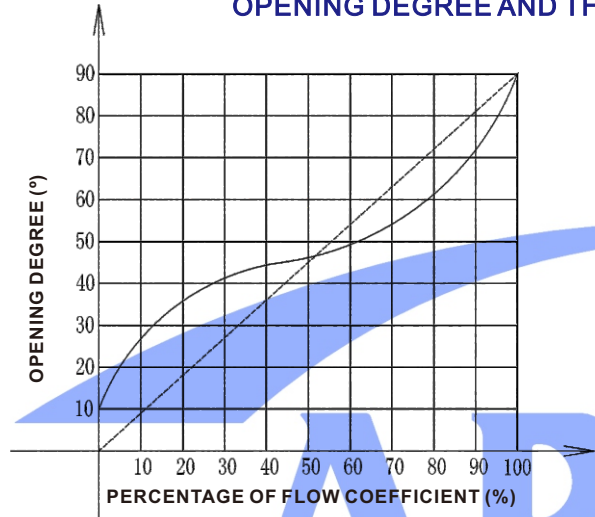


CONCENTRIC BUTTERFLY VALVE Cv CHART

OPENING DEGREE AND THE PERCENTAGE OF FLOW COEFFICIENT

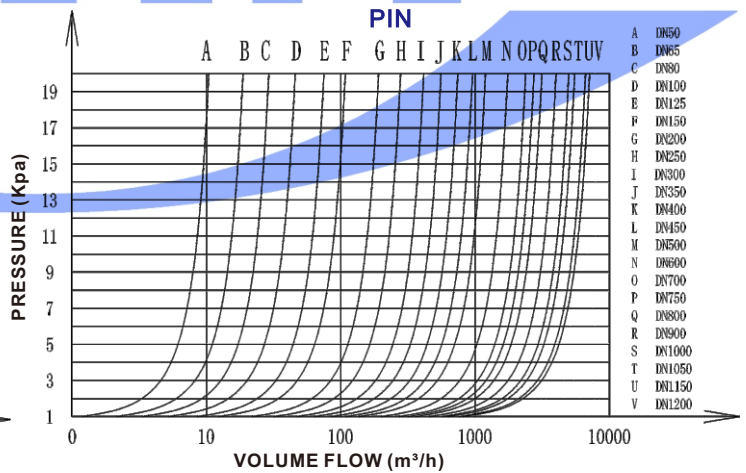
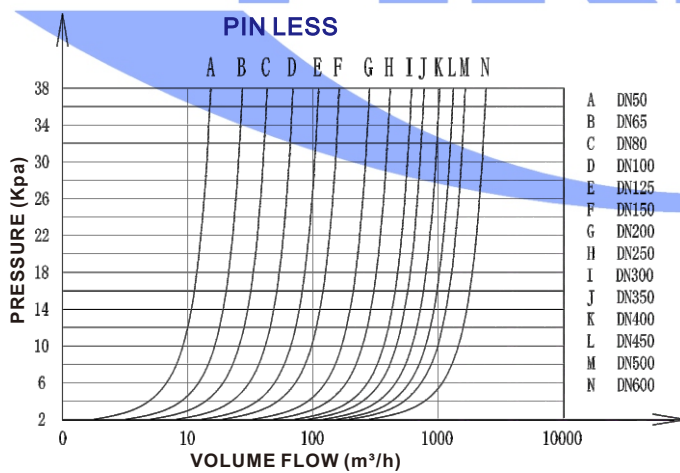


$$K_v = q_v \sqrt{p/\Delta P}$$

- K_v = FLOW COEFFICIENT (m³/h)
- q_v = VOLUME FLOW (m³/h)
- ΔP = PRESSURE DROP (bar)
- p = DENSITY OF FLUID (KG/m³)
- 1 bar = 100 Kpa
- C_v = 1.167 K_v



DIFFERENTIAL PRESSURE AND VOLUME FLOW RATIO



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Flow velocity

PS bar	Maximum flow velocity m/s	
	Liquid fluids	Gaseous fluids [at \approx 1 bar]
Up to 6	2,5	25
10	3	30
16	4	35
\geq 25	5	40

