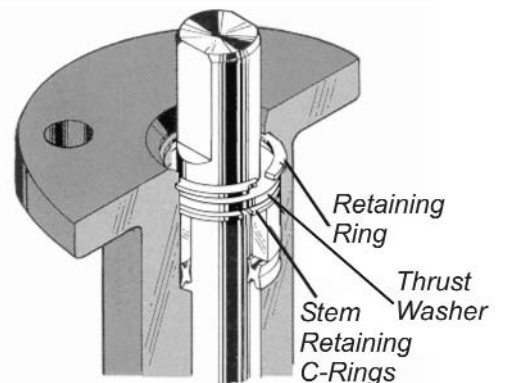
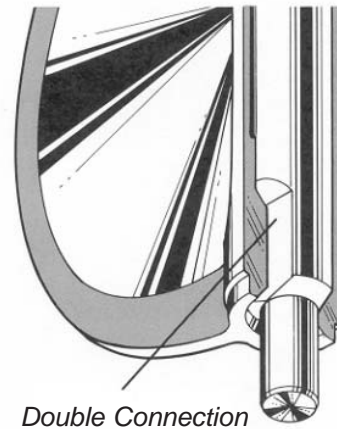
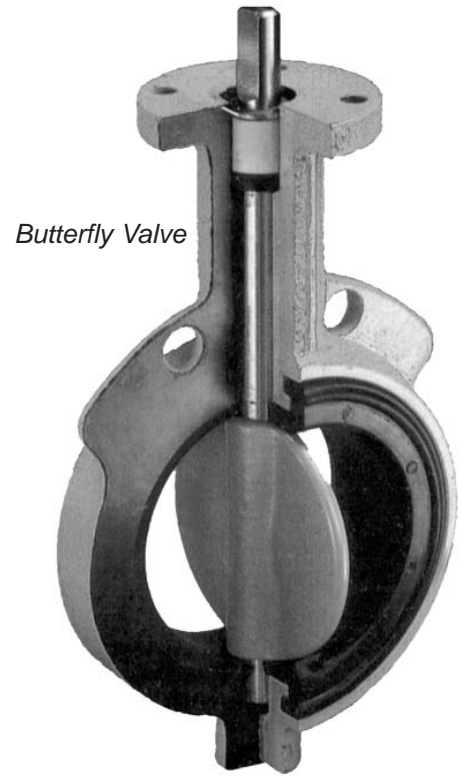


APPLICATION: FLSmidth is proud to offer a new line of high quality butterfly valves to meet the requirements of today's market. Combining years of field application experience in the minerals and cement markets, with research and development, FLSmidth has designed many unique features into the valve, resulting in longer service life, greater reliability, ease of parts replacement and interchangeability of components.

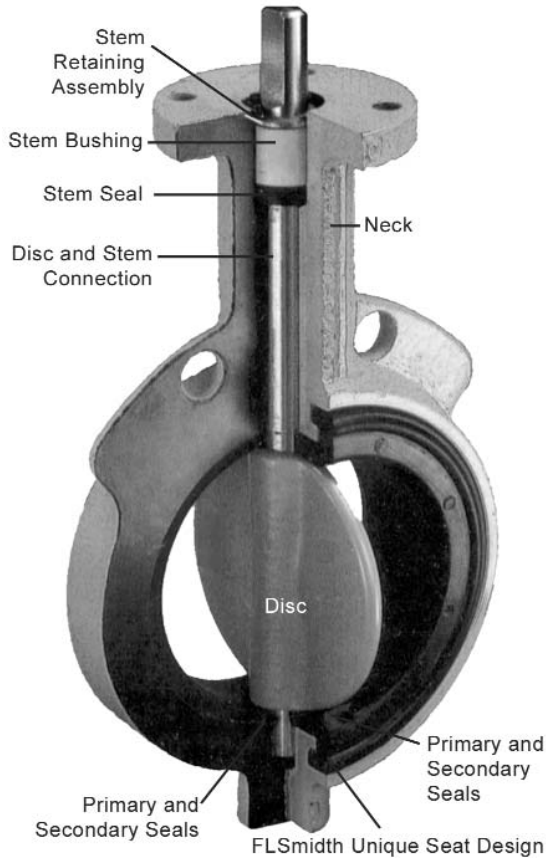
SPECIFICATION: **DISC AND STEM CONNECTION**
 Features a high-strength through stem design. The close tolerance connection that drives the valve disc is a special feature of the FLSmidth valve. It eliminates stem retention components being exposed to the line media, such as disc screws and taper pins, which commonly result in leak paths, corrosion, and vibration failures. Disc screws or taper pins, due to wear and corrosion, often require difficult machining for disassembly. Disassembly of the FLSmidth stem is just a matter of pulling the stem out of the disc. Without fasteners obstructing the line flow, the Cv values are higher than many other valves, turbulence is reduced, and pressure recovery is increased. The stem ends and top mounting flange are standardized for interchangeability with FLSmidth actuators.

