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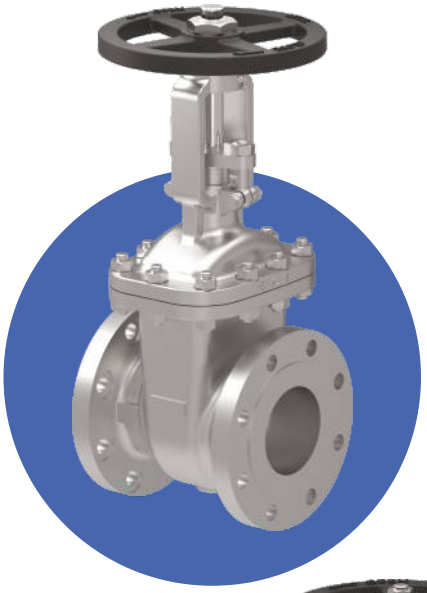
Gate, Globe & Swing Check (GGC) Valves (Metal - Seated)



for

WATER TREATMENT PLANTS

OIL & GAS INDUSTRIES

PETROCHEMICAL INDUSTRIES

ALLIED INDUSTRIES

LGT Series Gate

LGL Series Globe &

LCV Series Swing Check

(GGC) Valves

Material of Construction

Lubi Gate, Globe & Check Valves are offered in a wide variety of MOC's as per the applications requirement. Also, we can provide the Valve Trims as per the customers requirements.

Body / Bonnet Materials			
Sr.#	**ASTM Grade**	**Material Specification**	**Working Temperature Range**
1	ASTM A216 Gr. WCB	Carbon Steel	-29°C to 425°C (-20°F to 800°F)
2	ASTM A217 Gr. WC6	Low and Intermediate Alloy Steel 1-¼ Cr – ½ Mo	-29°C to 593°C (-20°F to 1100°F)
3	ASTM A217 Gr. WC9	Low and Intermediate Alloy Steel 2-¼ Cr – 1 Mo	-29°C to 593°C (-20°F to 1100°F)
4	ASTM A351 Gr. CF8	Austenitic Stainless Steel (18Cr–8Ni)	-254°C to 816°C (-425°F to 1500°F)
5	ASTM A351 Gr. CF8M	Austenitic Stainless Steel (16Cr–12Ni–2Mo)	-254°C to 816°C (-425°F to 1500°F)
6	ASTM A351 Gr. CF3	Austenitic Stainless Steel (18Cr–8Ni)	-254°C to 425°C (-425°F to 800°F)
7	ASTM A351 Gr. CF3M	Austenitic Stainless Steel (16Cr–12Ni–2Mo)	-254°C to 455°C (-425°F to 850°F)
8	ASTM A352 Gr. LCB / LCC	Low Temperature Steel	-46°C to 345°C (-50°F to 650°F)

Note: Other Types of Materials such as C5, C12, Duplex SS are available on request.

Standards

Design (Gate Valve) (Globe Valve) (Check Valve)	**API 600 API 623 / BS 1873 API 6D / BS 1868**
Face to Face / End to End Dimensions	ASME B16.10
Flanged End Dimensions	ASME B16.5
Butt-weld End Dimensions	ASME B16.25
Pressure – Temperature Range	ASME B16.34
Inspection & Testing	API 598 / BS 6755 Part I / BS EN 12266 – Part 1 / ISO 5208

API Trim Options

Trim #	**Seat Surface**	**Wedge Seating Surface**	**Stem / Backseat Surface**
2	18Cr – 8Ni (SS 304)	18Cr – 8Ni (SS 304)	18Cr – 8Ni (SS 304)
5	HF – Stellite 6	HF – Stellite 6	13Cr (SS 410)
8	HF – Stellite 6	13Cr (SS 410)	13Cr (SS 410)
12	HF – Stellite 6	18Cr – 8Ni – Mo (SS 316)	18Cr – 8Ni – Mo (SS 316)
16	HF – Stellite 6	HF – Stellite 6	18Cr – 8Ni – Mo (SS 316)

* Other Trims available on special request

Gate, Globe & Swing Check Valves

Main Features

Body

Gate Valve

- Lubi Gate Valve Body has a straight through port which is ideal for bi-directional type of flow.
- This ensures minimum flow resistance, turbulence & erosion.
- The internal ribs inside the Body ensures guide to the stem as well as the wedge so that it accurately aligns with the valve seats.