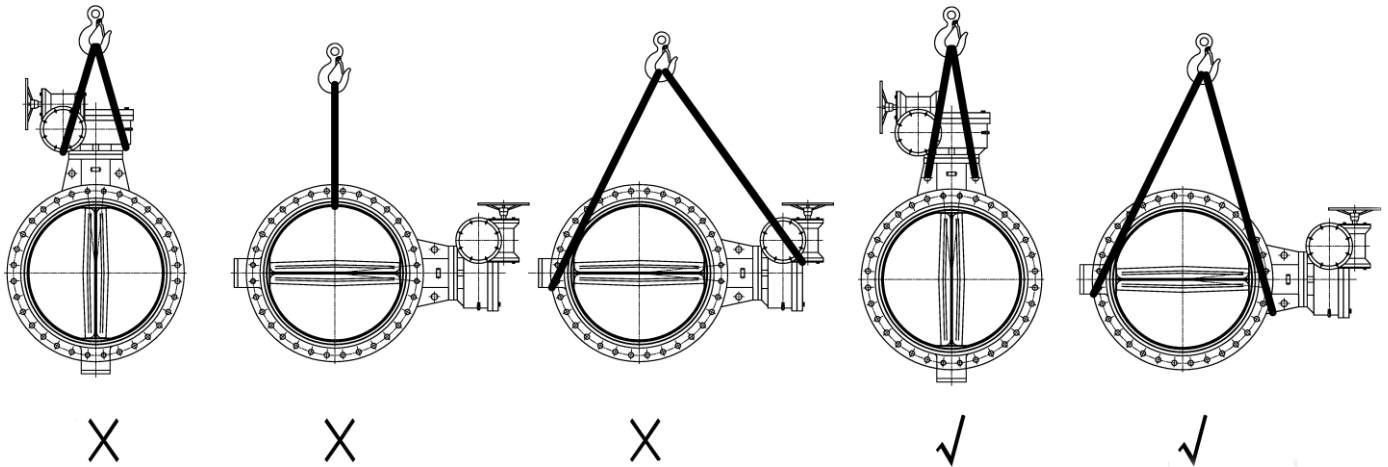
 ISO 9001:2008 CERTIFICATE NO. 0436-2002-AQ-RGC-RV1-Rev.1	 Pressure accessory CERTIFICATE NO. 4588-2014-CE-RGC-ACCREDIA	 CE Notified Body No. 0490 CERTIFICATE NO. 4990-2014-CE-RGC-ACCREDIA	 Det Norske Veritas Rules for Classification of Ships Det Norske Veritas Standards for Certification 2.9 No.5.734.48 CERTIFICATE NO. P-12513	 SIRIM BS EN 593:2004 PA046601	 12 MAT LY 093 F-MC058-b SEAT / QUALIFICATION CERTIFICATE#	 AW / M80310 1404521 SEAT / QUALIFICATION CERTIFICATE#	 CERTIFICATE OF REGISTRATION ARITA TRADEMARK REGISTRATION Form 1456/2007 to 13/06/2017
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Torque & Cv Data

CONCENTRIC BUTTERFLY VALVE 1" UP TO 48" (MAXIMUM AVAILABLE TORQUE)

