



## ST Series

## Resilient-Seated Ductile Iron Butterfly Valve



### END CONNECTIONS

**Wafer:** 2" to 12"

**Lugged:** 2" to 24"

### PRESSURE RANGE

**225 PSIG** (2" to 12")

**160 PSIG** (14" to 24")

[see Pressure/Temperature Curve](#)

### TEMPERATURE RANGE

**BUNA-N:** -4 to 194°F

**EPDM:** -22 to 230°F

[see Pressure/Temperature Curve](#)

### MATERIALS

**Body:** Epoxy Coated Ductile Iron

**Disc:** 316 Stainless Steel (standard)  
NI Plated D.I. or Bronze available

**Seats:** BUNA-N or EPDM

**Seals:** BUNA-N or EPDM

The Assured Automation ST is a resilient-seated 125/150, ductile iron, lug style butterfly valve available with either EPDM or BUNA-N seats and 316SS disc (other materials available upon request). It can be equipped with a manual handle or with pneumatic or electric actuators.

A full range of accessory items are available including limit switches, solenoid valves, positioners, chain wheels, and stem extensions.

### FEATURES

- Silicone free construction.
- Economy and high performance.
- One-piece body and self-centering disc.
- Seat facing acts as flange gasket.
- 3 shaft bushings support actuation.
- Shaft sealing against external leakage.
- Meets MSS SP-67 and API-609 specs.
- Complete line of accessories.

[see page 2 for feature details](#)

### TYPICAL APPLICATIONS

- Water and waste effluent treatment plants
- Paper, textiles and sugar industry
- Construction industry, and drilling production
- Heating, air conditioning, and cooling water circulation
- Pneumatic conveyors, and vacuum applications
- Compressed air, gas and desulphurization plants
- Brewing, distilling, and chemical process industry
- Transportation and dry bulk handling
- Power industry

### ACTUATORS

#### Pneumatic

- Spring return
- Double acting

#### Electric

- Various IP ratings and voltages
- Modulating or on/off

#### Manual

- Manual Hand Lever
- Manual Handle with Limit Switch
- Manual Geared Hand Wheel
- Geared Chain Wheel with Chain

[see page 4 for actuator details](#)

### CERTIFICATIONS & APPROVALS

- Meets MSS SP-67 and API-609 Certifications
- ISO 9001 by LRQA. certificate No.K981064
- Canada registration No CRN 0C0569.9C valves
- CE/PED approval... by LLOYDS certification No RPS0160308/01
- Products approval...South Africa SABS, No.7222/145532/VH136





