

MODEL SJ-300N BUTTERFLY VALVE

Resilient Seated Butterfly Valve from 2" to 24"

The Model SJ-300N Butterfly Valve is a grooved-end shut-off valve with outstanding flow characteristic, rated to 300 psi (20 MPa) working pressure. The valve can be supplied with either a 10-position lever handle or a worm gear operator. The epoxy coated ductile iron body and rubber encapsulated dual-seal disc offer a bi-directional bubble tight seal.



Model SJ-300N-L
300 psi Butterfly Valve
with lever handle
Size range: 2" to 12"



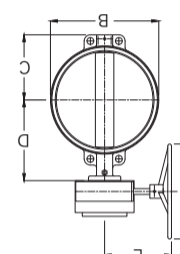
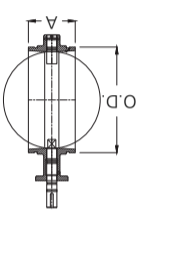
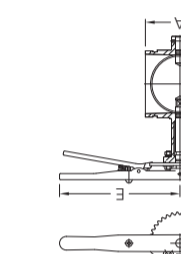
Model SJ-300N-W
300 psi Butterfly Valve
with gear operator
Size range: 2" to 24"




Specifications:
 Actuator platform: ISO 5211
 Overall dimension: MSS SP 67
 Applicable pipe: ANSI B36.10, ISO 4200, DIN 2448, BS1387-3600, NFA 49004
Technical Data:
 Working pressure: 300 psi (20 Bar, 2.0 MPa)
 Sealing test: 110% of working pressure
 Shell test: 200% of working pressure
Factory tested:
 All valves are tested prior to shipping.

Performance Data

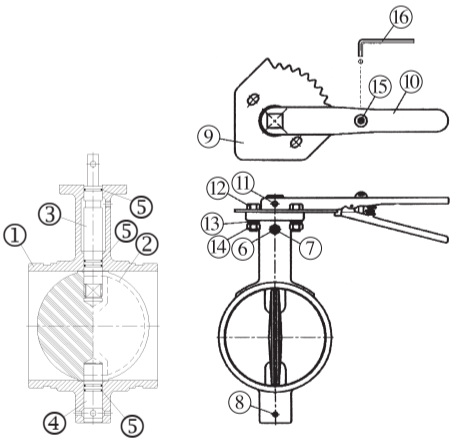
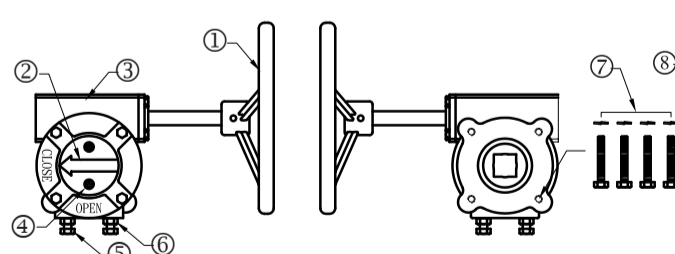
Nominal Pipe Size	Valve Body Dimensions		Lever Handle Type	Operating Torque	Weight
	A	B			
2	2.375	3.19	2.48	4.17	7.56
3	3.000	3.82	2.68	4.37	7.56
4	3.500	3.82	2.99	4.96	7.56
5	3.500	3.82	2.99	4.96	7.56
6	3.500	3.82	2.99	4.96	7.56
8	3.500	3.82	2.99	4.96	7.56
10	3.500	3.82	2.99	4.96	7.56
12	3.500	3.82	2.99	4.96	7.56
14	3.500	3.82	2.99	4.96	7.56
16	3.500	3.82	2.99	4.96	7.56
18	3.500	3.82	2.99	4.96	7.56
20	3.500	3.82	2.99	4.96	7.56
24	3.500	3.82	2.99	4.96	7.56

