

Neles™ Neldisc™ high performance metal seated triple eccentric disc valve Series LW, LG, ASME rated

Neldisc wafer type LW and lug type LG series are metal seated, high performance butterfly valves specially designed to fulfill the requirements of chemical, petrochemical, refining and pulp and paper industries. With a nearly equal percentage characteristics and superior tightness Neldisc butterfly valves operate both in control and shut-off applications. As a result of the unique triple offset geometry of Neldisc, the contact between disc and seat is mechanically induced and does not rely on assistance from differential pressure. Due to a number of special constructions developed from the versatile Neldisc design, these valves offer a powerful tool for standardization and are truly high performance valves.



Features

- Metal seated design
- Bidirectional long term tightness
- Low friction
- Excellent wear resistance
- Extended life cycle
- Lower operational torque

Reliability

Approvals

- TA-Luft, chapter 3.1.8.4, Shell SPE 77/312, ISO 15848
- Firesafe tested to BS6755 and API607, 6th edition.

Increased safety and minimized emissions

- Standard live loaded gland packing meets TA-Luft and Clean Air Act requirements.
- PTFE V-ring or graphite packing for a wide range of applications.
- Double packing available with or without leak off connection.
- Anti-blow out shaft construction standard in all valves, see page 2 exploded view.
- ATEX

Performance

Excellent for on-off and control applications

- Bi-directional tight seat ISO 5208 rate A (air), FCI 70.2 Class VI, API 598.
- Unique all-metal seat design assures superior tightness in difficult applications over long time periods.

- Contact between disc and seat is mechanically induced and does not rely on assistance from differential pressure.
- Low cost control valve for low differential pressures.
- Special S-disc option for difficult high noise and cavitation applications.

Abrasion resistant

- Solid metal seat design offered in a variety of materials to suit your application.
- Fully metal seated construction. No resilient parts exposed to the medium.

Materials suitable for a broad range of applications

Standard body materials:

Carbon steel (WCB)

Stainless steel (CF8M)

Other materials are available on application.

Face to face dimensions

API 609, category B

Other face to face dimensions on request.

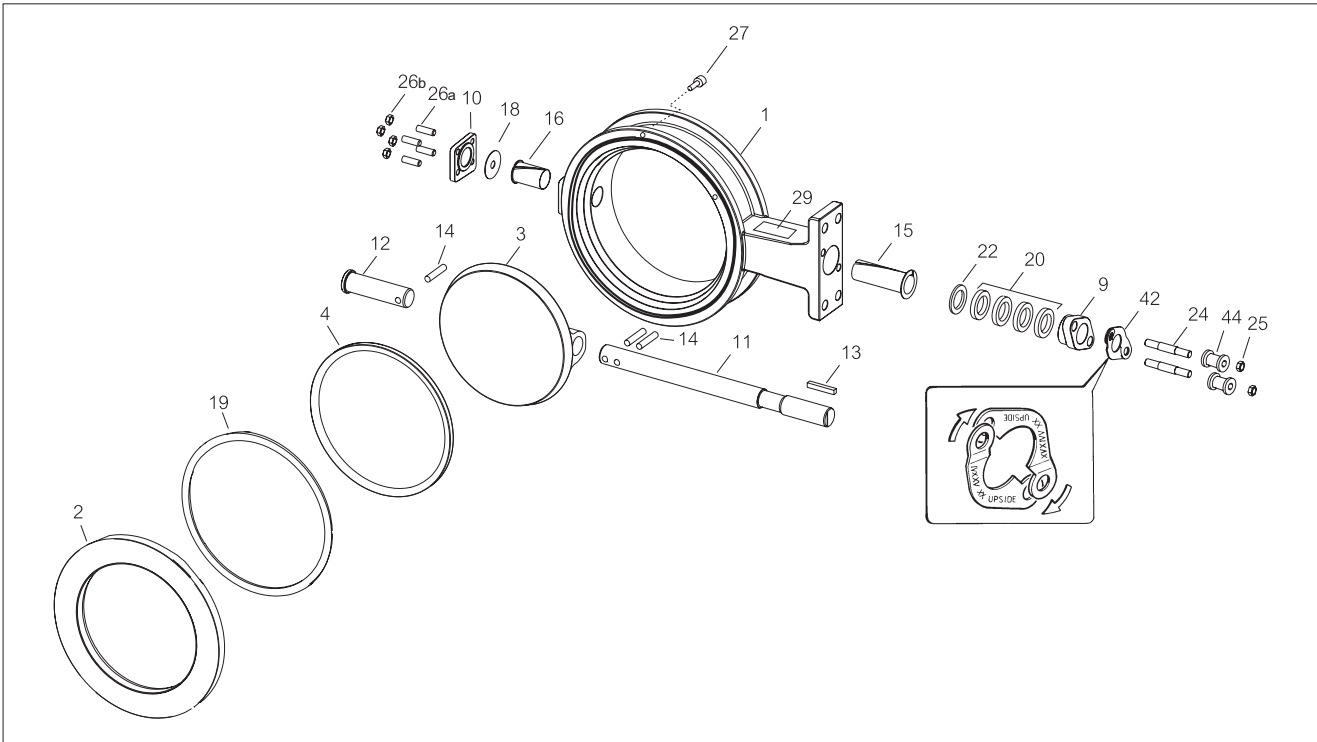
Wide pressure and temperature range

- Differential pressure/temperature ratings in accordance with ASME B16.34.
- Appropriate constructions perform equally well from -200 °C to + 600 °C / -330 °F to +1110 °F.

Extended body neck

- Extended body neck to accommodate easy pipe line insulation.

Exploded view



Parts list

ITEM	PART DESCRIPTION	STANDARD MATERIALS	
1	BODY wafer type	ASTM A216 gr. WCB	ASTM A351 gr. CF8M
2	CLAMP RING		
3	DISC	ASTM A182 gr. F316	
4	SEAT RING (code A)	Hard chrome coated Incoloy 825	
9	GLAND	ASTM A351 gr. CF8M	
10	BLIND FLANGE	ASTM A351 gr. CF8M	
11	DRIVE SHAFT	17-4PH Stainless steel	
12	SHAFT	17-4PH Stainless steel	
13	KEY	329 Stainless steel	
14	PIN	17-4PH Stainless steel	
15	BEARING	AISI 316 + PTFE or cobalt based alloy	
16	BEARING	AISI 316 + PTFE or cobalt based alloy	
18	GASKET	Graphite	
19	BODY SEAL	Graphite	
20	GLAND PACKING	PTFE V-ring or graphite	
22	ANTI-EXTRUSION RING	Graphite + AISI 316	
24	STUD	A4-70 / DIN 267 part 11 Stainless steel	
25	HEXAGON NUT	A4-70 / DIN 267 part 11 Stainless steel	
26a	STUD	Stainless steel	
26b	HEXAGON NUT	Stainless steel	
27	HEX SOC. HEAD CAP SCREW	A4-70 / DIN 267 part 11 Stainless steel	
29	IDENTIFICATION PLATE	AISI 304	
42	RETAINING PLATE	Stainless steel	
44	TA-Luft KIT		

Technical specification

Product type

Fully rated, high performance butterfly valve
 Metal seated
 LW : Wafer type
 LG : Lug type

Pressure ratings

Body & trim: ASME 150: LW5C, LG5C
 ASME 300: LW5D, LG5D

Size range

3" - 24"

Temperature range

-200 °C...+ 600 °C / -330 °F...+1110 °F
 (over + 600 °C / +1110 °F please consult with factory)

Desing standards

ASME B16.34, API 609 cat B

Approvals

Emission: TA-Luft, chapter 3.1.8.4, Shell
 SPE 77/312, ISO 15848

Fire test: BS 6755
 API 607, 6th edition.

