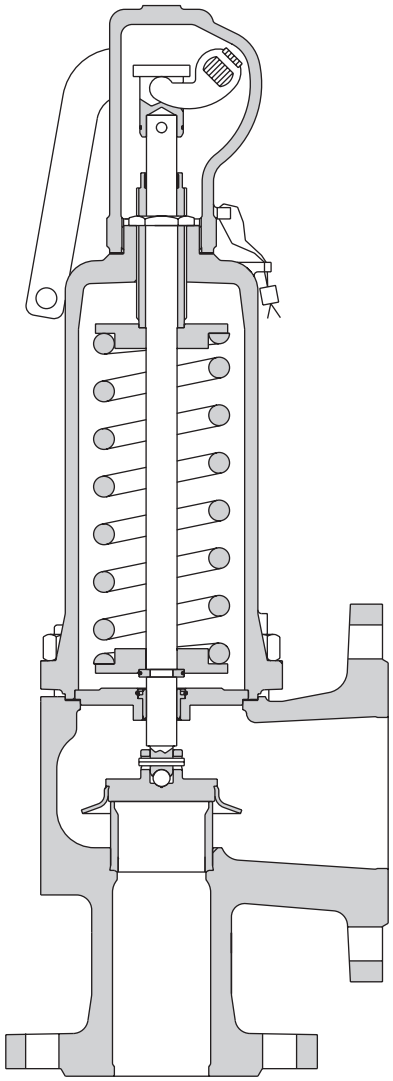
SVL606
Stainless Steel Safety Valve



Description
The SVL606 is a stainless steel, full lift TÜV approved flanged safety valve suitable for use with steam, gas and liquids.

Available types
Two main variations of the valve are available:

SVL606-B	with a sealed cap for liquid service.
SVL606-C	with a packed easing lever for steam (or other services where a lever is specified).

Note: Both designs have closed bonnets.

Applications
The SVL606 is suitable for the overpressure protection of steam boilers, pipelines, pressure vessels and most general process industry applications, particularly where a valve of all stainless steel construction is required to minimise contamination of the process media or where hygienic considerations and aesthetic qualities are prerequisites. This valve is also suitable for cryogenic service.

Standards and approvals
Approved by the TÜV to AD Merkblatt A2, TRD 421.
The requirements of the Pressure Equipment Directive (PED) have been satisfied and 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 pipe connections

Inlet size	DN	25	32	40	50	65	80	100	125	150	Flanged EN 1092 PN40
Outlet size	DN	40	50	65	80	100	125	150	200	250	Flanged EN 1092 PN16

Optional extras

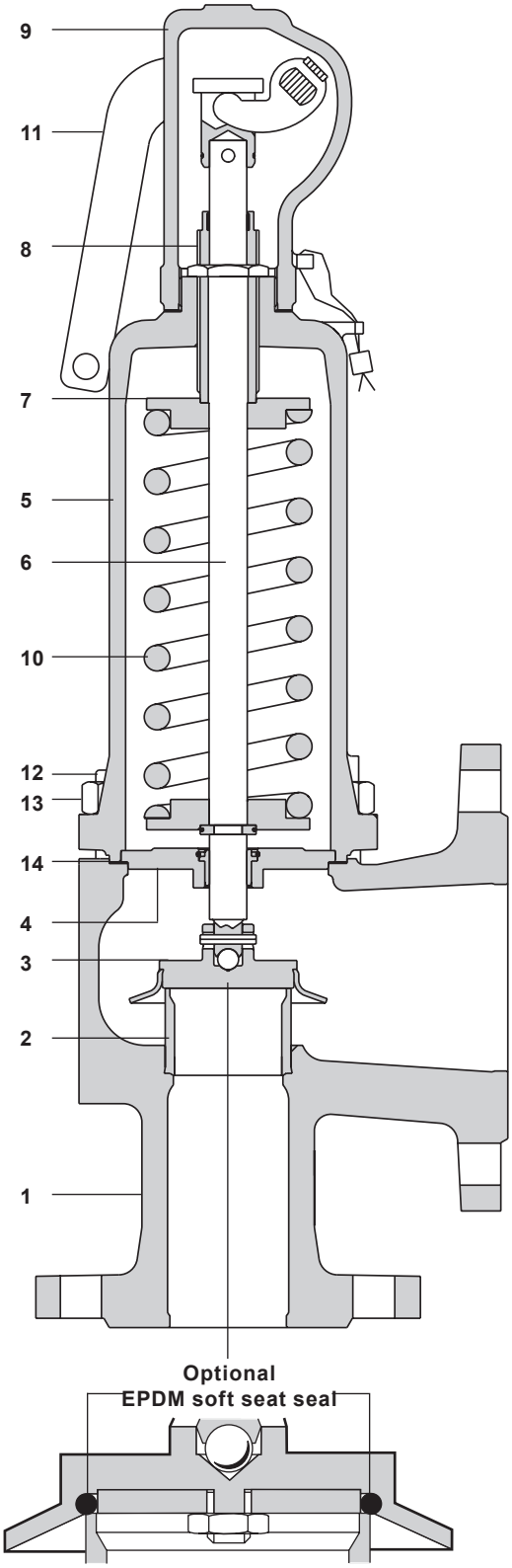
Flanges: ANSI B 16.5 flanges are available on request.