Part List

10-Position Indicator and Lever Handle

No.	Part Name	Material
1	Body	D.I. A536 Gr. 65-45-12
2	Disc	D.I. A536 Gr. 65-45-12 EPDM Encapsulated
3	Upper Stem	ASTM A582 Type 410
4	Lower Stem	ASTM A582 Type 410
5	O-Rings	EPDM
6	Set Screw	Cr-Mo Steel
7	Hex. Nut	Carbon Steel
8	Spring Pin	Spring Steel
9	10-Position Indicator	D.I. A536 Gr. 65-45-12
10	Lever Handle	D.I. A536 Gr. 65-45-12
11	Spring Pin	Spring Steel
12	Hex. Bolt	Carbon Steel
13	Spring Washer	Spring Steel
14	Hex. Nut	Carbon Steel
15	Lockscrew	Carbon Steel
16	Heptagonal Wrench	Cr-Mo Steel

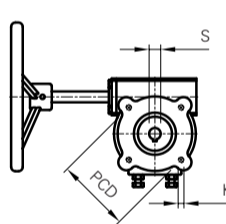
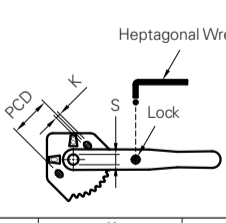
Worm-Gear Operator

No.	Part Name	Material
1	Handwheel	D.I. A536 Gr. 65-45-12
2	Indicator	Cast Iron A126-B
3	Gear Case	Cast Iron A126-B
4	Adjusting Screw	Carbon Steel
5	Stop Screw	Carbon Steel
6	Fixing Nut	Carbon Steel
7	Set Screws w/ Spring Washers	Carbon Steel
8	Pin Hole Aligner	Carbon Steel

Performance Data / Operating Torque

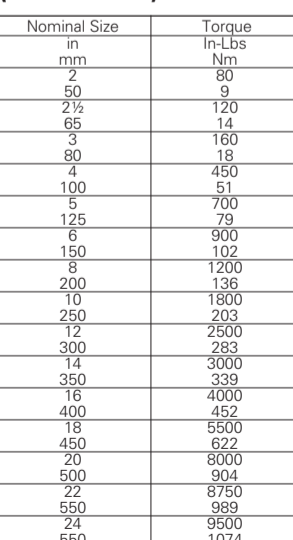
Worm Gear Operator

Nominal Size	PCD (dia.)	K	S (round □ or square □)	Weight	
				Lbs	Kgs
2	2.75	M8	0.39	9.0	4.1
3	2.75	M8	0.39	9.0	4.1
4	2.75	M8	0.39	9.0	4.1
5	2.75	M8	0.39	9.0	4.1
6	2.75	M8	0.39	9.0	4.1
8	2.75	M8	0.39	9.0	4.1
10	2.75	M8	0.39	9.0	4.1
12	2.75	M8	0.39	9.0	4.1
14	2.75	M8	0.39	9.0	4.1
16	2.75	M8	0.39	9.0	4.1
18	2.75	M8	0.39	9.0	4.1
20	2.75	M8	0.39	9.0	4.1
24	2.75	M8	0.39	9.0	4.1

10-Position Indicator and Lever Handle

Nominal Size	PCD (dia.)	K (dia.)	S (square)	Weight	
				Lbs	Kgs
2	2.75	M8	0.39	9.0	4.1
3	2.75	M8	0.39	9.0	4.1
4	2.75	M8	0.39	9.0	4.1
5	2.75	M8	0.39	9.0	4.1
6	2.75	M8	0.39	9.0	4.1
8	2.75	M8	0.39	9.0	4.1
10	2.75	M8	0.39	9.0	4.1
12	2.75	M8	0.39	9.0	4.1
14	2.75	M8	0.39	9.0	4.1
16	2.75	M8	0.39	9.0	4.1
18	2.75	M8	0.39	9.0	4.1
20	2.75	M8	0.39	9.0	4.1
24	2.75	M8	0.39	9.0	4.1

