

spirax sarco

SVL488

Stainless Steel Sanitary Safety Valve

Description

The SVL488 is a soft seated stainless steel, full lift, TÜV approved safety valve suitable for steam, gas and liquid applications.

Applications

The SVL488 is suitable for the overpressure protection of low pressure steam equipment, pipelines and pressure vessels, particularly within the brewing and beverage industries where extremely high standards of hygiene and cleanliness are required to maintain product quality and to minimise contamination of the process media.

Available types

Two main variations of the valve are available:

SVL488-B with a sealed cap for liquid service.

SVL488-C with a packed easing lever for steam (or other services where a lever is specified).

Note: Both designs have a closed bonnet and EPDM soft seat seal and bellows as standard.

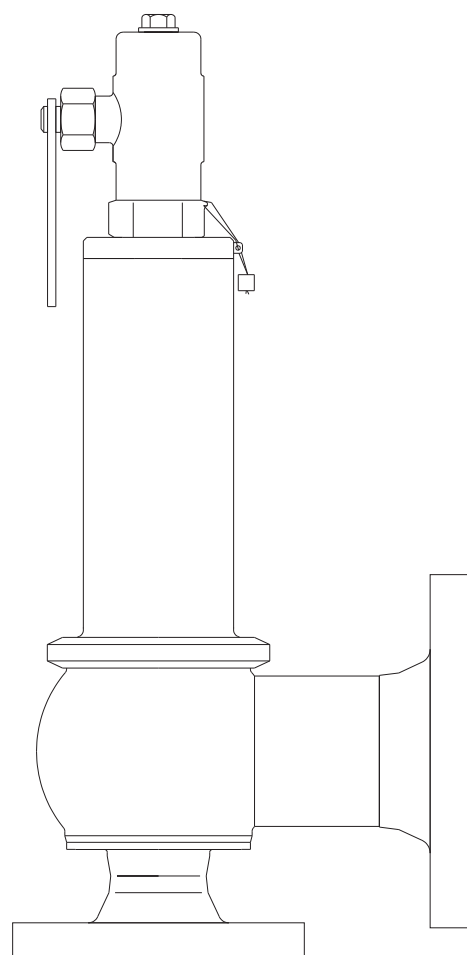
Certification

A manufacturer's Typical Test Report is provided as standard for each valve including valve set and hydraulic pressure. Also available on request is material certification in accordance with EN 10204 3.1.

Standards and approvals

- Approved by the TÜV to AD Merkblatt A2, TRD 421 and Vd TÜV SV100.
- EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations have been satisfied.
- The valve belongs to Category 4, having been designed for use with fluids in Group 1 and 2 (gases and liquids).

Always consult Spirax Sarco for fluid compatibility.