Soft seals are available (contact Spirax Sarco for pressure/temperature limitations).

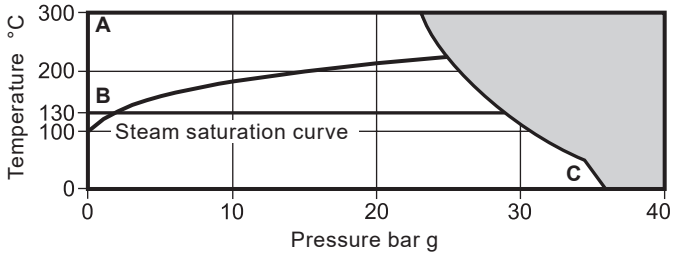
Special springs to extend the set pressure range on certain sizes can be provided.

Materials

No.	Part	Material	
1	Body	Stainless steel	1.4408
2	Seat	Stainless steel	1.4404
	Disc	Stainless steel	1.4404
3	Disc with 'O' ring (when specified)	EPDM (FDA approved)	
4	Guide	Stainless steel	1.4404
5	Bonnet	Stainless steel	1.4408
6	Spindle	Stainless steel	1.4404
7	Spring plate	Stainless steel	1.4404
8	Adjustment screw	Stainless steel	1.4404
	with bush	PTFE	
9	Cap	Stainless steel	1.4404
10	Spring	Stainless steel	1.4310
11	Easing lever	Stainless steel	1.4408
12	Bolt	Stainless steel	1.4401
13	Nut	Stainless steel	1.4401
14	Body gasket	Laminated graphite	



Pressure/temperature limits



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

A - B Metal seat

B - C EPDM seat seal is limited to a maximum operating temperature of 130 °C.

Body design conditions			PN40
Set pressure Please note: That higher set pressures are available with special springs. Consult Spirax Sarco.	DN25 to DN40	Maximum	40 bar g
		Minimum	0.1 bar g
	DN50	Maximum	33 bar g
		Minimum	0.1 bar g
	DN65	Maximum	28 bar g
		Minimum	0.1 bar g
	DN80	Maximum	13.6 bar g
		Minimum	0.1 bar g
	DN100 and DN125	Maximum	15 bar g
		Minimum	0.1 bar g
	DN150	Maximum	7 bar g
		Minimum	0.1 bar g
Temperature	Metal seat	Maximum	+300 °C
		Minimum	-270 °C
	EPDM seat	Maximum	+130 °C
		Minimum	-45 °C
Performance data	Overpressure	Steam, gas, liquid	Maximum 10%
	Blowdown limits	Steam, gas, liquid	Maximum 10%
	Derated coefficient of discharge values	Steam, gas	0.70
		Liquid	0.45
Designed for a maximum inlet cold hydraulic test pressure of:			60 bar g

Table 1 - SVL606 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		25/40	32/50	40/65	50/80	65/100	80/125	100/150	125/200	150/250
Flow area	mm^2	416	661	1075	1662	2827	4301	6648	7543	12272
	in^2	0.645	1.024	1.666	2.576	4.382	6.667	10.3	11.69	19.02
Set pressure (bar g)		Dry saturated steam, kg/h								
0.2		151	240	390	604	1027	1562	2415	2740	4457
0.5		214	341	554	857	1457	2217	3427	3888	6325
1.0		319	507	825	1275	2169	3300	5100	5787	9415
2.0		504	801	1303	2015	3427	5213	8058	9143	14875
3.0		678	1077	1751	2707	4605	7006	10829	12297	19991
4.0		843	1339	2177	3366	5726	8711	13465	15277	24855
5.0		1007	1599	2601	4022	6840	10407	16086	18252	29694
6.0		1170	1859	3023	4674	7951	12096	18697	21214	34514
7.0		1333	2118	3444	5325	9058	13781	21300	24168	39320
8.0		1495	2376	3864	5975	10162	15461	23898	27115	
9.0		1658	2634	4284	6623	11265	17138	26491	30057	
10.0		1820	2891	4702	7270	12366	18813	29080	32995	
12.0		2143	3406	5539	8563	14565	22160	43252	38863	
13.6		2402	3817	6207	9596	16323	24834	38385	43553	
15.0		1628	4176	6792	10501	17861		42003	47657	
16.0		2790	4433	7210	11147	18960				
18.0		3114	4947	8046	12440	21159				
20.0		3438	5462	8883	13733	23360				
22.0		3762	5978	9722	15030	25565				

