE: Reinforced polytetrafluoroethylene

HT: Heat Treatment

ST: Stellite Surfacing

SS: Stellite Partial-Surfacing

SF: Stellite Full-Surfacing

Table 1-1 Valve Body Material: Carbon Steel

Body Material		WCB, WC6, LCB			
Cage	Material	CF8			
	Processing			HT	
Valve spool	Material	CF8			
	Processing			HT	
Valve seat	Material	316+R.TFE	PEEK	630	630
	Processing	-	-	HT	HT
Balanced sealing ring	Material	R.TFE	R.TFE	R.TFE	Inconel 750
	Backing ring	316	316	316	316
Washer	Material	316L	316L	316L	316L
Allowable leakage of valve seat		Class Ⅴ/Ⅵ	Rated Cv×0.01%	Class Ⅳ	Class Ⅳ

Use Temperature ℃	WCB	-29～+250	-29～+250	-29～+250	-29～+425
	WC6	-29～+250	-29～+250	-29～+250	-29～+595
	LCB	-45～+250	-45～+250	-45～+250	-45～+345

Table 1-2 Valve Body Material: Stainless Steel

Body Material		CF8, CF8M, CF3M			
Cage	Material	304/316/316L			
	Processing	-			
Valve spool	Material	304/316/316L	304/316/316L	304/316/316L	304/316/316L
	Processing			ST	ST
Valve seat	Material	304/316/316L +R.TFE	304/316/316L +PEEK	304/316/316L	304/316/316L
	Processing	-	-	ST	ST
Balanced sealing ring	Material	R.TFE	R.TFE	R.TFE	Inconel 750
	Backing ring	316/Hastelloy C	316/Hastelloy C	316/Hastelloy C	-
Washer	Material	316L	316L	316L	316L
seat		Class Ⅴ/Ⅵ	Rated Cv×0.01%	Class Ⅳ	Class Ⅳ
Use Temperature ℃		-75～+250	-75～+250	-75～+250	-100～+650

Note: When the fluid temperature is below -75℃, the material of the balance sealing ring: Fluoroloy G; Backing ring: Elgiloy.

Table 2 Use Temperature and Pressure Range of Valve Body Materials

Table 2 1 Unit: MPa (Class ratings)

Temperature (℃)	Class150					Class300					Class600				
	LCB	WCB A105	WC6 F11	F304 CF8	F316 CF8M	LCB	WCB A105	WC6 F11	F304 CF8	F316 CF8M	LCB	WCB A105	WC6 F11	F304 CF8	F316 CF8M
-196～38	—	—	—	1.90	1.90	—	—	—	4.95	4.95	—	—	—	9.91	9.92
-45～38	1.84	—	—	1.90	1.90	4.78	—	—	4.95	4.95	9.57	—	—	9.91	9.92
-5～38	1.84	1.96	1.99	1.90	1.90	4.78	5.10	5.16	4.95	4.95	9.57	10.2	10.32	9.91	9.92
50	1.81	1.92	1.92	1.84	1.84	4.72	5.00	5.16	4.77	4.80	9.46	10.1	10.32	9.56	9.62
100	1.72	1.76	1.76	1.56	1.61	4.51	4.63	5.14	4.08	4.21	9.02	9.27	10.29	8.17	8.43
150	1.57	1.57	1.57	1.39	1.47	4.40	4.51	5.01	3.62	3.85	8.78	9.04	10.03	7.26	7.69
200	1.40	1.40	1.40	1.25	1.37	4.26	4.38	4.88	3.27	3.56	8.54	8.75	9.75	6.54	7.12
250	1.20	1.20	1.20	1.16	1.20	4.05	4.16	4.62	3.04	3.34	8.11	8.33	9.26	6.10	6.67
300	1.01	1.01	1.01	1.01	1.01	3.76	3.87	4.23	2.91	3.15	7.54	7.74	8.48	5.80	6.32
350	0.84	0.84	0.84	0.84	0.84	3.59	3.69	4.01	2.81	3.03	7.18	7.38	8.04	5.60	6.07
375	—	0.73	0.73	0.73	0.73	—	3.64	3.88	2.77	2.96	—	7.28	7.75	5.54	5.93
400	—	0.64	0.64	0.64	0.64	—	3.44	3.65	2.74	2.91	—	6.89	7.31	5.48	5.81
425	—	0.55	0.55	0.55	0.55	—	2.88	3.44	2.71	2.87	—	5.74	6.91	5.42	5.72
450	—	0.47	0.47	0.47	0.47	—	1.99	3.08	2.68	2.81	—	4.00	6.17	5.37	5.61
475	—	0.37	0.37	0.37	0.37	—	1.35	2.58	2.65	2.73	—	2.70	5.17	5.30	5.46
500	—	0.28	0.28	0.28	0.28	—	0.88	2.02	2.60	2.67	—	1.75	4.04	5.20	5.37
525	—	0.18	0.18	0.18	0.18	—	0.51	1.53	2.19	2.57	—	1.03	3.07	4.77	5.15
550	—	—	—	—	—	—	—	1.20	2.00	2.40	—	—	2.40	4.00	4.60
566	—	—	—	—	—	—	—	1.00	1.90	2.20	—	—	2.00	3.80	4.50

