

LE-LF type shut-off and control valve

Dimension range	DN 10 - 50 / NPS 3/8" - 2"
Pressure range	PN 16 - 400 / Class 150 - 2500
Temperature range	- 60°C - +550°C

This valve is designed according to API 602 Standard with forged body up to 50mm nominal size, for wide pressure-, and temperature ranges. The LE type valve is suitable for closing gas and liquid mediums streams while the LF type is suitable also for chocking. The valve seat and the disc is welded with Stellite 6 for the purpose of excellent abrasion resistance. The packing of the stuffing box is graphite (or Teflon) rings, which can be replaced during operation as well, in the uppermost position of the stem. The sealing of the bonnet is highly flexible spiral wound gasket. For higher pressures the sealing is a stainless steel gasket ring. The valves can be manufactured with threaded valve seats on demand.

Materials:

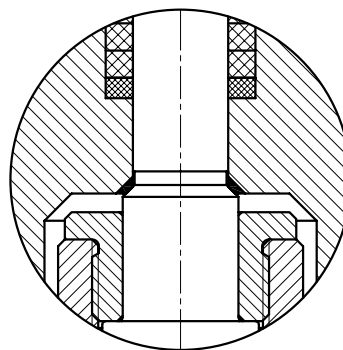
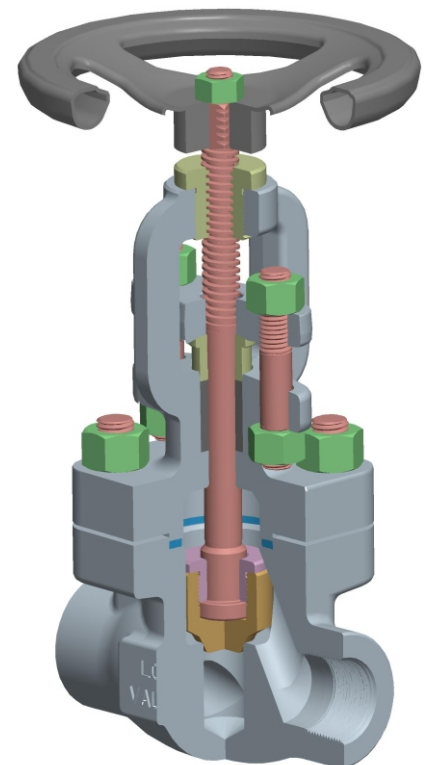
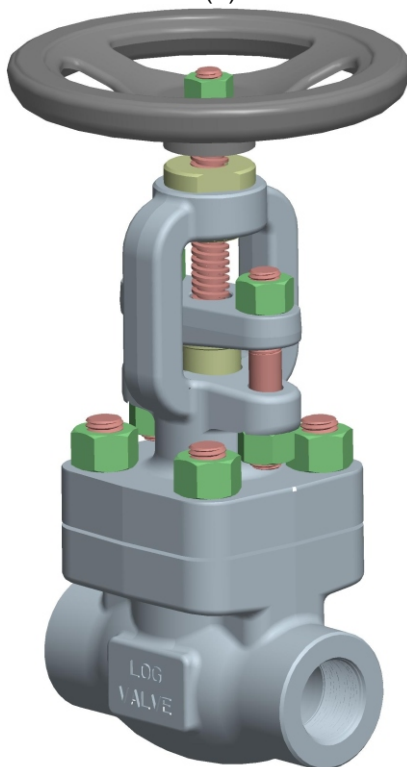
- ASTM A105
- ASTM A350 LF2
- ASTM A182 F11
- ASTM A182 F316(L)

Main features:

- Disc closing on conical surface
- Bolted bonnet
- Rising stem design with rising handwheel
- Ensured backseat
- Flanged, threaded, butt welded, or socket welded ends

