



FULL-LIFT SAFETY VALVE

MODEL SV459/462 DUCTILE CAST IRON
STAINLESS STEEL

SPRING LOADED FULL LIFT SAFETY VALVE FOR STEAM

Features

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

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. Model 459 with extremely wear resistant valve seat and disc, model 462 with O-ring disc.
6. Precision disc alignment and guide.
7. Contains no asbestos or copper-alloys.
8. Options:
 - Stainless steel bellows
 - Elastomer-bellows
 - Gas tight cap H2
 - Open bonnet lifting device H3



* Do not use for toxic, flammable or otherwise hazardous fluids

Specifications

Model	SV4593	SV4623	SV4594	SV4624
Inlet Body/Outlet Body Material	Stainless Steel / Ductile Cast Iron		Stainless Steel / Stainless Steel	
Material Number DIN EN (ASTM)**	1.4104 (AISI430F) / 0.7043 (A395)		1.4404 (AISI316L) / 1.4404 (AISI316L)	
Connection	Flange DIN EN 1092-1 or Screwed ISO 7-1 / BS21*			
Nominal Pressure Rating Inlet/Outlet	PN 40*** / PN 40			
Size/DN Inlet/Outlet	Screwed: 3/4"/1" (Valve size 15), 1"/1 1/2" (Valve Size 20) Flange: DN 25/DN 25 (Valve size 15), DN 25/DN 40 (Valve Size 20)			
Temperature Range (°C)	- 10 to + 300	- 10 to + 150	- 200 to + 400	- 45 to + 150
Maximum Operating Pressure (barg) PMO	40			
Maximum Operating Temperature TMO	400			

* Other standards available ** Equivalent *** Higher pressures for inlet body available

1 bar = 0.1 MPa

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

Maximum Allowable Pressure (barg) PMA: 40

Maximum Allowable Temperature (°C) TMA: 400

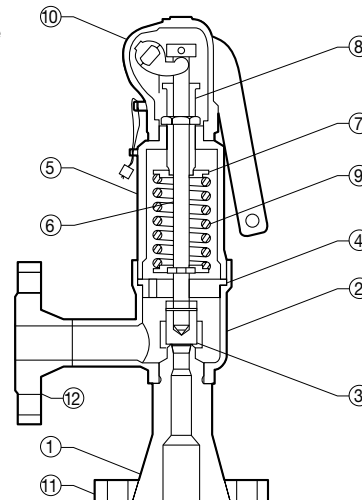


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

Nr.	Description	Material	DIN EN	ASTM/AISI*
①	Inlet Body	See above	—	—
②	Outlet Body	See above	—	—
③	Disc	Stainless Steel	1.4122	AISI440
④	O-Ring-Disc (SV462)	Steel/Rubber	1.0718/EPDM	AISI12L13/EPDM
⑤	Guide	Stainless Steel	1.4104	AISI430F
⑥	Bonnet	Ductile Cast Iron	0.7043	A395
⑦	Spindle	Stainless Steel	1.4021	AISI420
⑧	Spring Plate	Carbon Steel	1.0718	AISI12L13
⑨	Adjusting Screw with Bushing	Stainless Steel	1.4104	AISI430F
		Fluorine Resin	PTFE	PTFE
⑩	Spring t < 200 °C	Alloy Steel	1.1200	—
⑪	Spring t > 200 °C	Alloy Steel	1.8159	AISI6145
⑫	Lifting Device H4**	Ductile Cast Iron or Stainless Steel	0.7040 1.4408	A536 A351 Gr.CF8
⑬	Inlet Flange	Stainless Steel	1.4404	AISI316L
⑭	Outlet Flange	Stainless Steel	1.4404	AISI316L

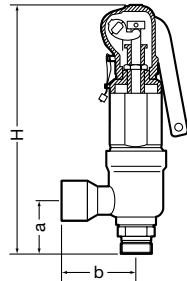
* Equivalent, Parts 3 - 8 and 11, 12 of models SV4594 and SV4624 made of stainless steel 1.4404 (AISI316L), part 9 made of 1.4310 (AISI301)

** Lifting device H3 for SV4593 available on request



Dimensions, Weights

- **SV4593**
- **SV4594**
- **SV4623**
- **SV4624**
- Screwed

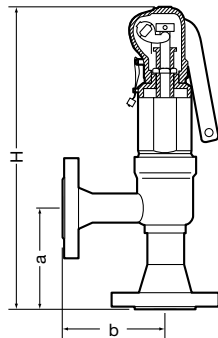


SV4593/SV4594/SV4623/SV4624 Screwed* (mm)