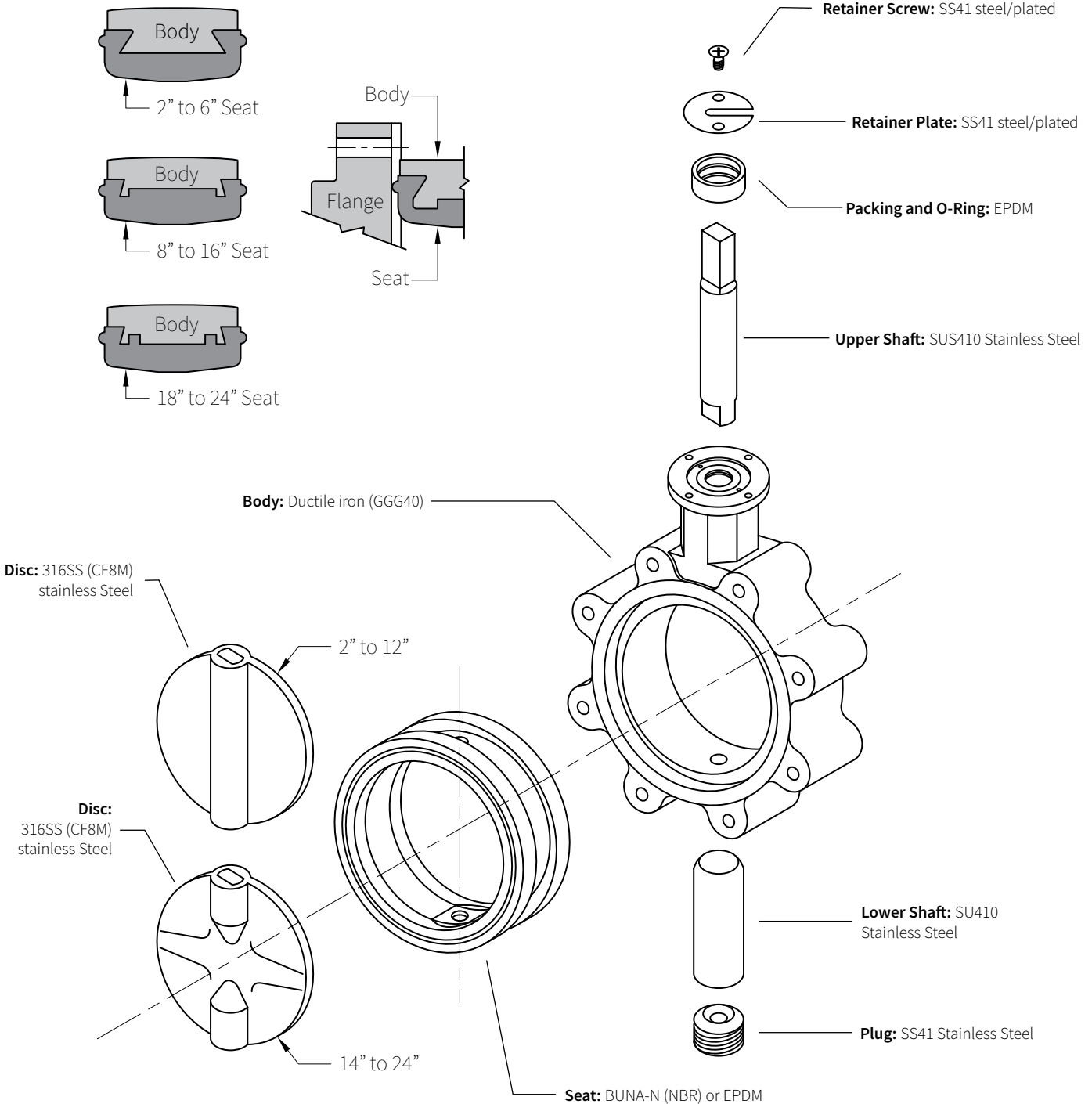
## ST Series



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### FEATURES AND BENEFITS

Stem: 316 Stainless Steel



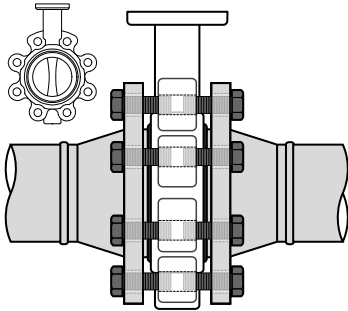


## ST Series



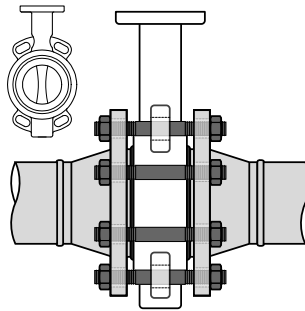
## Resilient-Seated Ductile Iron Butterfly Valve

### LUGGED AND WAFER CONNECTIONS



#### Lug Style Valve

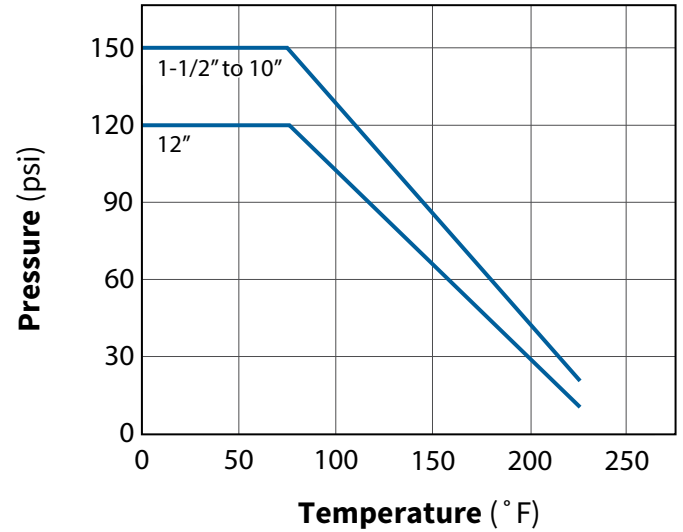
Installs between flanges. Bolts are threaded into tapped holes from each side of the valve's mounting flange.