Globe Valve

- Lubi Globe Valve Body is designed in such a way that the flow passage area never decreases. This ensures & helps in achieving proper flow with minimal loss at the outlet of the valve.

Swing Check Valve

- Lubi Check Valve Body has a straight full port on the upstream side of the valve. On the downstream side, there is ample amount of space given inside the body for the disc to open & swing fully via the pressure of fluid such that it does not disturb or create any resistance & turbulence to the smooth flow.

Gate, Globe & Swing Check Valves

Main Features

Bonnet

- The Bonnet of Gate as well as Globe Valve are designed in such a way that Integral Back-Seat as well as Threaded Back-Seat options are available to offer as per customer requirement.
- The Bonnet also houses the Yoke Sleeve & Stuffing Box assembly both of which are precisely machined to give proper alignment to the stem & the wedge during sealing

Body / Bonnet Joint

- The Body-Bonnet Joint Gasket is made up of Graphite reinforced by SS Ring so that it can handle high pressure & prevent any leakage pass through it.
- The Body – Bonnet Joint is tightly sealed with the help of standard Studs & Nuts as per the Bolting Calculation (ASME SEC. VIII & ASME B16.34) to prevent any leakage past the joint under maximum operating pressure for which the valve is designed for.

Wedge

- Lubi Gate Valve Wedge is casted one piece. It has internal guide slots which is used for guiding through the Body Guide Ribs for proper alignment.
- We offer flexible wedge which ensures proper & tight sealing at a wide range of pressure-temperature range without any effect of stress concentration or deformation to the component.
- The thrust generated from stem to wedge is applied towards the center of the wedge at the time of sealing. This ensures uniform operation of thrust & reduction in torque while obtaining a clean leak free seal.

Seat Ring

- Lubi Gate, Globe & Check Valves come with a seal welded Seat Ring which offer tight leakproof seal without any deformation or loosening at high pressure – temperatures compared to threaded seats. Also, the chance of leakage past the Body & Seat gets eliminated with seal welded seats.
- For Stainless Steel MOC's we also offer integral Seats which are integral with the Body Casting & are machined to behave as Seats for providing sealing.
- Threaded Seats are available optionally as per customer requirement for Lubi Globe Valves.

Stem

- Lubi Gate Valve has a Stem which is of one piece construction.
- It has smooth machined surface & ACME Threads made using precision machinery & tooling in order to increase life of the stem as well as to minimize leakage, friction & thus torque.
- Lubi Gate Valves has head of the stem T – Shaped which gets slotted in the T-Slot of the Wedge & thus prevents any free rotational movement of the Wedge during opening & closing. It also has a Back-seat chamfer which matches the degree of the Back0seat Bush in the bonnet to prevent any leakage past through it.
- Lubi Globe Valves have a stem which is secured to the Plug using a stem nut which allows free rotational movement of the plug while opening & closing. This ensures uniform seating when the valve is closed & hence prevents any leakage.

Yoke Sleeve / Yoke Bush

- It is made up of either Cast Austenitic Ductile Iron Grade D2 or Aluminum Bronze material in order to provide corrosion resistance, heat resistance and prevent wear.
- It has long thread engagement as per Standard API 600 which provide proper alignment of the stem.

Stem Packing Box

- The Packing Box contains space for stem packing & is machined as per the precise tolerances given by Design. The surface finish is also closely controlled in order to prevent any leakage of steam / fluid past through it.
- Seven numbers of Gland Packing are provided in the Stem Packing Box. The two ends of the packing are of Graphite cross-plaited packing (Braided Packing) & the middle 5 are of compressed graphite packing rings (Moulded packing).

Operation

- Lubi Gate Valve & Globe Valve is supplied with various operators such as Handwheel, Gear Box & Actuators.
- Unless specified Lubi valves will be supplied with Handwheel operator.
- Needle roller thrust bearings are used for thrust reduction in Gate and Glove valve (8" and above).

