



# FULL-LIFT SAFETY VALVE

## MODEL SV441

### SPRING-LOADED FLANGE TYPE SAFETY VALVE

#### Features

**Full-lift safety valve with closed lifting device. Available in cast iron, ductile cast iron, cast steel or stainless steel; to blow off steam, gases or fluids.**

1. Approved according to TRD 421, AD-A2 and ASME Sect. VIII Div.1.
2. High blow-off capacity.
3. Stable operation, even under adverse piping conditions.
4. Spring-loaded, direct-action design.
5. Valve seat and disc are extremely wear resistant.
6. Precision disc alignment and guide.
7. Contains no asbestos or copper-alloys.
8. Options:
  - Back pressure-compensating bellows
  - Elastomer-bellows
  - Disc with soft seal
  - Drain hole



#### Specifications

Model	SV4411	SV4415	SV4412	SV4414
Body Material	Cast Iron GG-25	Ductile Cast Iron GGG40.3	Cast Steel GP 240 GH	Stainless Steel GX5CrNiMo 19-11-2
Material Number DIN EN (ASTM*)	0.6025 (A126 Cl.B)	0.7043 (A395)	1.0619 (A216 Gr.WCB)	1.4408 (A351 Gr.CF8M)
Connection	Flanged DIN EN 1092**			
Available Caps	Standard Cap H2, With Packed Lever H4, With Plain Lever H3			Standard Cap H2, With Packed Lever H4
Nominal Pressure Rating Inlet/Outlet	PN 16 / PN 16	PN 40 / PN 16		
Size/DN Inlet/Outlet	20/32, 25/40 - 125/200	25/40 - 125/200	20/40 - 125/200	25/40 - 150/250
Temperature Range (°C)	- 10 to + 200	- 60 to + 220	- 85 to + 400	- 270 to + 400
Maximum Operating Pressure (barg) PMO	13	22	40	
Maximum Operating Temperature (°C) TMO	200	220	400	

\* Equivalent material \*\* Other standards available

1 bar = 0.1 MPa

**PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):**

Maximum Allowable Pressure (barg) PMA: 13 (GG-25), 22 (GGG40.3), 46 (GP 240 GH, GX5CrNiMo 19-11-2)

Maximum Allowable Temperature (°C) TMA: 200 (GG-25), 220 (GGG40.3), 400 (GP 240 GH, GX5CrNiMo 19-11-2)



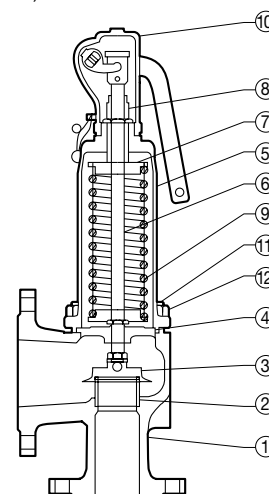
To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material <sup>1)</sup>	DIN EN	ASTM/AISI <sup>2)</sup>
①	Body	See specifications table		
②	Valve Seat	Stainless Steel	1.4404	AISI316L
③	Disc	Stainless Steel	1.4122	AISI440
④	Guide <sup>3)</sup>	Carbon Steel	1.0501	AISI1035
⑤	Bonnet <sup>3)</sup>	Ductile Cast Iron	0.7040	A536
⑥	Spindle	Stainless Steel	1.4021	AISI420
⑦	Spring Plate	Carbon Steel	1.0718	AISI12L13
⑧	Adjusting Screw with Bushing	Stainless Steel	1.4104	AISI430F
		Fluorine resin PTFE	PTFE	PTFE
⑨	Spring t < 200 °C	Alloy Steel	1.1200	—
		Alloy Steel	1.8159	AISI6145
⑩	Cap <sup>4)</sup>	Ductile Cast Iron	0.7040	A536
⑪	Body Bolt	Alloy Steel	1.1181	AISI1035
⑫	Body Nut	Alloy Steel	1.0501	AISI1035

<sup>1)</sup> Materials shown in this table are for SV4411, SV4415 and SV4412. Contact TLV for materials of SV4414.

