JFLOW CONTROLS®

Wafer/Lug Style Resilient Seated Butterfly Valve

CLASS 150 2" - 24"

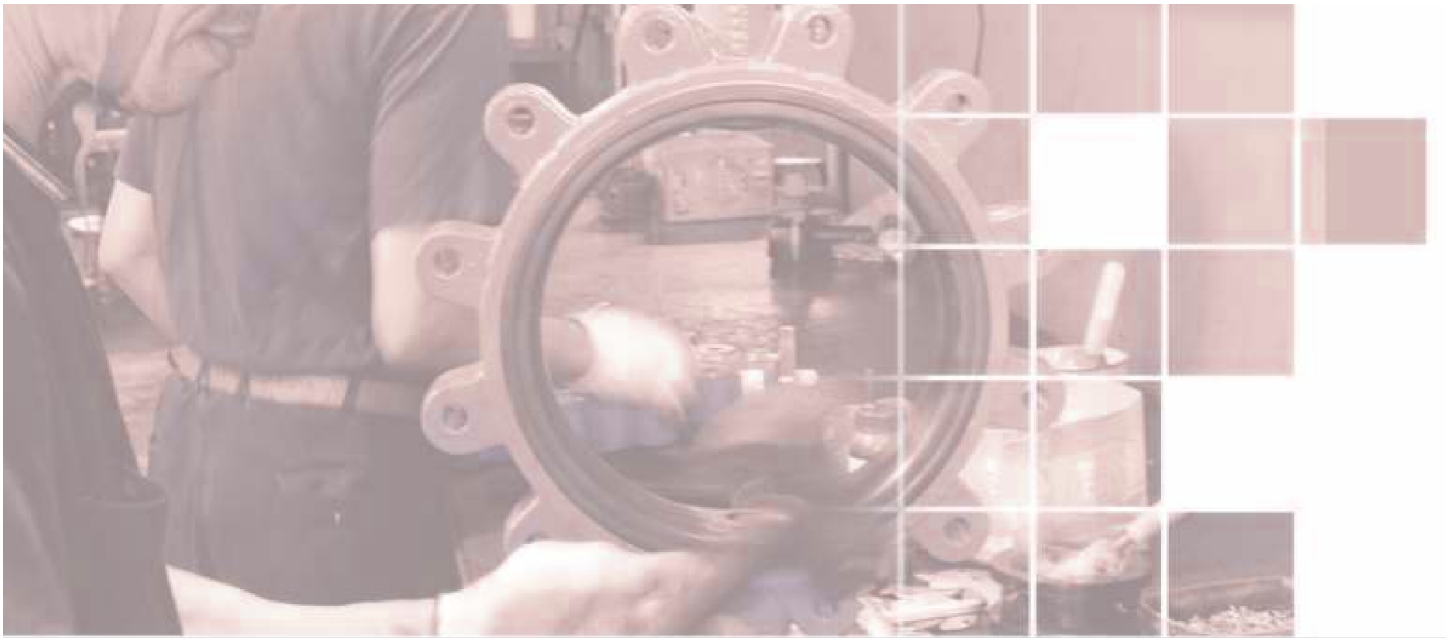
80 & 81 Series

OVERVIEW

STANDARDS	
Design	MSS SP-67 ISO 5752
Testing	API 598 MSS SP 61
Mounting	ISO 5211
Quality Assurance	ISO 9001:2015

APPROVALS & CERTIFICATIONS	
Canadian Registration Number	**CRN Registered**
Drinking Water System Components	NSF/ANSI 61
Lead Content Certification	NSF/ANSI 372

FACTORY APPROVALS & CERTIFICATIONS	
Design	API 609
Environmental Management System	ISO 14001:2004
Pressure Equipment Directive (PED)	CE



WHY JFLOW BUTTERFLY VALVES?

Quality is built into every JFlow butterfly valve to meet the rigorous requirements of commercial and industrial applications.

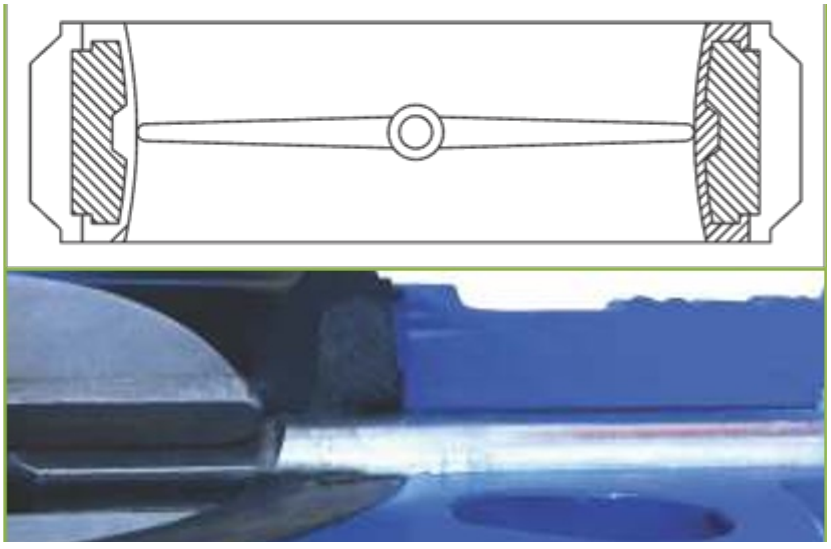
JFlow has been selling butterfly valves since 2001, serving both the OEM market and distributors. JFlow valves are manufactured under an ISO 9001:2015, ISO 14001:2004, NSF 61, NSF 372, and CE Pressure Equipment Directive (PED) Quality Assurance Program. All butterfly valves can be ordered with CE marking.