Gate Valves

LGT Series

Pressure Rating: #150

End Connection : Flanged End RF

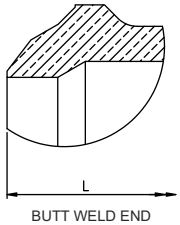
Size Range: 2” to 12” (DN50 to DN300)

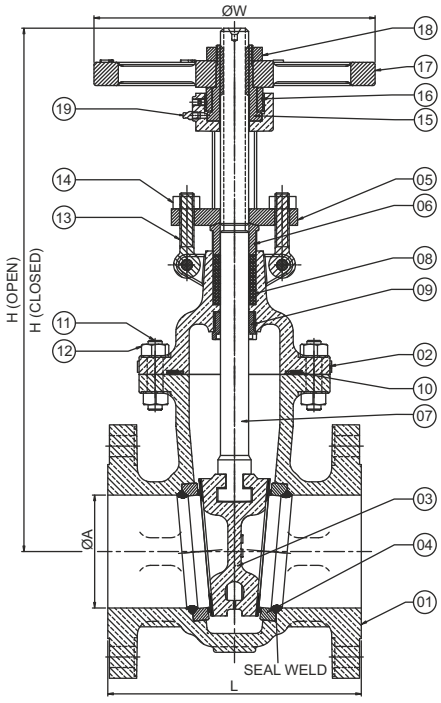
Standard – Material of Construction

Body / Bonnet Materials				
Sr.#	**Description**	**WCB**	**CF8**	**CF8M**
1	Body	A216 WCB	A351 CF8	A351 CF8M
2	Bonnet	A216 WCB	A351 CF8	A351 CF8M
3	Wedge	A216 WCB + 13% Cr.	A351 CF8	A351 CF8M
4	Seat Ring	A216 WCB + 13% Cr.	A351 CF8	A351 CF8M
5	Gland Flange	A105 / A216 WCB	A351 CF8	A351 CF8M
6	Gland Bush	A276 T410	A276 - T304	A276 - T316
7	Stem	A479 T410	A479 - T304	A479 - T316
8	Stem Packing	5 Die Moulded Graphite rings + 2 Braided Graphite rings on top & bottom		
9	Backseat Bush	A276 T410	A276 - T304	A276 - T316
10	Gasket	SWG SS304 + Graphite	SWG SS304 + Graphite	SWG SS316 + Graphite
11	Stud	A193 Gr. B7	A193 Gr. B8M CL.2	A193 Gr. B8M CL.2
12	Stud Nut	A194 Gr. 2H	A194 Gr. 8M	A194 Gr. 8M
13	Eye Bolt	A193 Gr. B7	A193 Gr. B8M CL.2	A193 Gr. B8M CL.2
14	Eye Bolt Nut	A194 Gr. 2H	A194 Gr. 8M	A194 Gr. 8M
15	Yoke Sleeve	A439 Type D2	A439 Type D2	A439 Type D2
16	Yoke Bush	Carbon Steel	Stainless Steel	Stainless Steel
17	Handwheel	Ductile Iron	Ductile Iron	Ductile Iron
18	Handwheel Nut	Steel	Steel	Steel
19	Grease Fitting	SS304	SS304	SS304

Dimensions

SIZE / DIMENSIONS								
Size	Inch	2"	3"	4"	6"	8"	10"	12"
	mm	50	80	100	150	200	250	300
ØA		51	76.2	102	152.4	203.2	254	305
L	Flange	178	203	229	267	292	330	356
	Butt Weld	216	282	305	403	419	457	502
ØW		203	229	254	305	356	405	455
H	Open	404	483	586	790	1006	1197	1392
	Close	344	397	473	619	785	927.5	1074
WEIGHT (Kg)	Flange	18.4	30.7	47.7	69	103.7	165.1	235.7
	Butt Weld	15.7	26.8	40.84	63.88	96	153.4	213.4