<sup>2)</sup> Equivalent materials <sup>3)</sup> Actual material may differ. Manufacturer defines the material.

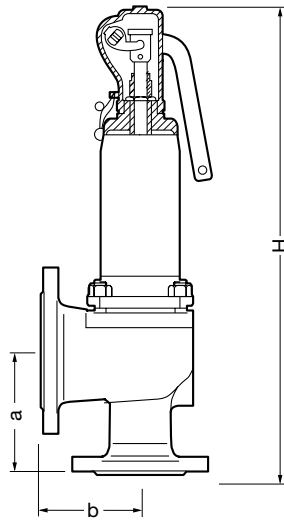
<sup>4)</sup> Available caps: H2 (not shown): Standard cap  
H3: cap with plain lever (not available for SV4414)  
H4: cap with packed lever



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**Dimensions**

- SV4411
- SV4412
- SV4414
- SV4415
- Flanged



**SV4411/SV4412/SV4414/SV4415 Flanged<sup>1)</sup>**

DN	H	a	b	Weight (kg)
20 / 32 <sup>2)</sup>	304	85	95	9
20 / 40 <sup>3)</sup>	304	85	95	9
25 / 40	339	105	100	9
32 / 50	446	115	110	12
40 / 65	512	140	115	16
50 / 80	569	150	120	22
65 / 100	699	170	140	32
80 / 125	801	195	160	56
100 / 150	883	220	180	75
125 / 200	913	250	200	85
150 / 250 <sup>4)</sup>	1083	285	225	131

<sup>1)</sup> DIN 2501 PN 16, 25, 40, other standards available

<sup>2)</sup> Only SV4411 <sup>3)</sup> Only SV4412

<sup>4)</sup> Only SV4414

**Blow-Off Capacity**

DN	20	25	32	40	50	65	80	100	125	150
Flow Diameter d <sub>0</sub> (mm)	18	23	29	37	46	60	74	92	98	125
Operating Pressure p (barg)	Saturated Steam (kg/h) (Consult TLV for blow-off capacities of air and water)									
0,2	86	140	223	363	561	954	1451	2243	2545	4140
0,5	137	224	356	579	895	1523	2316	3580	4062	6609
1	199	326	518	843	1302	2215	3370	5209	5910	9616
2	318	519	825	1343	2075	3531	5371	8302	9420	15326
3	428	699	1111	1808	2794	4754	7232	11178	12683	20635
4	534	871	1385	2254	3485	5928	9018	13938	15816	25731
5	639	1043	1658	2699	4172	7097	10796	16687	18934	30804
6	744	1214	1930	3142	4856	8262	12568	19426	22042	35861
7	846	1381	2196	3574	5525	9399	14297	22098	25074	40794
8	950	1551	2466	4014	6205	10556	16057	24818	28161	45816
9	1054	1721	2736	4454	6884	11712	17815	27535	31244	50831
10	1158	1891	3006	4893	7562	12866	19571	30250	34324	55842
12	1366	2230	3545	5770	8919	15174	23081	35675	40480	65858
14	1569	2562	4073	6629	10247	17433	26518	40987	46507	75664
16	1776	2900	4610	7505	11600	19735	30020	46400	52650	85657
18	1984	3239	5149	8382	12955	22041	33526	51820	58800	95663
20	2191	3578	5688	9260	14312	24350	37039	57249	64960	105685
22	2393	3907	6212	10111	15629	36590	40446	62515	70935	115407
24	2601	4247	6752	10991	16988	28903	43964	67953	77106	125445
26	2810	4588	7294	11873	18351	31222	47491	73405	83292	
28	3019	4930	7837	12757	19718	33547	51029	78873	89496	
30	3229	5272	8382	13644	21089	35880	54577	84358		
32	3440	5616	8929	14534	22465	38220	58137	89860		

Manufacturer:  
LESER GmbH & Co. KG