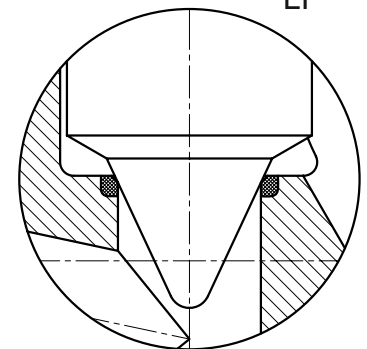
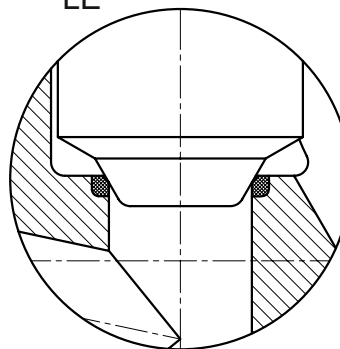
Design possibilities:

- Renewable valve seat
- Electric motor operation
- Pneumatic operation



LE

LF



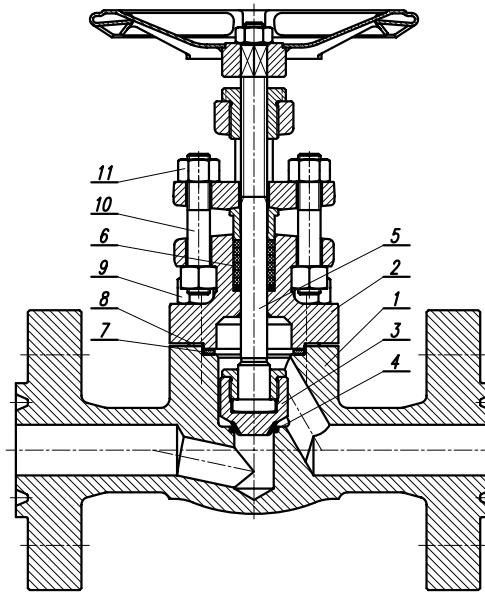
Design standards:

- Construction: API 602 / ISO 15761
- Face to face length: ASME B16.10; EN 558
- Socket welded type: ASME B16.11; DIN 3239
- Butt welded type: ASME B16.25; EN 12627
- Threaded type: ASME B1.20.1 NPT
- Flanged type: ASME B16.5; EN 1092-1; GOST 12815; GOST 12821
- Pressure test: API 602; EN 12266-1



List of the main components

LE-LF type shut-off and control valve



N°	Description	Standard design			NACE design	Corrosion-resistant design
		T= -29°C ~ +427°C	T= -46°C ~ +343°C	T= -20°C ~ +550°C	T= -46°C ~ +343°C	T= -60°C ~ +427°C
1	Body	ASTM A105	ASTM A350 LF2	ASTM A182 F11	ASTM A350 LF2	ASTM A182 F316(L)
2	Bonnet	ASTM A105	ASTM A350 LF2	ASTM A182 F11	ASTM A350 LF2	ASTM A182 F316(L)
3	Valve head	ASTM A276 410 (+HF)	ASTM A276 410 (+HF)	ASTM A276 410 (+HF)	ASTM A182 F6NM (+HF)	ASTM A276 316(L) (+HF)
4	Valve seat	HF ASTM A276 410 (+HF)	HF ASTM A276 410 (+HF)	HF ASTM A276 410 (+HF)	HF ASTM A182 F6NM (+HF)	HF ASTM A276 316(L) (+HF)
5	Stem	ASTM A276 410	ASTM A276 410	ASTM A276 410	ASTM A182 F6NM	ASTM A276 316(L)
6	Gland packing	Grafit	Grafit	Grafit	Grafit	Grafit
7	Body-bonnet packing	Spiral Wound 316L+Grafit	Spiral Wound 316L+Grafit	Spiral Wound 316L+Grafit	ASTM A276 316L	Spiral Wound 316L+Grafit
8; 10	Bolt	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A320 L7M	ASTM A193 B8M Cl.2
9; 11	Nut	ASTM A194 2H	ASTM A194 Gr.7	ASTM A194 8M	ASTM A194 2HM	ASTM A194 8M

- HF = Stellite 6 welding on (min. 350 HB)
- For other mediums, orders on material quality is based on temperature.