DISC
 Casting is spherically machined, hand polished to provide a bubble-tight shut off, minimum torque, and longer seat life. The disc O.D. clearance is designed to work with all standard piping.

STEM RETAINING ASSEMBLY
 The stem is retained in the body by means of a unique Stainless Steel retaining ring, a thrust washer and two C-rings, manufactured from brass as standard, stainless steel upon request. The retaining ring may be easily removed with a standard hand tool. The stem retaining assembly also prevents accidental removal of stem during field service.



BUTTERFLY VALVES



STEM BUSHING

Non-corrosive, heavy duty acetal bushing absorbs actuator side thrusts

STEM SEAL

Double "U" cup seal design is self adjusting and gives positive sealing in both directions. Prevents external substances from entering stem bore.

NECK

Extended neck length allows for 2" of piping insulation and is easily accessible for mounting actuators.

PRIMARY AND SECONDARY SEALS

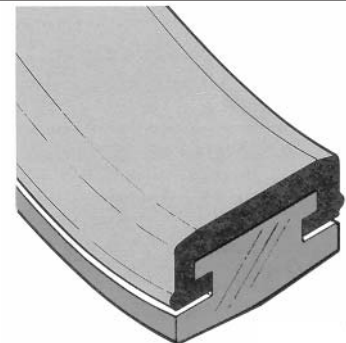
The Primary Seal is achieved by an interference fit of the unique molded seat flat with the disc hub. The Secondary Seal is created because the stem diameter is greater than the diameter of the seat stem hole. These seals prevent line media from coming in contact with the stem or body.

TYPE SB & USB MAXIMUM TEMPERATURE 250°F (121°C)
 Type SB & USB wafer-style Butterfly Valve for gas service only, reduced diameter disc, ANSI class 125/150, 80% vacuum to 50 PSI differential pressure, cast iron body, phosphate-coated D.I. disc, 416 stainless steel shaft, EPDM seat

TYPE HB & UHB MAXIMUM TEMPERATURE 400°F (205°C)
 Type HB & UHB wafer-style Butterfly Valve for gas service only, reduced diameter disc, ANSI class 125/150, 80% vacuum to 50 PSI differential pressure, cast iron body, phosphate-coated D.I. disc, 416 stainless steel shaft, VITON seat

FLSMIDTH UNIQUE SEAT DESIGN

One of the valve's key elements is the unique tongue-and-groove seat design. This resilient seat features lower torque than many valves on the market today and provides complete isolation of flowing media from the body. The tongue-and-groove seat to body retention method is superior to traditional designs, making field replacement simple and fast. The seat is specifically designed to seal with slip-on or weld-neck flanges. The seat features a molded O-ring which eliminates the use of flange gaskets. An important maintenance feature is that all resilient seats for FLSmidth butterfly valves are completely interchangeable.



Tongue and Groove Design

ACTUATOR MOUNTING FLANGE AND STEM CONNECTION

Universally designed to ISO 5211 for direct mounting of FLSmidth power actuators and manual operators.