Table 2-1 (continued) Unit: MPa (Class 900 / 1500 / 2500)

Temperature (℃)	Class900					Class1500					Class2500				
	LCB	WCB A105	WC6 F11	F304 CF8	F316 CF8M	LCB	WCB A105	WC6 F11	F304 CF8	F316 CF8M	LCB	WCB A105	WC6 F11	F304 CF8	F316 CF8M
-196～38	—	—	—	14.88	14.88	—	—	—	24.79	24.79	—	—	—	41.34	41.34
-45～38	14.35	—	—	14.88	14.88	23.92	—	—	24.79	24.79	39.87	—	—	41.34	41.34
-5～38	14.35	15.31	15.50	14.88	14.88	23.92	25.51	25.84	24.79	24.79	39.87	42.52	43.07	41.34	41.34
50	14.18	15.01	15.33	14.34	14.43	23.64	25.02	25.55	23.90	24.04	39.40	41.70	42.59	39.84	40.07
100	13.52	13.90	14.62	12.25	12.65	22.53	23.16	24.36	20.42	21.09	37.56	38.62	40.61	34.01	35.14
150	13.18	13.56	13.90	10.8 9	11.54	21.96	22.60	23.18	18.16	19.24	36.60	37.66	38.61	30.26	32.07
200	12.79	13.14	13.63	9.82	10.69	21.32	21.89	22.73	16.37	17.83	35.53	36.50	37.88	27.28	29.71
250	12.17	12.51	13.33	9.15	10.02	20.28	20.84	22.22	15.26	16.68	33.80	34.75	37.03	25.43	27.80
300	11.30	11.61	12.72	8.71	9.49	18.84	19.36	21.20	14.52	15.80	31.40	32.26	35.33	24.20	26.34
350	10.78	11.08	12.06	8.42	9.12	17.96	18.46	20.11	14.02	15.20	29.95	30.78	33.51	23.36	25.36
375	—	10.94	11.63	8.32	8.91	—	18.22	19.38	13.86	14.84	—	30.37	32.32	23.12	24.74
400	—	10.34	10.98	8.23	8.72	—	17.24	18.28	13.72	14.55	—	28.73	30.47	22.87	24.25
425	—	8.62	10.53	8.14	8.59	—	14.37	17.54	13.57	14.32	—	23.94	29.23	22.63	23.87
450	—	6.01	10.13	8.06	8.42	—	10.02	16.89	13.42	14.03	—	16.68	28.16	22.37	22.79
475	—	4.06	9.50	7.97	8.20	—	6.76	15.82	13.27	13.67	—	11.28	26.36	22.13	22.34
500	—	—	8.33	7.81	8.05	—	—	13.89	13.02	13.40	—	—	23.15	21.71	21.47
525	—	—	6.08	7.15	7.73	—	—	10.12	11.94	12.89	—	—	16.88	19.88	20.79
550	—	—	3.83	6.54	7.49	—	—	6.38	10.91	12.48	—	—	10.63	18.17	17.85
575	—	—	2.55	6.02	7.22	—	—	4.24	10.04	12.04	—	—	7.08	16.72	15.20

600	—	—	1.75	5.01	6.43	—	—	2.94	8.35	10.71	—	—	7.90	13.92	17.85
625	—	—	—	3.92	5.48	—	—	—	6.54	9.12	—	—	—	10.89	15.20
650	—	—	—	3.16	4.23	—	—	—	5.25	7.06	—	—	—	8.75	11.76
675	—	—	—	2.33	3.78	—	—	—	3.88	6.31	—	—	—	6.45	10.53

Table 2-2 Unit: MPa

WCB				
Temperature (℃)	PN16	PN40	PN63	PN100
-5～200	1.60	4.00	6.30	10.0
～250	1.40	3.50	5.40	9.00
～300	1.20	3.00	4.80	7.50
～350	1.10	2.60	4.00	6.00
～400	0.90	2.30	3.70	5.80
～425	0.80	2.00	3.20	5.00
～435	0.70	1.80	2.80	4.50
～445	0.62	1.60	2.50	4.20
～455	0.57	1.40	2.30	3.60