JFlow valves are available with fully traceable Mill Test Certificates for both the body and disc. Every JFlow valve is 100% pressure tested and quality inspected. JFlow valves comply with the Trade Agreements Act (FAR 52.225-5).

JFlow offers a complete range of valves for HVAC, chemical plants, waterworks, membrane plants, food and beverage, municipal applications, pulp and paper, steel mills, tank trucks, ship vessels, and the oil and gas industry.

FEATURES AND BENEFITS

JFlow Controls' 80 and 81 Series resilient-seated butterfly valves feature a cartridge-style seat, which is far superior to the molded-type seat (vulcanized design) or the common booted-type seat (dovetail design). The cartridge-style seat is a unified, rigid component formed by bonding an elastomer to a hard, dense phenolic composite ring, which is then inserted into the valve body. The phenolic backing prevents the elastomer from shifting during installation, reducing seat tearing and fatigue caused by bunching.



JFlow Controls' cartridge-style seats are independent of flange support and capable of full-rated dead-end service. In highly abrasive applications, the seat can simply be replaced instead of the entire valve, reducing maintenance costs and downtime.

A disc interference with the seat at the top and bottom of the hub area acts as the primary seal. If the primary seal fails—whether due to abrasives damaging the seat, incorrect installation, or high-cycle wear—media could migrate up the stem to the mounting plate and into the directly mounted actuator. This poses a risk of damaging the actuator and solenoid valves. To mitigate this issue, JFlow Controls' 80 and 81 Series butterfly valves feature "leak path" channels cast into the mounting plate, preventing media migration through the stem and into a directly mounted actuator and subsequent solenoid valve.

Size: Cartridge design seat type : 2" ~ 48"

Type: Wafer, Lug

Pressure Rating: Class 125/150

Body Material: Cast Iron, Ductile Iron, Aluminum and Stainless Steel.

Seat Type: Cartridge Type

Operation: Lever, Gear , Actuators

Drilling: ANSI 150

Available in tapped lug body or wafer design with common ANSI 150 drilling.

FEATURES & BENEFITS

- One – piece body construction of Ductile Iron design complies with API 609, MSS SP 67, and ISO 5752.
- ISO 5211 mounting pad with square or key type stem shaft permits direct mount
    - actuation for manual (lever & gear), pneumatic and electric operations.
- Teflon stem bushing to assure long life even during extended period of activity.
- Lowers operating torque for easy manual operation and maximize shaft support.
- High strength two-piece stem eliminates taper pins or disc screws which often
    - fail prematurely through abrasion, corrosion or fatigue.
- All disc castings are spherically machined & polished for extended seat life & bubble tight shut off.
- Conforms to API 598 and MSS SP 61. Shell tested to 150% and seat tested to 110% of maximum working pressure
- Lug body valves are rated for 150 PSI in dead end service.
- Valve Rating:

    Top flange mounting pad: ISO 5211

    Basic Design: API 609, MSS-SP-67, BS 5155, ISO 5752, DIN 3202

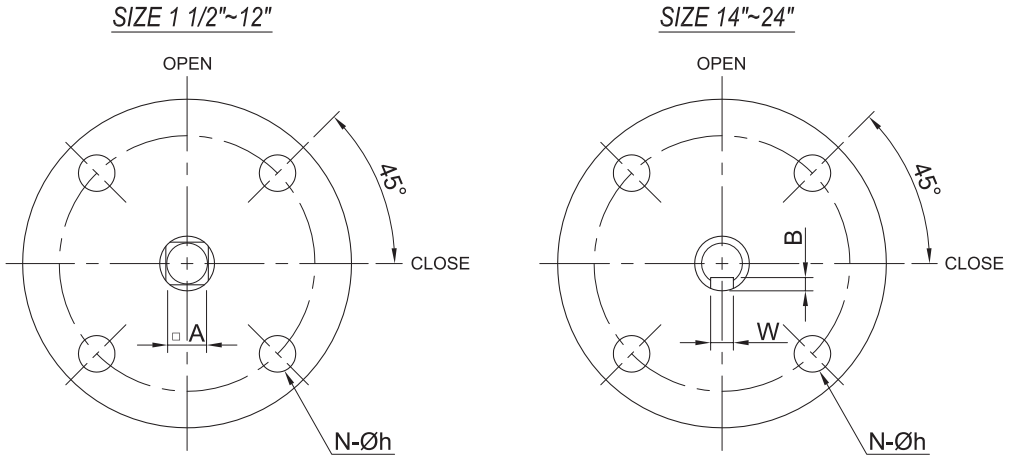
    Shell/Seat Test: API 598, MSS-SP-61

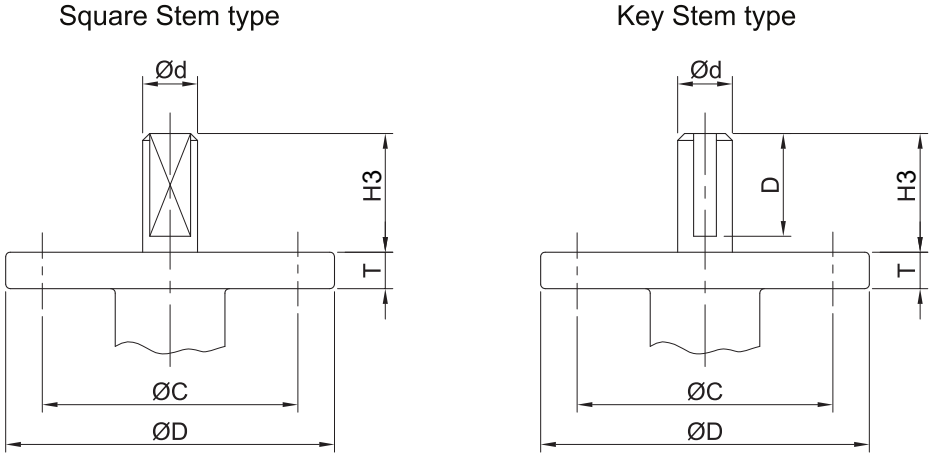
    Shell: DI (400 psig)