#### Wafer Style Valve

Installs between flanges. Bolts span the body.

### PRESSURE/TEMPERATURE CURVE



### C<sub>v</sub> FACTORS

Size	Angle of Disc (0° = closed, 90° = open)							
	20°	30°	40°	50°	60°	70°	80°	90°
<b>1 1/2"</b>	3	5	11	18	26	45	70	80
<b>2"</b>	8	9	18	28	55	72	110	135
<b>2 1/2"</b>	10	15	27	44	85	110	168	210
<b>3"</b>	15	23	39	65	130	165	250	310
<b>4"</b>	27	41	71	115	230	300	465	540
<b>5"</b>	58	86	150	245	480	610	980	1100
<b>6"</b>	96	140	245	400	785	1010	1615	1910
<b>8"</b>	165	245	410	685	1275	1715	2670	3185
<b>10"</b>	255	380	650	1130	2100	2700	4250	4900
<b>12"</b>	370	540	950	1570	3050	3950	5950	7350
<b>14"</b>	450	750	1300	2210	4080	5610	8078	11200
<b>16"</b>	640	900	1720	2790	5000	7650	10770	12900
<b>18"</b>	730	1250	2295	3700	7050	9180	13900	17500
<b>20"</b>	910	1595	2850	4630	8600	11500	17540	22400
<b>24"</b>	1250	2290	4000	6090	12500	16500	23590	28300



## ST Series



## Resilient-Seated Ductile Iron Butterfly Valve

### ACTUATORS AVAILABLE

A full range of actuators are available to choose from. All sizing is done by Assured Automation to make selecting your assembly easy. Any accessories ordered with the actuator will be installed and tested by our ISO certified facility.

### Pneumatic

#### C Series

Dual Rack and Pinion



**Spring Return**  
fail to Open or Closed

**Double Acting**  
fail in place

[\(see C series web page\)](#)

#### P Series

Dual Scotch Yoke



**Spring Return**  
fail to Open or Closed

**Double Acting**  
fail in place

[\(see P series web page\)](#)

#### F Series

Dual Rack and Pinion



**Spring Return**  
fail to Open or Closed

**Double Acting**  
fail in place

[\(see F series web page\)](#)

#### Accessories

- NAMUR direct mount solenoid valves
- Variety of limit switches
- Modulating positioners
- 1/4" NPT x 1/4" tube push fittings
- 1/4" NPT x 1/4" compression fittings
- SS and poly tubing

[see page 8 for accessory details](#)

### Electric

#### Weatherproof

##### S4 Series



12 to 120 VAC/VDC

- Isolated end of travel limit switches
- Manual override
- Electronic torque limiter
- Auto-voltage sensing

[\(see S4 series web page\)](#)

##### K4 Series



12 to 120 VAC/VDC

- Built-in thermal protector
- Ball bearing construction
- Manual override
- Self locking worm gear drive

[\(see K4 series web page\)](#)

#### Explosion Proof

##### B7 Series



24 VDC and 120 VAC

- NEMA 4/4X/7 enclosure
- Heater and thermostat installed in all actuators
- Manual override on all units

[\(see B7 series web page\)](#)

### Manual

#### 10-Position Lockable Lever



#### Geared Hand Wheel



#### Accessories

- Cryogenic stem extensions
- Chain wheels for geared handwheels
- Limit switches