CF8				
Temperature (℃)	PN16	PN40	PN63	PN100
-45～200	1.60	4.00	6.30	10.0
～300	1.40	3.50	5.40	9.00
～400	1.20	3.00	4.80	7.50
～480	1.10	2.60	4.00	6.60
～520	0.90	2.30	3.70	5.80
～560	0.80	2.00	3.20	5.00

Figure 1 Material Processing of Valve Inner Parts

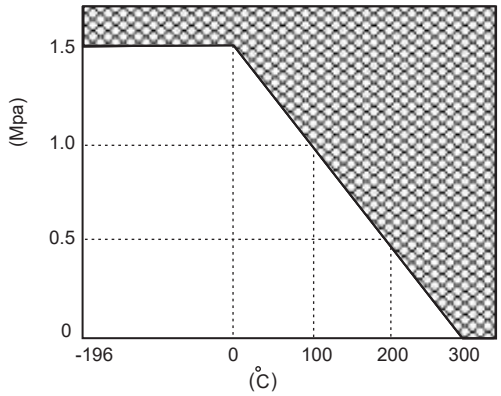


Figure 1-1 Working Range of Stellite

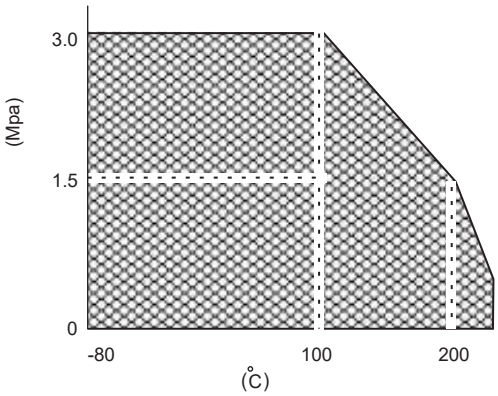


Figure 1-2 Working Temperature and Pressure Difference range of Soft Valve Seat

Note 1: 630 stainless steel does not need surfacing

Note 2: In the case of cavitation, flash, and oil prohibition, it is recommended to conduct Stellite surfacing no matter what the temperature and pressure are.

Figure 2 Use Temperature and Pressure Range of Packing

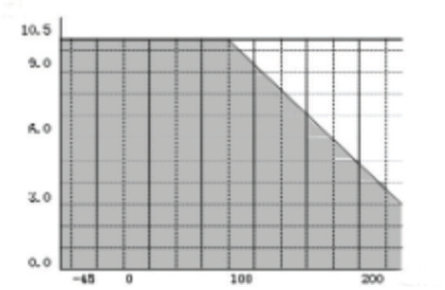


Figure 2-1 V-type R.TFE Packing

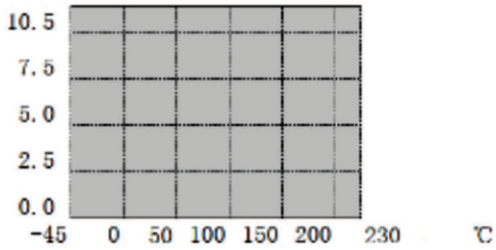


Figure 2-2 PTFE Carbon

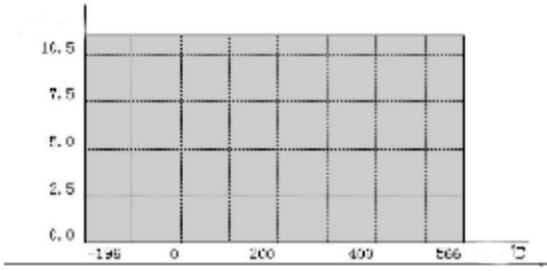


Figure 2-3 Expanded Graphite
(Non-oxidizing Environment)

