

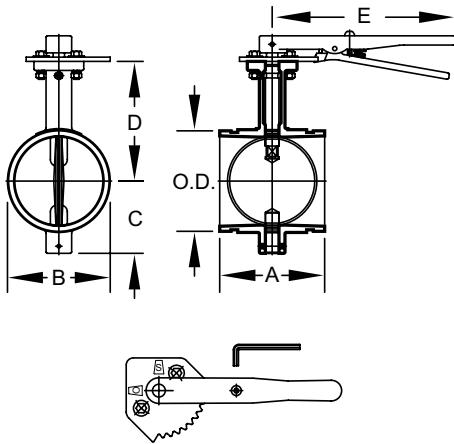
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The Model SJ-300N Butterfly Valve is a grooved-end tight shut-off valve designed, manufactured and tested to MSS SP-67. The valve can be shipped either with a 10-position lever handle with a locking device (SJ-300N-L) or with a worm gear operator (SJ-300N-W). The valve consists of epoxy powder coated ductile iron body and EPDM or Nitrile (NBR) rubber encapsulated dual-seal disc. The Model SJ-300N is rated up to + 200°F (+93°C) for general service use and is UL classified in accordance with NSF/ANSI 61 and NSF/ANSI 372 for potable water service up to temperature +180°F (+82°C).

- End-to-End Dimensions: MSS SP-67 Table 4
- End Connections: Grooved ends to ANSI/AWWA C-606
- Pressure Rating: 300 psi / 2.1 MPa (non-shock cold water)
- Max. Service Temperature:  
180°F / 82°C (EPDM) - Potable water service  
200°F / 93°C (EPDM)\* - General service  
*(\*Please refer to the materials note on last page.)*

## DIMENSIONS

### SJ-300N-L

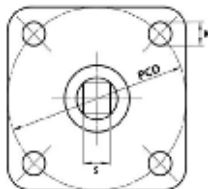


NOMINAL SIZE	PIPE O.D.	MAX. WORKING PRESSURE (CWP)*	DIMENSIONS					OPERATING TORQUE	WEIGHT*
			A	B	C	D	E		
2	2.375	300	3.19	2.52	2.48	4.17	7.56	80	6.8
50	60.3	20	81	64	63	106	192	9	3.1
2-1/2	2.875	300	3.82	3.11	2.68	4.37	7.56	120	8.2
65	73.0	20	97	79	68	111	192	14	3.7
76.1 mm	3.000	300	3.82	3.11	2.68	4.37	7.56	120	8.4
	76.1	20	97	79	68	111	192	14	3.8
3	3.500	300	3.82	3.62	2.99	4.96	7.56	160	9.0
80	88.9	20	97	92	76	126	192	18	4.1
4	4.500	300	4.57	4.65	3.50	5.32	10.24	450	11.4
100	114.3	20	116	118	89	135	260	51	5.2
139.7 mm	5.500	300	5.83	5.71	4.02	6.61	10.24	700	16.9
	139.7	20	148	145	102	168	260	79	7.7
5	5.563	300	5.83	5.71	4.02	6.61	10.24	700	16.9
125	141.3	20	148	145	102	168	260	79	7.7
165.1 mm	6.500	300	5.83	6.77	4.49	7.24	10.24	900	20.2
	165.1	20	148	172	114	184	260	102	9.2
6	6.625	300	5.83	6.77	4.49	7.24	10.24	900	20.2
150	168.3	20	148	172	114	184	260	102	9.2
200 JIS	8.516	300	5.24	8.74	5.51	8.19	10.24	1200	26.8
	216.3	20	133	222	140	208	260	136	12.2
8	8.625	300	5.24	8.74	5.51	8.19	10.24	1200	26.8
200	219.1	20	133	222	140	208	260	136	12.2
10	10.750	300	6.25	10.86	6.69	9.25	14.02	1800	48.4
250	273.0	20	159	276	170	235	356	204	22.0
12	12.750	300	6.53	12.87	8.07	10.24	14.02	2500	73.7
300	323.9	20	165	327	205	260	356	282	33.5

\* Working pressure is based on connection with roll- or cut-grooved standard wall carbon steel pipe.  
\* The weight includes the lever handle.  
Notes: The torque values are based on liquid applications. For dry or non-lubricating applications add a 25% service factor to the above values.