    Closure 2″~12″: 255psig

    14″~24″: 188psig

80/81 SERIES MOUNTING

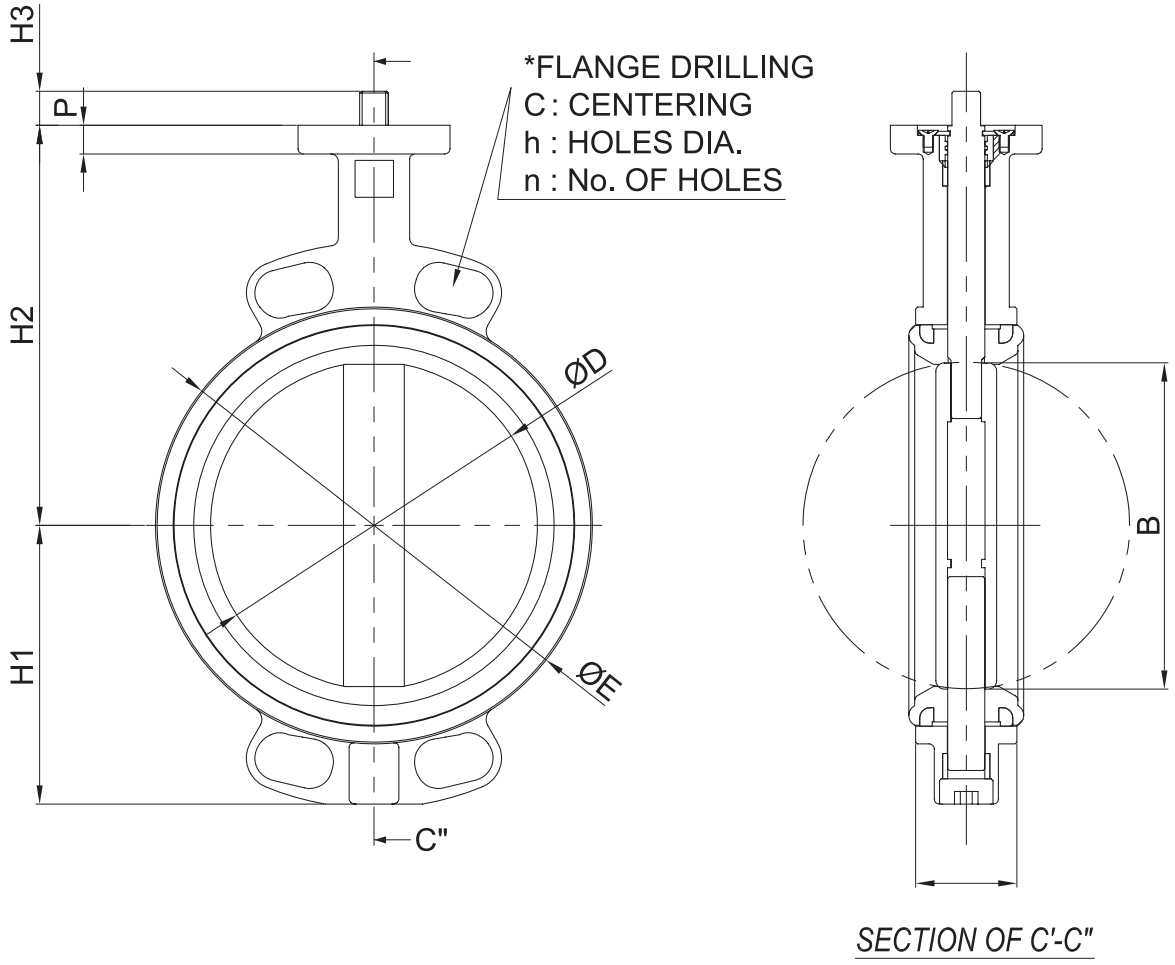




CLASS 150 WAFER (80) & LUG (81) MOUNTING

NPS	T	ØD	H3	Ød	A	B	W	E	N	Øh	ØC	ISO
2	0.55	2.80	0.60	0.55	0.433	-	-	-	4	0.354	2.756	F07
2-1/2	0.55	2.80	0.60	0.55	0.433	-	-	-	4	0.354	2.756	F07
3	0.55	2.80	0.60	0.55	0.433	-	-	-	4	0.354	2.756	F07
4	0.63	2.80	0.70	0.63	0.551	-	-	-	4	0.354	2.756	F07
5	0.63	2.80	0.70	0.71	0.551	-	-	-	4	0.354	2.756	F07
6	0.63	2.80	0.75	0.71	0.551	-	-	-	4	0.354	2.756	F07
8	0.67	2.80	0.81	0.87	0.669	-	-	-	4	0.354	2.756	F07
10	0.79	3.74	0.81	1.00	0.866	-	-	-	4	0.433	4.016	F10
12	0.79	3.74	0.95	1.10	0.866	-	-	-	4	0.433	4.016	F10
14	0.79	5.51	2.76	1.10	-	0.20	0.39	2.36	4	0.472	4.016	F10
16	0.91	6.30	3.48	1.26	-	0.20	0.39	2.76	4	0.709	5.512	F14
18	0.91	6.30	3.48	1.50	-	0.20	0.47	2.76	4	0.709	5.512	F14
20	0.91	6.30	3.48	1.77	-	0.20	0.47	2.76	4	0.866	6.496	F16
24	0.91	6.30	3.68	2.17	-	0.20	0.55	2.76	4	0.866	6.496	F16