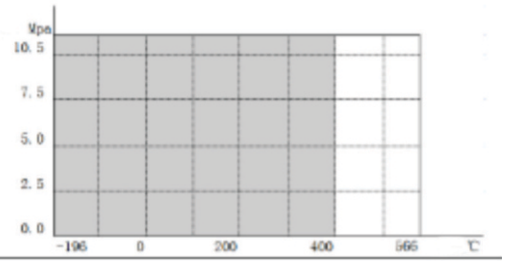
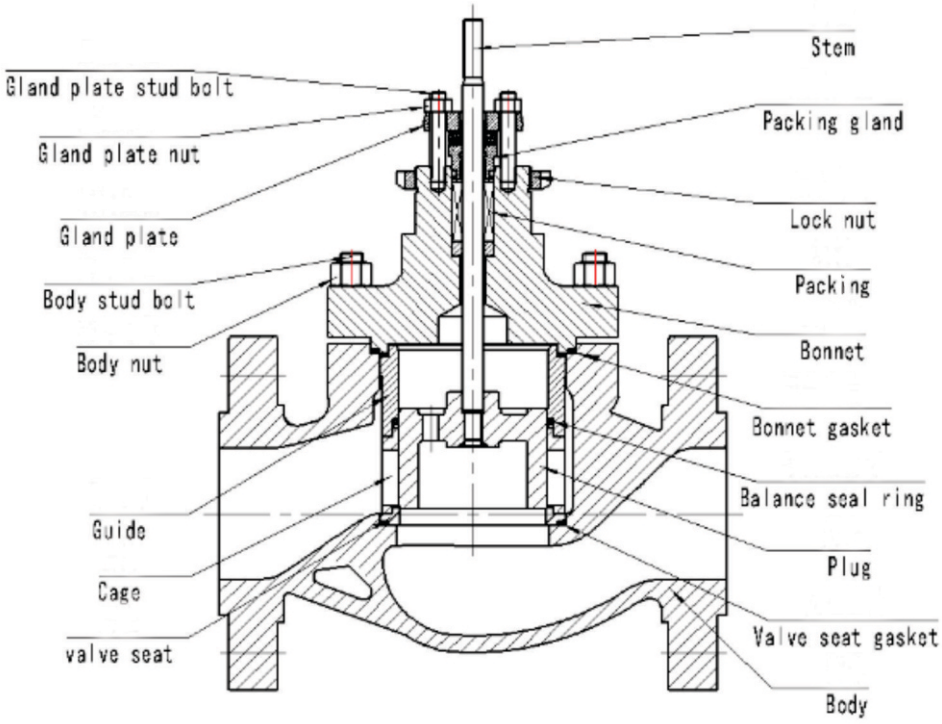


Figure 2-3 Expanded Graphite
(Oxidizing Environment)

Figure 3 Structure of Valve Body Parts



Table

Table 3-1 High Capacity Spool (%F, LF&ON/OFF) (Class150~600, PN16~110)

Parameter	DN32	DN40	DN50	DN65	DN80	DN100
Valve Seat Diameter (mm)	32	40	50	65	80	100
Rated CV Value- Equal Percentage (%F)	20	30	50	85	125	200
Rated CV Value- Linear LF & ON/OFF	26	40	75	110	150	240
Rated Stroke (mm)	25			38		

Table 3-2 High-Precision Spool (%,L) (Class150~600, PN16~110)

Nominal diameter	32		40			50			65			80			100			125			150			200		
Valve seat	32		40			50			65			80			100			125			150			200		
Value	10	16	10	16	25	16	25	40	25	40	65	40	65	100	65	100	160	100	160	250	160	250	400	250	400	630
percentage%	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
Rated stroke (mm)	16		25						40						60											

M.V.S. => Metal Valve Seat

Nominal diameter	250	300	350	400	450	500	600
Valve seat diameter	250	300	350	400	450	500	600
Equal percentage%	900	1100	1550	2000	2500	3500	4650
Linear L	1000	1300	1640	2200	2860	3600	5100
Rated stroke(mm)	100		150		150		200

Note: "△" indicates the specification range of the valve.

(Class900/1500、PN150~260)