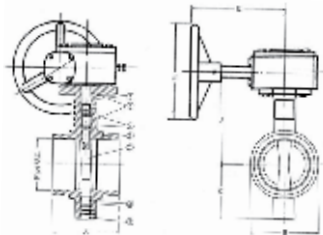
## DIMENSIONS

### 10 POSITION INDICATOR AND LEVER

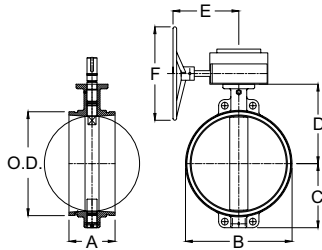


NOMINAL SIZE	PCD (DIA.)	K (DIA.)	S (SQUARE)	L
2	2.75	0.354	0.39	7.56
50	70	9	10	192
2-1/2	2.75	0.354	0.39	7.56
65	70	9	10	192
3	2.75	0.354	0.39	7.56
80	70	9	10	192
4	2.75	0.354	0.47	10.24
100	70	9	12	260
5	2.75	0.354	0.47	10.24
125	70	9	12	260

NOMINAL SIZE	PCD (DIA.)	K (DIA.)	S (SQUARE)	L
6	2.75	0.354	0.63	10.24
150	70	9	16	260
8	2.75	0.354	0.63	10.24
200	70	9	16	260
10	4	0.433	0.94	14.02
250	102	11	24	356
12	4	0.433	0.94	14.02
300	102	11	24	356



2" - 12"



14" - 24"

## DIMENSIONS

### SJ-300N-W

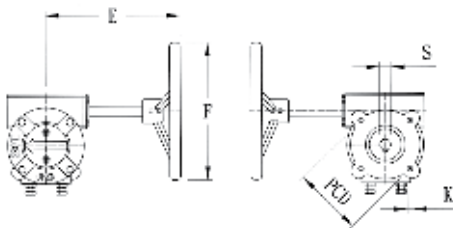
NOMINAL SIZE	PIPE O.D.	MAX. WORKING PRESSURE (CWP)*	DIMENSIONS						WEIGHT <sup>^</sup>
			A	B	C	D	E	F	
in	in	PSI	in	in	in	in	in	in	lb
mm	mm	Bar	mm	mm	mm	mm	mm	mm	kg
2	2.375	300	3.19	2.52	2.48	4.17	6.00	6.00	13.6
50	60.3	20	.81	.64	.63	1.06	1.52	1.52	6.2
2-1/2	2.875	300	3.82	3.11	2.68	4.37	6.00	6.00	14.3
65	73.0	20	.97	.79	.68	1.11	1.52	1.52	6.5
76.1 mm	3.000	300	3.82	3.11	2.68	4.37	6.00	6.00	14.3
	76.1	20	.97	.79	.68	1.11	1.52	1.52	6.5
3	3.500	300	3.82	3.62	2.99	4.96	6.00	6.00	16.0
80	88.9	20	.97	.92	.76	1.26	1.52	1.52	7.3
4	4.500	300	4.57	4.65	3.50	5.32	6.00	6.00	19.1
100	114.3	20	1.16	1.18	.89	1.35	1.52	1.52	8.7
139.7 mm	5.500	300	5.83	5.71	4.02	6.61	6.00	6.00	21.8
	139.7	20	1.48	1.45	1.02	1.68	1.52	1.52	9.9
5	5.563	300	5.83	5.71	4.02	6.61	6.00	6.00	21.8
125	141.3	20	1.48	1.45	1.02	1.68	1.52	1.52	9.9
165.1 mm	6.500	300	5.83	6.77	4.49	7.24	6.00	6.00	25.0
	165.1	20	1.48	1.72	1.14	1.84	1.52	1.52	11.4
6	6.625	300	5.83	6.77	4.49	7.24	6.00	6.00	25.3
150	168.3	20	1.48	1.72	1.14	1.84	1.52	1.52	11.5
200 JIS	8.516	300	5.24	8.74	5.51	8.19	6.00	6.00	31.9
	216.3	20	1.33	2.22	1.40	2.08	1.52	1.52	14.5
8	8.625	300	5.24	8.74	5.51	8.19	6.00	6.00	32.0
200	219.1	20	1.33	2.22	1.40	2.08	1.52	1.52	14.5
10	10.750	300	6.25	10.86	6.69	9.25	8.00	8.00	59.4
250	273.0	20	1.59	2.76	1.70	2.35	2.03	2.03	27.0
12	12.750	300	6.53	12.87	8.07	10.24	8.00	8.00	73.7
300	323.9	20	1.65	3.27	2.05	2.60	2.03	2.03	33.5
14	14.000	300	7.00	14.37	8.82	10.86	9.50	12.00	130.0
350	355.6	20	1.78	3.65	2.24	2.76	2.42	3.06	59.0
16	16.000	300	7.00	16.38	9.76	11.89	9.50	12.00	147.4
400	406.4	20	1.78	4.16	2.48	3.02	2.42	3.06	67.0
18	18.000	300	8.00	18.50	11.14	13.78	9.50	12.00	189.2
450	457.2	20	2.03	4.70	2.83	3.50	2.42	3.06	86.0
20	20.000	300	8.50	20.75	12.36	15.08	11.50	16.00	292.6
500	508.0	20	2.16	5.27	3.14	3.83	2.90	4.12	133.0
22	22.000	300	9.25	22.75	13.48	16.81	11.50	16.00	324.1
550	559.0	20	2.35	5.78	3.43	4.27	2.90	4.12	147.0
24	24.000	300	10.00	24.76	14.49	17.83	11.50	16.00	352.0
600	609.6	20	2.54	6.29	3.68	4.53	2.90	4.12	160.0