80 SERIES (WAFER)



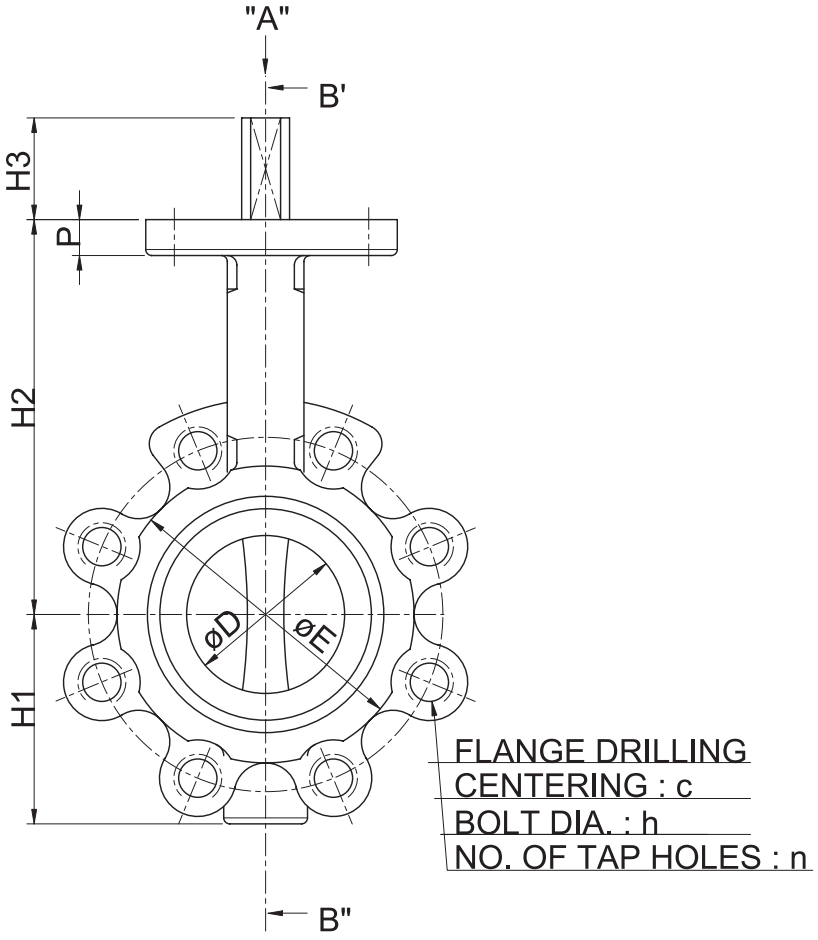
80 SERIES WAFER, CLASS 150

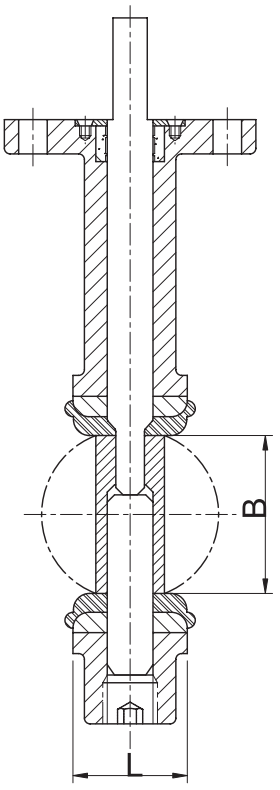
GENERAL **Weight (lbs)**

NPS	L	ØD	H1	H2	ØE	B	c	n	h	Bare Stem	W/ Lever	W/ Gear
2	1.69	2.05	2.77	5.06	3.66	1.93	4.75	4	0.75	6.28	7.83	15.90
2 1/2	1.81	2.64	2.96	5.36	4.25	2.52	5.5	4	0.75	7.28	8.82	16.89
3	1.81	3.15	3.67	5.64	4.96	3.03	6	4	0.75	7.85	9.39	17.46
4	2.05	3.94	4.18	6.41	5.91	3.82	7.5	8	0.75	9.30	10.85	19.06
5	2.2	4.92	4.69	7.34	6.97	4.8	8.5	8	0.87	13.67	15.21	23.41
6	2.2	5.93	5.48	7.98	8.19	5.83	9.5	8	0.87	16.89	18.43	26.63
8	2.36	7.74	6.51	9.34	10.2	7.62	11.75	8	0.87	22.64	27.27	42.95
10	2.68	9.72	7.86	11.13	12.48	9.65	14.25	12	1.00	39.64	44.49	61.13
12	3.07	11.63	9.47	12.27	14.61	11.54	17	12	1.00	55.23	60.08	82.01
14	3.07	12.99	10.41	13.6	16.34	12.83	18.75	12	1.13	81.11	-	107.59
16	4.02	14.92	11.75	13.76	18.69	14.82	21.25	16	1.13	132.74	-	161.82
18	4.49	17.2	13.96	15.75	20.73	17.09	22.75	16	1.25	168.21	-	201.99
20	5	19.29	15.14	17.32	23.17	19.13	25	20	1.25	242.35	-	305.14
24	6.06	22.62	17.5	20.08	27.8	22.46	29.5	20	1.37	409.33	-	472.12

DIMENSIONS

81 SERIES (LUG)





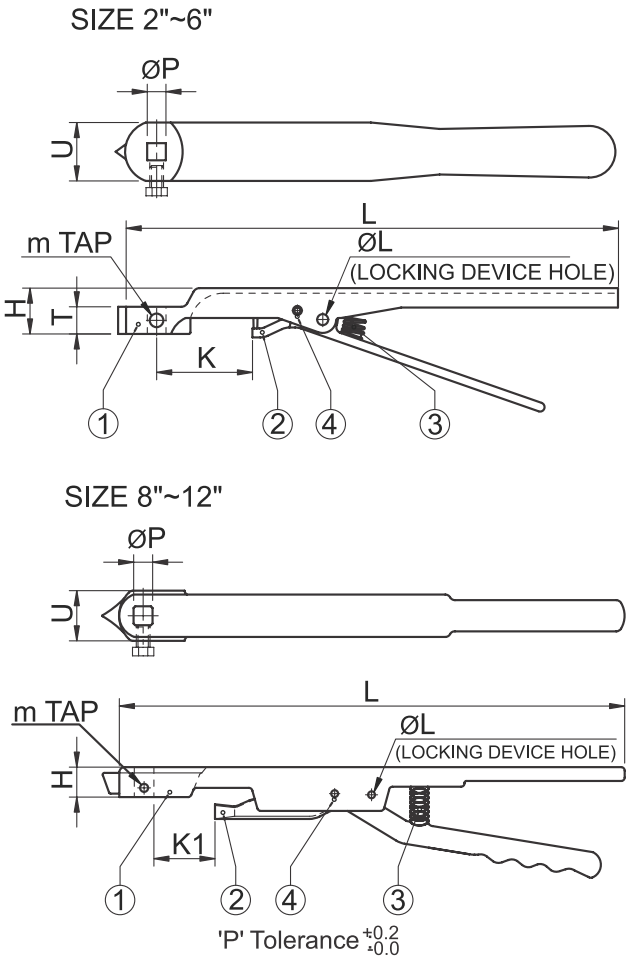
SECTION OF B'-B"

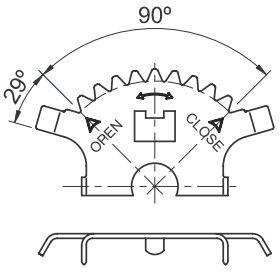
81 SERIES LUG, CLASS 150

GENERAL **Weight (lbs)**

NPS	L	ØD	H1	H2	ØE	B	c	n	h	Bare Stem	W/ Lever	W/ Gear
2	1.69	2.05	2.77	4.94	3.66	1.93	4.75	4	5/8"-11	6.3	7.8	15.9
2 1/2	1.81	2.64	2.95	5.2	4.25	2.52	5.5	4	5/8"-11	7.3	8.8	16.9
3	1.81	3.15	3.67	6.07	4.8	3.03	6	4	5/8"-11	7.9	9.4	17.5
4	2.05	3.94	4.18	6.54	5.91	3.82	7.5	8	5/8"-11	9.3	10.9	19.1
5	2.2	4.92	4.69	7.13	7.09	4.8	8.5	8	3/4"-10	13.7	15.2	23.4
6	2.2	5.93	5.63	7.99	8.19	5.83	9.5	8	3/4"-10	16.9	18.4	26.6
8	2.36	7.74	6.51	9.26	10.2	7.62	11.75	8	3/4"-10	22.6	27.3	43.0
10	2.68	9.72	7.86	10.5	12.52	9.62	14.25	12	7/8"-9	39.6	44.5	61.1
12	3.07	11.63	9.47	12.15	14.61	11.54	17	12	7/8"-9	55.2	60.1	82.0
14	3.07	12.99	10.41	13.6	16.34	12.83	18.75	12	1"-8	81.1	-	107.6
16	4.02	14.92	11.75	13.76	18.69	14.82	21.25	16	1"-8	132.7	-	161.8
18	4.49	17.2	13.78	15.75	20.73	17.09	22.75	16	1 1/8"-7	168.2	-	202.0
20	5	19.29	14.96	17.32	23.17	19.13	25	20	1 1/8"-7	242.4	-	305.1
24	6.06	22.62	17.32	20.08	27.8	22.46	29.5	20	1 1/4"-7	409.3	-	472.1