Valve tightness

Standard seat, code A:
 ANSI Class V
 ISO 5208, rate D, air
 10 x ISO 5208 rate D with RH
 hand lever

Optional Leakage

API 598
 ANSI Class VI
 ISO 5208 rate A, air (4"-24")

Options

S-Disc, flow balancing trim, see bulletin 2 S-L1 20.
 High cycle/cycling design
 Cryogenic
 Oxygen construction
 High temperature design
 Steam jacket, heat tracing
 NACE MR0103/MR0175 with suitable const.
 Erosion resistance design

Pressure/Temperature ratings

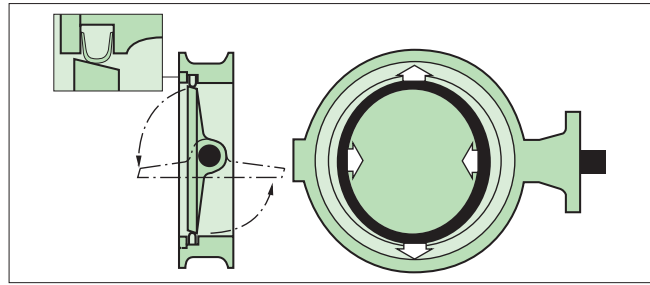
Maximum working pressure ratings of the valve in accordance with ASME B16.34.

Temp. °F	ASME 150		ASME 300	
	Carbon steel* (psi)	AISI 316 Stainless steel (psi)	Carbon steel* (psi)	AISI 316 Stainless steel (psi)
-20 to 100	284.2	275.5	740.9	719.2
122	278.4	266.8	726.4	697.4
212	256.6	234.9	672.8	611.9
300	229.1	214.6	655.4	558.2
392	203.0	198.6	635.1	517.6
482	175.4	175.4	604.6	484.3
572	147.9	147.9	561.1	458.2
662	121.8	121.8	536.5	440.8
707	107.3	107.3	529.2	430.6
752	94.2	94.2	500.2	421.9

* Not recommended for prolonged usage above +425 °C / +800 °F.

Neldisc triple offset seating principle

The disc of the valve is machined to close tolerances to create an elliptical shape similar to an oblique slice taken from a solid metal cone. When the valve is closed, the elliptical disc at the major axis displaces the seat ring outward, causing the seat ring to contact the disc at the minor axis. When the valve is opened, the contact is released and the seat ring returns to its original circular shape.



Flow Data

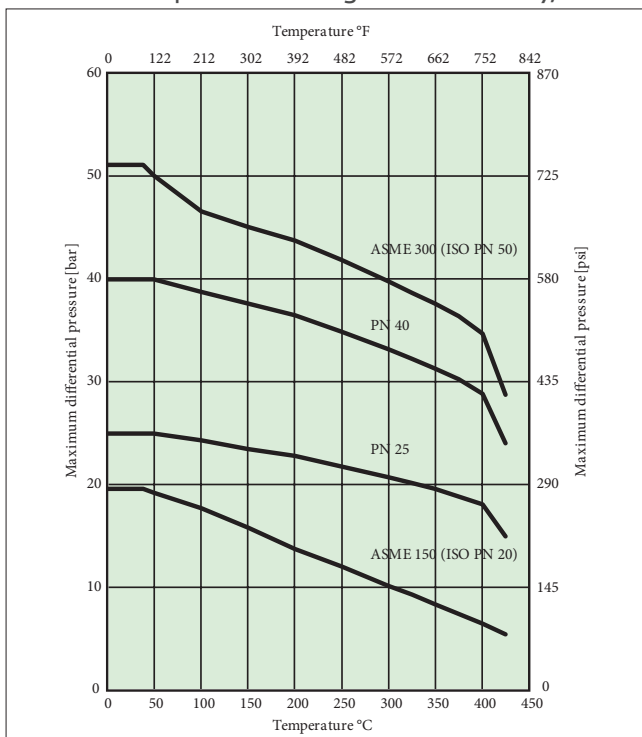
Cv tables of LW and LG valves in pressure classes ASME 150 and 300.

Inch	Cv Values			
	Standard		S-Disc	
	#150	#300	#150	#300
3	245	245	210	210
4	450	450	310	310
6	1500	1300	790	680
8	3050	2300	1470	1160
10	5300	3500	2580	2130
12	7600	5280	3500	3480
14	9400	7470	4500	5200
16	12200	5540	5670	4750
18	17600	6810	7670	5900
20	21900	9110	9180	7840
24	31000	10400	13500	9290
28	25100		12700	
30	35300		17800	
32	46700		20900	
36	53000		23100	
40	69600		30000	

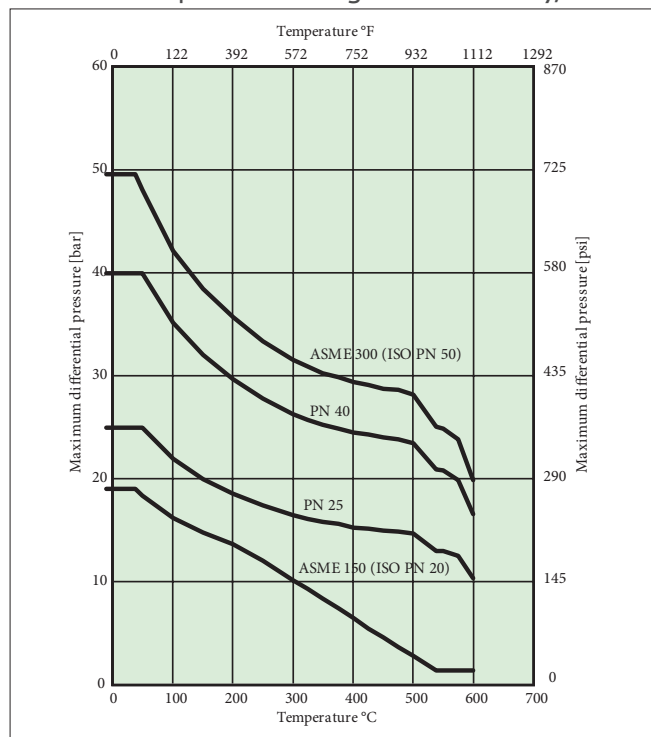
Valve body ratings

Maximum working pressure ratings of the valve body in accordance with different standards.

