



D-LINE® Butterfly Valves are designed and manufactured with the best quality materials to provide an improvement in the mechanical properties resulting in a less brittle, tougher and more resistant valve. The unique resilient seat is designed to seal against the disc, isolating the valve body and stem from the line. They are factory tested to 110% of its pressure rating for optimum performance in the field.

APPLICATIONS

D-LINE® Butterfly Valves serve multi-national end users in a wide range of applications in many industries including:

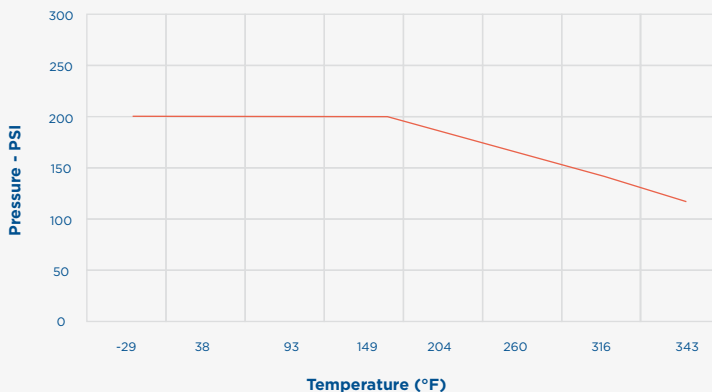
- Fire Protection
- Water Treatment
- Food industries
- Mining
- Pharmaceutical
- Oil refinery industries
- Chemical & Petrochemical
- Ship building industries

DESIGN FEATURES

- Lug design
- Face to face to per ISO 5752
- Mounting pad ISO 5211
- Epoxy painted
- Resilient seat
- Bidirectional sealing
- Lever handle with 10 position locking system
- Gear operator
- Maximum working pressure 200 PSI (1" - 12")
- Maximum working pressure 150 PSI (14" - 48")
- Double "D" style stem

PRESSURE - TEMPERATURE CURVE

These are conservative guide for general service. Previous experience in process or new development may permit applications above those shown.

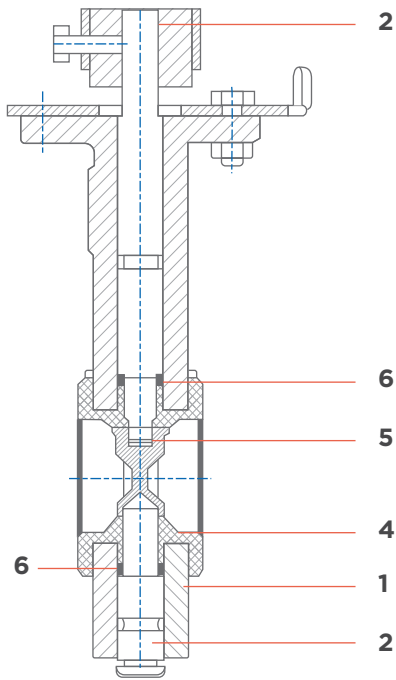


TEST SPECIFICATION	
TEST ACCORDANCE TO PER API 598	
CLASS	150
NOMINAL PRESSURE	150 PSI
SHELL TEST (WATER)	400 PSI
SEAT TEST (WATER)	225 PSI
AIR TEST	80 PSI

FEATURES	
SIZES	1" - 48"
CLASS	125/150
TEMPERATURE	-29° TO 343° F

DIMENSIONS

Size 1" - 1 1/2"