SIZES		SEAL TORQUE (Nm)							Cv (US Gallon / min)				
DN	In.	PTFE SEAT	RESILIENCE SEAT					GROOVE TYPE	ALUMINUM VALVE	PIN	PIN LESS	GROOVE TYPE	ALUMINUM VALVE
		PN 10	PN 10	PN 16	JIS 5K	JIS 20K	PN 10						
25	1"	---	11	11	11	10	---	8	---	14	---	18.2	
40	1 1/2"	17	13	13	11	---	10	18	19	---	20.9		
50	2"	18	14	15	12	17	12	29	31	25	34.1		
65	2 1/2"	20	15	17	13	19	13	53	55	48	60.5		
80	3"	29	22	23	19	25	20	82	87	77	95.7		
100	4"	48	37	40	32	43	32	129	140	119	154.0		
125	5"	75	58	62	51	67	52	210	224	195	246.0		
150	6"	122	94	102	82	110	88	304	328	294	361.0		
200	8"	226	174	192	152	207	160	537	572	512	629.0		
250	10"	372	286	323	245	348	260	782	837	750	921.0		
300	12"	558	429	490	382	528	400	1161	1241	1121	1365.0		
350	14"	715	550	625	492	---	---	1564	1564	---	---		
400	16"	982	755	846	680	---	---	2087	2087	---	---		
450	18"	1316	1012	1131	912	---	---	2681	2681	---	---		
500	20"	1755	1350	1431	1230	---	---	3350	3350	---	---		
550	22"	2223	1710	---	1555	---	---	4053	4053	---	---		
600	24"	2744	2111	2301	1930	---	---	4907	4907	---	---		
650	26"	---	2423	---	---	---	---	5759	---	---	---		
700	28"	---	3272	---	---	---	---	6664	---	---	---		
750	30"	---	3865	---	---	---	---	7692	---	---	---		
800	32"	---	4308	---	---	---	---	8799	---	---	---		
900	36"	---	5257	---	---	---	---	11232	---	---	---		
1000	40"	---	8926	---	---	---	---	13963	---	---	---		
1050	42"	---	9050	---	---	---	---	15406	---	---	---		
1100	44"	---	10050	---	---	---	---	16922	---	---	---		
1200	48"	---	12580	---	---	---	---	19967	---	---	---		

Nm = Newton Meter



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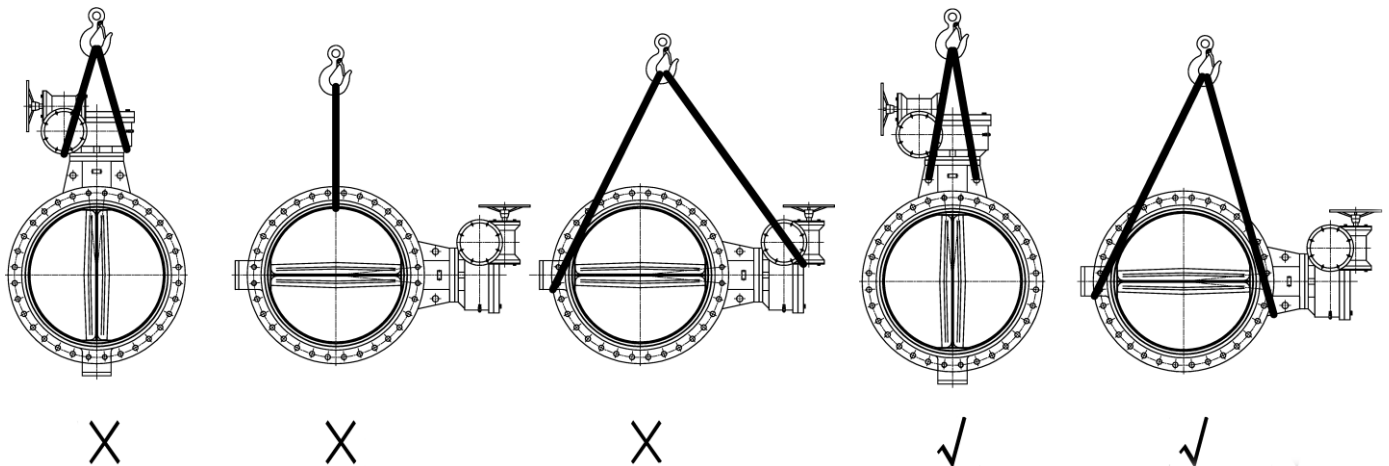
Torque

CONCENTRIC BUTTERFLY VALVE 1" UP TO 48" (MINIMUM AVAILABLE TORQUE)