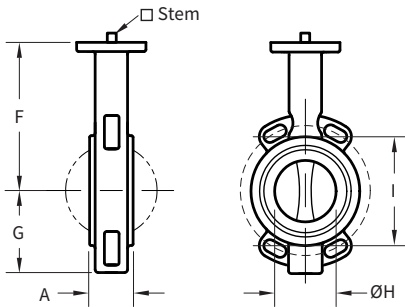
## ST Series



## Resilient-Seated Ductile Iron Butterfly Valve

### DIMENSIONS

#### Wafer

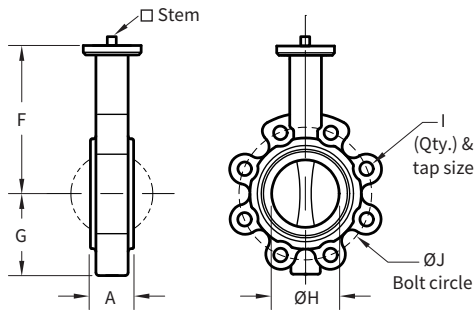


Size	A	F	G	ISO	ØH	I*	J**	Stem	Weight
2"	1.69	5.24	2.95	F07	1.99	(4) 5/8"-11	3.70	11 mm	13.3
2 1/2"	1.81	5.55	3.15	F07	2.61	(4) 5/8"-11	4.29	11 mm	14.3
3"	1.81	5.71	3.74	F07	3.11	(4) 5/8"-11	4.48	11 mm	15.3
4"	2.05	6.56	4.33	F07	3.92	(8) 5/8"-11	5.79	14 mm	19.3
5"	2.20	7.50	4.84	F07	4.89	(8) 3/4"-10	6.81	14 mm	25.7
6"	2.20	8.13	5.63	F07	5.89	(8) 3/4"-10	7.95	14 mm	30.1
8"	2.36	9.45	6.61	F07	7.70	(8) 3/4"-10	9.88	17 mm	53.7
10"	2.68	11.26	7.99	F10	9.72	(12) 7/8"-9	12.52	22 mm	84.0
12"	3.07	12.32	9.53	F10	11.63	(12) 7/8"-9	14.25	22 mm	145.0

\*bolts required for installation. 4 through holes are NOT tapped - (Qty.) size-threads per inch.

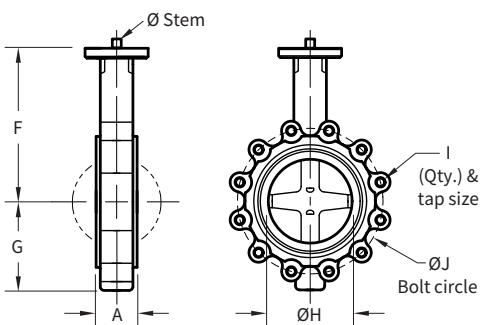
\*\*height between upper and lower holes

#### Lugged (2" to 12")



Size	A	F	G	ISO	ØH	I	J	Stem	Weight
2"	1.69	5.12	2.95	F07	1.99	(4) 5/8"-11	4.75	11 mm	14.0
2 1/2"	1.81	5.39	3.15	F07	2.61	(4) 5/8"-11	5.50	11 mm	16.0
3"	1.81	6.14	3.74	F07	3.11	(4) 5/8"-11	6.00	11 mm	18.0
4"	2.05	6.69	4.33	F07	3.92	(8) 5/8"-11	7.50	14 mm	27.0
5"	2.20	7.28	4.84	F07	4.89	(8) 3/4"-10	8.50	14 mm	32.3
6"	2.20	7.99	5.63	F07	5.89	(8) 3/4"-10	9.50	14 mm	42.8
8"	2.36	9.37	6.61	F07	7.70	(8) 3/4"-10	11.75	17 mm	59.8
10"	2.68	10.63	7.99	F07	9.72	(12) 7/8"-9	14.25	22 mm	91.9
12"	3.07	12.20	9.53	F07	11.63	(12) 7/8"-9	17.00	22 mm	165.9

#### Lugged (14" to 24")



Size	A	F	G	ISO	ØH	I	J	Stem	Weight
14"	3.07	13.60	10.41	F10	12.99	(12) 1"-8	18.75	28 mm	143
16"	4.02	13.76	11.75	F14	14.92	(16) 1"-8	21.25	32 mm	243
18"	4.49	15.75	13.78	F14	17.20	(16) 1.12"-7	22.75	38 mm	310
20"	5.00	17.32	14.96	F16	19.29	(20) 1.12"-7	25.00	45 mm	512
24"	6.06	20.08	17.32	F16	22.62	(20) 1.25"-7	29.50	55 mm	686