MODEL: LEVER





10 POSITION INDICATOR

STANDARD MATERIAL

NO.	DESCRIPTION	MATERIAL
1	Lever	Malleable Iron or Stainless Steel
2	Aux Lever	Malleable Iron or Stainless Steel
3	Spring	Steel or SS 304
4	Pin	Steel or SS 410

(unit : inch)

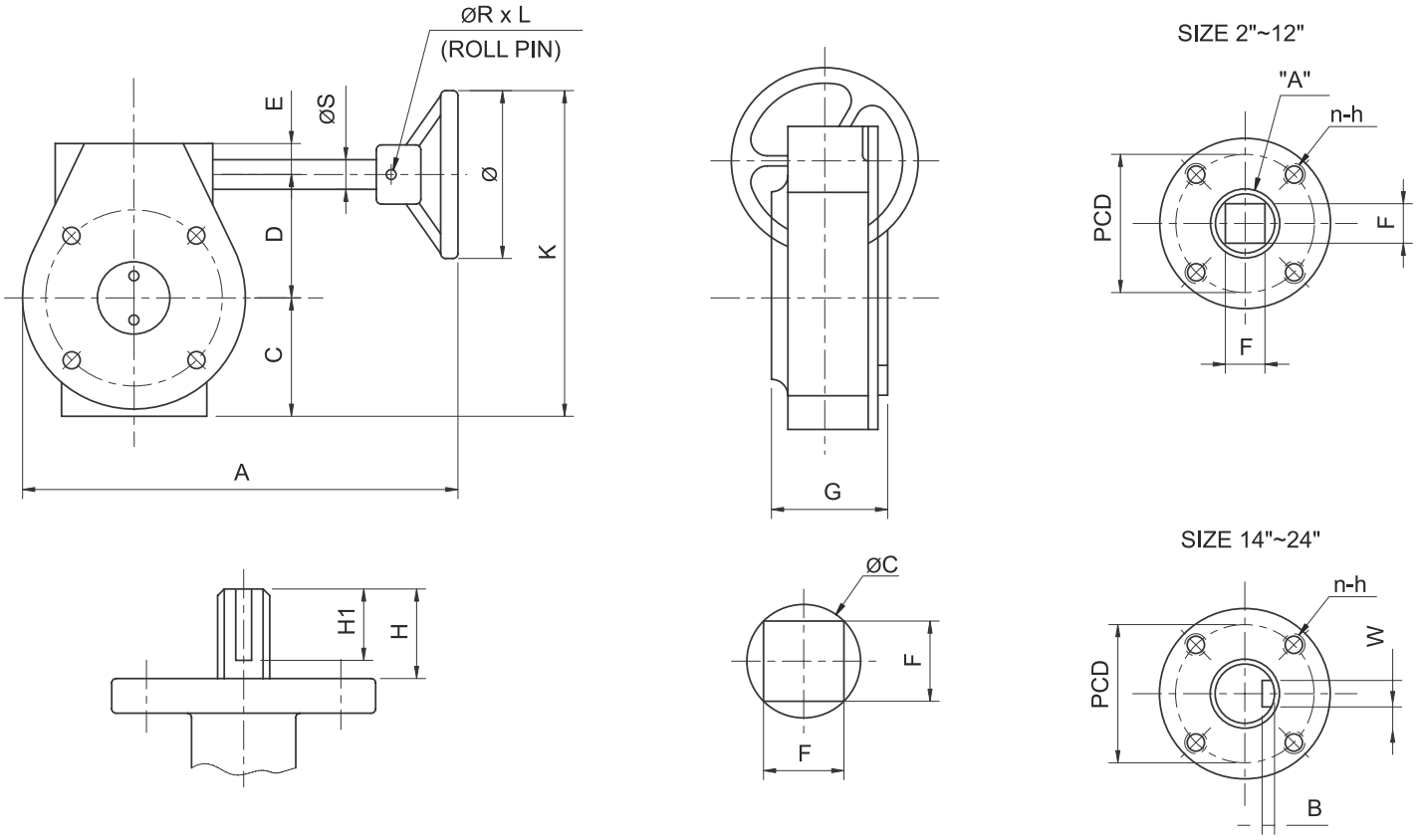
	P	T	L	m	U	H	K	K1	ØL
2	0.43	0.63	11.37	M8	1.34	1.06	2.09		0.3
2.5	0.43		11.37	M8	1.34	1.06	2.09		0.3
3	0.43		11.37	M8	1.34	1.06	2.09		0.3
4	0.55		11.37	M8	1.34	1.06	2.09		0.3
5	0.55		11.37	M8	1.34	1.06	2.09		0.3
6	0.55	0.71	11.37	M8	1.34	1.06	2.09		0.3
8	0.67		16.34	M10	1.77	1.02		1.65	0.3
10	0.87		16.34	M8	1.77	1.02		2.09	0.3
12	0.87		16.34	M8	1.77	1.02		2.09	