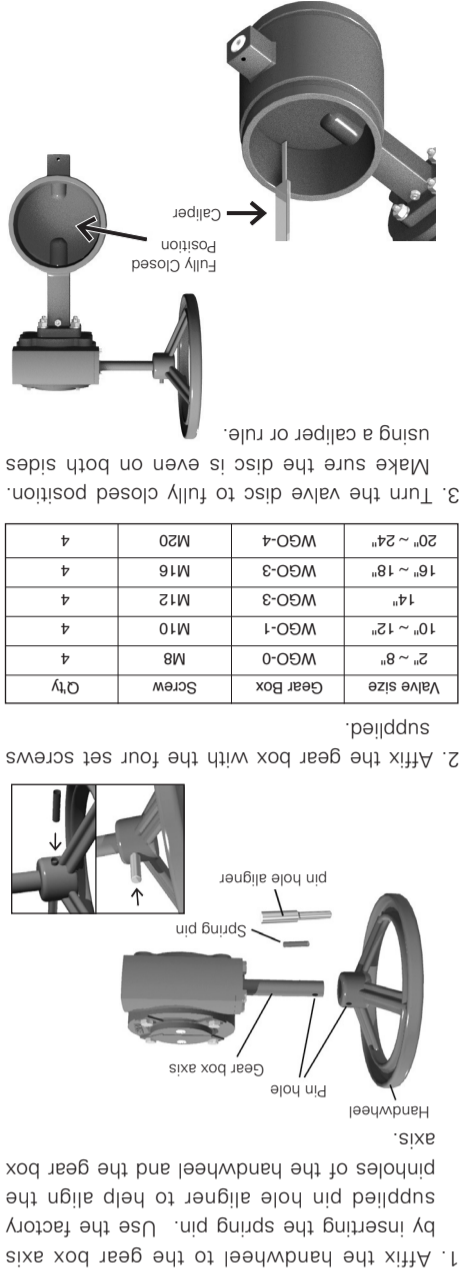
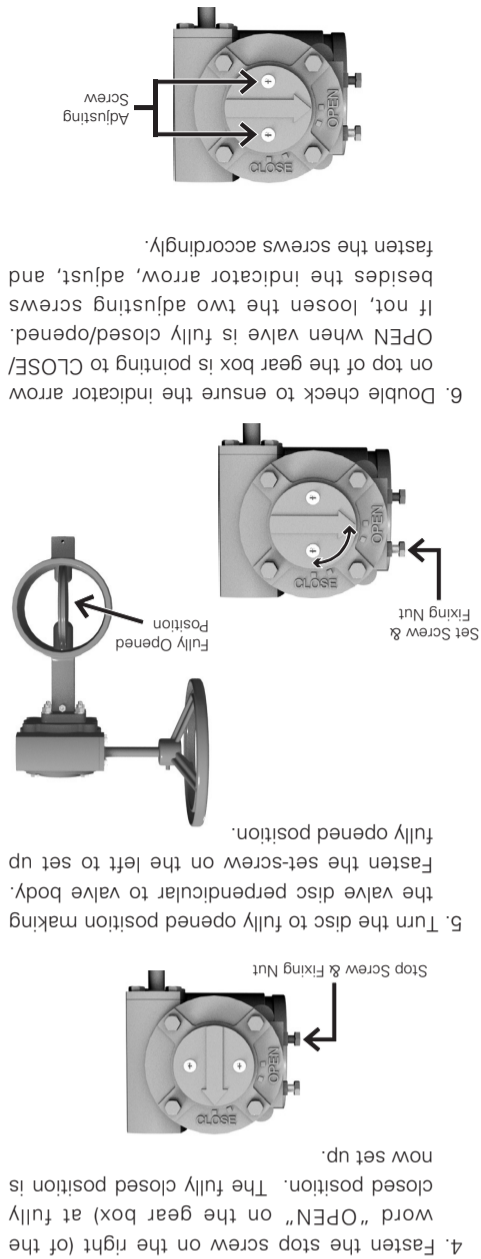


Operating Torque (SJ-300N-W)