FLANGE LOCATING HOLES

Provides quick and proper alignment during installation.

BODY

One-piece wafer style. Polyester coating for excellent corrosion resistance. FLSmidth valve bodies meet ANSI 150 pressure ratings for hydrostatic shell test requirements.

TEMPERATURE RANGE OF SEATS

Type	Max	Min
EPDM	+ 250°F (+121°C)	-40°F (-40°C)
Viton	+ 400°F (+204°C)	0°F (-18°C)

DESIGN FEATURES

The FLSmidth Butterfly valve is a wafer version with flange locating holes. All FLSmidth valves are tested to 110% of full pressure rating before shipment.

A major design advantage of FLSmidth valve product lines is international compatibility. The same valve is compatible with most world flange standards - ANSI Class 125/150, BS 10 Tables D and E, BS 4504 NP 10/16, DIN ND 10/16 AS 2129 and JIS 10. In addition, the valves are designed to comply with ISO 5752 face-to-face and ISO 5211 actuator mounting flanges. Therefore, one valve design can be used in many different world markets.

Due to a modular concept of design, all FLSmidth handles, manual gear operators, and pneumatic and electric actuators mount directly to FLSmidth valves. No brackets or adapters are required. The standard FLSmidth design includes the pneumatic actuator.

FLSmidth interchangeability and compatibility offers you the best in uniformity of product line and low-cost performance in the industry today.

POLYESTER CORROSION PROTECTIVE COATED

FLSmidth's standard product offers valve bodies with a polyester coating, providing excellent corrosion and wear resistance to the valve's surface. The FLSmidth polyester coating is a hard, gloss finish.

Chemical Resistance - resists a broad range of chemicals including: dilute aqueous acids and alkalis, petroleum solvents, alcohols, greases, and oils. Offers outstanding resistance to humidity and water

Weatherability - outdoor tested, resistant to ultra-violet radiation

Abrasion Resistance - excellent resistance to abrasion

Impact Resistance - withstands impact without chipping or cracking

RECOMMENDED SPECIFICATIONS FOR FLSMIDTH VALVES SHALL BE:

- Polyester coated, cast iron, wafer bodies
- Through-stem direct drive design requiring no disc screws or pins to connect stem to disc with no possible leak paths in disc/stem connection
- Stem mechanically retained in body neck and no part of stem or body exposed to line media
- Tongue-and-groove seat design with primary hub seal and a molded O-ring suitable for weld-neck and slip-on flanges. Seat totally encapsulates the body with no flange gaskets required.
- Spherically machined, hand-polished disc edge and hub for minimum torque and maximum sealing capability
- Equipped with non-corrosive bushing and self-adjusting stem seal
- Bi-directional and tested to 110% of full rating'
- Bi-directional pressure ratings:
 - 2"-12" valves: 175 psi
 - 14"-20" valves: 150 psi
- No field adjustment necessary to maintain optimal performance
- The valve shall be FLSmidth or equal

MATERIALS SELECTION

- 2" - 20" (50mm - 500mm)