Globe Valves

LGL Series

Pressure Rating: #150

End Connection : Flanged End RF

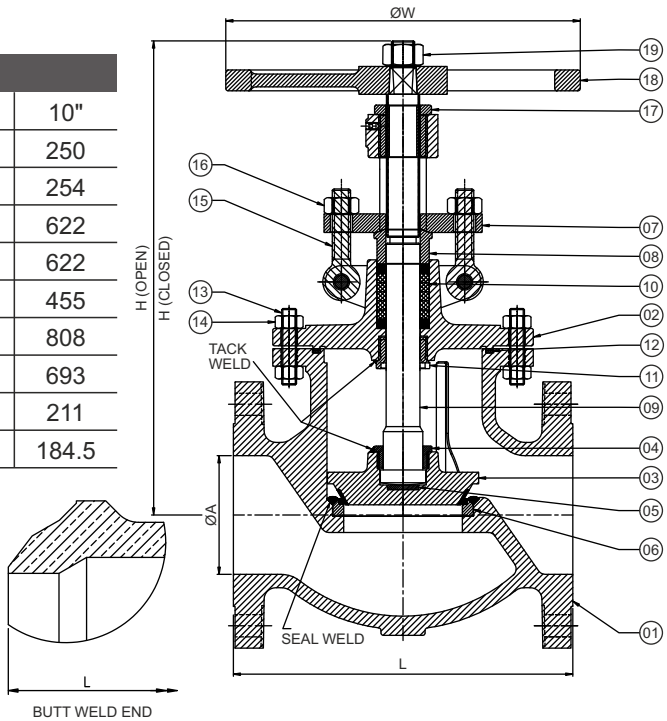
Size Range: 2” to 10” (DN50 to DN250)

Standard – Material of Construction

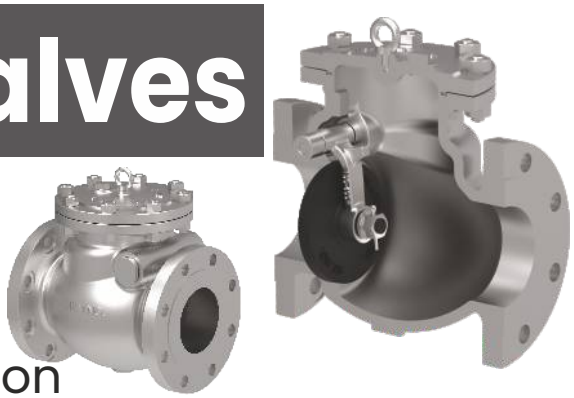
Body / Bonnet Materials				
Sr.#	**Description**	**WCB**	**CF8**	**CF8M**
1	Body	A216 WCB	A351 CF8	A351 CF8M
2	Bonnet	A216 WCB	A351 CF8	A351 CF8M
3	Plug	A216 WCB + 13% Cr.	A351 CF8	A351 CF8M
4	Plug Nut	A276 T410	A276 T304	A276 T316
5	Thrust Plate	A276 T420	A276 T304	A276 T316
6	Seat Ring	A216 WCB + 13% Cr.	A351 CF8	A351 CF8M
7	Gland Flange	A105 / A216 WCB	A351 CF8	A351 CF8M
8	Gland Bush	A276 T410	A276 - T304	A276 - T316
9	Stem	A479 T410	A479 - T304	A479 - T316
10	Stem Packing	5 Die Moulded Graphite rings + 2 Braided Graphite rings on top & bottom		
11	Backseat Bush	A276 T410	A276 - T304	A276 - T316
12	Gasket	SWG SS304 + Graphite	SWG SS304 + Graphite	SWG SS316 + Graphite
13	Stud	A193 Gr. B7	A193 Gr. B8M CL.2	A193 Gr. B8M CL.2
14	Nut	A194 Gr. 2H	A194 Gr. 8M	A194 Gr. 8M
15	Eye Bolt	A193 Gr. B7	A193 Gr. B8M CL.2	A193 Gr. B8M CL.2
16	Eye Bolt Nut	A194 Gr. 2H	A194 Gr. 8M	A194 Gr. 8M
17	Yoke Bush	A439 Type D2	A439 Type D2	A439 Type D2
18	Handwheel	Ductile Iron	Ductile Iron	Ductile Iron
19	Handwheel Nut	Steel	Steel	Steel