Lever Weight

SIZE	KG
2"	0.50
2 1/2"	0.50
3"	0.50
4"	0.60
5"	0.60
6"	0.60
8"	1.85
10"	1.85
12"	1.85

DIMENSIONS

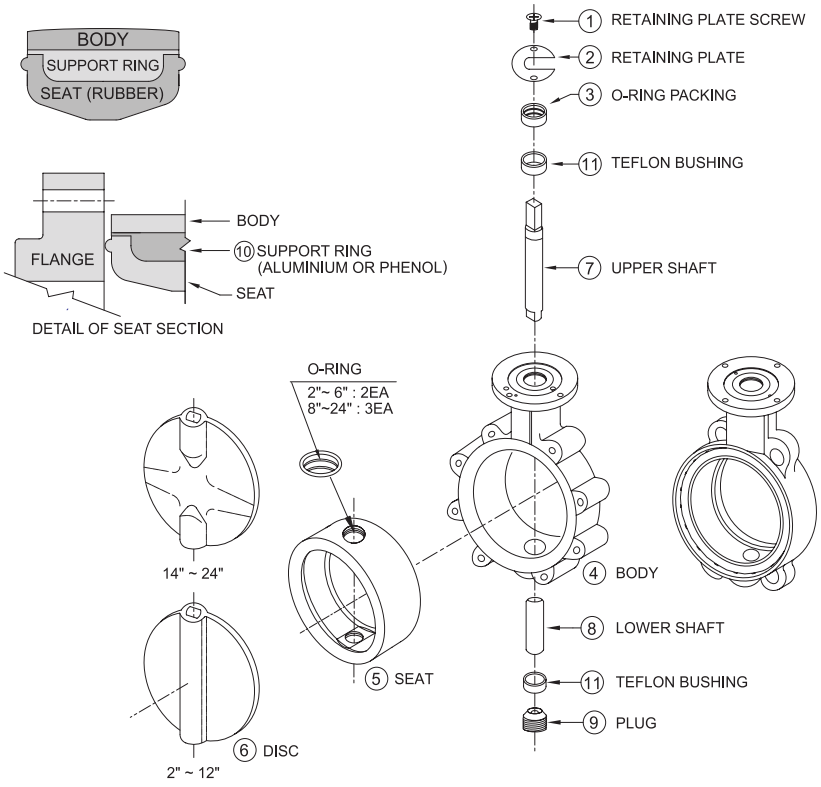
MODEL: GEAR



(unit : inch)

	RATIO	A	L	G	C	D	E	K	Ø	n-h	PCD	B	W	H	F	ØC	H1	ØS	ØRxL	Weight (lbs)
2	24:1	8.35	6.22	2.83	2.13	1.77	1.10	6.71	5.79	4-M8	2.76			0.60	0.43	0.55		0.63	0.2x1.57	7.50
2.5	24:1	8.35	6.22	2.83	2.13	1.77	1.10	6.71	5.79	4-M8	2.76			0.60	0.43	0.55		0.63	0.2x1.57	7.50
3	24:1	8.35	6.22	2.83	2.13	1.77	1.10	6.71	5.79	4-M8	2.76			0.60	0.43	0.55		0.63	0.2x1.57	7.50
4	24:1	8.35	6.22	2.83	2.13	1.77	1.10	6.71	5.79	4-M8	2.76			0.70	0.55	0.63		0.63	0.2x1.57	7.63
5	24:1	8.35	6.22	2.83	2.13	1.77	1.10	6.71	5.79	4-M8	2.76			0.70	0.55	0.71		0.63	0.2x1.57	7.63
6	24:1	8.35	6.22	2.83	2.13	1.77	1.10	6.71	5.79	4-M8	2.76			0.70	0.55	0.71		0.63	0.2x1.57	7.98
8	30:1	10.98	8.07	2.83	2.87	2.60	1.22	11.38	11.81	4-M8	2.76			0.81	0.67	0.87		0.75	0.25x1.97	14.77
10	30:1	10.98	8.07	2.83	2.99	2.60	1.34	11.50	11.81	4-M10	4.02			0.81	0.87	1.00		0.75	0.25x1.97	15.83
12	50:1	11.18	8.10	3.23	3.19	3.17	1.29	12.19	11.81	4-M10	4.02			0.95	0.87	1.10		0.75	0.25x1.97	21.12
14	50:1	11.18	8.10	3.07	3.46	3.09	1.36	12.46	11.81	4-M10	4.02	0.2	0.39	2.81	0.00	1.10	2.36	0.75	0.25x1.97	20.81
16	50:1	11.18	8.10	3.07	3.46	3.09	1.36	12.46	11.81	4-M16	5.51	0.2	0.39	3.15	0.00	1.26	2.36	0.75	0.25x1.97	22.80
18	50:1	11.18	8.10	3.19	3.46	3.09	1.36	14.13	15.16	4-M16	5.51	0.2	0.47	3.15	0.00	1.50	2.36	0.75	0.25x1.97	23.41
20	80:1	15.16	10.53	4.49	4.98	4.70	1.46	17.26	15.16	4-M20	6.50	0.2	0.47	3.54	0.00	1.77	2.76	0.98	0.33x2.01	51.90
24	80:1	15.16	10.53	4.49	4.98	4.70	1.46	17.26	15.16	4-M20	6.50	0.2	0.55	3.74	0.00	2.17	2.76	0.98	0.33x2.01	51.90