Figure 4 Typical Curve of Flow Characteristics

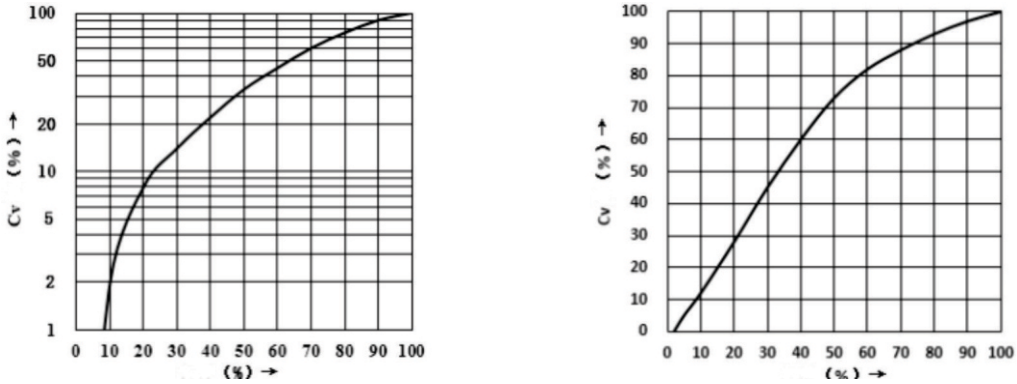
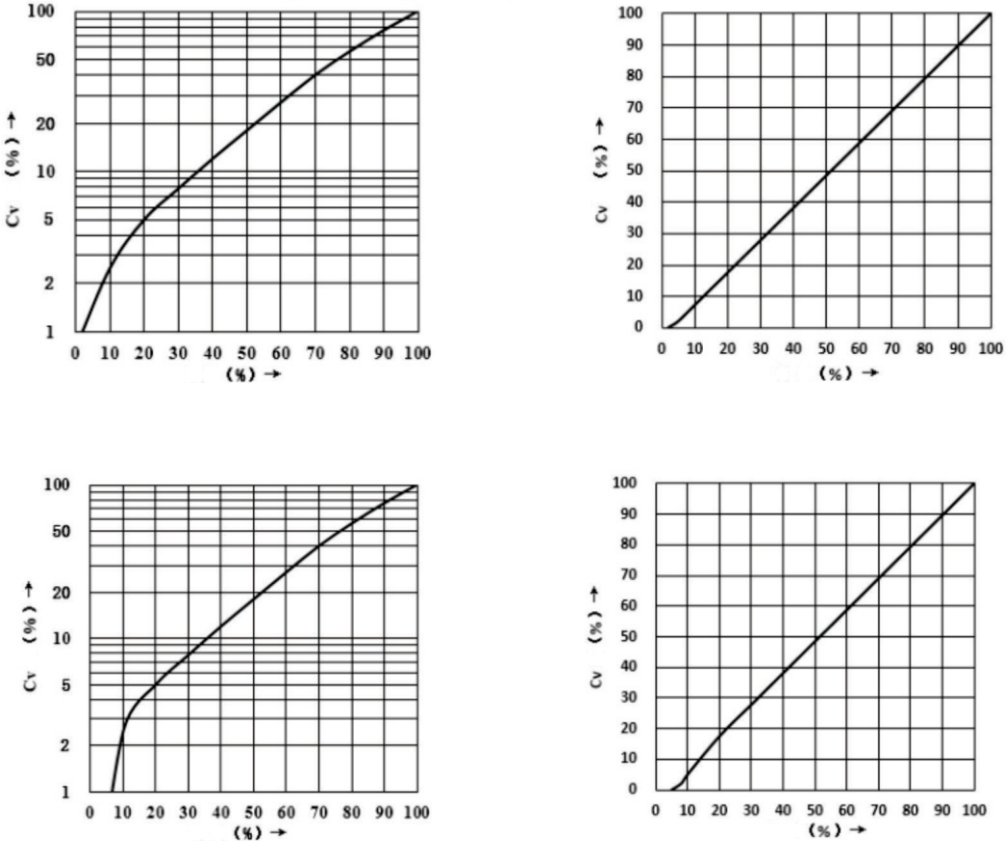


Figure 4-1 High Capacity Flow Characteristic Curve



4-2 High-Precision Flow Characteristic Curve

Table 4 – Dimensions

Table 4-1-1 Flange Distance Dimensions (mm)

Note: Flange distance conforms to standard IEC 60534-3.

Nominal Pressure	DN15 NPS ½ “			DN20 NPS ¾ “			DN25 NPS 1”			DN32 NPS 1 ¼ “		
	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ
PN 16,25, 40	185	185	-	185	185	-	185	185	-	200	200	-
PN63	200	200	213	200	200	213	210	210	223	212	212	225
PN100	200	200	213	200	200	213	210	210	223	212	212	225
Lb	185	-	-	185	-	-	185	-	187	200	-	205
Lb	200	200	200	200	203	203	210	210	210	212	212	212
Lb	205	205	205	205	205	205	214	214	214	216	216	216

Nominal Pressure	DN40 NPS ½ “			DN50 NPS 2“			DN65 NPS 2 ½ ”			DN80 NPS 3“		
	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ
PN 16,25, 40	222	222	-	254	254	-	276	276	-	298	298	-
PN63	235	235	248	267	267	283	292	292	308	317	317	333
PN100	235	235	248	267	267	283	292	292	308	317	317	333
Class150 Lb	222	-	231	254	-	262	277	-	286	298	-	307
Class300 Lb	235	235	235	267	272	272	292	304	304	317	330	330
Class600 Lb	240	240	240	274	274	274	304	304	304	330	330	330

