CI BUTTERFLY VALVE LUG TYPE CL150

Gear Operated · Cast Iron Body, Ductile Iron Disc · Resilient Seated

BRAND: SW FLOW CONTROLS | SKU: SW-0381 | SIZE 1.1/2" TO 12" | ANSI CLASS 150 DRILLING



FIG. 1 | CI LUG BUTTERFLY VALVE, GEAR OPERATED

PRODUCT OVERVIEW

The SWBM CI Butterfly Valve Lug Type is a quarter-turn, resilient seated valve for isolation and throttling duty on large bore lines. The cast iron body carries tapped lugs on the flange faces, so the valve is bolted independently to each pipe flange. Downstream pipework can be removed for maintenance with the valve holding line pressure, and the valve is suitable for dead end service within the rated limits.

The ductile iron disc runs on a stainless steel shaft supported in bronze bushings, and seals against a one-piece elastomer seat that also forms the flange face gasket. An enclosed worm gear operator with handwheel gives controlled 90 degree travel, self-locking hold in any position and a visible position indicator. The tapped lugs are drilled to ANSI B16.5 Class 150 and accept UNC studs from each side.

Valve type	**Lug type butterfly valve, resilient seated**
Operation	**Enclosed worm gear with handwheel, 90°**
Body material	**Cast iron, ASTM A126 Class B**
Disc material	**Ductile iron, ASTM A536 Gr. 65-45-12**
End connection	**Lug type, tapped, ANSI Class 150 drilling**
Size range	**1.1/2" to 12" (DN40 to DN300)**

TECHNICAL SPECIFICATION

Design standard	**API 609 / MSS SP-67**	Working pressure	**10 bar (150 psi) CWP, non-shock**
Valve standard	**ISO 5752 / BS 5155 / BS EN 593**	Shell test	**1.5 x rated pressure**
Face to face	**ISO 5752, short pattern**	Seat test	**1.1 x rated pressure, bubble tight**
Flange drilling	**ANSI B16.5 Class 150**	Working medium	**Water, oil, gas**
Top flange	**ISO 5211, F07 / F10 by size**	Temperature range	**-20°C to +110°C (EPDM seat)**
Testing	**API 598 / EN 12266-1**	Shaft material	**Stainless steel 410 or 431**

BILL OF MATERIALS

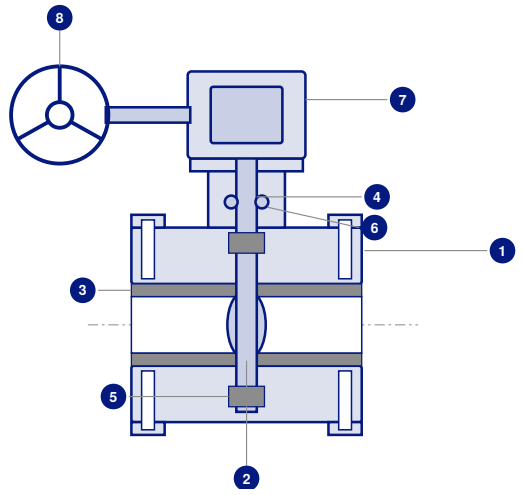


FIG. 2 | SECTIONAL ARRANGEMENT

#	COMPONENT	MATERIAL
1	Body	Cast iron, ASTM A126 Class B
2	Disc	Ductile iron, ASTM A536 Gr. 65-45-12
3	Seat	EPDM (NBR optional)
4	Shaft	Stainless steel 410 / 431, ASTM A276
5	Bushing	Bronze, ASTM B62 C83600
6	O-ring	NBR
7	Gear operator	Enclosed worm gear, cast iron housing
8	Handwheel	Cast iron

Body and disc materials are as listed for this product code. Ductile iron, bronze, stainless steel 304 and stainless steel 316 discs are available on request. The gear operator, handwheel and fasteners are to manufacturer standard and are not itemised in the source bill of material.

DIMENSIONS AND WEIGHTS

SIZE	DN	ØD	L	H	H1	H2	ØC	LUGS X TAPPING	WEIGHT (KG)
1.1/2"	40	86	33	205	58	124	98.5	4 x 1/2"	3.5
2"	50	100	43	235	72.5	130.5	120.5	4 x 5/8"	4.1
2.1/2"	65	112	46	237	75.5	129.5	139.5	4 x 5/8"	5.5
3"	80	126	46	255	82	143	152.5	4 x 5/8"	6.8
4"	100	153	52	292	99.5	160.5	190.5	8 x 5/8"	8.6
5"	125	182	56	317	111	177	216	8 x 3/4"	10.5
6"	150	210	56	357	134	191	241.5	8 x 3/4"	12.5
8"	200	255	60	412	163	217	298.5	8 x 3/4"	21.4
10"	250	328	68	519	218	267	362	12 x 7/8"	29.3
12"	300	374	78	588	249	295	432	12 x 7/8"	44

All dimensions in mm. ØD = body outside diameter, L = face to face, H = overall height of the bare valve to the top of the shaft, h1 = centreline to bottom of body, h2 = centreline to top flange face, ØC = lug bolt circle to ANSI B16.5 Class 150 with UNC tappings. H and the weights exclude the gear operator and handwheel; assembled figures are issued on request. Dimensions are nominal. Certified drawings for the supplied make and size are issued on request.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0381
Size	2", 2.1/2", 3", 4", 5", 6", 8" held in stock. 1.1/2", 10" and 12" against enquiry
Body and disc	Cast iron body with ductile iron disc
Seat	EPDM standard. NBR on request
Operation	Enclosed worm gear with handwheel. Lever and actuator versions available
Order example	**SW-0381 / 6" / CL150 / EPDM / GEAR**

Stock held in Dubai for fast despatch across the UAE and GCC. Larger sizes and alternative drillings including JIS 5K, JIS 10K, JIS 16K and BS 4504 PN10 are offered against enquiry. Contact our sales desk for pricing, availability and certification requirements.

PRESSURE AND TEMPERATURE

Working pressure	**10 bar (150 psi) CWP, non-shock**
Shell test pressure	**15 bar (225 psi)**
EPDM seat	**-20°C to +110°C**
NBR seat	**-10°C to +80°C**

Temperature limits are seat dependent and are stated by the manufacturer. The lug body allows dead end service and removal of the downstream flange. Confirm the dead end pressure rating with SWBM for the size and seat combination required.

TYPICAL APPLICATIONS

- Water treatment and distribution networks
- HVAC and chilled water systems
- Fire protection ring mains
- Pump rooms and building services risers
- Irrigation and landscape supply lines
- General industrial process and utility piping

COMPLIANCE AND QUALITY

- Design in accordance with API 609 and MSS SP-67
- Face to face to ISO 5752, short pattern
- Flange drilling to ANSI B16.5 Class 150
- Top flange to ISO 5211 for direct actuator mounting
- Pressure testing to API 598 / EN 12266-1
- 100% shell and seat tested prior to despatch
- Material test certificate EN 10204 3.1 on request

INSTALLATION AND OPERATION

- Flush the line before installation to clear weld slag, sand and debris
- Set the disc just off the closed position while the valve is fitted between the flanges
- Check that the disc clears the pipe bore before operating, allowing for pipe wall thickness and lining
- No flange gasket is needed. The moulded seat face seals against the mating flange
- Tighten the flange bolts evenly in a diagonal sequence
- Do not use the gear operator or handwheel as a lifting point
- Operate the valve periodically to prevent the seat sticking on lines in low use

COMPANY

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