

731X/732X/732Q

Standard specification for 731X/732X/732Q

Valve nominal size	16K type		20K type	
	732X/732Q	731X	732X/732Q	731X
	50 to 400 mm	450 to 600 mm	50 to 400 mm	450 to 600 mm
Applicable flange standard	JIS 10K, 16K, 20K ANSI 125, 150Lb DIN PN 10, 16 BS 4504 NP 10, 16			
Face-to-face dimensions	JIS B 2002 (2032) 46 series / ISO 5752 (20 series) / BS5155			
Max. working pressure	1.57 MPa (16 kgf/cm ² G)		1.96 MPa (20 kgf/cm ² G)	
Body shell test (Hydraulic)	2.35 MPa (24 kgf/cm ² G)		2.94 MPa (30 kgf/cm ² G)	
Seat leak test	1.73 MPa (17.6 kgf/cm ² G)		2.16 MPa (22 kgf/cm ² G)	
Velocity range	Max. 6 m/sec (at full opening degree)			
Working temperature range	NBR: -10 to 80°C, EPDM: -20 to 120°C			
Standard materials	Body	Ductile iron (FCD 450 / A395), Carbon steel (SCPH ₂ / WCB)		
	Disc	Stainless steel (SCS 13 / CF8, SCS 14 / CF8M), Aluminum bronze (ALBC ₂ / B148)		
	Stem	420 J2 S.S, K-MONEL	630 S.S, K-MONEL	
	Seat ring	NBR, EPDM, CR		
Coating	50 to 300 mm: Epoxy primer (Munsell N7), 350 to 600 mm: Lacquer primer (Munsell N7)			

731X/732X/732Q Actuator selection chart

Valve nominal size		3I		3Q · 3R		3Y	
		Standard	Heavy duty	Standard	Heavy duty	Standard	Heavy duty
50	2	Type 1		Type 2		Z-06	
65	2 ½						
80	3						
100	4	Type 2		Type 3		Z-08	
125	5						
150	6	Type 3		Type 4		Z-11	
200	8						
250	10	Type 4		AW-13S		Z-13	
300	12						
350	14	TGA-125	TGA-140	AW-20S			
400	16		TGA-160				

Valve nominal size		3A		3B · 3N		3T · 3S		
		Standard	Heavy duty	Standard	Heavy duty	Standard	Heavy duty	
50	2							
65	2 ½							
80	3							
100	4	TGA-63		TGA-S-80		AG-13S		
125	5	TGA-80		TGA-S-90				
150	6	TGA-90		TGA-S-100		AW-13S		
200	8	TGA-100		TGA-S-125	TGA-S-140	AW-17S		
250	10			TGA-125	TGA-S-140	TGA-S-160		
300	12	TGA-125	TGA-140	TGA-S-160	TGA-S-180	AW-20S		
350	14		TGA-160	TGA-S-180	TGA-S-220			
400	16		TGA-140	TGA-180	TGA-S-200	TGA-S-250	AW-28S	
450	18	TGA-160	TGA-200	TGA-S-220				
500	20	TGA-200	TGA-250	TGA-S-250				
600	24	TGA-140	TGA-180	TGA-S-200	TGA-S-250			

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

731X/732X/732Q Actuator selection chart

Valve nominal size		3X · 3W		4I		4E	
mm	inch	Standard	Heavy duty	Standard	Heavy duty	Standard	Heavy duty
50	2	Z-08S					
65	2 1/2						
80	3	Z-11S		Type 1		SRE-010	
100	4						
125	5	Z-12S		Type 2		SRE-020	
150	6		Z-13S	Type 2.5		SRE-060	
200	8						
250	10			Type 3			
300	12					LTRH-01 0.2KW MGH2	
350	14					LTRH-01 0.4KW MGH3	
400	16						
450	18					LTKD-02 0.75KW MGH4	
500	20						
600	24					LTKD-05 0.75KW MGH5	

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

**Butterfly valves
Auto Actuated**

731X/732X/732Q Basic torque chart

(Unit: N-m)

Type		Rubber seat
Size		731X · 732X
mm	inch	
50	2	
65	2 ½	23.5
80	3	27.4
100	4	32.4 (8.8)
125	5	55.9 (16.7)
150	6	88.2 (27.4)
200	8	159.7 (83.3)
250	10	267.5 (149.0)
300	12	398.9 (270.0)
350	14	548.8 (441.0)
400	16	840.8 (627.2)
450	18	1171.1 (882.0)
500	20	1509.2 (882.0)
600	24	2312.8 (2156.0)

*** Note**

- The data shows seating torque of butterfly valves. It can be used for basic torque for actuator sizing.
- () figures represent dynamic torque for concentric design butterfly valves (700 series & 800 series) based on the followings
 Valve opening degree : 30 degree
 ΔP : 0.2 MPa

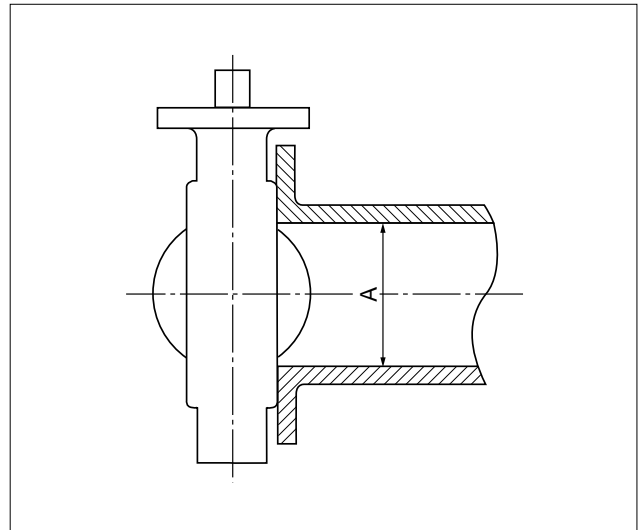
*** Special note for "Basic torque"**

The seating torques, especially for concentric rubber seated butterfly valves, are subject to working conditions, such as type of fluid, temperature, duration at closed position, frequency of operation, material of rubber, combinations of materials etc. Therefore, various considerations should be given when using butterfly valves.