Nominal Pressure	DN100 NPS 4“			DN125 NPS 5“			DN150 NPS 6 ”			DN200 NPS 8“		
	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ
PN 16,25, 40	352	352	-	403	403	-	451	451	-	545	545	-
PN63	368	368	384	428	428	444	475	475	491	575	575	591
PN100	368	368	384	428	428	444	475	475	491	575	575	591
Class150 Lb	352	-	361	403	-	408	451	-	456	545	-	552
Class300 Lb	368	382	382	428	442	442	475	487	487	575	585	585
Class600 Lb	382	382	382	452	452	452	497	497	497	597	597	597

Nominal Pressure	DN250 NPS 10“			DN300 NPS 12“			DN350 NPS 14 ”			DN400 NPS 16“		
	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ	RF	MF	RJ
PN 16,25, 40	673	673	-	740	740	-	889	889	-	1016	1016	-
PN63	742	742	758	775	775	791	927	927	943	1057	1057	1073
PN100	770	770	786	775	775	791	927	927	949	1057	1057	1079
Class150 Lb	673	-	679	740	-	745	889	-	893	1016	-	1019
Class300 Lb	742	754	754	775	785	785	927	937	937	1057	1068	1068
Class600 Lb	792	792	792	787	787	787	937	937	937	1068	1068	1068

MDCV1030 With Actuator , Assembly Drawing Reference

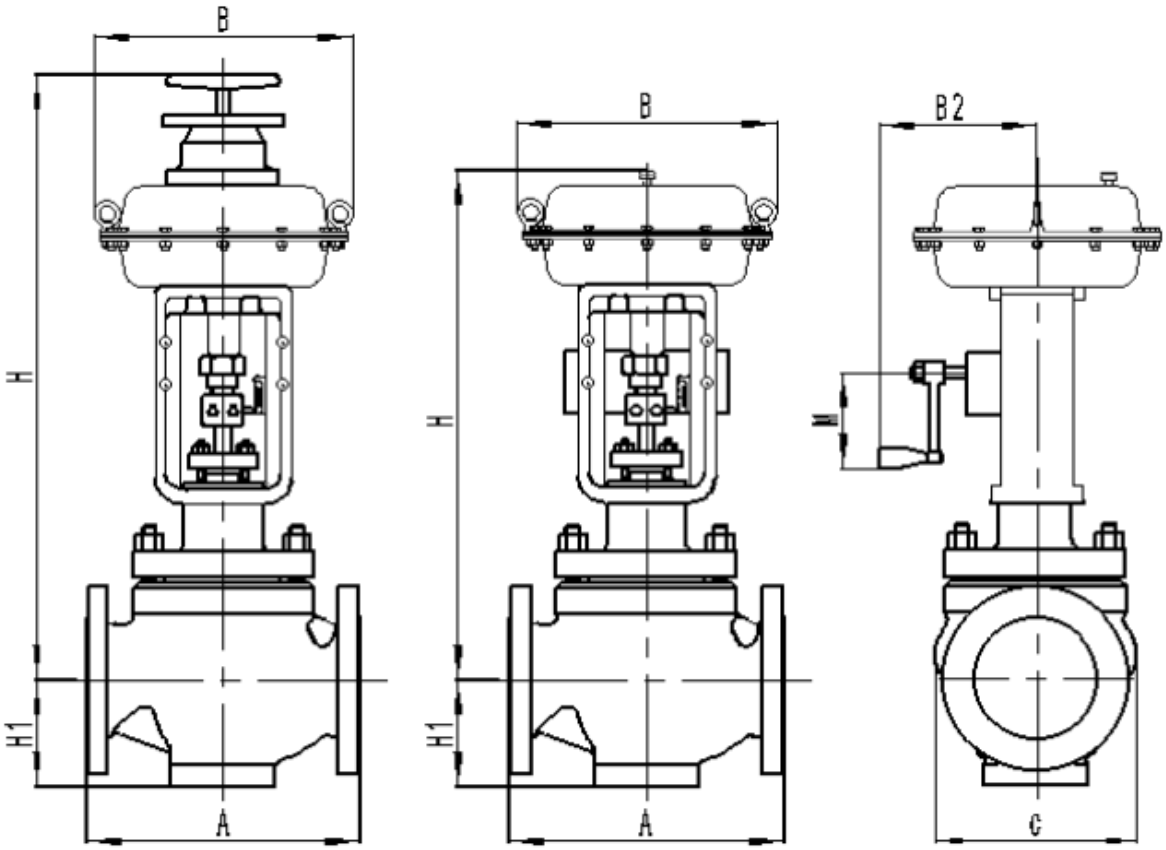


Table 4-2 , MDAC Specification and Technical Parameter Table – Pneumatic Spring Membrane Actuator

