

Z-Z 702Z

Standard specification for 702Z

Size	40 to 300 mm (10 sizes)	
Applicable flange standards	JIS 5K/10K, ANSI 125/150Lb BS 4504 NP 10, DIN NP 10, BS 10 E	
Applicable standard	JIS B 2032	
Face-to-face dimension	JIS B 2002 (2032) series 46 / ISO 5752 (series 20)	
Top flange	ISO 5211	
Max. working pressure	0.98 MPa (10 kgf/cm ² G)	
Body test pressure	1.72 MPa* (17.5 kgf/cm ² G)	
Seat leakage test pressure	1.08 MPa (11 kgf/cm ² G)	
Working temperature range	EPDM: -20 to 120°C (Semi-standard NBR: -10 to 80°C)	
Working temperature range for continues use	EPDM: -10 to 100°C (Semi-standard NBR: 0 to 60°C)	
Standard materials	Body	ADC 12 (Aluminum diecast alloy)
	Disc	PPS (Polyphenylene sulfide lined on stainless steel core) 50 to 200 mm
		316 Stainless steel (SCS 14 / SUS F 316) 40 to 300 mm
	Stem	SUS 420 J2
	Seat ring	EPDM (Standard), NBR (Semi-standard)
Coating	Top flange	HR85LV (High performance engineering plastic)
	Body	Epoxy-Melanin baked with Munsell 2.5BG 6/12
Condensation prevention performance	Top flange	Acrylic resin with Munsell 2.5BG 6/12
	No condensation on the actuator and its mounting flange at 34°C room temperature with 75% humidity on 5°C chilled water line.	

* Compliance with the specification for ministry of construction in Japan.

702Z Actuator selection chart

Butterfly valves
Auto Actuated

Valve nominal size		3I		3Q · 3R		3Y · 3A	
mm	inch	Standard	Heavy duty	Standard	Heavy duty	Standard	Heavy duty
40	1 ½	Type 1		Type 1		Z-06D	
50	2			Type 2			
65	2 ½			Type 3			
80	3			Type 4			
100	4	Type 2		Type 3		Z-08D	
125	5	Type 3		Type 4		Z-11	
150	6	Type 4		Type 4		Z-13	
200	8	Type 4		Type 4		Z-13	
250	10	Type 4		Type 4		Z-13	
300	12	Type 4		Type 4		Z-13	

Valve nominal size		3X · 3W · 3T · 3S		4I	4E		
mm	inch	Standard	Heavy duty				
40	1 ½	Z-06S		Type 1			
50	2					Z-08S	
65	2 ½					Z-11S	
80	3					Z-12S	
100	4	Z-11S		SRE-010			
125	5	Z-12S					
150	6	Z-12S		SRE-020			
200	8	Z-13S		SRE-020			
250	10	AW-13S		SRE-060			
300	12	AW-17S		SRE-060			

* The selection of pneumatic cylinder is based on 0.39 MPa air supply.

702Z Basic torque chart

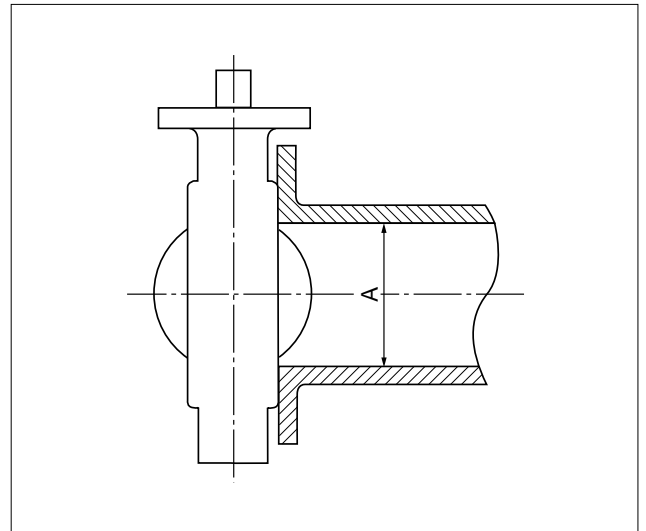
(Unit: N·m)

Type		Rubber seat
Size		702Z
mm	inch	
40	1 ½	5.9
50	2	8.8
65	2 ½	13.7
80	3	17.6
100	4	36.3
125	5	53.9
150	6	76.4
200	8	137.2
250	10	176.4
300	12	284.2

Minimum internal piping diameter for 702Z

(Unit: mm)