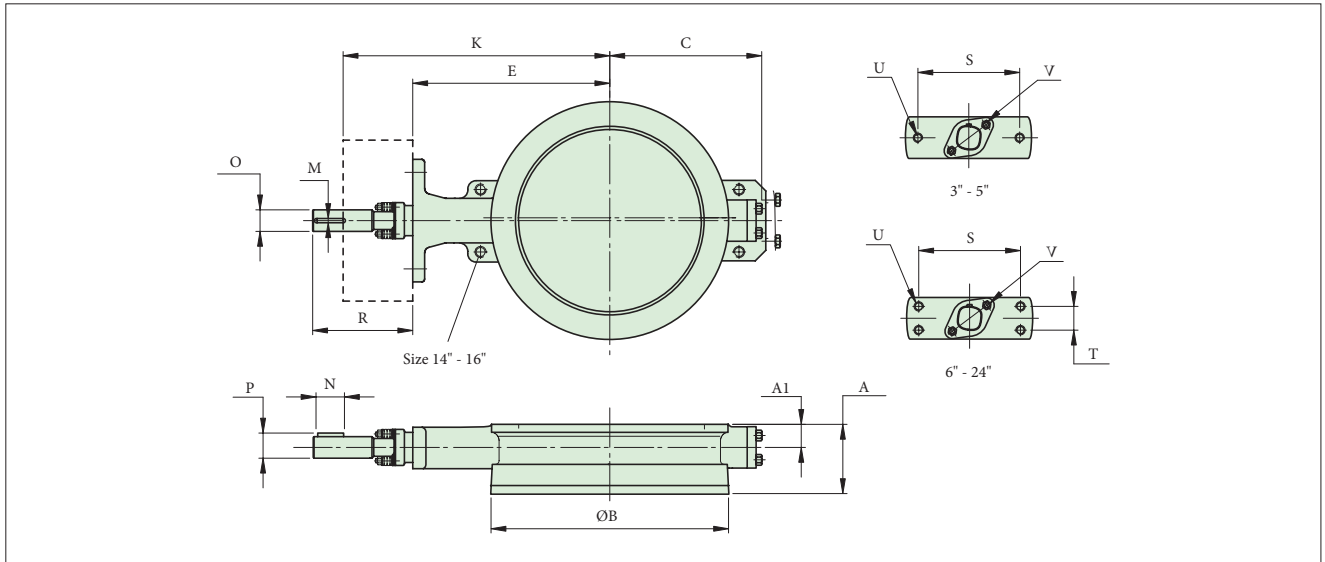
Pressure/temperature ratings for valve body, WCB



Pressure/temperature ratings for valve body, CF8M



LW5C, 3" – 24", ASME 150



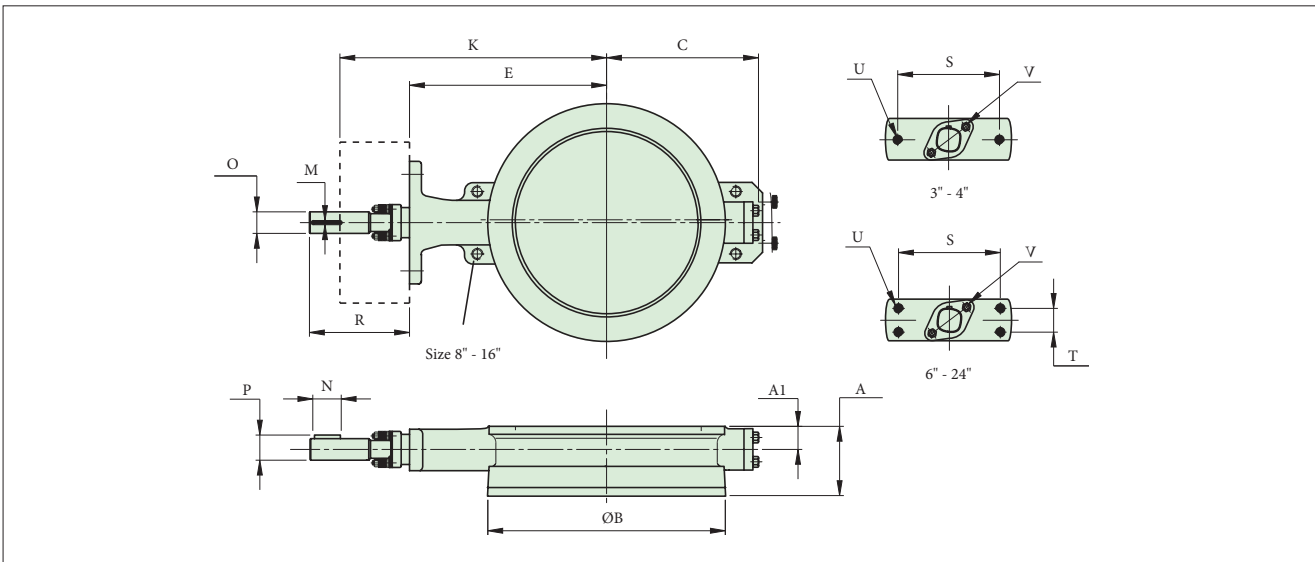
LW5C, dimensions

Size	Dimensions, Inch									U THREAD	V THREAD	Dimensions, Inch					Weight (lbs)
	A1	A	S-LW5C A	ØB	C	E	K	S	T			O	R	M	N	P	
3	0.71	1.89	1.93	5.04	3.15	6.61	9.76	2.76	-	M10	M8	0.59	4.13	0.19	0.98	0.67	9
4	0.79	2.13	2.20	6.22	3.94	7.17	10.71	3.54	-	M12	M8	0.79	4.92	0.19	1.38	0.87	13
6	0.91	2.24	2.76	8.35	5.91	8.94	12.48	4.33	1.26	M12	M8	0.79	4.92	0.19	1.38	0.87	33
8	0.94	2.52	2.80	10.55	6.30	10.12	13.66	4.33	1.26	M12	M10	0.98	5.31	0.25	1.81	1.09	44
10	1.14	2.80	2.99	12.60	8.27	11.42	15.75	5.12	1.26	M12	M10	1.18	6.3	0.25	2.01	1.30	66
12	1.26	3.19	3.27	14.88	10.83	12.60	16.93	5.12	1.26	M12	M10	1.38	6.3	0.37	2.28	1.54	99
14	1.42	3.62	3.62	17.24	11.42	13.98	18.70	6.30	1.57	M16	M10	1.57	7.4	0.37	2.68	1.74	154
16	1.73	4.02	4.02	19.09	12.60	15.94	20.67	6.30	1.57	M16	M14	1.77	7.87	0.50	3.15	1.98	209
18	1.85	4.49	4.49	20.94	14.58	14.96	20.47	6.30	2.17	M20	M14	1.97	9.06	0.50	3.54	2.19	286
20	2.2	5.00	5.00	23.03	16.23	17.32	22.83	6.30	2.17	M20	M14	2.17	9.06	0.50	3.54	2.39	385
24	2.83	6.06	6.06	26.97	18.31	19.88	26.97	9.06	3.54	M24	M14	2.76	11.81	0.75	4.69	3.08	671