Minimum internal piping diameter for 731X/732X/732Q

(Unit: mm)

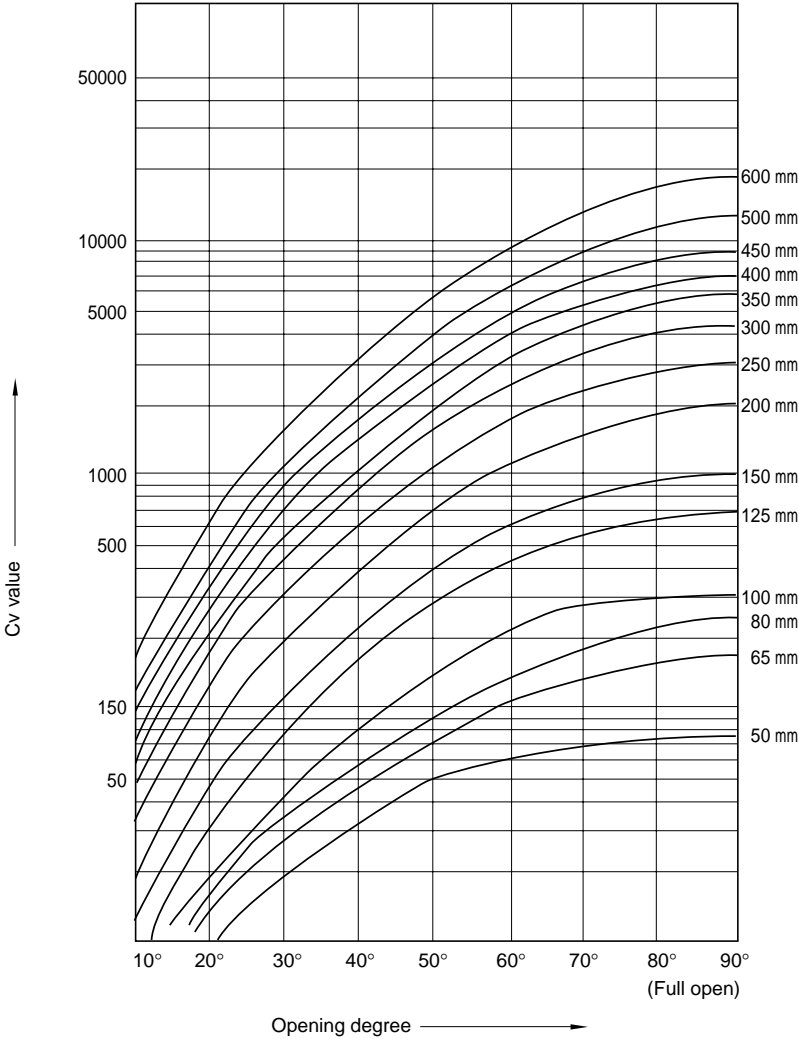
Size		Minimum diameter A
mm	inch	
50	2	40
65	2 ½	58
80	3	71
100	4	87
125	5	114
150	6	143
200	8	193
250	10	248
300	12	297
350	14	331
400	16	378
450	18	428
500	20	477
600	24	564



731X/732X/732Q

731X/732X/732Q 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

731X Cv value chart

Size		Opening degree							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
50	2	10	19	33	50	61	68	72	74
65	2½	13	29	48	75	104	134	159	165
80	3	15	36	60	92	137	184	221	232
100	4	20	42	80	143	223	281	296	300
125	5	32	82	158	279	422	548	628	650
150	6	47	118	230	407	619	816	947	982
200	8	82	203	404	710	1114	1540	1846	1940
250	10	128	321	634	1119	1721	2351	2779	2910
300	12	183	455	901	1590	2465	3402	4055	4247
350	14	222	548	1101	1930	3080	4431	5451	5770
400	16	289	717	1429	2515	3924	5482	6586	6920
450	18	365	911	1807	3182	4953	6896	8262	8670
500	20	457	1123	2265	3975	6395	9311	11571	12300
600	24	664	1614	3307	5797	9328	13698	17243	18400

731X/732X Pressure loss coefficient

Size		Opening degree							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
50	2	165	45.7	15.1	6.60	4.43	3.57	3.18	3.01
65	2½	239	47.9	17.5	7.17	3.73	2.25	1.59	1.48
80	3	354	61.4	22.1	9.40	4.24	2.35	1.63	1.48
100	4	585	133	36.6	11.5	4.71	2.97	2.67	2.60
125	5	536	81.7	22.0	7.06	3.08	1.83	1.39	1.30
150	6	503	79.8	21.0	6.71	2.90	1.67	1.24	1.15
200	8	508	82.8	20.9	6.77	2.75	1.44	1.00	0.907
250	10	500	79.5	20.4	6.54	2.77	1.48	1.06	0.967
300	12	503	81.3	20.7	6.66	2.77	1.45	1.02	0.934
350	14	536	88.0	21.8	7.09	2.78	1.35	0.889	0.793
400	16	539	87.6	22.1	7.12	2.93	1.50	1.04	0.941
450	18	542	86.9	22.1	7.13	2.94	1.52	1.06	0.960
500	20	534	88.4	21.7	7.05	2.72	1.29	0.832	0.737
600	24	529	89.5	21.3	6.94	2.68	1.24	0.784	0.688