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Table 2 - SVL606 flow capacity for air - normal m_3/h at 0 °C and 1013 mbar
(calculated in accordance with AD-MERKBLATT A2)

Valve size DN in/out		25/40	32/50	40/65	50/80	65/100	80/125	100/150	125/200	150/250
Flow area	mm^2	416	661	1075	1662	2827	4301	6648	7543	12272
	in^2	0.645	1.024	1.666	2.576	4.382	6.667	10.3	11.69	19.02
Set pressure (bar g)		Flow capacity for air m^3/h								
0.2		162	258	420	649	1105	1680	2597	2947	4794
0.5		263	418	680	1051	1789	2721	4206	4772	7764
1.0		388	617	1004	1552	2641	4017	6209	7045	11461
3.0		854	1357	2209	3414	5809	8836	13657	15497	25212
5.0		1289	2050	3337	5157	8774	13346	20629	23407	38082
7.0		1725	2742	4464	6900	11739	17857	27600	31317	50951
10.0		2379	3781	6155	9514	16187	24622	38057	43183	
12.0		2814	4474	7283	11257	19152	29152	45028	51093	
13.6		3163	5028	8185	12651	21524	32747	50617	57431	
15.0		3468	5305	8974	13872	23600		55498	62970	
16.0		3686	5859	9538	14743	25082				
18.0		4121	6552	10666	16486	28047				
20.0		4557	7245	11793	18228	31012				
22.0		4993	7938	12921	19971	33977				
26.0		5864	9323	15176	23457	39908				
28.0		6300	10016	16304	25200	42873				
30.0		6736	10708	17431	26942					
32.0		7171	11401	18559	28685					
33.0		7389	11747	19123	29565					
36.0		8043	12786	20814						
40.0		8914	14172	23069						

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Table 3 - SVL606 flow capacity for water in kilogrammes per hour (kg/h) at 20 °C
(calculated in accordance with AD-MERKBLATT A2 at 10% overpressure)

Valve size DN in/out		25/40	32/50	40/65	50/80	65/100	80/125	100/150	125/200	150/250
Flow area	mm^2	416	661	1075	1662	2827	4301	6648	7543	12272
	in^2	0.645	1.024	1.666	2.576	4.382	6.667	10.3	11.69	19.02
Set pressure (bar g)		Flow capacity for water kg/h								
0.2		5210	8280	13500	20800	15500	53000	85300	94600	154000
0.5		7370	11700	19100	29500	50100	76300	118000	134000	218000
1.0		9970	15900	25800	39900	67900	103000	160000	181000	295000
3.0		17300	27500	44700	69100	118000	179000	276000	314000	510000
5.0		22300	35500	57700	89200	152000	231000	357000	405000	659000
7.0		19900	42000	68300	106000	180000	273000	422000	479000	779000
10.0		31500	50100	81600	126000	215000	326000	505000	573000	
12.0		34600	54900	89400	138000	235000	358000	553000	627000	
13.6		36700	58300	94800	147000	249000	379000	586000	665000	
15.0		38600	61300	99700	154000	262000		616000	699000	
16.0		39900	63400	103000	160000	272000				
18.0		42300	67300	110000	169000	288000				
20.0		44600	70900	115000	178000	304000				
22.0		46800	74400	121000	187000	318000				
26.0		50900	80900	132000	203000	346000				
28.0		52800	83900	137000	211000	359000				
30.0		54600	86800	141000	219000					
32.0		56400	89700	146000	226000					
33.0		57300	91100	148000	229000					
36.0		59800	95100	155000						
40.0		63100	100000	163000						

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Dimensions/weights (approximate) in mm and kg

Valve size		A	B	C			
				SVL606B	SVL606C		
Inlet	**Outlet**	Centreline at inlet to outlet flange face	Centreline at outlet to inlet flange face	Overall height, Gas tight cap design	Overall height, packed lever design	Additional height with bellows	**Weight**
DN25	**DN40**	100	105	337	339	39	9
DN32	**DN50**	110	115	430	437	42	12
DN40	**DN65**	115	140	496	503	38	16
DN50	**DN80**	120	150	553	560	46	22
DN65	**DN100**	140	170	651	699	70	32
DN80	**DN125**	160	195	753	801	59	56
DN100	**DN150**	180	220	835	883	56	75
DN125	**DN200**	200	250	865	913	56	85
DN150	**DN250**	225	285	1 020	1 020	58	131

Installation

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

SVL606 safety valve selection guide

Model type	SVL60		**SVL60**
Body material	6	= Stainless steel	**6**
Configuration	B	= Closed bonnet/gas tight cap	**B**
	C	= Closed bonnet/packed easing lever	
Seal material	S	= Stainless steel	**S**
	E	= EPDM	
Inlet connection	PN40 = Flanged		**PN40**

SVL606	-	**B**	-	**S**	-	**PN40**

How to order

Example: 1 off Spirax Sarco DN25 x 40 SVL606-B-S-PN40 safety valve with a set pressure of 15.5 bar g.