LW5C, dimensions

Size	Dimensions, mm									U THREAD	V THREAD	Dimensions, mm					Weight (kg)
	A1	A	S-LW5C A	ØB	C	E	K	S	T			O	R	M	N	P	
3	18	48	49	128	80	168	248	70	-	M10	M8	15	105	4.76	25	17.00	4
4	20	54	56	158	100	182	272	90	-	M12	M8	20	125	4.76	35	22.20	6
6	23	57	70	212	150	227	317	110	32	M12	M8	20	125	4.76	35	22.20	15
8	24	64	71	268	160	257	347	110	32	M12	M10	25	135	6.35	46	27.80	20
10	29	71	76	320	210	290	400	130	32	M12	M10	30	160	6.35	51	32.90	30
12	32	81	83	378	275	320	430	130	32	M12	M10	35	160	9.52	58	39.10	45
14	36	92	92	438	290	355	475	160	40	M16	M10	40	188	9.52	68	44.20	70
16	44	102	102	485	320	405	525	160	40	M16	M14	45	200	12.70	80	50.40	95
18	47	114	114	532	370.3	380	520	160	55	M20	M14	50	230	12.70	90	55.50	130
20	56	127	127	585	412.3	440	580	160	55	M20	M14	55	230	12.70	90	60.60	175
24	72	154	154	685	465	505	685	230	90	M24	M14	70	300	19.05	119	78.15	305

LW5D, 3" – 24", ASME 300



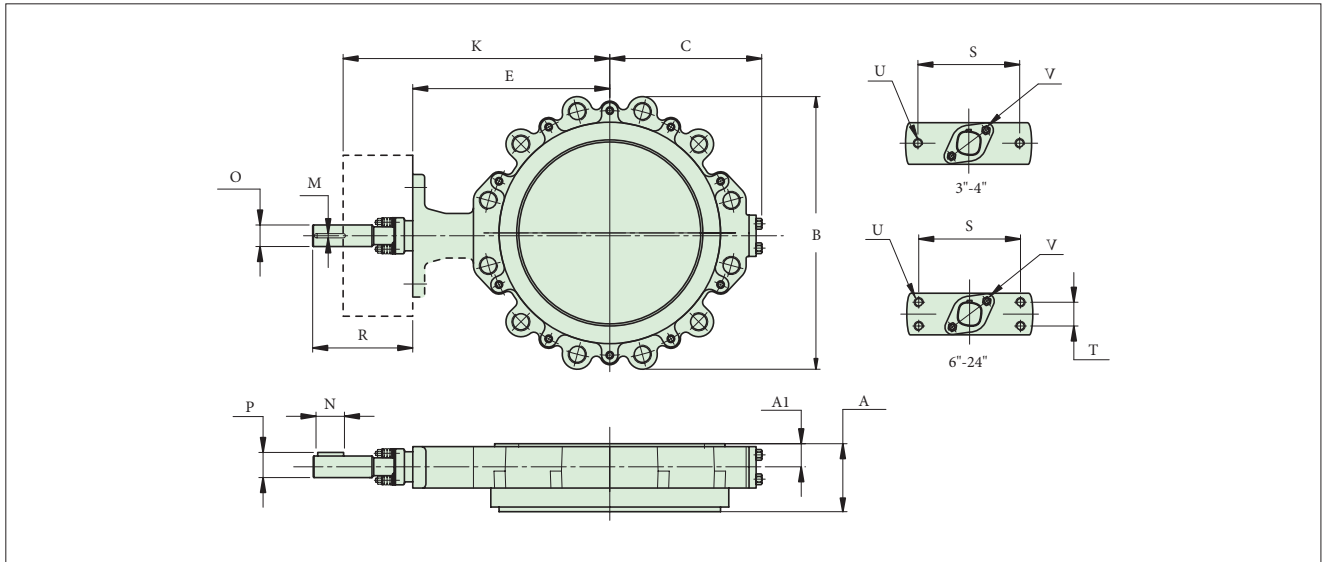
LW5D, dimensions

Size	Dimensions, Inch									U THREAD	V THREAD	Dimensions, Inch					Weight (lbs)
	A1	A	S-LW5D A	ØB	C	E	K	S	T			O	R	M	N	P	
3	0.71	1.89	2.52	5.04	3.15	6.61	9.76	2.76	-	M10	M8	0.59	4.13	0.19	0.98	0.67	9
4	0.79	2.13	2.52	6.22	3.94	7.17	10.71	3.54	-	M12	M8	0.79	4.92	0.19	1.38	0.87	13
6	1.06	2.32	2.99	8.58	5.71	9.13	12.68	4.33	1.26	M12	M8	0.98	5.31	0.25	1.81	1.09	44
8	1.34	2.87	3.50	10.87	8.07	10.79	15.12	5.12	1.26	M12	M10	1.38	6.5	0.37	2.28	1.54	84
10	1.61	3.27	4.49	13.19	10.24	12.60	17.32	6.30	1.57	M16	M10	1.77	7.87	0.50	3.15	1.98	132
12	1.81	3.62	4.49	15.55	11.81	14.17	19.69	6.30	2.17	M20	M14	1.97	9.06	0.50	3.54	2.19	187
14	2.24	4.61	5.00	17.72	12.99	15.75	21.26	6.30	2.17	M20	M14	2.17	9.06	0.50	3.54	2.39	231
16	2.6	5.24	5.51	19.88	14.57	17.32	22.83	6.30	2.17	M20	M14	2.17	9.06	0.50	3.54	2.39	275
18	2.83	5.87	5.98	21.81	16.12	16.34	23.43	9.06	3.54	M24	M16	2.76	11.77	0.75	4.69	3.08	495
20	2.87	6.26	5.98	24.02	17.38	17.32	24.41	9.06	3.54	M24	M16	2.76	11.73	0.75	4.69	3.08	561
24	3.27	7.13	7.01	27.56	20.33	19.69	26.77	9.06	3.54	M24	M16	3.35	12.83	0.88	5.75	3.73	891