Visit our Web Site for **CAD Models and dimension drawings of complete valve assemblies including accessories. Our easy to use configurators allow complete assembly specification with help screens for most selections. Once your assembly is complete, simply click the CAD icon.**

assured**automation.com**

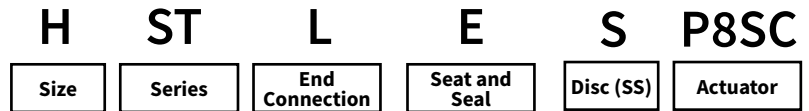


## ST Series



## Resilient-Seated Ductile Iron Butterfly Valve

### ORDERING INFORMATION



### VALVE BODY

Size: \_\_\_\_\_

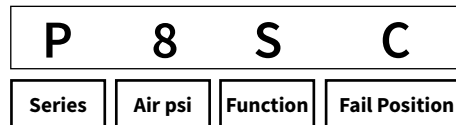
- |            |         |
|------------|---------|
| H = 2"     | O = 10" |
| I = 2 1/2" | P = 12" |
| J = 3"     | Q = 14" |
| K = 4"     | R = 16" |
| L = 5"     | S = 18" |
| M = 6"     | T = 20" |
| N = 8"     | U = 24" |

End Connection: \_\_\_\_\_

- L = Lugged
- W = Wafer

Seat and Seal: \_\_\_\_\_

- E = EPDM
- B = BUNA



### ACTUATOR

#### Pneumatic Actuators

Series: \_\_\_\_\_

- C = C Series Dual Rack & Pinion
- P = P Series Dual Scotch Yoke
- F = F Series Dual Rack & Pinion

Supply Air Pressure: \_\_\_\_\_

- 6 = 60psi
- 8 = 80psi

Function: \_\_\_\_\_

- S = Spring return
- D = Double acting

Fail Safe Position: \_\_\_\_\_

- C = Fail to CLOSED
- O = Fail to OPEN
- D = Fails to Last Position
- (omit) for direct acting

#### Electric Actuators

Series: \_\_\_\_\_

- S4 = Weatherproof
- K4 = Weatherproof
- B7 = Explosion Proof

Voltage: \_\_\_\_\_

- A = 120VAC
- B = 24VDC
- F = 12VDC

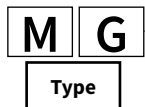
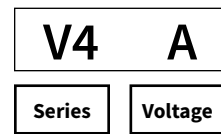
#### Manual Operators

Type: \_\_\_\_\_

- M = Basic Manual Lever
- G = Geared Hand Wheel (only available on 8" to 12")

Note: only one actuator may be chosen

Code continues to specify additional accessories and options





## ST Series



## Resilient-Seated Ductile Iron Butterfly Valve

### ACCESSORIES

#### Solenoid Valves

NAMUR solenoid valves for direct mount to the actuator. Various coil and connector options are available including weatherproof, explosion proof, corded, NPT conduit, and cable gland.

**3-way**  
for spring return models



**3/4-way for**  
for double acting models



[Solenoid valve web page](#)

#### Limit Switches (valve position indicators)

Used to communicate the position of the valve to a PLC, HMI, or simple remote indicator lamp. Various switch technologies are available. All include a local visual indicator as well.

#### UA/UB Series

Solid state proximity switches; 1 for Open, 1 for Closed



#### YF Series

SPDT mechanical switches; 1 for Open, 1 for Closed



#### YE, YH, YO Series

SPDT mechanical switches; 1 for Open, 1 for Closed



Other limit switches are available [Limit switch web page](#)

#### Modulating Positioners

Add modulating control to either of our pneumatic actuator series. These positioners mount to the top of the actuator using the NAMUR standard mounting hole and stem pattern.

#### Pneumatic

0-15 psi control signal



#### Electro-pneumatic

4-20mA or 0-10VDC control signal



#### With feedback unit

4-20mA or 0-10VDC feedback signal



[Positioner web page](#)