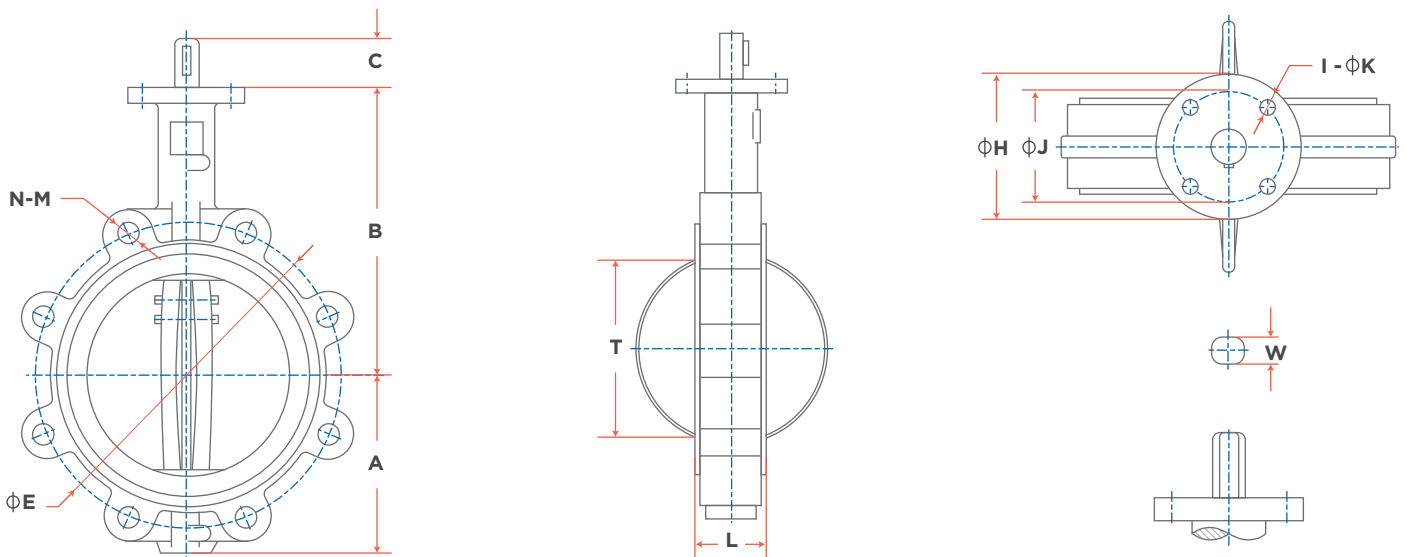
VALVE MATERIAL LIST		
No.	DESCRIPTION	MATERIAL
1	BODY	ASTM A-536 Gr. 65-45-12
2	STEM	ASTM A-276 Gr. 410
3	SEAT	NBR (BUNA)
4	DISC	ASTM A-536 Gr. 65-45-12 ASTM A-351 Gr. CF8M
5	O-RING	NBR (BUNA)

VALVE DIMENSIONS & WEIGHTS

SIZE	A	B	C	ØE	N-M	ØH	ØJ	I-ØK	L	T	W	WEIGHT (KG)
1"	2.4	0.7	1.25	3.12	4 - 1/2" - 13	2.6	1.95	4 - 0.27	1.18	1.00	0.39	2.20
1-1/2"	2.75	8.89	1.25	3.87	4 - 1/2" - 13	2.55	1.96	4 - .27	1.29	1.06	0.39	2.45

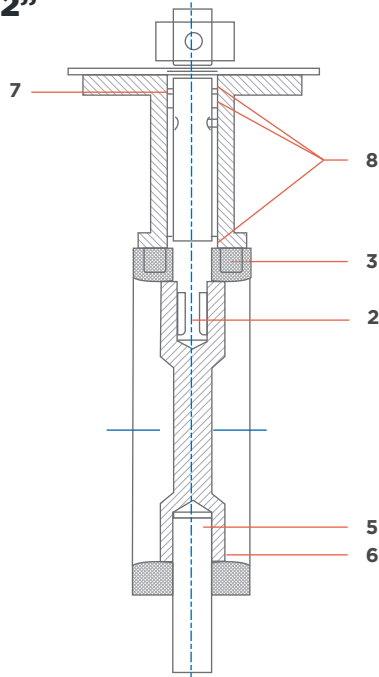
*WEIGHT IS ESTIMATED

*ALL DIMENSIONS ARE EXPRESSED IN INCHES



DIMENSIONS

Size 2" - 12"