Sizes and end connections

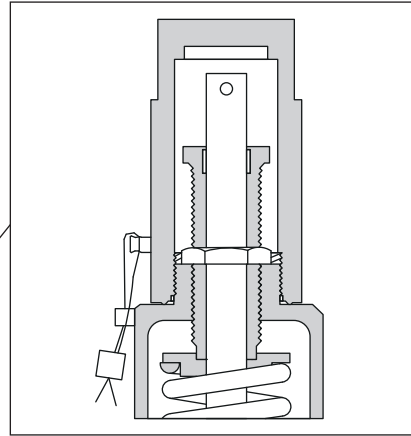
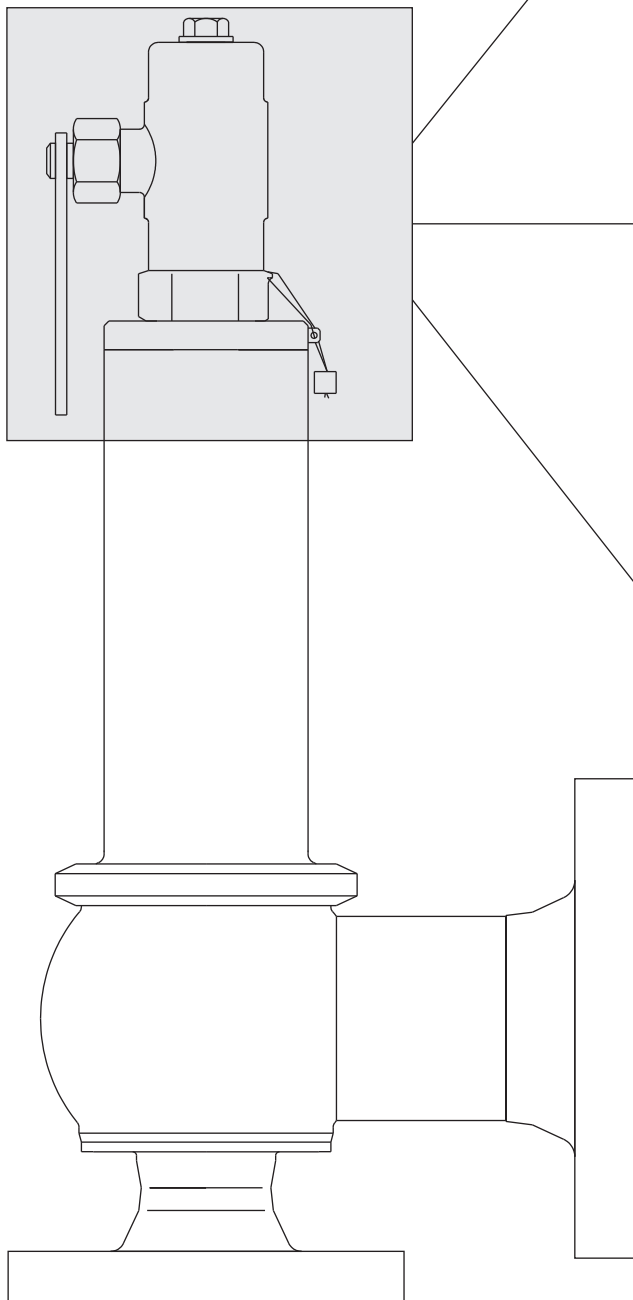
Nominal inlet size	DN	25	40	50	65	80	100
Nominal outlet size	DN	40	65	80	100	125	150
Inlet clamp	inch	1½	2	2½	3	4	4½
Outlet clamp	inch	2	3	4	4½	5	6

Pipe connections: Valves are available with flanged DIN 2633 PN16 or sanitary clamp ISO 2852 (ISO 2037 pipe standard) connections. Please state connection required when placing an order.

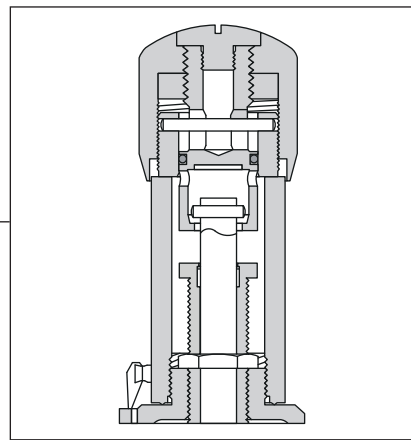
Optional extras

The standard inlet wetted surface finish is 0.75 µm Ra. Other finishes are available on request - Please contact Spirax Sarco.