Nominal Size	Torque In-Lbs	Torque Nm
2	90	12
3	160	21
4	450	60
5	700	95
6	900	123
8	1200	163
10	1800	247
12	2500	339
14	3000	407
16	4000	540
18	5500	744
20	8000	1080
24	10700	1450

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

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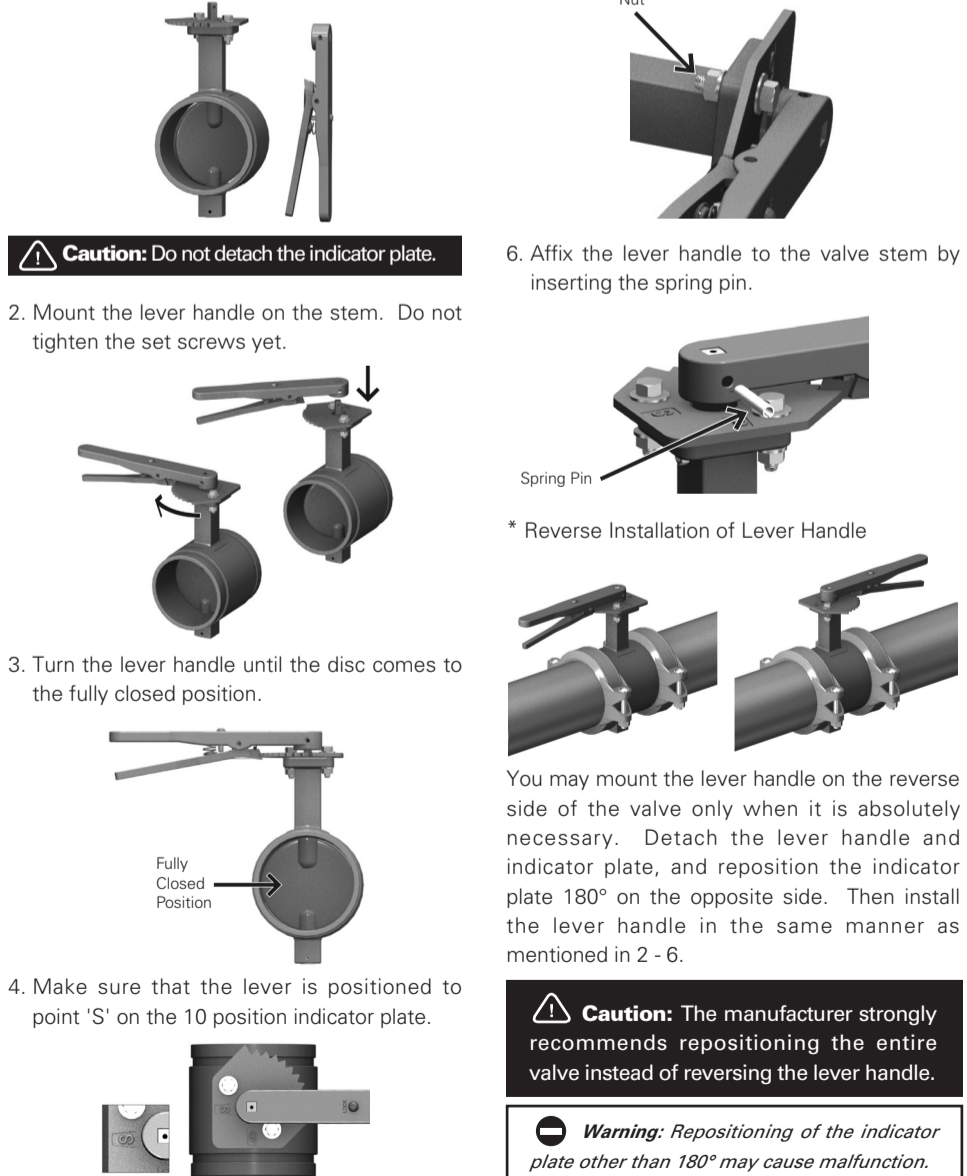
Valve size	Gear Box	Screw	Qty
2" ~ 8"	WGO-0	M8	4
10" ~ 12"	WGO-1	M10	4
14"	WGO-3	M12	4
16" ~ 18"	WGO-3	M16	4
20" ~ 24"	WGO-4	M20	4