Dimensions

SIZE / DIMENSIONS							
Size	Inch	2"	3"	4"	6"	8"	10"
	mm	50	80	100	150	200	250
ØA		51	76.2	102	152.4	203.2	254
L	Flange	203	241	292	406	495	622
	Butt Weld	203	241	292	406	495	622
ØW		203	254	305	356	405	455
H	Open	339	401	467	517	652	808
	Close	303	356	408	453	579	693
WEIGHT (Kg)	Flange	18.5	33.7	52.5	84.7	139.1	211
	Butt Weld	15.5	27.9	42.9	70.8	119.2	184.5



Swing Check Valves



LCV Series

Pressure Rating: #150

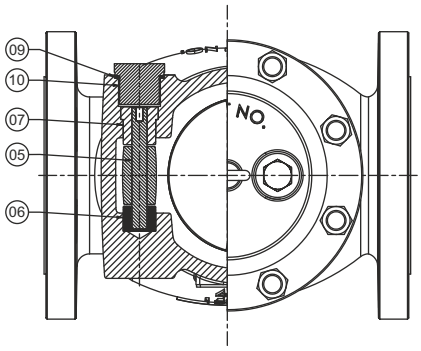
End Connection : Flanged End RF

Size Range: 2” to 12” (DN50 to DN300)

Standard – Material of Construction

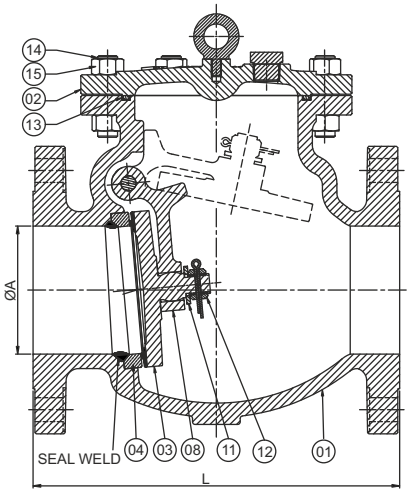
Body / Bonnet Materials				
Sr.#	**Description**	**WCB**	**CF8**	**CF8M**
1	Body	A216 WCB	A351 CF8	A351 CF8M
2	Cover	A216 WCB	A351 CF8	A351 CF8M
3	Disc	A216 WCB + 13% Cr.	A351 CF8	A351 CF8M
4	Seat Ring	A216 WCB + 13% Cr.	A351 CF8	A351 CF8M
5	Hinge Pin	A479 T410	A479 - T304	A479 - T316
6	Inner Bush	A276 T420	A479 - T304	A479 - T316
7	Outer Bush	A276 T420	A479 - T304	A479 - T316
8	Hinge	A216 WCB	A351 CF8	A351 CF8M
9	Washer	Copper	Copper	Copper
10	Hinge Pin Plug	A105	A479 - T304	A479 - T316
11	Washer	SS 304	SS 304	SS 316
12	Disc Nut	SS 304	SS 304	SS 316
13	Gasket	SWG SS304 + Graphite	SWG SS304 + Graphite	SWG SS316 + Graphite
14	Stud	A193 Gr. B7	A193 Gr. B8M CL.2	A193 Gr. B8M CL.2
15	Nut	A194 Gr. 2H	A194 Gr. 8M	A194 Gr. 8M

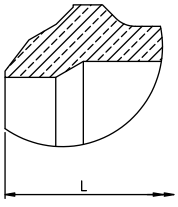
Note : Lifting eye bolts are provided from 4” 150# and above.



Dimensions

SIZE / DIMENSIONS								
Size	Inch	2"	3"	4"	6"	8"	10"	12"
	mm	50	80	100	150	200	250	300
ØA		51	76.2	102	152.4	203.2	254	305
L	Flange	203	241	292	356	495	622	698
	Butt Weld	203	241	292	356	495	622	698
H	Open	144	160	220	267	314	362	407
WEIGHT (Kg)	Flange	14.1	23.1	38	63.9	106.3	162.9	238.1
	Butt Weld	10.9	17.3	28.1	51	84.8	135.8	196.2





BUTT WELD END

VALVES

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Product Improvement is a continuous process at 'LUBI'. The data given in this publication is therefore subject to revision.

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ISO 9001 ISO 14001

Customer Care Number : 09824200800