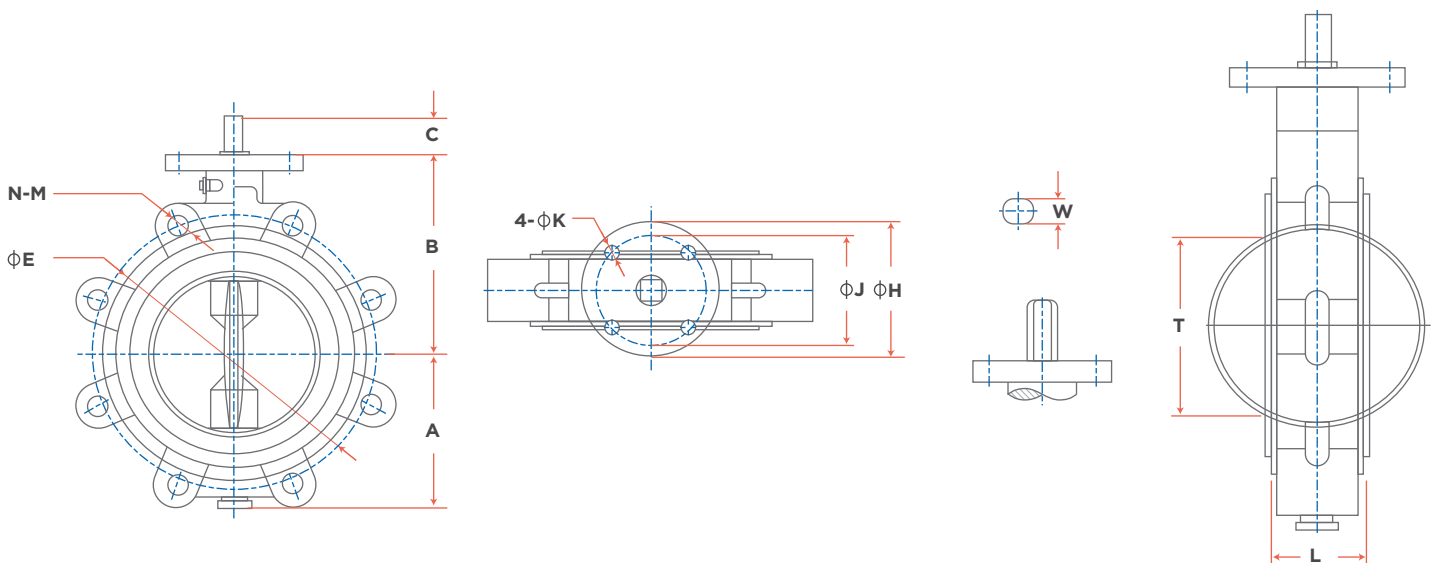
VALVE MATERIAL LIST		
No.	DESCRIPTION	MATERIAL
1	BODY	ASTM A-536 Gr. 65-45-12
2	UPPER STEM	ASTM A-276 Gr. 410
3	SEAT	NBR (BUNA)
4	SPRING PIN	CARBO STEEL
5	LOWER STEM	ASTM A-276 Gr. 410
6	DISC	ASTM A-536 Gr. 65-45-12 ASTM A-351 Gr. CF8M
7	O-RING	NBR (BUNA)
8	BUSHING	PTFE
9	GREASE FITTING	ASTM B-62

VALVE DIMENSIONS & WEIGHTS

SIZE	A	B	C	ØE	N-M	ØH	ØJ	ØK	L	T	W	WEIGHT (KG)
2"	3.00	3.93	1.03	4.12	5/8-11	0.40	3.25	.437	1.65	1.25	.375	3.50
2 1/2"	3.34	4.59	1.03	4.87	5/8-11	0.40	3.25	.437	1.75	1.85	.375	3.75
3"	3.65	4.90	1.03	5.37	5/8-11	0.40	3.25	.437	1.78	2.56	.375	5.75
4"	4.28	0.6	1.28	5.37	5/8-11	0.40	3.25	.437	2.04	3.54	.437	7.20
5"	4.84	6.12	1.28	7.75	3/4-11	0.40	3.25	.437	2.12	4.37	.50	10.00
6"	5.34	6.68	1.28	8.75	3/4-11	0.40	3.25	.437	2.18	5.70	.50	10.50
8"	6.53	9.43	1.28	0.11	3/4-11	0.60	0.50	.562	2.37	7.59	.625	19.50
10"	7.84	11.21	1.28	13.37	7/8-9	0.60	0.50	.562	2.57	9.48	.625	29.00
12"	9.37	11.81	1.28	16.12	7/8-9	0.60	0.50	.562	3.03	11.50	.75	43.00

