

Resilient Seated Butterfly Valves: 2"-24"

General Service Applications, Wafer & Lug Bodies

400
SERIES
422



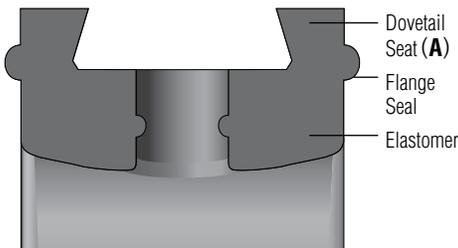
ultraflo®

400/422 SERIES

Ultraflo proudly offers the 400/422 Series general service butterfly valve. This economical, resilient seat valve is available in a wide variety of materials and provides a bi-directional pressure rating of **150 psi**. Undercut disc/stems, rated for **50 psi** and requiring less operating torque, are also available. Precision machined to close tolerances and constructed of high quality materials, the 400/422 Series delivers long service life, ease of operation and maintenance, and reduced cost. Valve sizes are from **2"–24"**.

2"–12" 400 Series wafer bodies are available in **Cast Iron** and **Aluminum**.

14"–24" 400 Series valves are available in **Nodular Iron** only. All sizes 422 Series lug bodies are constructed of **Nodular Iron**.



Elastomer seat. Section view at stem hole.

Ultraflo's resilient **Seat (A)** is the heart of all 400/422 Series valves. This seat offers lower torque and provides complete isolation of the line media from the valve body. The seat incorporates a dovetail retention system ensuring positive alignment and ease of assembly. All 400 Series seats include a flange seal molded into the seat face providing a positive seal with all popular flanges. Valves installed in dead end service (downstream flange removed) are derated to 75 psi for 2"–12" valves, 50 psi for 14"–24" valves.

Features Primary and Secondary Seals (B) The primary seal is formed by an interference fit between the disc hub and the seat flat. The secondary seal is an interference fit between the stem and seat stem hole. These seals prevent line media from coming into contact with other valve components. Ultraflo's **Disc (C)** edge is CNC machined and hand polished to produce bubble tight shut off, minimum torque and longer seat life. Discs are available in a variety of materials and custom coatings. The **Stem (D)** is constructed of 17-4 ph Stainless Steel for high strength and includes industry standard connections for actuator mounting. The **Upper Stem Bushing (E)** absorbs operator side thrusts, provides precision alignment to ensure less wear and lowers operating torque. The **Lower Stem Bushing (F)** eliminates gaulding and frozen stems. Both upper and lower bushings are heavy duty non-corrosive thermoplastic polymer. A **Stem Packing (G)** prevents external contaminants from entering the stem bore. The one-piece **Body (H)** is offered in wafer or lug style. All 400/422 Series valve bodies are designed to fit between ASME/ANSI 125 or 150 lb. flanges. **Body Recesses (I)** accommodate lightweight flanges. All sizes of Cast Iron, Nodular Iron and Aluminum bodies have a CNC machined **Top Plate (J)** with standardized drilling for total actuator and operator interchangeability. A handle notch plate is supplied with the manual handle kit.



400 Series
Buna Seat,
Stainless Steel Disc,
Wafer Style Body shown

400/422 SERIES

Direct Operator Mounting

Ultraflo has designed the 400/422 Series operator mounting Top Flange to ISO 5211 specifications for direct mounting of manual operators and actuators. Designed to recognized industry standards, the Double D stem connection provides a secure connection with most actuators eliminating the need for brackets.



Discs are offered in Investment Cast 316 Stainless Steel, Nodular Iron, Nylon Coated Nodular Iron, ENP/Nodular Iron, Aluminum Bronze and a variety of custom coatings. Standard Seats are EPDM, Nitrile, Buna and FKM. Nitrile and EPDM are available in FDA approved white.

All Ultraflo valves are tested to 110% of pressure rating for bubble tight shut off before shipment.

All 400/422 Series valves are designed to meet MSS SP67 Dimensional Standards.

Components

Item	Description	Qty.
1	Body	1
2	Seat	1
3	Disc	1
4	Stem	1
5	Upper Bushing	1
6	Stem Packing	1
7	Lower Bushing	1
8	O-Ring	2*
9	Disc Screw	2*

*3 on 12" and larger valves. 24" disc to stem fasteners are hex nut retained taper pins with O-ring sealers.

Materials of Construction

Bodies: 2"-12" wafer bodies are available in Cast Iron or Aluminum. Lug style bodies all sizes, and 14"-24" wafer bodies are Nodular Iron.

Seats: EPDM, Nitrile, Buna, FKM. Nitrile and EPDM seats are available in FDA approved food grade white.

Disc: Investment Cast 316 Stainless Steel, Nodular Iron, Nylon Coated Nodular Iron, ENP/Nodular Iron and Aluminum Bronze. Custom disc coatings are also available.