LW5D, dimensions

Size	Dimensions, mm									U THREAD	V THREAD	Dimensions, mm					Weight (kg)
	A1	A	S-LW5D A	ØB	C	E	K	S	T			O	R	M	N	P	
3	18	48	64	128	80	168	248	70	-	M10	M8	15	105	4.76	25	17	4
4	20	54	64	158	100	182	272	90	-	M12	M8	20	125	4.76	35	22.2	6
6	27	59	76	218	145	232	322	110	32	M12	M8	25	135	6.35	46	27.8	20
8	34	73	89	276	205	274	384	130	32	M12	M10	35	165	9.52	58	39.1	38
10	41	83	114	335	260	320	440	160	40	M16	M10	45	200	12.70	80	50.4	60
12	46	92	114	395	300	360	500	160	55	M20	M14	50	230	12.70	90	55.5	85
14	57	117	127	450	330	400	540	160	55	M20	M14	55	230	12.70	90	60.6	105
16	66	133	140	505	370	440	580	160	55	M20	M14	55	230	12.70	90	60.6	125
18	72	149	152	554	409.4	415	595	230	90	M24	M16	70	299	19.05	119	78.25	225
20	73	159	152	610	441.4	440	620	230	90	M24	M16	70	298	19.05	119	78.25	255
24	83	181	178	700	516.4	500	680	230	90	M24	M16	85	326	22.225	146	94.625	405

LG5C, 3" – 24", ASME 150



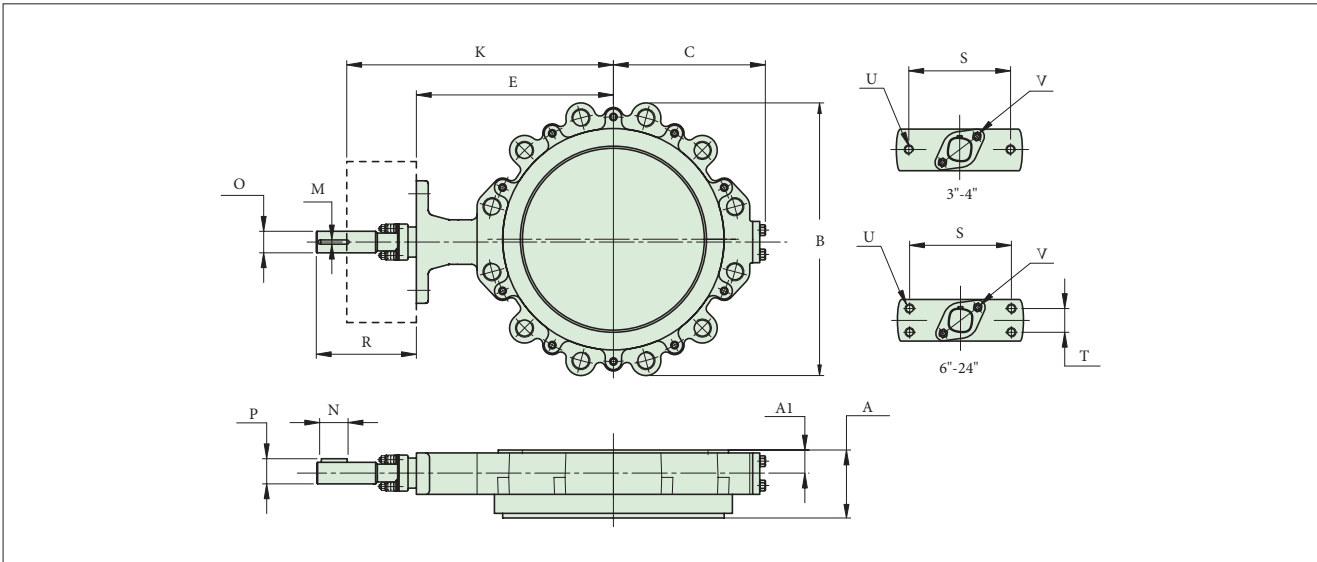
LG5C, dimensions

Size	Dimensions, Inch									U THREAD	V THREAD	Flange Thread		Dimensions, Inch					Weight (lbs)
	A1	A	S-LG5C A	ØB	C	E	K	S	T			Thread	Qty	O	R	M	N	P	
3	0.71	1.89	1.93	8.07	4.72	6.61	9.76	2.76	-	M10	M8	5/8	4	0.59	4.13	0.19	0.98	0.67	20
4	0.83	2.13	2.20	9.25	5.31	7.17	10.71	3.54	-	M12	M8	5/8	8	0.79	4.92	0.19	1.38	0.87	31
6	0.87	2.24	2.76	11.81	6.30	8.94	12.48	4.33	1.26	M12	M8	3/4	8	0.79	4.92	0.19	1.38	0.87	53
8	0.98	2.52	2.80	14.17	7.28	10.12	13.66	4.33	1.26	M12	M10	3/4	8	0.98	5.31	0.25	1.81	1.09	75
10	1.1	2.80	2.99	16.73	8.66	11.42	15.75	5.12	1.26	M12	M10	7/8	12	1.18	6.3	0.25	2.01	1.30	95
12	1.26	3.19	3.27	19.09	10.83	12.60	16.93	5.12	1.26	M12	M10	7/8	12	1.38	6.3	0.37	2.28	1.54	165
14	1.42	3.62	3.62	21.85	12.20	13.98	18.70	6.30	1.57	M16	M10	1	12	1.57	7.4	0.37	2.68	1.74	209
16	1.61	4.02	4.02	24.02	13.39	15.94	20.67	6.30	1.57	M16	M14	1	16	1.77	7.87	0.50	3.15	1.98	330
18	1.93	4.49	4.49	25.20	14.58	14.96	20.47	6.30	2.17	M20	M14	1 1/8	16	1.97	9.06	0.50	3.54	2.19	451
20	2.2	5.00	5.00	28.74	16.23	17.32	22.83	6.30	2.17	M20	M14	1 1/8	20	2.17	9.06	0.50	3.54	2.39	653
24	2.56	6.06	6.06	32.87	18.28	19.88	26.97	9.06	3.54	M24	M14	1 1/4	20	2.76	11.81	0.75	4.69	3.08	981

LG5C, dimensions

Size	Dimensions, mm									U THREAD	V THREAD	Flange Thread		Dimensions, mm					Weight (kg)
	A1	A	S-LG5C A	ØB	C	E	K	S	T			Thread	Qty	O	R	M	N	P	
3	18	48	49	205	120	168	248	70	-	M10	M8	5/8	4	15	105	4.76	25	17	9
4	21	54	56	235	135	182	272	90	-	M12	M8	5/8	8	20	125	4.76	35	22.2	14
6	22	57	70	300	160	227	317	110	32	M12	M8	3/4	8	20	125	4.76	35	22.2	24
8	25	64	71	360	185	257	347	110	32	M12	M10	3/4	8	25	135	6.35	46	27.8	34
10	28	71	76	425	220	290	400	130	32	M12	M10	7/8	12	30	160	6.35	51	32.9	43
12	32	81	83	485	275	320	430	130	32	M12	M10	7/8	12	35	160	9.52	58	39.1	75
14	36	92	92	555	310	355	475	160	40	M16	M10	1	12	40	188	9.52	68	44.2	95
16	41	102	102	610	340	405	525	160	40	M16	M14	1	16	45	200	12.70	80	50.4	150
18	49	114	114	640	370.3	380	520	160	55	M20	M14	1 1/8	16	50	230	12.70	90	55.5	205
20	56	127	127	730	412.3	440	580	160	55	M20	M14	1 1/8	20	55	230	12.70	90	60.6	297
24	65	154	154	835	464.4	505	685	230	90	M24	M14	1 1/4	20	70	300	19.05	119	78.15	446