Optional TRIM material combinations:

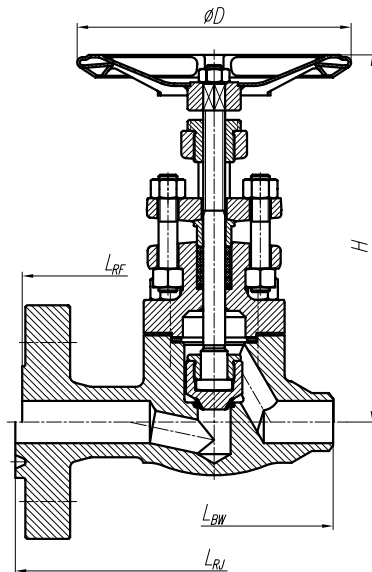
Trim number (API 602)	Sealing surface of valve head	Sealing surface of valve seat	Stem material
1	410	410	410
5	Stellit 6	Stellit 6	410
8	410	Stellit 6	410
10	316	316	316
12	316	Stellit 6	316
16	Stellit 6	Stellit 6	316

LE-LF



Chart of dimensions

LE-LF type shut-off and control valve ANSI


CLASS 150

NPS	LRF* (mm)	LRJ* (mm)	LBW (mm)	ØD (mm)	H (mm)
1/2"	152	---	110	100	186
3/4"	178	---	120	100	218
1"	203	216	135	125	225
1 1/4"	216	229	150	125	248
1 1/2"	229	242	170	150	291
2"	267	283	210	150	340

* CLASS 300 face to face length

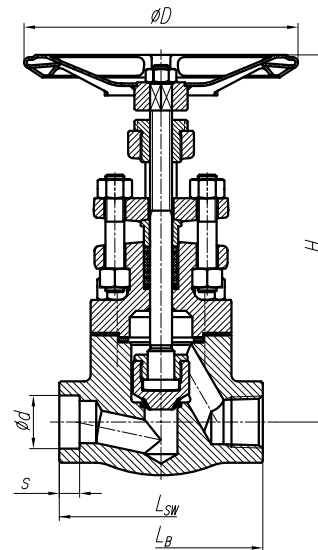
CLASS 600

NPS	LRF (mm)	LRJ (mm)	LBW (mm)	ØD (mm)	H (mm)
1/2"	165	163	110	100	189
3/4"	190	190	120	125	228
1"	216	216	135	150	234
1 1/4"	229	229	150	150	278
1 1/2"	241	241	170	200	304
2"	292	295	210	250	354

CLASS 2500**

NPS	LRF (mm)	LRJ (mm)	LBW (mm)	ØD (mm)	H (mm)
1/2"	264	264	150	150	286
3/4"	273	273	165	200	332
1"	308	308	175	250	352
1 1/4"	349	352	195	250	406
1 1/2"	384	387	230	300	448
2"	451	454	265	350	530

** with ring-joint body-bonnet packing


CLASS 300

NPS	LRF (mm)	LRJ (mm)	LBW (mm)	ØD (mm)	H (mm)
1/2"	152	163	110	100	186
3/4"	178	191	120	100	218
1"	203	216	135	125	225
1 1/4"	216	229	150	125	248
1 1/2"	229	242	170	150	291
2"	267	283	210	150	340

CLASS 900; CLASS 1500

NPS	LRF (mm)	LRJ (mm)	LBW (mm)	ØD (mm)	H (mm)
1/2"	216	216	110	125	189
3/4"	229	229	120	150	228
1"	254	254	135	175	234
1 1/4"	279	279	150	200	278
1 1/2"	305	305	170	250	304
2"	368	371	210	250	354