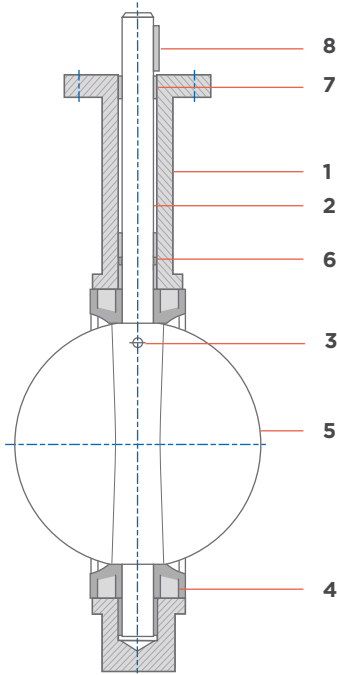
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DIMENSIONS

Size 14" - 48"



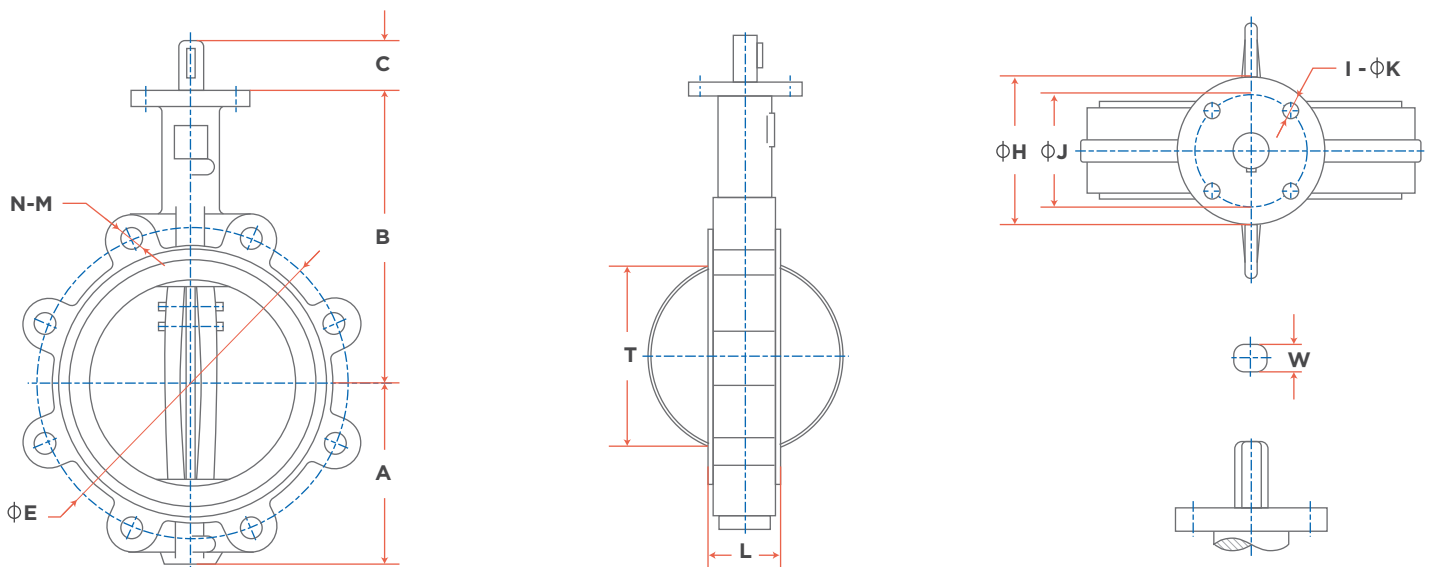
VALVE MATERIAL LIST		
No.	DESCRIPTION	MATERIAL
1	BODY	ASTM A-536 Gr. 65-45-12
2	STEM	ASTM A-276 Gr. 410
3	TAPPER PIN	ASTM A-276 Gr. 304
4	SEAT	NBR (BUNA)
5	DISC	ASTM A-536 Gr. 65-45-12 ASTM A-351 Gr. CF8M
6	O-RING	NBR (BUNA)
7	BUSHING	PTFE
8	KEY	CARBON STEEL