LG5D, 3" – 24" ASME 300



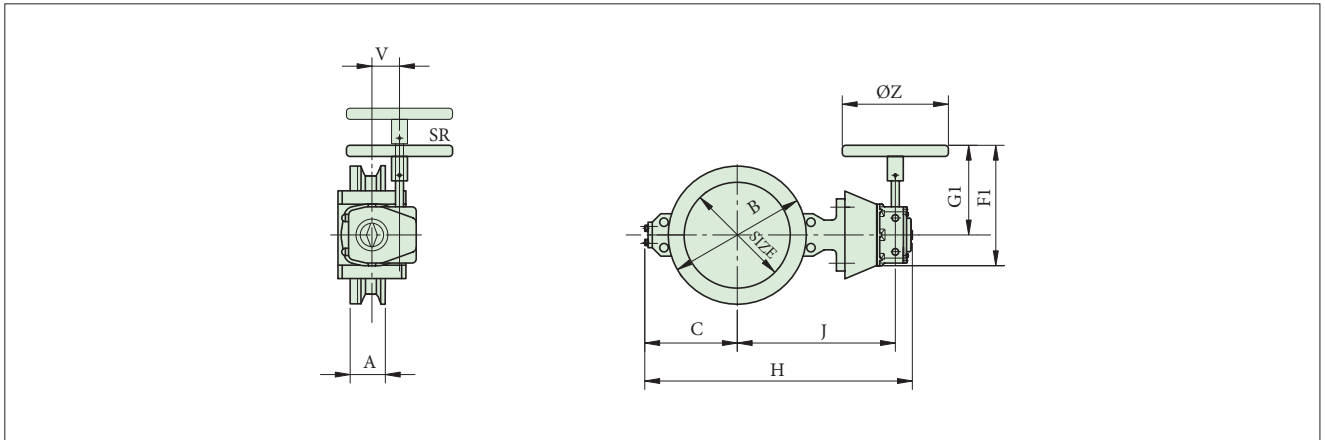
LG5D, dimensions

Size	Dimensions, Inch									U THREAD	V THREAD	Flange Thread		Dimensions, Inch					Weight (lbs)
	A1	A	S-LG5D A	ØB	C	E	K	S	T			Thread	Qty	O	R	M	N	P	
3	0.67	1.89	2.52	8.07	4.72	6.61	9.76	2.76	-	M10	M8	3/4	8	0.59	4.13	0.19	0.98	0.67	20
4	0.83	2.13	2.52	9.25	5.31	7.17	10.71	3.54	-	M12	M8	3/4	8	0.79	4.92	0.19	1.38	0.87	31
6	0.94	2.32	2.99	11.42	6.30	9.13	12.68	4.33	1.26	M12	M10	3/4	12	0.98	5.31	0.25	1.81	1.09	55
8	1.34	2.87	3.50	14.37	8.07	10.79	15.12	5.12	1.26	M12	M10	7/8	12	1.38	6.5	0.37	2.28	1.54	106
10	1.61	3.27	4.49	17.13	10.24	12.60	17.32	6.30	1.57	M16	M14	1	16	1.77	7.87	0.50	3.15	1.98	198
12	1.81	3.62	4.49	19.69	11.81	14.17	19.69	6.30	2.17	M20	M14	1 1/8	16	1.97	9.06	0.50	3.54	2.19	330
14	2.24	4.61	5.00	22.24	12.99	15.75	21.26	6.30	2.17	M20	M14	1 1/8	20	2.17	9.06	0.50	3.54	2.39	440
16	2.44	5.24	5.51	25.55	14.57	17.32	22.83	6.30	2.17	M20	M33	1 1/4	20	2.17	9.06	0.50	3.54	2.39	638
18	2.85	5.87	5.98	27.95	16.12	16.34	23.43	9.06	3.54	M24	M16	1 1/4	24	2.76	11.77	0.75	4.69	3.08	840
20	2.95	6.26	5.98	30.31	17.38	17.32	24.41	9.06	3.54	M24	M16	1 1/4	24	2.76	11.73	0.75	4.69	3.08	979
24	3.15	7.13	7.01	36.02	20.33	19.69	26.77	9.06	3.54	M24	M16	1 1/2	24	3.35	12.83	0.88	5.75	3.73	1595

LG5D, dimensions

Size	Dimensions, mm									U THREAD	V THREAD	Flange Thread		Dimensions, mm					Weight (kg)
	A1	A	S-LG5D A	ØB	C	E	K	S	T			Thread	Qty	O	R	M	N	P	
3	17	48	64	205	120	168	248	70	-	M10	M8	3/4	8	15	105	4.76	25	17	9
4	21	54	64	235	135	182	272	90	-	M12	M8	3/4	8	20	125	4.76	35	22.2	14
6	24	59	76	290	160	232	322	110	32	M12	M10	3/4	12	25	135	6.35	46	27.8	25
8	34	73	89	365	205	274	384	130	32	M12	M10	7/8	12	35	165	9.52	58	39.1	48
10	41	83	114	435	260	320	440	160	40	M16	M14	1	16	45	200	12.70	80	50.4	90
12	46	92	114	500	300	360	500	160	55	M20	M14	1 1/8	16	50	230	12.70	90	55.5	150
14	57	117	127	565	330	400	540	160	55	M20	M14	1 1/8	20	55	230	12.70	90	60.6	200
16	62	133	140	649	370	440	580	160	55	M20	M33	1 1/4	20	55	230	12.70	90	60.6	290
18	72	149	152	710	409.4	415	595	230	90	M24	M16	1 1/4	24	70	299	19.05	119	78.25	382
20	75	159	152	770	441.4	440	620	230	90	M24	M16	1 1/4	24	70	298	19.05	119	78.25	445
24	80	181	178	915	516.4	500	680	230	90	M24	M16	1 1/2	24	85	326	22.225	146	94.625	725

