

Ductile Iron Lug Style Butterfly Valve

Feature

- 200 PSI (size 2"-12"), 150 PSI (size 14"-up)
- Lug style
- Ductile iron body
- Cartridge seat
- ISO 5211 mounting flange
- MSS-SP-67
- Suitable for bi-directional and dead service



Material

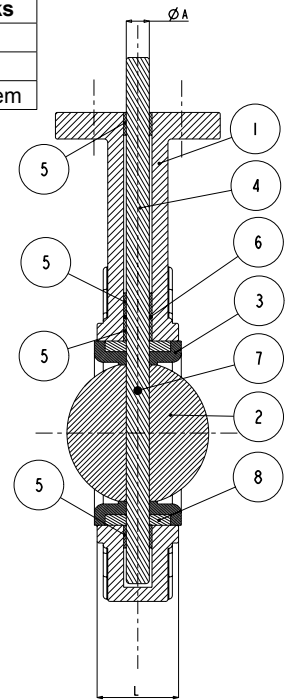
Part	Material
1 Body	Ductile iron (ASTM A536)
2 Disc	Alum. bronze / Ductile iron / 316 SS
3 Seat	EPDM / NBR
4 Stem	416 SS
5 Bushings	PTFE
6 O-ring	NBR
7 Taper pin	316 SS
8 Seat support	Plastic

Figure number breakdown (Example: 938DNSL)

Disc	Seat	Stem	Topworks
B: Aluminum	E: EPDM	S: 416 SS	L: Lever
D: Ductile iron	N: NBR		G: Gear
M: 316 SS	-		X: Bare stem

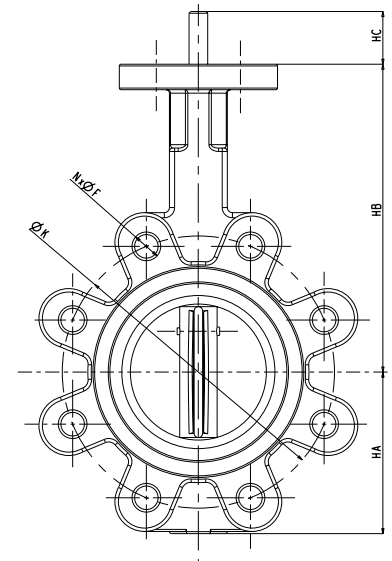
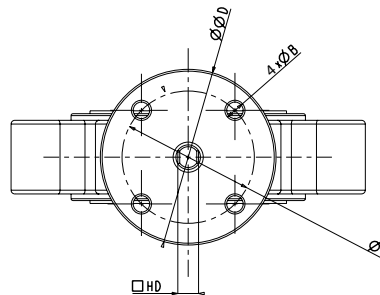
Dimension, Weight

	HA	HB	HC	L	N	ΦF	ΦK	ΦD	ΦA	HD	ΦB	ΦC	ISO	Wt. L	Wt. G	Wt. X
	[in]	[in]	[in]	[in]		[in]	[in]	[in]	[in]	[in]	[in]	[in]	5211	[lb]	[lb]	[lb]
2"	3.15	6.34	1.10	1.69	4	5/8	4.75	3.54	0.50	0.39	0.39	2.76	F07	10.0	18.2	8.8
2½"	3.50	6.89	1.10	1.81	4	5/8	5.50	3.54	0.50	0.39	0.39	2.76	F07	11.8	19.4	10.6
3"	3.74	7.13	1.10	1.81	4	5/8	6.00	3.54	0.50	0.39	0.39	2.76	F07	12.0	19.8	10.8
4"	4.49	7.87	1.10	2.05	8	5/8	7.50	3.54	0.62	0.47	0.39	2.76	F07	18.0	25.8	16.8
5"	5.00	8.39	1.10	2.20	8	3/4	8.50	3.54	0.74	0.55	0.39	2.76	F07	22.4	29.8	21.2
6"	5.47	8.90	1.10	2.20	8	3/4	9.50	3.54	0.74	0.55	0.39	2.76	F07	26.2	33.2	25.0
8"	6.89	10.24	1.58	2.36	8	3/4	11.75	4.92	0.87	0.670	0.47	4.02	F10	41.6	58.5	38.8
10"	7.99	11.50	1.58	2.68	12	7/8	14.25	4.92	1.12	0.87	0.47	4.02	F10	64.0	74.5	61.2
12"	9.53	13.27	1.58	3.07	12	7/8	17.00	5.91	1.24	0.95	0.47	4.92	F12	101	120	98.2
14"	10.51	14.49	1.58	3.07	12	1	18.75	5.91	1.24	0.95	0.47	4.91	F12	-	171	160
16"	12.28	15.75	2.02	4.02	16	1	21.25	8.27	1.31	1.06	0.71	6.50	F16	-	283	220
18"	12.87	16.61	2.02	4.49	16	1-1/8	22.75	8.27	1.50	1.06	0.71	6.50	F16	-	350	292
20"	14.17	18.90	2.52	5.00	20	1-1/8	25.00	8.27	1.62	1.26	0.71	6.50	F16	-	424	477
24"	17.95	22.13	2.76	6.06	20	1-1/4	29.50	8.27	1.99	1.42	0.91	6.50	F16	-	639	567