Dimension in mm

SIZE		TORQUE Nm		STEM DATA (mm)				MINIMUM TORQUE (Nm)								
DN	In.	SEAT		STEM O	STEM □	KEYWAY		SUS 304 / SUS 316			SUS 416			SUS 431		
		RESILIENCE	PTFE			WIDTH	DEEP	STEM O	STEM □	STEM KEYED	STEM O	STEM □	STEM KEYED	STEM O	STEM □	STEM KEYED
25	1	11	—	8.00	9	3	2.7	18.1	25.3	15.6	20.2	42.2	17.3	35.3	73.8	30.3
40	1 1/2	13	17	10.00	9	3	2.7	23.6	25.3	21.0	39.3	42.2	35.0	68.8	73.8	61.3
50	2	15	18	12.60	9	3	2.7	47.1	25.3	43.4	78.5	42.2	72.3	137.4	73.8	126.6
65	2 1/2	17	20	12.60	9	3	2.7	47.1	25.3	43.4	78.5	42.2	72.3	137.4	73.8	126.6
80	3	23	29	12.60	9	3	2.7	47.1	25.3	43.4	78.5	42.2	72.3	137.4	73.8	126.6
100	4	40	48	15.77	11	5	3.0	92.4	69.2	83.1	154.0	76.8	138.5	269.5	134.5	242.4
125	5	62	75	18.92	14	5	3.0	159.6	133.1	147.5	266.0	158.5	245.8	465.5	277.4	430.2
150	6	102	122	18.92	14	5	3.0	159.6	133.1	147.5	266.0	158.5	245.8	465.5	277.4	430.2
200	8	192	226	22.10	17	5	2.9	254.3	229.8	239.8	423.8	283.7	399.7	741.7	496.4	699.4
250	10	323	372	28.45	22	8	4.2	542.6	368.9	500.9	904.3	614.8	834.8	1582.6	1076.0	1461.0
300	12	490	558	31.60	22	8	4.3	743.5	368.9	694.8	1239.2	614.8	1158.0	2168.5	1076.0	2026.5
350	14	625	715	31.60	22	8	4.3	743.5	368.9	694.8	1239.2	614.8	1158.0	2168.5	1076.0	2026.5
400	16	755	982	33.15	—	10	5.0	858.4	—	786.6	1430.7	—	1311.0	2503.7	—	2294.3
450	18	1012	1316	37.95	—	10	5.0	1287.8	—	1202.0	2146.3	—	2003.3	3756.1	—	3505.8
500	20	1350	1755	41.12	—	10	5.0	1638.2	—	1543.0	2730.3	—	2571.7	4778.1	—	4500.4
550	22	1710	2223	50.62	—	16	6.0	3056.2	—	2829.6	5093.7	—	4716.0	8913.9	—	8253.0
600	24	2111	2744	50.62	—	16	6.0	3056.2	—	2829.6	5093.7	—	4716.0	8913.9	—	8253.0
650	26	2423	—	50.62	—	16	6.0	3056.2	—	2829.6	5093.7	—	4716.0	8913.9	—	8253.0
700	28	3272	—	63.35	—	18	7.0	5990.3	—	5232.5	9983.8	—	8720.8	17471.7	—	15261.5
750	30	3865	—	63.35	—	18	7.0	5990.3	—	5232.5	9983.8	—	8720.8	17471.7	—	15261.5
800	32	4308	—	63.35	—	18	7.0	5990.3	—	5232.5	9983.8	—	8725.8	17471.7	—	15270.2
900	36	5257	—	75.00	—	20	7.5	9940.2	—	8846.7	16567.0	—	14744.5	28992.3	—	25802.9
1000	40	8926	—	85.00	—	22	9.0	14470.0	—	12855.4	24116.7	—	21425.7	42204.2	—	37494.9
1050	42	9050	—	95.00	—	25	9.0	20201.4	—	18099.4	33669.0	—	30165.7	58920.8	—	52789.9
1100	44	10050	—	100.00	—	28	10.0	23561.9	—	20840.3	39269.8	—	34733.8	68722.7	—	60784.2
1200	48	12580	—	105.00	—	28	10.0	27275.9	—	24387.9	45459.8	—	40646.5	79554.7	—	71131.4

Nm = Newton Meter



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