Valve Size	Inlet/Outlet	d ₀	H	a	b	Weight (kg)
15	3/4 "/1"	9	299	56	75	2.6
15	3/4 "/1"	13				
20	1"/1 1/2"	17.5	303	66		3

* ISO 7-1 / BS21, other standards available

- **SV4593**
- **SV4594**
- **SV4623**
- **SV4624**
- Flanged



SV4593/SV4594/SV4623/SV4624 Flanged* (mm)

Valve Size	Inlet/Outlet	d ₀	H	a	b	Weight (kg)
15	25/25	9	330	100	100	6.3
15	25/25	13				
20	25/40	17.5	333	105		6.7

* DIN EN 1092-1 PN40, other standards available

Blow-Off Capacity

Application Model	Saturated Steam (kg/h)						Air at 0°C, 1013 mbar (m³/h)						Water at 20°C (10³ kg/h)						
	SV459			SV462			SV459			SV462			SV459			SV462			
	15	20		15	20		15	20		15	20		15	20		15	20		
Valve Size/DN	15	20		15	20		15	20		15	20		15	20		15	20		
Flow Diameter d ₀ (mm)	9	13	17.5	9	13	17.5	9	13	17.5	9	13	17.5	9	13	17.5	9	13	17.5	
Pression de fonctionnement p (bar)	0.2	53	85				61	98					1.96	3.48					
	0.5	84	134	40	87	134	98	157	47	102	157		2.77	4.93	1.53	3.19	4.93		
	1	120	200	58	125	200	143	238	69	149	238		3.75	6.67	2.07	4.32	6.67		
	2	93	190	331	93	195	331	113	229	400	113	235	400	2.93	5.31	9.44	2.93	6.11	9.44
	3	127	258	456	127	258	456	155	316	558	155	316	558	3.59	6.5	11.6	3.59	7.48	11.6
	4	158	322	569	158	322	569	195	396	700	195	396	700	4.14	7.51	13.3	4.14	8.64	13.3
	5	189	386	681	189	386	681	234	477	842	234	477	842	4.63	8.39	14.9	4.63	9.66	14.9
	6	220	449	793	220	449	793	247	557	985	274	557	985	5.07	9.19	16.3	5.07	10.6	16.3
	7	251	511	902	251	511	902	313	638	1127	313	638	1127	5.48	9.93	17.7	5.48	11.4	17.7
	8	282	573	1013	282	573	1013	353	718	1269	353	718	1269	5.86	10.6	18.9	5.86	12.2	18.9
	9	312	636	1124	312	636	1124	392	799	1412	392	799	1412	6.21	11.3	20	6.21	13	20
	10	343	699	1235	343	699	1235	432	879	1554	432	879	1554	6.55	11.9	21.1	6.55	13.7	21.1
	12	405	824	1457				511	1040	1839	511	1040	1839	7.17	13	23.1	7.17	15	23.1
	14	465	947	1674				590	1201	2123	590	1201	2123	7.75	14	25	7.75	16.2	25
	16	527	1072	1895				669	1363	2408	669	1363	2408	8.28	15	26.7	8.28	17.3	26.7
	18	588	1197	2116				748	1524	2693	748	1524	2693	8.78	15.9	28.3	8.78	18.3	28.3
	20	650	1323	2338				827	1685	2977	827	1685	2977	9.26	16.8	29.8	9.26	19.3	29.8
	22	709	1444	2553				906	1846	3262	906	1846	3262	9.71	17.6	31.3	9.71	20.3	31.3
	24	771	1570	2775				986	2007	3547	986	2007	3547	10.1	18.4	32.7	10.1	21.2	32.7
	26	833	1696	2997				1065	2168	3831	1065	2168	3831	10.6	19.1	34	10.6	22	34
28	895	1822	3221				1144	2329	4116	1144	2329	4116	11	19.9	35.3	11	22.9	35.3	
30	957	1949	3445				1223	2490	4401	1223	2490	4401	11.3	20.6	36.5	11.3	23.7	36.5	
32	1020	2076	3669				1302	2651	4685	1302	2651	4685	11.7	21.2	37.7	11.7	24.4	37.7	
34	1079	2198	3884				1381	2812	4970	1381	2812	4970	12.1	21.9	38.9	12.1	25.2	38.9	
36	1142	2325	4110				1460	2973	5255	1460	2973	5255	12.4	22.5	40	12.4	25.9	40	
38	1205	2453	4336				1539	3134	5539	1539	3134	5539	12.8	23.1	41.1	12.8	26.6	41.1	
40	1268	2582	4564				1618	3295	5824	1618	3295	5824	13.1	23.7	42.2	13.1	27.3	42.2	

Manufacturer:
LESER GmbH & Co. KG