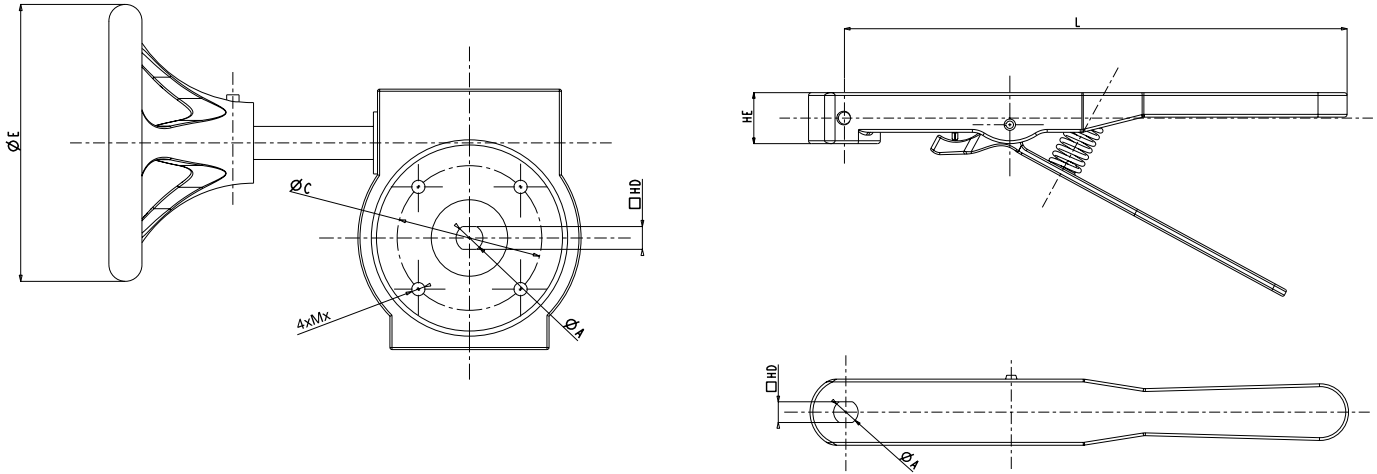
Seating torques

	50	100	150	200
	[in-lb]	[in-lb]	[in-lb]	[in-lb]
2"	123	131	137	144
2½"	169	184	199	213
3"	215	229	242	254
4"	316	351	388	424
5"	423	481	540	598
6"	585	675	765	854
8"	1077	1203	1329	1454
10"	1539	1724	1910	2096
12"	2540	2764	2990	3214
14"	4881	6226	7570	8580
16"	7020	8580	10140	11566
18"	10105	12202	14300	15819
20"	13923	16582	19240	20425
24"	23617	26953	30290	32840



All torque values shown are for wet (water and other non-lubricating media) on-off service. For dry services (dry gas, etc.) multiply values by 1.15. For lubed service (clean, non-abrasive lubricating media) multiply values by 0.85. These values do not include a safety factor. An appropriate safety factor should be used when sizing any actuator.