SIZES 14" AND UPPER ARE GEAR OPERATOR FROM FACTORY

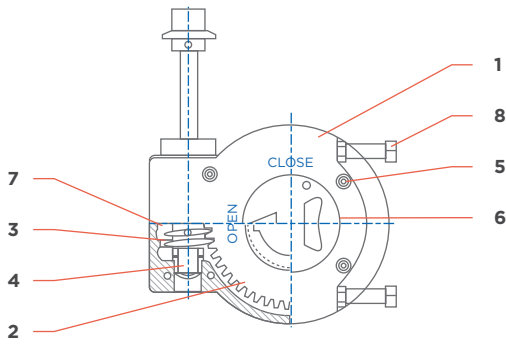
VALVE DIMENSIONS & WEIGHTS												
SIZE	A	B	C	ØE	N-M	ØH	ØJ	I-ØK	L	T	W	WEIGHT (KG)
14"	10.91	8.54	1.77	18.75	12 - 1" - 8	4.92	4.02	4 - .45	3.03	12.80	0.94	46.00
16"	12.13	8.54	2.00	21.25	16 - 1" - 8	8.27	6.50	4 - .87	3.39	14.96	1.06	75.00
18"	13.46	16.61	2.00	22.75	16 - 1 1/8" - 7	8.27	6.50	4 - .87	4.13	16.85	1.06	89.00
20"	14.72	18.86	2.52	25.00	20 - 1 1/8" - 7	8.27	6.50	4 - .87	5.12	18.66	1.26	128.00
24"	18.07	22.13	2.76	29.50	20 - 1 1/4" - 7	8.27	6.50	4 - .87	5.98	22.64	1.42	206.00
30"	21.45	25.59	2.83	36.00	28 - 1 1/4" - 7	11.81	10.00	8 - .70	6.57	28.58	-	445.00
36"	0.25	30.23	3.03	42.75	32 - 1 1/2" - 6	11.81	10.00	8 - .70	8.14	33.03	-	770.00
42"	30.11	33.85	3.34	49.50	32 - 1 1/2" - 6	11.81	0.10	8 - .70	10.00	39.25	-	990.00
48"	33.03	0.37	5.90	56.00	44 - 1 1/2" - 6	13.77	11.73	8 - .86	10.86	44.29	-	1500.00

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DIMENSIONS



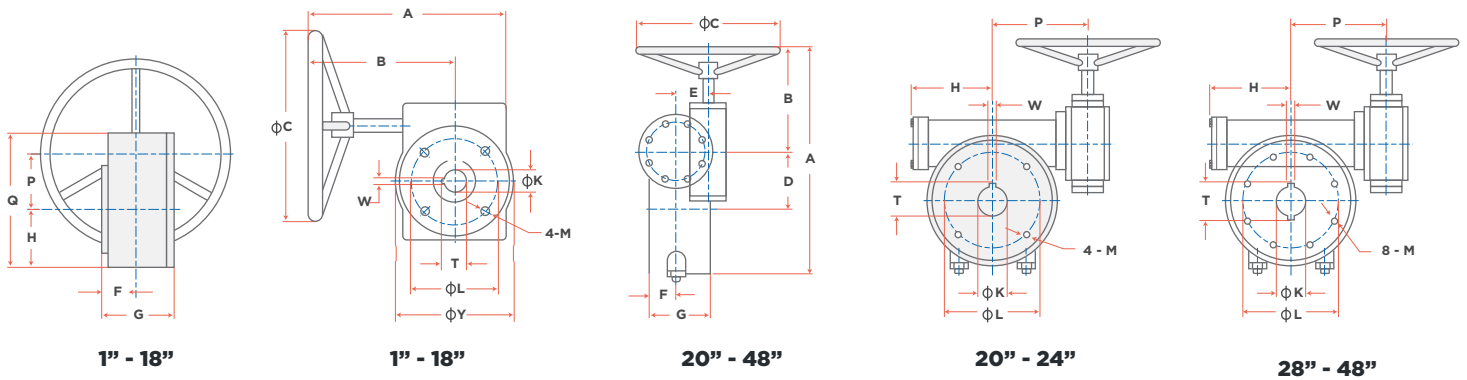
GEAR OPERATOR MATERIAL LIST		
No.	DESCRIPTION	MATERIAL
1	HOUSING	ASTM A-536 Gr. 65-45-12
2	SEGMENT GEAR	ASTM A-126 Gr. B
3	WORM	CARBON STEEL
4	WORM SHAFT	CARBON STEEL
5	COVER BOLT	CARBON STEEL
6	INDICATOR	ALUMINIUM
7	GREASE	EP-2
8	STOP SCREW	CARBON STEEL