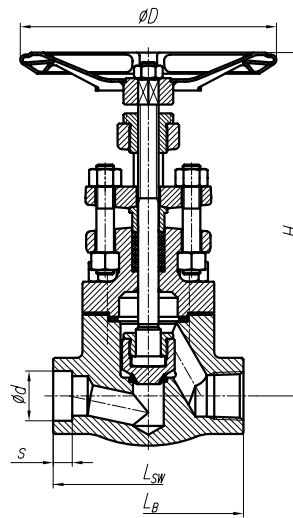
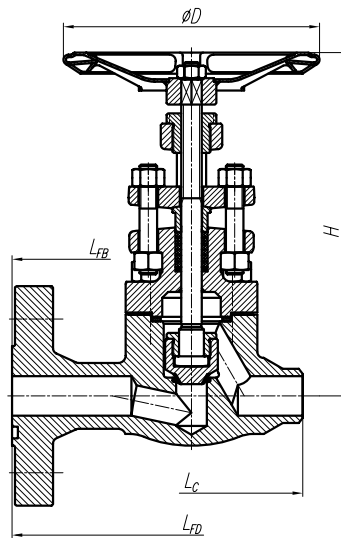
CLASS 800; CLASS 1500; CLASS 2500**

NPS	Lsw ; Lb (mm)		Ød (mm)	Smin (mm)	ØD (mm)		H (mm)	
	800 1500	2500			800 1500	2500	800 1500	2500
3/8"	90	110	17,6	10	100	125	189	270
1/2"	95	120	21,8	10	125	150	189	286
3/4"	115	145	27,2	13	150	200	228	332
1"	130	165	33,9	13	175	250	234	352
1 1/4"	150	200	42,7	13	200	250	278	406
1 1/2"	170	221	48,5	13	250	300	304	448
2"	210	250	61,2	16	250	350	354	530



Chart of dimensions

LE-LF type shut-off control valve
 EN



PN 16; PN 25; PN 40

DN	LFB; LFD (mm)	Lc (mm)	Lsw; Lb (mm)	Ød (mm)	S _{min} (mm)	ØD (mm)	H (mm)
10	130	---	90	17,6	10	100	186
15	130	110	95	21,8	10	100	186
20	150	120	115	27,2	13	100	218
25	160	135	130	33,9	13	125	225
32	180	150	150	42,7	13	125	248
40	200	170	170	48,8	13	150	291
50	230	210	210	61,2	16	150	340

PN 63

DN	LFB; LFD (mm)	Lc (mm)	Lsw; Lb (mm)	Ød (mm)	S _{min} (mm)	ØD (mm)	H (mm)
10	210	---	90	17,6	10	100	186
15	210	110	95	21,8	10	100	186
20	230	120	115	27,2	13	125	218
25	230	135	130	33,9	13	125	225
32	260	150	150	42,7	13	150	248
40	260	170	170	48,8	13	150	291
50	300	210	210	61,2	16	200	340

PN 100; PN 160

DN	LFB; LFD (mm)	Lc (mm)	Lsw; Lb (mm)	Ød (mm)	S _{min} (mm)	ØD (mm)	H (mm)
10	210	---	90	17,6	10	100	189
15	210	110	95	21,8	10	100	189
20	230	120	115	27,2	13	125	228
25	230	135	130	33,9	13	150	234
32	260	150	150	42,7	13	150	278
40	260	170	170	48,8	13	200	304
50	300	210	210	61,2	16	250	354

PN 250

DN	LFB; LFD (mm)	Lc (mm)	Lsw; Lb (mm)	Ød (mm)	S _{min} (mm)	ØD (mm)	H (mm)
10	230	---	90	17,6	10	100	189
15	230	110	95	21,8	10	125	189
20	---	120	115	27,2	13	150	228
25	260	135	130	33,9	13	175	234
32	---	150	150	42,7	13	200	278
40	300	170	170	48,8	13	250	304
50	350	210	210	61,2	16	250	354

PN 320; PN 400

DN	LFB; LFD (mm)	Lc (mm)	Lsw; Lb (mm)	Ød (mm)	S _{min} (mm)	ØD (mm)	H (mm)
10	230	---	110	17,6	10	125	270
15	230	150	120	21,8	10	150	286
20	---	165	145	27,2	13	200	332
25	260	175	165	33,9	13	250	352
32	---	195	200	42,7	13	250	406
40	300	230	221	48,8	13	300	448
50	350	265	250	61,2	16	350	530

LE-LF