Stem: 17-4 ph Stainless Steel and 316 Stainless Steel

Upper and Lower Bushings: Thermoplastic Polymer

Stem Packing: Buna-N

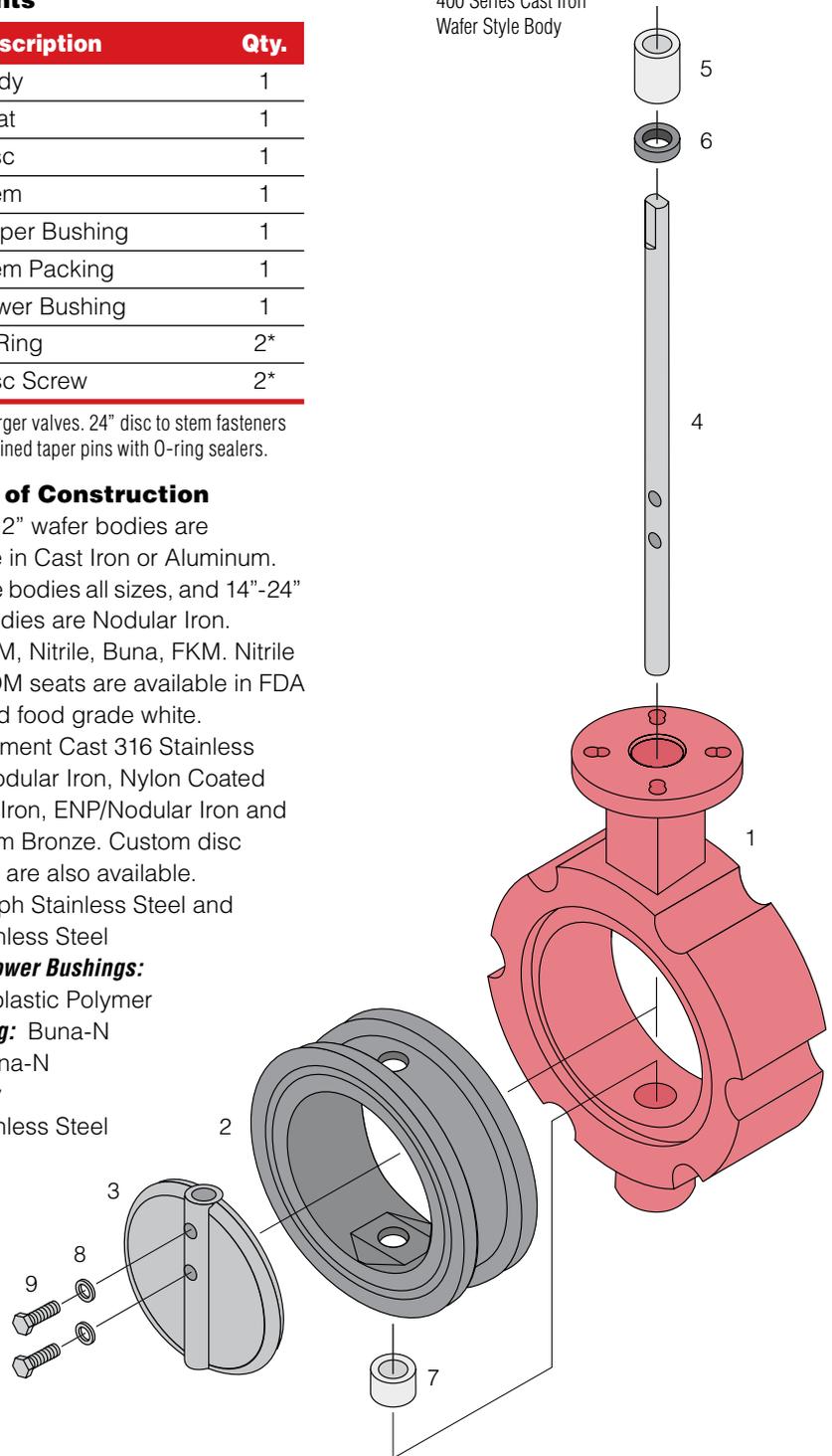
O-Rings: Buna-N

Disc Screws: 316 Stainless Steel

Temperature Range of Seats

Type	Minimum	Maximum
EPDM	-40°F	+250°F
Buna	0°F	+212°F
Nitrile	-20°F	+275°F
FKM	0°F	+400°F

400 Series Cast Iron Wafer Style Body



Actuators & Accessories

Ultraflo offers a wide range of automation products including handles, gear operators, rack and pinion pneumatic actuators, pneumatic cylinder and wrench arm assemblies, electric actuators, pneumatic and electro-pneumatic positioners, solenoids, valve position indicators, proximity and limit switches.