Parameter	MDAC				
Diaphragm Effective Area cm2	220	350	350	560	900
Rated Stroke (mm)	10	16	25	40	60
Spring Range (kPa)	20～100, 40～200, 80～240, 20～60, 60～100				

Table 5 - MDAC External Dimensions and Weight Table for Type Actuators

Model	A (mm)	H² (mm)	Weight (kg)
ZH-11 (A/B)	236	190	6
ZH-22 (A/B)	285	280	12
ZH-23 (A/B)	285	307	16
ZH-34 (A/B)	360	398	22
ZH-45 (A/B)	470	530	35

Control Valve Inquiry Form

(Customer Data Sheet for Sizing & Selection)

Please complete the following information to enable proper sizing and selection of the control valve.

1. GENERAL INFORMATION

- **Tag Number :** _____
- **Project Name :** _____
- **Service / Application :** _____
- **Line Size :** _____
- **Line Class / Pressure Rating :** _____
- **Fluid Type :** _____
- **Operating Medium State:** ☐ Liquid ☐ Gas ☐ Steam

2. PROCESS CONDITIONS

- **Flow Rate:**
  - Minimum: _____
  - Normal: _____
  - Maximum: _____
- **Inlet Pressure:** _____
- **Outlet Pressure:** _____
- **Operating Temperature:**_____
- **Fluid Density / Specific Gravity:**_____
- **Viscosity:** _____
- **Vapor Pressure (if applicable):**_____

3. VALVE SPECIFICATIONS

- **Valve Type:**☐ Globe ☐ Ball ☐ Butterfly ☐ Other: _____
- **Valve Size (DN / NPS) :**_____
- **Body Material :**_____
- **Trim Material :**_____
- **Seat Type:**☐ Soft Seat ☐ Metal Seat
- **Flow Characteristic:**☐ Linear ☐ Equal Percentage ☐ Quick Opening
- **Required C_v (if known) :**_____
- **End Connection:**☐ Flanged ☐ Threaded ☐ Welded ☐ Other: _

4. ACTUATOR REQUIREMENTS

- **Actuator Type:** ☐ Pneumatic Diaphragm ☐ Pneumatic Piston ☐ Electric
- **Fail Action:** ☐ Air to Open (Fail Close) ☐ Air to Close (Fail Open) ☐ Fail in Place
- **Air Supply Pressure (if pneumatic) :**____
- **Power Supply (if electric):** _____

5. POSITIONER & ACCESSORIES

- **Positioner Type:**☐ None ☐ Analog ☐ Smart (HART) ☐ Fieldbus
- **Limit Switch:** ☐ Yes ☐ No
- **Solenoid Valve:**☐ Yes ☐ No
- **Air Filter Regulator:**☐ Yes ☐ No
- **Volume Booster:**☐ Yes ☐ No
- **Manual Handwheel:**☐ Yes ☐ No

6. STANDARDS & TESTING

- **Design Standard:**☐ ANSI ☐ API ☐ IEC ☐ Other : _____
- **Pressure Rating Standard :**☐ ASME ☐ DIN ☐ Other : _____
- **Leakage Class (IEC 60534-4 / ANSI FCI 70-2) :**____
- **Hydrostatic Test Required :**☐ Yes ☐ No
- **Explosion Proof / ATEX :** ☐ Yes ☐ No
- **SIL Requirement:** ☐ SIL 1 ☐ SIL 2 ☐ SIL 3 ☐ Not Required

Special Requirements / Notes:

Control Valve Ordering Information

Please complete the following form to specify your valve requirements.

---

1. VALVE TYPE

- [ ] Ball Control Valve butterfly

2. BODY STYLE

- [ ] Straight Pattern
- [ ] Angle Pattern
- [ ] Three-Way (Mixing)
- [ ] Three-Way (Diverting)

3. NOMINAL SIZE

- [ ] DN15 | [ ] DN25 | [ ] DN40 | [ ] DN50 | [ ] DN65 | [ ] DN80
- [ ] DN100 | [ ] DN125 | [ ] DN150 | [ ] DN200 | [ ] DN250 | [ ] DN300

4. PRESSURE RATING

- [ ] PN10 | [ ] PN16 | [ ] PN25 | [ ] PN40
- [ ] ANSI Class 150 | [ ] ANSI Class 300 | [ ] ANSI Class 600

5. PRESSURE-TEMPERATURE RATING

- [ ] ASME B16.34
- [ ] DIN EN 1092

6. END CONNECTION

- [ ] Flanged
- [ ] Threaded
- [ ] Butt Weld
- [ ] Socket Weld

7. BODY MATERIAL

- [ ] Carbon Steel (WCB)
- [ ] Stainless Steel (CF8)
- [ ] Stainless Steel (CF8M)
- [ ] Alloy Steel
- [ ] Duplex Stainless Steel