MATERIALS



STANDARD MATERIAL LIST - 80 & 81 SERIES

PART	NAME	STAINLESS STEEL	CARBON STEEL
1	Retaining Plate Screw	Carbon Steel / Stainless Steel	Galvanized
2	Retaining Plate	Carbon Steel / Stainless Steel	Galvanized
3	O-Ring Packing	EPDM or NBR	
4	Body	Ductile Iron	
5	Seat	EPDM	-22° ~ +230°
		BUNA-N (NBR)	-4° ~ +194°
		WHITE EPDM	-22° ~ +230°
		VITON	14° ~ +320°
		HIGH TEMP	-22° ~ +266°
		TEFLON (PTFE)	"-40° ~ +482° Disc is not encapsulated
6	Disc	Stainless Steel	CF8
			CF8M
		Aluminum Bronze	Only available in CI/DI Body
7	Upper Stem	Stainless Steel	SS 304, SS 316, SS 410, SS 420
8	Lower Stem		
9	Plug	Carbon Steel / Stainless Steel	
10	Support Ring	Phenolic Resin	2" ~ 14"
		Aluminum	16" ~ 24"
11	Teflon	Teflon	
12	Teflon	SS304	
13	Gasket	PTFE	
14	Ball	SS 316	SS 304
15	Seat	PTFE	RPTFE

TORQUE (IN-LB) - CLASS 150

	EPDM / BUNA-N			TEFLON
NPS\PSI	50	145	230	165
2	142	367	367	168
2 1/2	254	367	367	221
3	254	367	480	451
4	367	367	593	451
5	593	593	649	
6	621	824	971	1283
8	1039	1332	1896	2487
10	2675	3273	4006	3169
12	3386	4063	4627	5638
14	2961	7076	13385	-
16	4047	15948	17506	-
18	5445	17950	23542	-
20	6737	19595	29076	-
24	10872	36036	46847	-

*Note:
-30% safety factor included.
-Torques shown were derived from test data using water at 41°F.
-For torques using dry gases, multiply the torques above by 1.6.

The specified torque values are suitable for seawater, lubricating hydrocarbons, and most media within a temperature range of 32-180°F (0-82°C). When operating the actuator, it is important to consider its speed to prevent water hammer during valve closure in liquid systems.

MATERIALS

NAME	COMPOSITION	GENERAL APPLICAITION	TEMPERATURE RANGE	LIMITS
EPDM	Ethylene - Propylene Terpolymer	Water - steam Sea water Brine Esters Ketone Alkalis Caustic Soda	-22°F to +230°F	Not recommended for hydrocarbons - oils - fats
High Temp EPDM			-22°F to +266°F	
White EPDM		Food & Beverage	-22°F to +230°F	
BUNA-N	Copolymer of Butadiene and high Acrylonitrile	Hydrocarbons Natural Gas Oil and fat Air Gasoline	-4°F to +194°F	Not recommended for solvents - Benzene - Xylol
VITON	Fluorocarbon polymer	Acids Oils Hydrocarbons	14°F to +320°F	Not recommended for Steam - Freon22 Solvent - Ketones - Esters - Alkalis
TEFLON	PTFE	Chemical Processing Oil & Gas Pulp & Paper Aerospace Power Generation	-40°F to +482°F	Higher Torque than other materials

CV VALUES - VALVE SIZING COEFFICIENTS (US - GPM @ PSI ΔP)

NPS	DISC ANGLE							Full 90° Open
	20°	30°	40°	50°	60°	70°	80°	
	20°	30°	40°	50°	60°	70°	80°	
2	8	9	18	28	55	72	110	135
2 1/2	10	15	27	44	85	110	168	210
3	15	23	39	65	130	165	250	310
4	27	41	71	115	230	300	465	540
5	58	86	150	245	480	610	980	1100
6	96	140	245	400	785	1010	1615	1910
8	165	245	410	685	1275	1715	2670	3185
10	255	380	650	1130	2100	2700	4250	4900
12	370	540	950	1570	3050	3950	5950	7350
14	450	750	1300	2210	4080	5610	8078	11200
16	640	900	1720	2790	5000	7650	10770	12900
18	730	1250	2295	3700	7050	9180	13900	17500
20	910	1595	2850	4630	8600	11500	17540	22400
24	1250	2290	4000	6090	12500	16500	23590	28300
20	910	1595	2850	4630	8600	11500	17540	22400
24	1250	2290	4000	6090	12500	16500	23590	28300

HOW TO ORDER - 2F00

Size	Prefix	Series	Body Ball Stem	Port	Packing	Seat	Body Seal	End Connection	Operator/ Bracket
7 -2” 8 -2-1/2” 9 -3” A -4” B -5” C -6” E -8” F -10” G -12” H -14” K -16” L -18” M -20” N -22” O -24”									
LEAVE BLANK IF NO PREFIX									
		80 - WAFER STYLE 80 SERIES 81 - LUG STYLE 81 SERIES							
			BODY DISC STEM D3 - WCB 316S/CF8M 416SS						
			B - BFV						
			E - EPDM B - BUNA-N	V - VITON					
			E - EPDM B - BUNA-N	V - VITON					
			E - EPDM B - BUNA-N	V - VITON					
			L1 - LUG STYLE ANSI 150 W1 - WAFER STYLE ANSI 150						

10 - 10 POSITION LOCKING LEVER
GO - MANUAL GEAR OPERATOR
SE - STEM EXTENSION (CONTACT JFLOW SALES FOR DIFFERENT HEIGHTS)
*
*Contact JFlow Controls for additional material options and automation capabilities

JFLOW CONTROLS®

THE RIGHT VALVE - THE RIGHT APPLICATION - RIGHT NOW!

4665 Interstate Drive, Cincinnati, OH 45246 USA
P- 513-731-2900 F- 513-731-6939
sales@jflowcontrols.com JFLOWCONTROLS.COM

JFlow Controls® reserves the right to change product designs and technical/dimensional specifications without notice.