Worm Gear Operator Installation

- Affix the handwheel to the gear box axis by inserting the spring pin. Use the factory supplied pin hole aligner to help align the pinholes of the handwheel and the gear box axis.
- Affix the gear box with the four set screws supplied.
- Turn the valve disc to fully closed position. Make sure the disc is even on both sides using a caliper or rule.
- Fasten the stop screw on the right (of the word "OPEN" on the gear box) at fully closed position. The fully closed position is now set up.
- Turn the disc to fully opened position making the valve disc perpendicular to valve body. Fasten the set-screw on the left to set up fully opened position.
- Double check to ensure the indicator arrow on top of the gear box is pointing to CLOSE/OPEN when valve is fully closed/opened. If not, loosen the two adjusting screws besides the indicator arrow, adjust, and fasten the screws accordingly.

Lever Handle Installation

- As supplied, the lever handle is disassembled and the 10 position indicator is not firmly affixed on the valve.
- Mount the lever handle on the stem. Do not tighten the set screws yet.
- Turn the lever handle until the disc comes to the fully closed position.
- Make sure that the lever is positioned to point 'S' on the 10 position indicator plate.
- Tighten the nuts firmly and affix the 10 position indicator plate on the valve.
- Affix the lever handle to the valve stem by inserting the spring pin.



Caution: The manufacturer strongly recommends repositioning the entire valve instead of reversing the lever handle.

Warning: Repositioning of the indicator plate other than 180° may cause malfunction.

Maintenance / Flow Data

Maintenance Instructions
The Model #SJ-300N Butterfly Valves require no regular maintenance. We do however recommend that you periodically inspect and verify proper operation of the unit on an annual basis or in accordance with the local authority(s) having jurisdiction. The inspection should include visual check for leakage at the valve pipe connection and the body to operator connection. Inspection and maintenance should be performed by qualified inspection personnel.

Caution:
Depressurize and drain the pipeline system Always depressurize and drain the pipeline system before disassembly and removal of any component(s). Failure to do so could result in serious personal injury, joint leakage and or property damage.

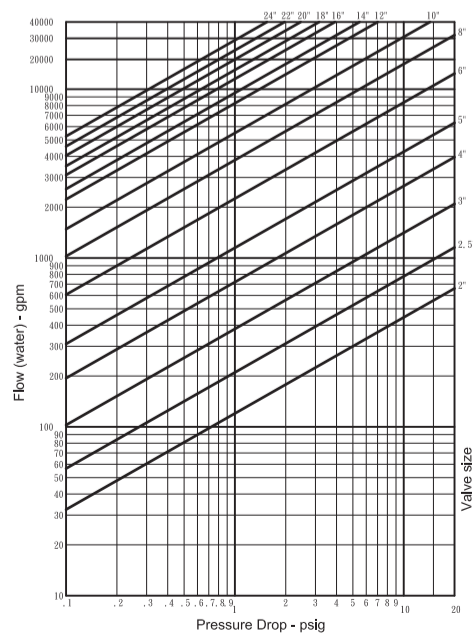
Caution:
Valves should be handled carefully to avoid any damage, especially to the seating area. If a valve tends to close hard, it usually indicates debris is lodged in the seating area. In such a case, back off the hand wheel and attempt to close the disc again.

Warning:
Do not use a wrench or other tool on the handwheel when opening or closing the valve as this may distort the valve components or score the seating surface. The pipeline should be properly supported to prevent excess stress on the valve body.

Flow Data
Equivalent length and Cv values for flow of water are shown below (water temperature at +20°C or +68°F).

Nominal Size (in)	Equiv. Length of Sch. 40 pipe* Feet (Meter)	Cv Values
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.



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