\* Working pressure is based on connection with roll- or cut-grooved standard wall carbon steel pipe.

<sup>^</sup> The weight includes the worm gear operator.

## DIMENSIONS

### WORM GEAR OPERATOR



NOMINAL SIZE	E	F (DIA.)	PCD (DIA.)	K	S (SQUARE □ OR ROUND ○)	WT.
in	in	in	in	mm	in	lb
mm	mm	mm	mm	mm	mm	kg
2	6	6	2.75	M8	□ 0.39	9
50	152	152	70		10	4.1
2-1/2	6	6	2.75	M8	□ 0.39	9
65	152	152	70		10	4.1
3	6	6	2.75	M8	□ 0.39	9
80	152	152	70		10	4.1
4	6	6	2.75	M8	□ 0.47	9
100	152	152	70		12	4.1
5	6	6	2.75	M8	□ 0.47	9
125	152	152	70		12	4.1
6	6	6	2.75	M8	□ 0.63	9
150	152	152	70		16	4.1
8	6	6	2.75	M8	□ 0.63	9
200	152	152	70		16	4.1
10	8	8	4.02	M10	□ 0.94	12.3
250	203	203	102		24	5.6
12	8	8	4.02	M10	□ 0.94	12.3
300	203	203	102		24	5.6
14	9.53	12	4.9	M12	□ 0.94	32.8
350	242	306	125		24	14.9
16	9.53	12	4.9	M16	○ 1.44	32.8
400	242	306	125		36.6	14.9
18	9.53	12	5.5	M16	○ 1.625	32.8
450	242	306	140		41.28	14.9
20	11.4	16.2	6.5	M20	○ 2.04	67.1
500	290	412	165		51.9	30.5
22	11.4	16.2	6.5	M20	○ 2.04	67.1
550	290	412	165		51.9	30.5
24	11.4	16.2	6.5	M20	○ 2.04	67.1
600	290	412	165		51.9	30.5

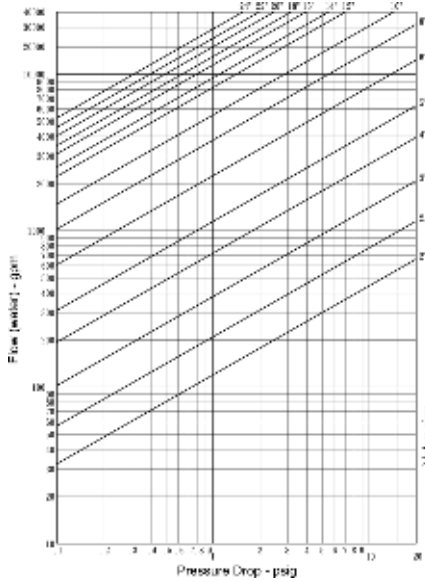
**FLOW DATA**

Equivalent length and Cv values for flow of water are shown below (water temperature at +68°F or +20°C)  
This chart should be used as a general guide.