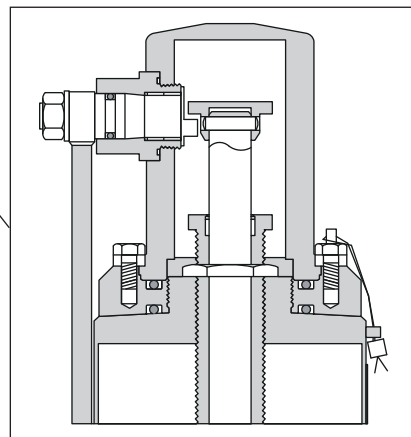
Cap/lifting lever types



Gastight cap
All sizes

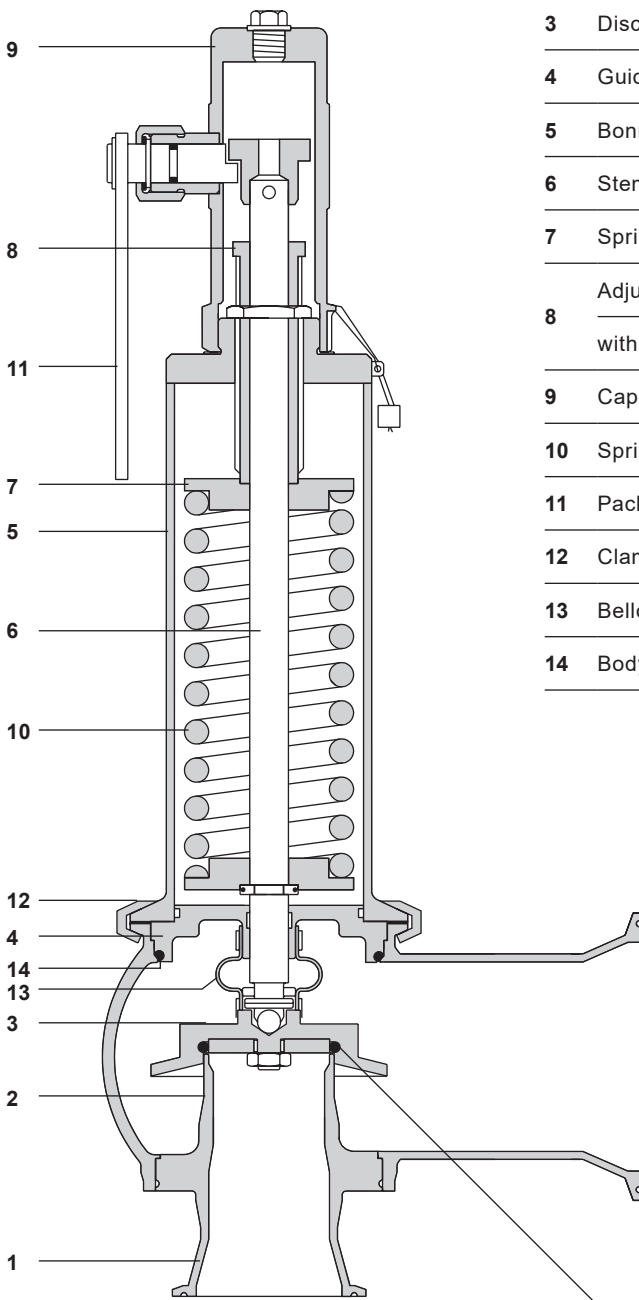


Gastight lifting device
DN25 only

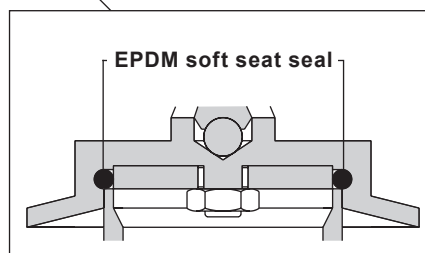


Packed lever
DN40 and larger

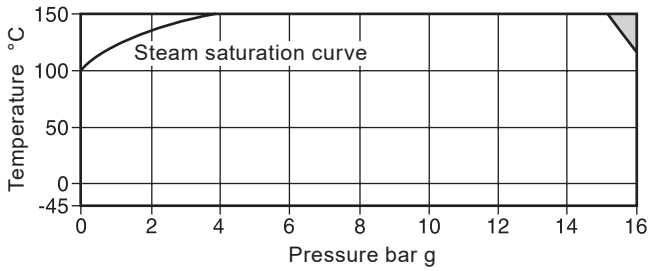
Materials



No.	Part	Material	
1	Body	Stainless steel	1.4404 316L
	Seat	Stainless steel	1.4404 316L
2	Disc	Stainless steel	1.4404 316L
3	Disc 'O' ring	EPDM (FDA approved)	
4	Guide/bush	Stainless steel	1.4404 316L/PTFE + 15% Glass
5	Bonnet	Stainless steel	1.4404 316L
6	Stem	Stainless steel	1.4404 316L
7	Spring plates (2)	Stainless steel	1.4404 316L
	Adjustment screw	Stainless steel	1.4404 316L
8	with bush	PTFE + 15% glass	
9	Cap	Stainless steel	1.4404 316L
10	Spring	Stainless steel	1.4310 301
11	Packed lever	Stainless steel	1.4404 316L
12	Clamp	Stainless steel	1.4401 316
13	Bellows	EPDM (FDA approved)	
14	Body gasket	Laminated graphite	



Pressure/temperature limits



The product **must not** be used in this region.