GEAR OPERATORS FOR SIZES 1" - 12" AVAILABLE
SIZES 14" AND UPPER ARE GEAR OPERATOR FROM FACTORY

GEAR OPERATOR DIMENSIONS LIST

SIZE	TORQUE (N.m)	RATIO	A	B	ØC	D	E	F	G	H	L	P	Q	M	K	T	W	Y
1" - 3"	170	24:1	9.05	7.00	5.90	N/A	N/A	1.49	2.44	2.08	1.96	1.80	4.92	M6	0.50	0.55	0.11	4.13
4"	170	24:1	9.05	7.00	5.90	N/A	N/A	1.49	2.44	2.08	2.75	1.80	4.92	M8	0.71	0.71	0.19	4.13
5"-6"	170	24:1	9.05	7.00	5.90	N/A	N/A	1.49	2.44	2.08	2.75	1.80	4.92	M8	0.84	0.84	0.19	4.13
9"	750	30:1	12.20	9.25	11.80	N/A	N/A	1.61	3.07	2.99	4.01	2.50	6.85	M10	0.94	0.96	0.31	6.22
10"	750	30:1	12.20	9.25	11.80	N/A	N/A	1.61	3.07	2.99	4.01	2.50	6.85	M10	1.25	1.25	0.31	6.22
12"-14"	1200	50:1	12.00	8.87	11.80	N/A	N/A	1.65	3.14	3.18	4.01	3.20	7.67	M10	1.25	1.25	0.31	6.69
16"	2500	80:1	12.48	8.54	14.20	N/A	N/A	1.88	4.13	4.92	6.49	3.70	10.00	M20	1.35	1.44	0.39	8.86
18"	2500	80:1	12.48	8.54	14.20	N/A	N/A	1.88	4.13	4.92	6.49	3.70	10.00	M20	1.50	1.62	0.39	8.86
20"	3000	352:1	18.89	8.26	14.20	4.33	2.48	2.04	4.72	6.29	6.49	7.30	N/A	M20	1.62	1.65	0.39	N/A
24"	4000	416:1	20.47	8.26	14.20	4.92	2.48	2.24	4.72	6.29	6.49	7.30	N/A	M20	2.00	2.16	0.62	N/A
28" - 32"	8000	502:1	22.05	8.66	14.20	6.30	4.72	2.44	5.04	6.30	10.00	11.00	N/A	M16	2.17	2.50	0.63	N/A
36"	15000	520:1	25.98	10.03	17.70	7.55	3.07	5.11	8.58	7.87	10.00	11.00	N/A	M16	3.34	3.77	0.86	N/A
42"	15000	520:1	25.98	10.03	17.70	7.55	4.72	5.11	8.58	7.87	10.00	11.00	N/A	M16	3.34	3.77	0.86	N/A
48"	26000	408:1	32.48	10.03	22.40	11.81	4.96	7.71	12.70	12.00	11.70	16.00	N/A	M20	3.62	4.05	0.98	N/A