**CV VALUES**

NOMINAL SIZE	EQUIVALENT LENGTH ON SCH. 40 PIPE*	CV VALUES
IN	FEET (METER)	
2	4.7 (1.4)	120
2½	5.2 (1.6)	210
3	5.5 (1.7)	380
4	6.8 (2.1)	720
5	8.5 (2.6)	1150
6	7.4 (2.3)	2000
8	9.2 (2.8)	3800
10	13.5 (4.1)	5500
12	15.1 (4.6)	8250
14	19.6 (6.0)	9500
16	21.8 (6.6)	13000
18	23.8 (7.3)	16000
20	27.3 (8.3)	20000
22	30.5 (9.3)	24000
24	33.7 (10.3)	29000

\*At 15 feet/sec. (4.6m/s) velocity of water.



**VALVE OPERATING TORQUES**

NOMINAL SIZE	TORQUE
in	in-lb
mm	Nm
2	80
50	9
2½	120
65	14
3	160
80	18
4	450
100	51
5	700
125	79
6	900
150	102
8	1200
200	136
10	1800
250	203
12	2500
300	283
14	3000
350	339
16	4000
400	452
18	5500
450	622
20	8000
500	904
22	8750
550	989
24	9500
550	1074

Note: The torque values are based on liquid applications. For dry or non-lubricating applications add a 25% service factor to the above values.

## MATERIAL SPECIFICATIONS

### VALVE BODY & DISC:

- Ductile Iron to ASTM A536, Gr. 65-45-12 and or to ASTM A395, Gr. 65-45-15.

### VALVE BODY COATING:

- Epoxy powder coating, black color, meets NSF/ANSI 61 and NSF/ANSI 372, for use in +180°F (+82°C) potable water system.

### UPPER & LOWER SHAFTS:

- Stainless steel Type 410.

### STEM SEALS:

- O-Ring, EPDM.

### LEVER HANDLE:

- Ductile Iron to ASTM A536, Gr. 65-45-12 and or to ASTM A395 Gr. 65-45-15. Black epoxy painted.

## DISC ENCAPSULATION:

### Grade E-pw EPDM (Color code: Double Green stripe)

- **Potable Water Service:** Certified under NSF/ANSI 61 and NSF/ANSI 372 for potable water service to +180°F (+82°C)
- **Mechanical Service:** Good for cold & hot water up to +230°F (+110°C). Also good for services for water with acid, water with chlorine, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.
- **Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons.**
- Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C).  
\*EPDM gaskets for water services are not recommended for steam services.

### (Option) Grade "T" Nitrile (Color code: Orange stripe)

- Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Also good for water services under +150°F (+66°C)
- Temperature range: -20°F to +180°F (-29°C to +82°C)
- **Do not use for HOT WATER above +150°F (+66°C) or HOT DRY AIR above +140°F (+60°C).**

## GENERAL NOTES

- Maximum Working Pressure (CWP) listed is the maximum cold water pressure for general piping services tested to MSS SP-67 methods. Figures listed are based on roll- or cut-grooved standard wall carbon steel pipe. For other pipe schedules or pipe materials, contact Shurjoint for additional information.
- Field Joint Test: For one time only the system may be tested hydrostatically at 1.5 times the maximum working pressure listed (AWWA C606 5.2.3).
- Warning: Piping systems must always be depressurized and drained before attempting disassembly and or removal of any components.
- Products manufactured by Shurjoint are warranted solely to the original Buyer for eighteen months (18) months from date of shipment or one (1) year from date of installation, whichever is sooner.
- Warranty applies to manufacturing defects only and does not cover severe service/temperature applications or wear parts.
- Shurjoint reserves the right to change specifications, designs and or standard without notice and without incurring any obligations.