Valve+ manual gear operator, M-series



L_5C+M-series, dimensions

Size	OPERATOR ISO 5211	Dimensions, Inch													Weight	
		L_5C	S-L_5C	LW5C			LG5C			F1	G1	J	V	Z	LW5C-M lbs	LG5C-M lbs
		A	A	ØB	C	H	B	C	H							
3	M7/Q	1.89	1.93	5.04	3.15	15.35	8.07	4.72	16.93	6.93	5.2	10.79	1.54	5.98	18	28
4	M7/Q	2.13	2.20	6.22	3.94	17.13	9.25	5.31	18.50	6.93	5.2	11.73	1.54	5.98	22	40
6	M7/Q	2.25	2.76	8.35	5.91	20.87	11.81	6.30	21.26	6.93	5.2	13.50	1.54	5.98	42	62
8	M10/Q	2.52	2.80	10.55	6.30	22.83	14.17	7.28	23.82	9.8	7.52	15.04	2.05	12.01	57	88
10	M12/Q	2.80	2.99	12.60	8.27	27.36	16.73	8.66	27.76	12.56	9.61	17.40	2.64	17.99	92	120
12	M14/Q	3.19	3.27	14.88	10.83	31.70	19.09	10.83	31.69	16.69	12.8	18.90	3.50	24.02	143	210
14	M14/Q	3.62	3.62	17.24	11.42	34.05	21.85	12.20	34.84	16.69	12.8	20.67	3.50	25.02	210	265
16	M16/Q	4.02	4.02	19.09	12.60	38.19	24.02	13.39	38.98	23.66	17.44	22.64	6.06	35.98	310	430
18	M15/Q	4.49	4.49	20.94	14.76	39.17	25.20	14.76	39.17	17.95	13.62	20.94	15.98	22.36	6.15	9.10
20	M15/Q	5.00	5.00	23.03	16.34	43.11	28.74	16.34	43.11	17.95	13.62	20.94	15.98	22.36	7.92	12.72
20	M16/Q	5.00	5.00	23.03	16.34	44.09	28.74	16.34	44.09	17.95	13.62	25.28	15.98	25.00	8.34	13.14
24	M25/Q	6.06	6.06	26.97	18.31	51.57	32.87	18.31	51.57	17.95	16.22	-	-	29.29	14.40	19.95

L_5D+M-series, dimensions

Size	OPERATOR ISO 5211	Dimensions, Inch													Weight	
		L_5D	S-L_5D	LW5D			LG5D			F1	G1	J	V	Z	LW5D-M lbs	LG5D-M lbs
		A	A	ØB	C	H	B	C	H							
3	M7/Q	1.89	2.52	5.04	3.15	15.35	8.07	4.72	16.93	6.93	5.2	10.79	1.54	5.98	18	28
4	M7/Q	2.13	2.52	6.22	3.94	17.13	9.25	5.31	18.50	6.93	5.2	11.73	1.54	5.98	22	40
6	M10/Q	2.32	2.99	8.58	5.71	21.26	11.42	6.30	21.85	9.8	7.52	14.06	2.05	12.01	57	66
8	M14/Q	2.87	3.50	10.87	8.07	26.38	14.37	8.07	26.38	16.69	12.8	17.09	3.50	24.02	123	145
10	M14/Q	3.27	4.49	13.19	10.24	31.50	17.13	10.24	31.50	16.69	12.8	19.29	3.50	24.02	165	230
12	M16/Q	3.62	4.49	15.55	11.81	35.83	19.69	11.81	35.83	23.66	17.44	21.65	6.06	35.98	255	395
14	M16/Q	4.61	5.00	17.72	12.99	38.58	22.24	12.99	38.58	23.66	17.44	23.23	6.06	35.98	300	495
16	M16/Q	5.24	5.51	19.88	14.57	41.73	25.55	14.57	41.73	23.66	17.44	24.80	6.06	35.98	340	680
18	M16/Q	5.87	5.98	21.81	16.12	44.49	27.95	16.12	44.49	17.95	13.62	25.59	6.06	35.98	576	922
18	M20/K85	5.87	5.98	21.81	16.12	45.87	27.95	16.12	45.87	23.50	16.22	25.75	7.17	30.00	629	975
20	M20/K85	6.26	5.98	24.02	17.38	48.23	30.31	17.38	48.23	23.50	16.22	26.73	7.17	30.00	695	1113
24	M20/K85	7.13	7.01	27.56	20.33	53.54	36.02	20.33	53.54	23.50	16.22	29.09	7.17	30.00	1025	1729

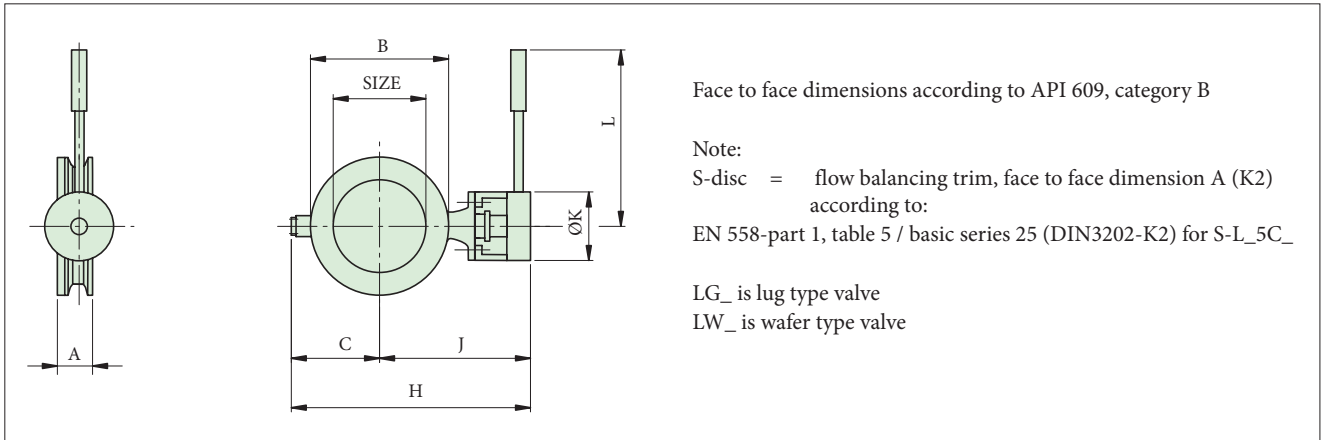
L_5C+M-series, dimensions

Size	OPERATOR ISO 5211	Dimensions, mm													Weight	
		L_5C	S-L_5C	LW5C			LG5C			F1	G1	J	V	Z	LW5C-M kg	LG5C-M kg
		A	A	ØB	C	H	B	C	H							
3	M7/Q	48	49	128	80	390	205	120	430	176	132	274	39	152	8	13
4	M7/Q	54	56	158	100	435	235	135	470	176	132	298	39	152	10	18
6	M7/Q	57	70	212	150	530	300	160	540	176	132	343	39	152	19	28
8	M10/Q	64	71	268	160	580	360	185	605	249	191	382	52	305	26	40
10	M12/Q	71	76	320	210	695	425	220	705	319	244	442	67	457	42	55
12	M14/Q	81	83	378	275	805	485	275	805	424	325	480	89	610	65	95
14	M14/Q	92	92	438	290	865	555	310	885	424	325	525	89	636	95	120
16	M16/Q	102	102	485	320	970	610	340	990	601	443	575	154	914	141	195
18	M15/Q	114	114	532	375	995	640	375	995	456	346	532	406	568	156.2	231.2
20	M15/Q	127	127	585	415	1095	730	415	1095	456	346	532	406	568	201.2	323.2
20	M16/Q	127	127	585	415	1120	730	415	1120	456	346	642	406	635	211.8	333.8
24	M25/Q	154	154	685	465	1310	835	465	1310	456	412	-	-	744	365.8	506.8