*ALL DIMENSIONS ARE EXPRESSED IN INCHES



DIMENSIONS

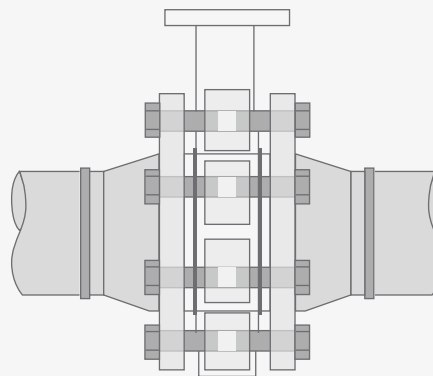
FLOW COEFFICIENTS [Cv Values (US-GPM @ 1/P)]									
SIZE	10°	20°	30°	40°	50°	60°	70°	80°	90°
1"	0.2	1.01	2.16	4.7	8.1	14.3	23	37	41
1" - 1/2"	0.04	1.92	4.1	8.7	15	26	41	65	72
2"	0.06	3	7	15	27	44	70	105	115
2 1/2"	0.1	6	12	25	45	75	119	178	196
3"	0.2	9	18	39	70	116	183	275	302
4"	0.3	17	36	78	139	230	364	546	600
5"	0.5	29	61	133	237	392	620	930	1022
6"	0.8	45	95	205	366	605	958	1437	1579
8"	2	26157	188	408	727	1202	1903	2854	3136
10"	3	89	320	694	1237	2049	3240	4859	5340
12"	4	234	495	1072	1911	3162	5005	7507	8250
14"	66	338	715	1549	2761	4568	7230	10844	11917
16"	8	464	938	2130	3797	6282	9942	14913	16388
18"	11	615	1302	2822	5028	8320	13168	19752	21705
20"	14	791	1647	3628	6465	10698	16931	25396	27908
24"	22	222	2587	5605	9989	16528	26157	39236	43116
30"	37	2080	4406	9546	17010	28147	44545	66818	73246
36"	260	3050	6730	12740	20220	32500	52500	79600	87500
42"	350	4095	9040	17180	27150	43640	70500	106890	117500
48"	455	5365	11840	22400	30600	51200	92300	140000	154000

200 PSI TORQUE*	
SIZE	90°
1"	N/A
1 - 1/2"	12.5
2"	19
2 1/2"	30
3"	39
4"	62
5"	95
6"	138
8"	226
10"	360
12"	514
14"	627.10
16"	947.00
18"	1452.50
20"	1717.70
24"	2962.40
30"	5305.8
36"	9774.40
42"	N/A
48"	N/A

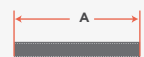
*ALL TORQUE VALUES SHOWN ON CHART ARE FOR "WET" (WATER AND OTHER NON-LUBRICATING MEDIA) ON-OFF SERVICE. UNDER CERTAIN CONDITIONS, HYDRODYNAMIC TORQUE CAN MEET OR EXCEED SEATING AND UNSEATING TORQUES. WHEN DESIGNING VALVE SYSTEMS, HYDRODYNAMIC TORQUE MUST BE CONSIDERED TO HELP ENSURE CORRECT SELECTION OR APPLICATION.

LUG STYLE BOLT DATA-WITH CAP SCREWS (1)				
VALVE SIZE	QUANTITY PER VALVE	BOLT SIZE	STUD LENGHT "A"	BOLT LENGHT "B"
1"	8	1/2" - 13	2.00	1.00
1 - 1/2"	8	1/2" - 13	2.00	1.25
2"	8	5/8" - 11	1.25	1.25
2 - 1/2"	8	5/8" - 11	1.50	1.50
3"	8	5/8" - 11	1.50	1.75
4"	16	5/8" - 11	1.75	1.75
5"	16	3/4" - 10	1.75	1.75
6"	16	3/4" - 10	1.75	1.75
8"	16	3/4" - 10	2.00	2.00
10"	24	7/8" - 9	2.25	2.00
12"	24	7/8" - 9	2.50	2.50
14"	24	1" - 8	2.75	2.75
16"	32	1" - 8	3.00	2.75
18"	32	1 1/8" - 7	3.5	3.50
20"	40	1 1/8" - 7	4.00	4.00
24"	40	1 1/4" - 7	4.75	4.75
30"	56	1 1/4" - 7	N/A*	N/A*
36"	64	1 1/2" - 6	N/A*	N/A*
42"	72	1 1/2" - 6	N/A*	N/A*
48"	88	1 1/2" - 6	N/A*	N/A*

*LENGHT TO BE DETERMINED BY THE PURCHASER



Lug-Style Valve



Threaded Studs



Cap Screw



Scan the QR CODE to see our available studs.