8. BONNET TYPE

- [ ] Standard Bonnet
- [ ] Extended Bonnet (Low Temperature Service)
- [ ] Bellows Seal Bonnet
- [ ] Cryogenic Bonnet

9. TRIM TYPE

- [ ] Standard Trim
- [ ] Balanced Trim
- [ ] Cage Guided Trim

10. TRIM SIZE

- [ ] Full Trim (Full Cv)
- [ ] Reduced Trim

11. PLUG TYPE

- [ ] Contoured Plug
- [ ] Parabolic Plug
- [ ] V-Port Plug

12. GUIDING TYPE

- [ ] Top Guided
- [ ] Cage Guided
- [ ] Stem Guided

13. TRIM MATERIAL

- [ ] Stainless Steel
- [ ] Hardened Stainless Steel
- [ ] Stellite Hard Facing

14. SEAT TYPE

- [ ] Metal Seat
- [ ] Soft Seat

15. LEAKAGE CLASS

- [ ] Class II | [ ] Class III | [ ] Class IV | [ ] Class V | [ ] Class VI
- Standard: IEC 60534-4 / ANSI FCI 70-2

16. FLOW CHARACTERISTIC

- [ ] Linear
- [ ] Equal Percentage
- [ ] Quick Opening

17. FLOW DIRECTION

- [ ] Flow Up
- [ ] Flow Down

18. SHUT-OFF DIFFERENTIAL PRESSURE

- [ ] Standard Service
- [ ] High Differential Pressure

19. STEM TYPE

- [ ] Rising Stem
- [ ] Non-Rising Stem

20. PACKING TYPE

- [ ] PTFE Packing
- [ ] Graphite Packing
- [ ] Low Emission Packing (ISO 15848 / TA-Luft)

21. ACTUATOR TYPE

- [ ] Pneumatic Diaphragm
- [ ] Pneumatic Piston
- [ ] Electric Actuator

22. FAIL ACTION

- [ ] Air to Open (Fail Close)
- [ ] Air to Close (Fail Open)
- [ ] Fail in Position

23. POSITIONER

- [ ] None
- [ ] Analog Positioner
- [ ] Smart Positioner (HART)
- [ ] Fieldbus Positioner

24. ACCESSORIES

- [ ] Air Filter Regulator | [ ] Solenoid Valve | [ ] Limit Switch
- [ ] Position Transmitter (4-20 mA) | [ ] Volume Booster
- [ ] Quick Exhaust Valve | [ ] Lock-up Valve | [ ] Pressure Gauge
- [ ] Manual Handwheel

25. ACTUATOR PROTECTION (Electric Actuator)

- [ ] IP65 | [ ] IP66 | [ ] IP67 | [ ] Explosion Proof (Ex d)

26. AMBIENT TEMPERATURE (ACTUATOR)

- [ ] -20°C to +60°C
- [ ] -40°C to +80°C

27. PROCESS MEDIUM

- [ ] Water | [ ] Steam | [ ] Gas | [ ] Oil | [ ] Chemical Fluid

28. OPERATING TEMPERATURE RANGE

- [ ] Cryogenic (< -50°C)
- [ ] Low Temperature (-50°C to 0°C)
- [ ] Standard Temperature (0°C to 200°C)
- [ ] High Temperature (200°C to 400°C)
- [ ] Severe Service (> 400°C)

29. DESIGN STANDARD

- [ ] IEC 60534 | [ ] ANSI / ASME | [ ] API | [ ] DIN / EN

30. CERTIFICATION

- [ ] ATEX | [ ] SIL | [ ] PED

31. OPTIONAL FEATURES

- [ ] Anti-Cavitation Trim | [ ] Low Noise Trim | [ ] Fire Safe Design
- [ ] NACE MR0175 / ISO 15156 Compliance | [ ] Oxygen Service Cleaning
- [ ] Steam Service Trim | [ ] High Temperature Packing
- [ ] Low Emission Packing (ISO 15848) | [ ] Stainless Steel Nameplate

32. PAINTING / SURFACE PROTECTION

- [ ] Standard Industrial Paint
- [ ] Epoxy Coating
- [ ] Offshore Coating System

33. INSPECTION & DOCUMENTATION

- [ ] Material Certificate (EN 10204 – 3.1)
- [ ] Hydrostatic Test Report
- [ ] NDT Inspection Report
- [ ] Paint / Coating Certificate
- [ ] Final Inspection Report