L_5C+M-series, dimensions

Size	OPERATOR ISO 5211	Dimensions, mm													Weight	
		L_5D	S-L_5D	LW5D			LG5D			F1	G1	J	V	Z	LW5D-M kg	LG5D-M kg
		A	A	ØB	C	H	B	C	H							
3	M7/Q	48	64	128	80	390	205	120	430	176	132	274	39	152	8	13
4	M7/Q	54	64	158	100	435	235	135	470	176	132	298	39	152	10	18
6	M10/Q	59	76	218	145	540	290	160	555	249	191	357	52	305	26	30
8	M14/Q	73	89	276	205	670	365	205	670	424	325	434	89	610	56	66
10	M14/Q	83	114	335	260	800	435	260	800	424	325	490	89	610	75	105
12	M16/Q	92	114	395	300	910	500	300	910	601	443	550	154	914	116	180
14	M16/Q	117	127	450	330	980	565	330	980	601	443	590	154	914	136	225
16	M16/Q	133	140	505	370	1060	649	370	1060	601	443	630	154	914	155	309
18	M16/Q	149	152	554	409	1130	710	409	1130	456	346	650	154	914	262	419
18	M20/K85	149	152	554	409	1165	710	409	1165	597	412	654	182	762	286	443
20	M20/K85	159	152	610	441	1225	770	441	1225	597	412	679	182	762	316	506
24	M20/K85	181	178	700	516	1360	915	516	1360	597	412	739	182	762	466	786

Valve + hand lever, RH



LW5C + RH, dimensions

SIZE	HAND LEVER	Dimensions, inch											LW5C-RH lbs	LG5C-RH lbs
		L_5C	S-L_5C	LW5C			LG5C			J	ØK	L		
		A	A	B	C	H	B	C	H					
3	RH 415 MM	1.89	1.93	5.04	3.15	13.98	8.07	4.72	15.55	10.83	3.94	15.75	11	22
4	RH 420 MM	2.13	2.20	6.22	3.94	16.14	9.25	5.31	17.52	12.20	3.94	15.75	15	33
6	RH 520 MM	2.24	2.76	8.35	5.91	20.87	11.81	6.30	21.26	14.57	5.12	19.69	37	57

LW5C + RH, dimensions

SIZE	HAND LEVER	Dimensions, mm											LW5C-RH kg	LG5C-RH kg
		L_5C	S-L_5C	LW5C			LG5C			J	ØK	L		
		A	A	B	C	H	B	C	H					
3	RH 415 MM	49	49	128	80	355	205	120	395	275	100	400	5	10
4	RH 420 MM	52	56	158	100	410	235	135	445	310	100	400	7	15
6	RH 520 MM	56	70	212	150	530	300	160	540	370	130	500	17	26

WARNING:

As the use of the valve is application specific, a number of factors should be taken into account when selecting a valve for a given application. Therefore, some of the situations in which the valves are used are outside the scope of this manual. If you have any questions concerning the use, application or compatibility of the valve with the intended service, contact Valmet for more information.

How to order

Neldisc butterfly valve, Series LW, LG, ASME rated.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
	LW	5	C	B	A	08	P	A	C	A	G	/

1. sign	S-DISC CONSTRUCTION
S-	Flow balancing trim on down stream side of body flow port. Face to face acc. to EN 558 -part 1, table 5

2. sign	PRODUCT SERIES / DESIGN
LW	Wafer type, metal seated butterfly valve.
LG	Lug type, metal seated butterfly valve.

3. sign	FACE TO FACE
5	API 609, category B.

4. sign	PRESSURE RATING
C	ASME 150 fully rated.
D	ASME 300 fully rated.

5. sign	VALVE- ACTUATOR CONNECTION
B	Drive shaft with key way.

6. sign	CONSTRUCTION
A	STANDARD (-80 °C...+260 °C/-110 °F...+500 °F) - bearings AISI 316 + PTFE - body and blind flange gaskets graphite - live loaded TA-Luft packing
C	CRYOGENIC (min. -200 °C/-330 °F) - extended bonnet and drive shaft - otherwise as construction A
N	EXTENDED SERVICE (max.+425 °C/+800 °F) - shaft bearings surfaces Nitrited - bearings cobalt based alloy - body and blind flange gaskets graphite - live loaded TA-Luft packing
H	HIGH TEMP (max. +600 °C / +1110 °F) - shaft bearings surfaces Celsit coated - bearings cobalt based alloy - body and blind flange gaskets graphite - live loaded TA-Luft packing
B	BEARING PROTECTION - O-ring bearing protection on upper and lower shaft - O-ring behind seat to prevent the accumulation of process fluid behind the seat

7. sign	SIZE
	03, 04, 06, 08, 10, 12, 14, 16, 18, 20, 24, 28, 30, 32, 36, 40

MATERIALS					
8. sign	BODY	9. sign	DISC	10. sign	SHAFTS & PINS
A	CF8M	A	F316 or CF8M	C	gr. 630 (17-4PH)
P	WCB	B	CF8M / F316+ cobalt based alloy on disc edge	H	Nimonic 80A (Not used with N-construction, can not be nitrated)
				N	XM-19 (Not used with N-construction, can not be nitrated)

11. sign	SEAT
A	Incoloy 825, hard chrome plated.
H	Nimonic 80A, hard chrome plated. (Used with "H" construction)
K	2.4681, UNS R31233 (ULTIMET®).

12. sign	DESIGN OPTIONS
T	TA-Luft PTFE V-ring packing.
G	TA-Luft graphite packing, Fire safe construction.

13. sign	FLANGE FACING
-	ASME B16.5 (Ra 3.2-6.3/RMS 125 - 250), standard, without sign.
Y	Special, to be specified.

Example model codes:

LW5CBA_AACAT - Standard valve (Tmax = 500 °F)

S-LW5CBA_AACAT - Standard valve with flow balancing trim (Face to face according to EN558-part 1, table 5)

LW5CBN_AACAG - Extended service valve (Tmax = 800 °F)

LW5CBH_AANHG (Tmax = 1100 °F)

Subject to change without prior notice.

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