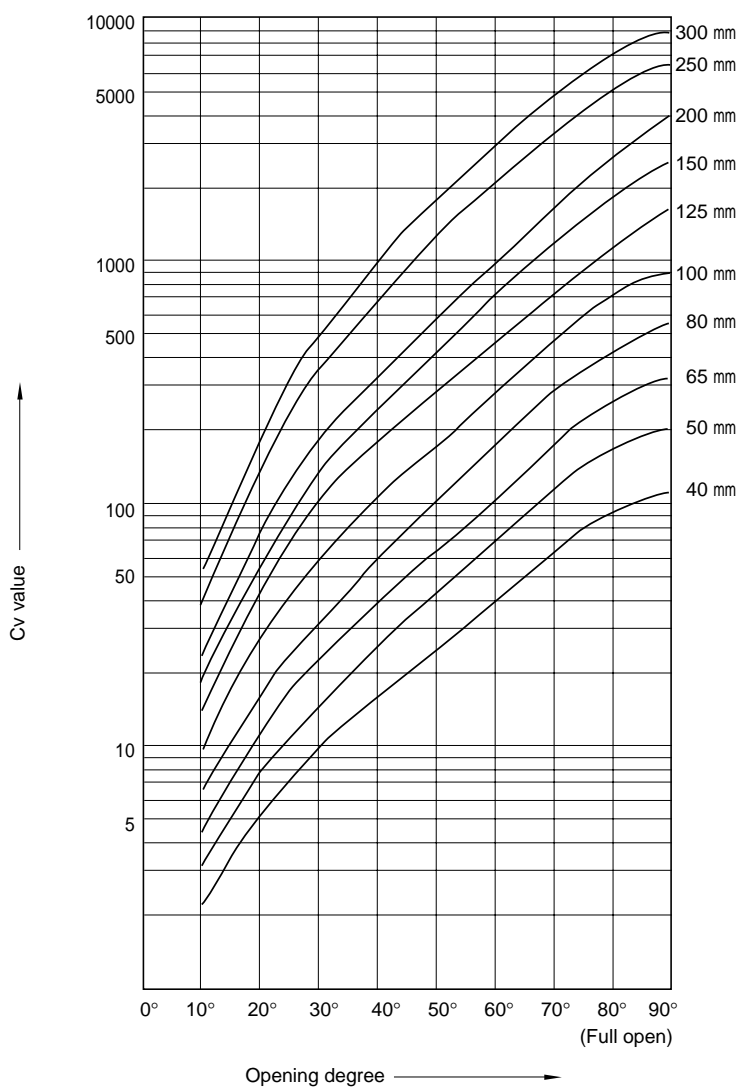
Size		Minimum diameter A
mm	inch	
40	1 ½	25
50	2	34
65	2 ½	51
80	3	70
100	4	91
125	5	118
150	6	144
200	8	194
250	10	246
300	12	294



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702Z Cv value

Cv value is defined as follows:
The flow rate expressed as US gal./min. at which a fresh water of 60°F flows when the pressure difference across the valve is maintained at 1 psi.



Cv value · Pressure loss coefficient

702Z Cv value chart

Size		Opening degree							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1½	5	9	16	25	39	61	95	121
50	2	8	15	25	40	64	103	160	200
65	2½	12	25	41	64	102	162	260	320
80	3	15	33	57	95	163	271	450	580
100	4	27	58	100	162	269	444	749	880
125	5	45	109	189	295	453	719	1144	1590
150	6	60	148	262	423	685	1147	1897	2800
200	8	67	188	347	576	969	1698	2902	4300
250	10	130	351	675	1225	2125	3375	5091	6200
300	12	194	487	972	1764	3011	4966	7412	8900

702Z Pressure loss coefficient

Size		Opening degree							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1½	246	76.1	24.1	9.86	4.05	1.66	0.683	0.421
50	2	258	73.3	26.4	10.3	4.03	1.55	0.644	0.412
65	2½	280	64.5	24.0	9.84	3.88	1.54	0.596	0.394
80	3	354	73.0	24.5	8.81	2.99	1.08	0.393	0.236
100	4	321	69.6	23.4	8.92	3.24	1.19	0.417	0.302
125	5	271	46.2	15.4	6.31	2.68	1.06	0.420	0.217
150	6	309	50.7	16.2	6.21	2.37	0.845	0.309	0.142
200	8	761	96.6	28.4	10.3	3.64	1.18	0.405	0.185
250	10	485	66.5	18.0	5.46	1.81	0.719	0.316	0.213
300	12	447	71.0	17.8	5.41	1.86	0.683	0.306	0.213