BODY

- Cast Iron ASTM A126 Class B

SEAT

- EPDM - Food Grade
- Viton

STEM

- 416 Stainless Steel ASTM A582 Type 416

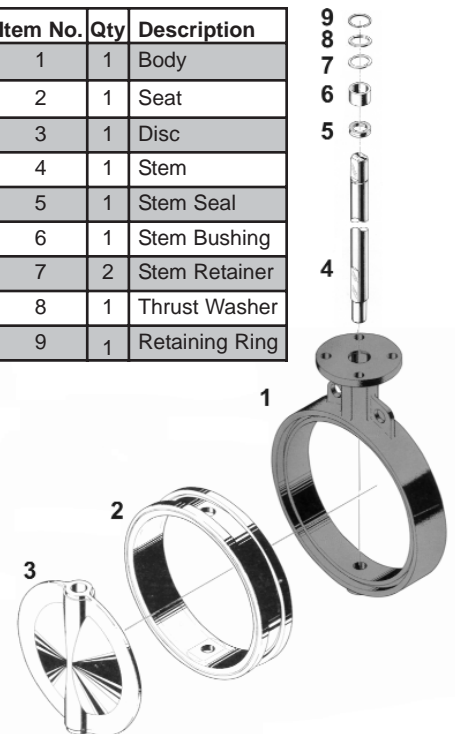
DISC

- Coated Ductile Iron ASTM A536 Gr. 65-45-12

ACTUATORS

- Hand lever
- Air cylinder

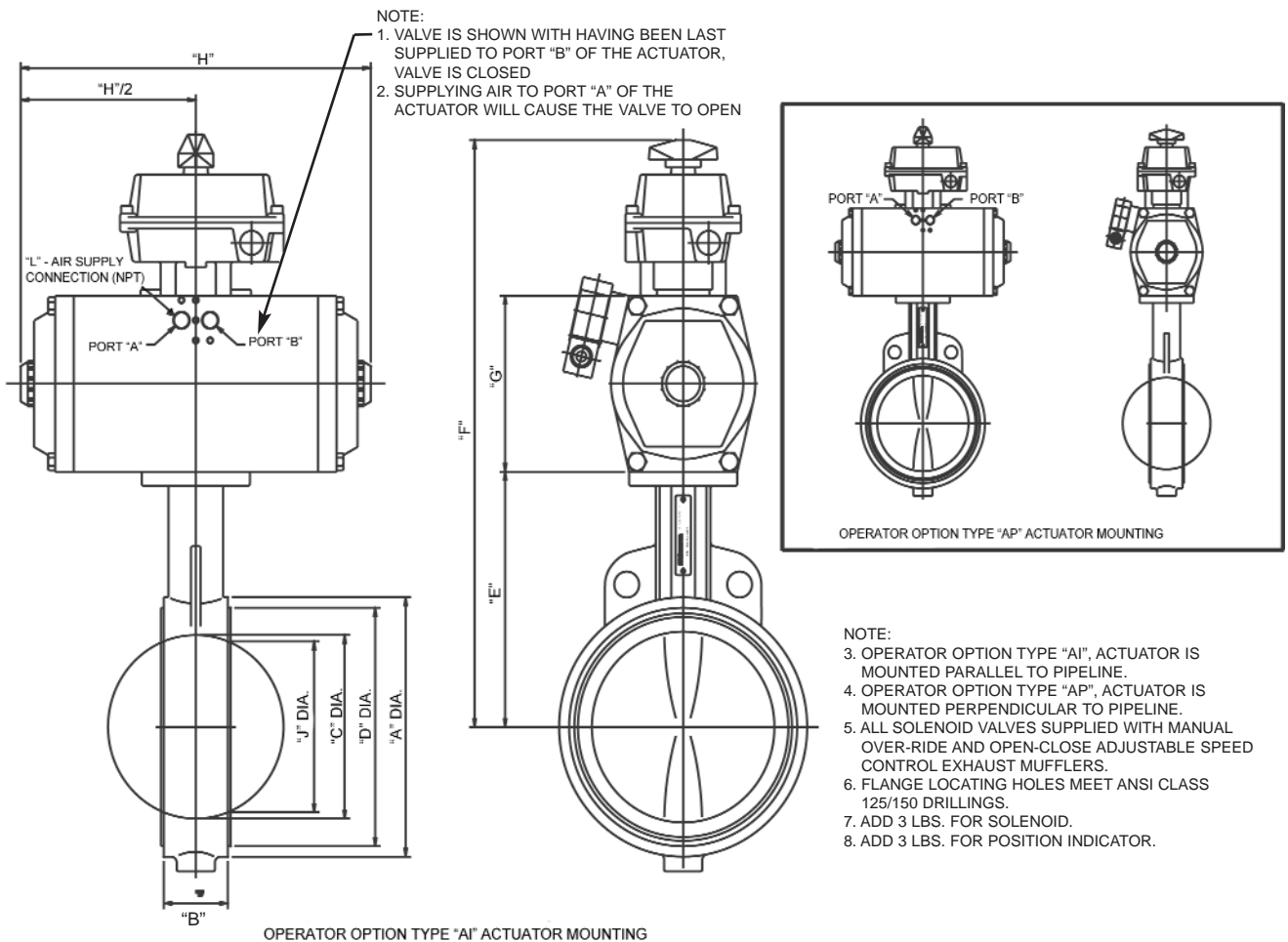
Item No.	Qty	Description
1	1	Body
2	1	Seat
3	1	Disc
4	1	Stem
5	1	Stem Seal
6	1	Stem Bushing
7	2	Stem Retainer
8	1	Thrust Washer
9	1	Retaining Ring