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Dimension, Cv

	ΦA [in]	ΦC [in]	HD [in]	HE [in]	ΦE [in]	L [in]	Mx [in]
2"	0.50	2.76	0.39	1.06	5.91	10.51	M8
2½"	0.50	2.76	0.39	1.06	5.91	10.51	M8
3"	0.50	2.76	0.39	1.06	5.91	10.51	M8
4"	0.62	2.76	0.47	1.06	5.91	10.51	M8
5"	0.74	2.76	0.55	1.06	5.91	10.51	M8
6"	0.74	2.76	0.55	1.06	5.91	10.51	M8
8"	0.87	4.02	0.670	1.22	11.42	14.13	M10
10"	1.12	4.02	0.87	1.22	11.42	14.13	M10
12"	1.24	4.92	0.95	1.22	11.42	14.13	M10
14"	1.24	4.91	0.95	-	11.42	-	M12
16"	1.31	6.50	1.06	-	11.42	-	M20
18"	1.50	6.50	1.06	-	11.42	-	M20
20"	1.62	6.50	1.26	-	11.42	-	M20
24"	1.99	6.50	1.42	-	14.76	-	M20

Degrees Open Size	Degrees Open								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
2"	0.06	3	7	15	27	44	70	105	115
2½"	0.1	6	12	25	45	75	119	178	196
3"	0.2	9	18	39	70	116	183	275	302
4"	0.3	17	36	78	139	230	364	546	600
5"	0.5	29	61	133	237	392	620	930	1022
6"	0.8	34	94	153	257	422	706	1154	1320
8"	2	56	154	251	422	693	1158	1892	2165
10"	3	87	238	385	654	1073	1794	2931	3353
12"	4	153	417	681	1145	1890	3142	5132	5827
14"	6	338	715	1549	3761	4568	7230	10844	11917
16"	8	464	983	2130	3797	6282	9942	14913	16388
18"	11	615	1302	2822	5028	8320	13168	19752	21705
20"	14	791	1674	3628	6465	10698	16931	25369	27908
24"	22	1222	2587	5605	9989	16528	26157	39236	43116

Fitting RWV actuator

	Electric ON/OFF 110VAC	Electric ON/OFF 24VDC	Electric Modulating 110VAC	Electric Modulating 24VDC	Pneumatic * Double acting	Pneumatic * Spring return
2"	CUTAQ05-02-120-3PT-0	CUTAQ05-02-024-3PT-0	CUTAQ05-02-120-MOD-0	CUTAQ05-02-024-MOD-0	HOVER-02-DA-0	HOVER-02-SR-0
2½"	CUTAQ05-02-120-3PT-0	CUTAQ05-02-024-3PT-0	CUTAQ05-02-120-MOD-0	CUTAQ05-02-024-MOD-0	HOVER-02-DA-0	HOVER-02-SR-0
3"	CUTAQ05-02-120-3PT-0	CUTAQ05-02-024-3PT-0	CUTAQ05-02-120-MOD-0	CUTAQ05-02-024-MOD-0	HOVER-02-DA-0	HOVER-03-SR-0
4"	CUTAQ10-04-120-3PT-0	CUTAQ10-04-024-3PT-0	CUTAQ10-04-120-MOD-0	CUTAQ10-04-024-MOD-0	HOVER-04-DA-0	HOVER-04-SR-0
5"	CUTAQ10-05-120-3PT-0	CUTAQ10-05-024-3PT-0	CUTAQ10-05-120-MOD-0	CUTAQ10-05-024-MOD-0	HOVER-05-DA-0	HOVER-05-SR-0
6"	CUTAQ15-06-120-3PT-0	CUTAQ15-06-024-3PT-0	CUTAQ15-06-120-MOD-0	CUTAQ15-06-024-MOD-0	HOVER-05-DA-0	HOVER-05-SR-0
8"	CUTAQ30-08-120-3PT-0	CUTAQ30-08-024-3PT-0	CUTAQ30-08-120-MOD-0	CUTAQ30-08-024-MOD-0	HOVER-08-DA-0	HOVER-08-SR-0
10"	CUTAQ50-10-120-3PT-0	CUTAQ50-10-024-3PT-0	CUTAQ50-10-120-MOD-0	CUTAQ50-10-024-MOD-0	HOVER-10-DA-0	HOVER-10-SR-0
12"	CUTAQ50-12-120-3PT-0	CUTAQ50-12-024-3PT-0	CUTAQ50-12-120-MOD-0	CUTAQ50-12-024-MOD-0	HOVER-12-DA-0	HOVER-12-SR-0
14"	**	**	**	**	HOVER-12-DA-0	HOVER-14-SR-0
16"	**	**	**	**	HOVER-16-DA-0	HOVER-16-SR-0
18"	**	**	**	**	HOVER-18-DA-0	**
20"	**	**	**	**	HOVER-20-DA-0	**

* Pneumatic actuators sized based on a 80psi air supply
 ** Options available, call for info