Body design conditions		PN16	
Set pressure range	DN25 and DN40	Maximum	16 bar g
		Minimum	0.1 bar g
	DN50	Maximum	15 bar g
		Minimum	0.2 bar g
	DN65 and DN80	Maximum	10.34 bar g
		Minimum	0.1 bar g
DN100	Maximum	8.2 bar g	
	Minimum	0.1 bar g	
Temperature	With EPDM soft seat	Maximum	150 °C
	All versions	Minimum	-45 °C
Performance data	Overpressure	Steam, gas	Maximum 10%
		Liquid	Maximum 10%
	Blowdown limits	Steam, gas	Maximum 10%
		Liquids	Maximum 20%
	Derated coefficient of discharge values α_d	Steam, gas	0.70
		Liquid	0.45
Maximum permitted backpressure		10% of set pressure	
Designed for a maximum inlet cold hydraulic test pressure of:		24 bar g	

Table 1 - SVL488 flow capacity for dry saturated steam in kilogrammes per hour (kg/h)
(calculated at 10% overpressure. In accordance with EN ISO 4126)

Valve size DN in/out	DN25/40	DN40/65	DN50/80	DN65/100	DN80/125	DN100/150
Flow diameter (mm)	23	37	46	60	74	92
Flow area (mm ²)	416	1 075	1 662	2 827	4 301	6 648

Set pressure (bar g)	Dry saturated steam, kg/h					
	0.2	151	390	604	1027	1562
0.5	214	554	857	1457	2217	3427
1.0	319	825	1 275	2 169	3 300	5 100
2.0	504	1 303	2 015	3 427	5 213	8 058
3.0	678	1 751	2 707	4 605	7 006	10 829
4.0	843	2 177	3 366	5 726	8 711	13 465

Table 2

SVL488 flow capacity for air or normal cubic meters per hour (Nm³/h) at 0 °C and 1013 mbar
 (calculated in accordance with AD-MERKBLATT A2 and TRD 421)

Valve size DN in/out	25/40	40/65	50/80	65/100	80/125	100/150
Flow area (mm ²)	416	1 075	1 662	2 827	4 301	6 648

Set pressure (bar g)	Flow capacity for air Nm ³ /h					
1.0	386	999	1 545	2 628	3 998	6 179
2.0	625	1 617	2 499	4 251	6 467	9 995
3.0	852	2 204	3 406	5 795	8 816	13 626
4.0	1 069	2 768	4 278	7 278	11 071	17 111
5.0	1 287	3 331	5 149	8 761	13 326	20 597
6.0	1 505	3 895	6 021	10 243	15 581	24 083
7.0	1 723	4 459	6 892	11 726	17 836	27 568
8.0	1 941	5 023	7 763	13 208	20 091	31 054
8.2	1 985	5 136	7 937	13 505	20 542	31 752
9.0	2 159	5 587	8 635	14 691	22 346	
10.0	2 377	6 150	9 506	16 173	24 601	
10.34	2 451	6 334	9 793	16 658	25 343	
12.0	2 812	7 278	11 249	The product must not be used in this region.		
14.0	3 248	8 405	12 992			
15.0	3 466	8 957	14 735			
16.0	3 684	9 533				

Table 3 - SVL488 flow capacity for water in kilogrammes per hour (kg/h) at 20 °C

(calculated in accordance with AD-MERKBLATT A2 and TRD 421 at 10% overpressure)
 Derated coefficient of discharge (Kdr) = 0.52