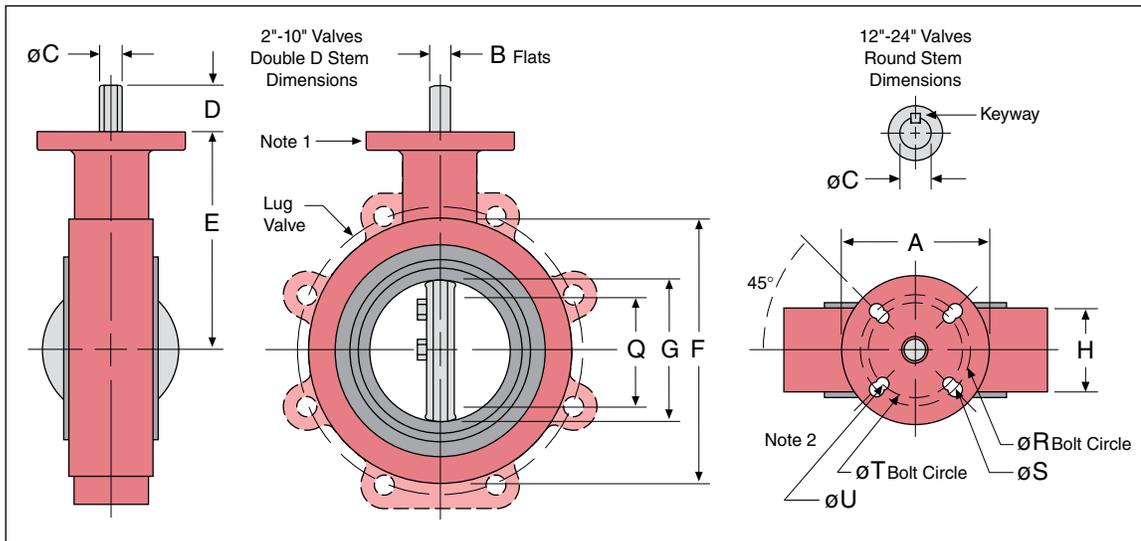
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Dimensions

Valve Size		A	B	C	D	E	F	G	H	Q	R	S	T	U	Lug Data		
ins	mm														BC	Holes	Tap
2	50	4.00	.375	.563	1.250	4.063	4.125	2.125	1.625	1.531	3.250	.438	2.760	.375	4.750	4	.625-11
2 1/2	65	4.00	.375	.563	1.250	4.625	4.875	2.50	1.750	1.969	3.250	.438	2.760	.375	5.50	4	.625-11
3	75	4.00	.375	.563	1.250	5.00	5.375	3.125	1.750	2.689	3.250	.438	2.760	.375	6.00	4	.625-11
4	100	4.00	.438	.625	1.250	6.00	6.875	4.125	2.00	3.719	3.250	.438	2.760	.375	7.50	8	.625-11
5	125	4.00	.438	.625	1.250	6.00	7.750	5.188	2.125	4.813	3.250	.438	2.760	.375	8.50	8	.750-10
6	150	4.00	.438	.625	1.250	6.625	8.750	6.125	2.125	5.813	3.250	.438	2.760	.375	9.50	8	.750-10
8	200	6.00	.500	.750	1.250	8.313	11.00	8.125	2.50	7.813	5.00	.563	4.020	.438	11.750	8	.750-10
10	250	6.00	.625	.875	1.250	9.125	13.375	10.125	2.50	9.906	5.00	.563	4.020	.438	14.250	12	.875-9

Valve Size		A	C	D	E	F	G	H	Q	Key Way	R	S	T	U	Lug Data		
ins	mm														BC	Holes	Tap
12	300	6.00	1.125	2.00	10.645	16.125	12.094	3.00	11.844	.25 x .25	5.00	.563	4.020	.438	17.00	12	.875-9
14	350	6.00	1.375	3.00	12.00	17.750	13.250	3.00	13.125	.313x.313	5.00	.563	—	—	18.75	12	1.0 - 8
16	400	6.00	1.375	3.00	12.953	20.250	15.250	4.00	15.00	.313x.313	5.00	.563	—	—	21.25	16	1.0 - 8
18	450	8.00	1.875	4.250	14.50	21.625	17.250	4.25	16.875	.50x.375	6.50	.813	—	—	22.75	16	1.125-7
20	500	8.00	1.875	4.250	15.875	23.875	19.250	5.00	18.750	.50x.375	6.50	.813	—	—	25.00	20	1.125-7
24	600	8.00	1.875	4.250	19.50	28.250	23.250	5.94	12.625	.50x.375	6.50	.813	—	—	29.50	20	1.25-7

All 400/422 Series valves are designed to meet MSS SP67 dimensional standards.



Notes:

1. Cast Iron, Nodular Iron & Aluminum Valve bodies have standard Top Flanges, notch plates are supplied with handle.
2. Bolt Circle T and Hole Diameter U meet ISO 5211 standards for Top Flange Drilling:
2"-6" = F7
8"-12" = F12
Not applicable to all sizes of Aluminum bodies or 14"-24" Nodular Iron bodies.

Flange Requirements

The valve O.D. and flange bolt circle must share a common center line. The valve is designed to be placed between ASME/ANSI 125 or 150 lb. flanges.

The data represented in this brochure is for general information only. Manufacturer is not responsible for acceptability of these products in relation to system requirements. Consult your Ultraflo representative for specific performance data and proper materials selection for your particular application.



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