BUTTERFLY VALVES

Valve Size		A	B	C	D	E	F	F	G	H	J	L	Ass'y Weight Lbs *
Inches	mm												
2"	50	3.69"	1.62"	2.00"	2.84"	5.50"	13.84"	14.67"	3.46"	6.00"	1.32"	1/8"	10
2.5"	65	4.19"	1.75"	2.50"	3.34"	6.00"	14.34"	15.17"	3.46"	6.00"	1.91"	1/8"	11
3"	80	4.88"	1.75"	3.00"	4.03"	6.25"	15.40"	16.23"	4.27"	7.89"	2.55"	1/8"	15
4"	100	6.06"	2.00"	4.00"	5.16"	7.00"	16.15"	16.98"	4.27"	7.89"	3.57"	1/8"	20
5"	125	7.06"	2.12"	5.00"	6.16"	7.50"	16.65"	17.48"	4.27"	7.89"	4.63"	1/8"	22
6"	150	8.12"	2.12"	5.75"	7.02"	8.00"	17.49"	18.32"	4.61"	8.91"	5.45"	1/8"	27
8"	200	10.50"	2.50"	7.75"	9.47"	9.50"	19.90"	20.73"	5.52"	12.10"	7.45"	1/4"	53
10"	250	12.75"	2.50"	9.75"	11.47"	10.75"	21.15"	21.98"	6.52"	12.10"	9.53"	1/4"	68
12"	300	14.88"	3.00"	11.75"	13.47"	12.25"	24.93"	25.76"	7.80"	15.45"	11.47"	1/4"	105
14"	350	17.05"	3.00"	13.25"	15.28"	13.62"	26.30"	27.13"	7.80"	15.45"	13.04"	1/4"	133
16"	400	19.21"	4.00"	15.25"	17.41"	14.75"	29.67"	30.50"	10.04"	18.92"	14.85"	1/4"	205
18"	450	21.12"	4.25"	17.25"	19.47"	16.00"	30.92"	31.75"	10.04"	18.92"	16.85"	1/4"	270
20"	500	23.25"	5.00"	19.25"	21.59"	17.25"	32.17"	33.00"	10.04"	18.92"	18.73"	1/4"	330

* Without solenoid and position indicator



Our brochure makes no offers, representations or warranties (express or implied), and information and data contained in this brochure are for general reference only and may change at any time. Please contact us for specific information or data that may relate to your interests.



www.fls-pt.com

Up-to-date addresses of worldwide subsidiaries and sales offices are available from our website

DENMARK

FLSmidth A/S
 Vigerslev Allé 77
 DK-2500 Valby
 Copenhagen
 Tel:+45 36 18 10 00
 Fax:+45 36 30 18 20
 Email: info@flsmidth.com

USA

FLSmidth Inc.
 2040 Avenue C
 Bethlehem, PA 18017-2188
 Tel:+1 610-264-6011
 Tel:+1 800-523-9482
 Fax:+1 610-264-6170
 E-mail: info-us@flsmidth.com

INDIA

FLSmidth Ltd.
 Capital Towers
 180, Kodambakkam High Road
 Nungambakkam
 Chennai 600 034
 Tel:+91 - 44-52 191234
 Fax:+91 - 44-2827 9393
 E-mail: indiainfo@flsmidth.com