Valve size DN in/out	25/40	40/65	50/80	65/100	80/125	100/150
Flow area (mm ²)	416	1 075	1 662	2 827	4 301	6 648

Set pressure (bar g)	Flow capacity for water kg/h					
1.0	9 970	25 800	39 900	67 900	103 000	160 000
2.0	14 100	36 500	56 400	96 000	126 000	226 000
3.0	17 300	44 700	69 100	118 000	179 000	276 000
4.0	19 900	51 600	79 800	136 000	206 000	319 000
5.0	22 300	57 700	89 200	152 000	231 000	357 000
6.0	24 400	63 200	97 700	166 000	253 000	391 000
7.0	26 400	68 300	106 000	180 000	273 000	422 000
8.0	28 200	73 000	113 000	192 000	292 000	451 000
8.2	28 500	73 900	114 000	194 000	292 000	458 000
9.0	29 900	77 400	120 000	204 000	310 000	
10.0	31 500	81 600	126 000	215 000	326 000	
10.34	32 000	82 700	128 000	218 000	334 000	
12.0	34 600	89 400	138 000	The product must not be used in this region.		
14.0	37 300	96 600	149 000			
15.0	38 600	99 700	154 000			
16.0	39 900	103 000				

Dimensions/weights (approximate) in mm and kg

Valve size		A		B		C		Weight
Inlet	Outlet	DIN 2633 Flanged PN16	ISO 2852 Sanitary clamp	DIN 2633 Flanged PN16	ISO 2852 Sanitary clamp	SVL488B sealed cap design	SVL488C Packed lever design	
DN25	DN40	134	112	99	75	264	332	9.0
DN40	DN65	170	147	114	92	398	518	20.0
DN50	DN80	170	147	123	99	406	534	21.7
DN65	DN100	170	153	132	109	415	552	26.5
DN80	DN125	195	178	148	124	496	640	47.0
DN100	DN150	198	181	166	149	514	684	56.0

Safety information, installation and maintenance

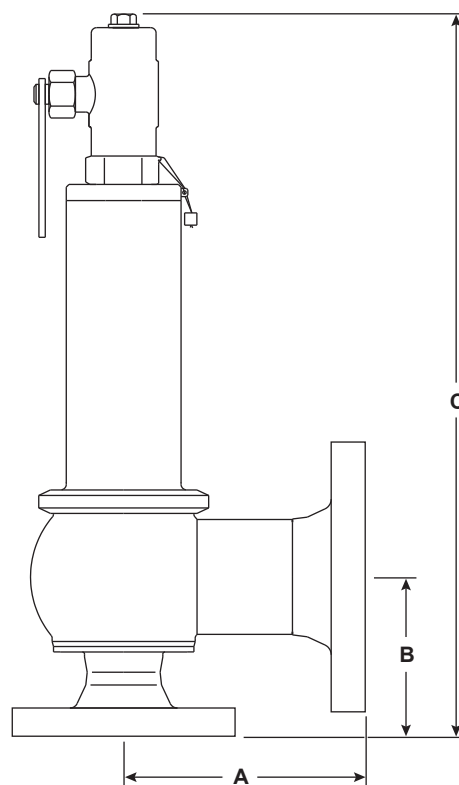
For full details see the Installation and Maintenance Instructions supplied with the product.

Installation note:

The safety valve should always be fitted with the centre line of the housing vertically above the line.

SVL488 safety valve selection guide

Model type	SVL488	SVL488	
Configuration	A = Closed bonnet/pneumatic Lever B = Closed bonnet/sealed cap C = Closed bonnet/packed easing lever		B
Seal material	E = EPDM (FDA) 'O' Ring and bellows V = FKM 'O' ring and bellows		
Inlet connection	PN16 = Flanged PN16 N = ANSI #150 RF ASME Flanged T = ISO2852/ISO2037 Clamp Ends S = ASME BPE Clamp Ends D = DIN32676/DIN11850 Clamp Ends		PN16



How to order

Example: 1 off Spirax Sarco DN50 SVL488-B-E-PN16 safety valve with a set pressure of 10 bar g. (If the bellows is not required, please add 'without bellows').