



Description

The SSV25 is an SG iron Full Lift, Open Bonnet and plain lever safety valve, which is suitable for the protection of boilers, pipelines, pressure vessels, compressors, receivers and most general process industry applications.

Fluids handled

Steam
Compressed air
Water service

Sizes and connections

Flanged Inlet – PN25 DN20 to DN100
Outlet – PN16

Dimensions and weights (mm and kg)

Size (DN) Inlet/Outlet	L	L1	H	H1	Weight
20x32	147	95	304	85	9
25x40	157	100	339	105	9
32x50	180	110	446	115	12
40x65	190	115	512	140	16
50x80	202	120	569	150	22
65x100	232	140	669	175	32
80x125	260	160	801	195	56
100x150	297	180	883	220	75

Limiting Conditions

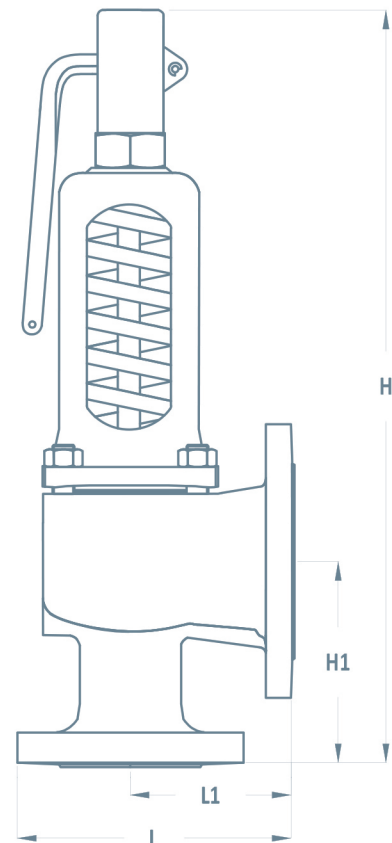
Body design conditions	PN25
Maximum allowable pressure (PMA)	25 bar g @ 120 °C
Maximum allowable temperature (TMA)	232 °C @ 21 bar g
Maximum operating pressure (PMO)	21 bar g
Maximum operating temperature (TMO)	230 °C
Maximum set pressure	20 bar g
Minimum set pressure	0.2 bar g
Back pressure limit	%10 of set pressure
Cold hydraulic test pressure	38 bar g

Safety valve set pressure

A decision must be made regarding the pressure at which the safety valve should be set. The maximum set pressure is the safe working pressure of the plant it protects and the valve must achieve its rated capacity with an overpressure of no more than %10.

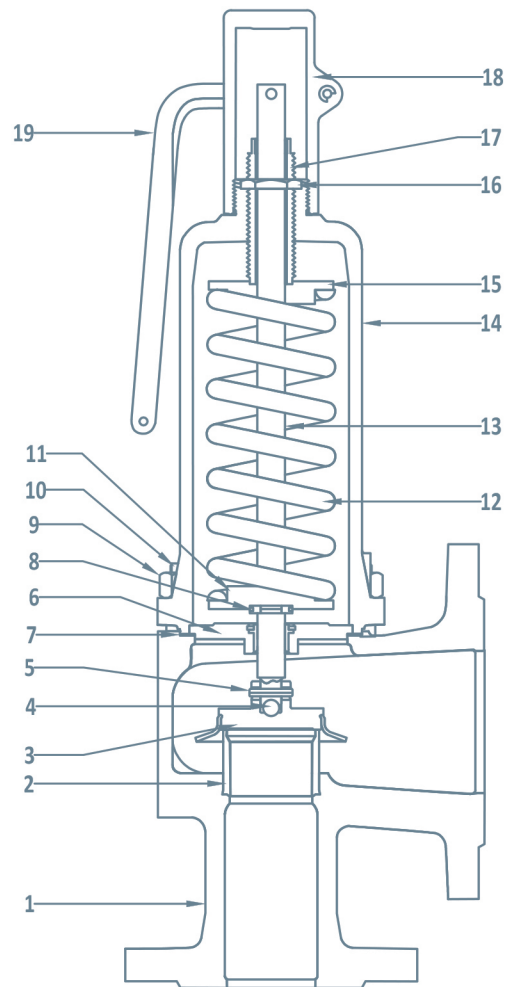
System pressure (bar g) Set pressure of safety valve (bar g)

1 ≥	System pressure + 0.5
1-4	System pressure + 0.8
4-6	System pressure + 1
6 <	System pressure + 1.2



Materials

NO.	Part	Material	
1	Body	SG Iron	GGG40
2	Seat	SG Iron	316
3	Disc	Stainless Steel	420
4	Ball	Hardened Stainless Steel	-
5	Pin	Stainless Steel	-
6	Guide with bushing	Carbon Steel Stainless Steel	
7	Gasket	Exfoliated graphite	-
8	Split ring	Carbon Steel	-
9	Nut	Carbon Steel	Gr.8.8
10	Stud	Carbon Steel	Gr.8.8
11	Lower spring plate	Carbon Steel	-
12	Spring	Carbon Steel	-
13	Spindle	Stainless Steel	420
14	Bonnet	SG Iron	GGG 40
15	Upper spring plate	Carbon Steel	-
16	Lock nut	Carbon Steel	-
17	Adjusting screw with bushing	Carbon Steel	-
18	Cap	SG Iron	GGG40
19	Lever	SG Iron	GGG40


Spare Parts

Description	Part NO.
Disk assembly kit	3
Ball assembly kit	4
Seat assembly kit	2
Gasket assembly kit	7
Spring assembly kit	12
Spindle assembly kit	13

Steam Capacity Chart

Inlet Size (DN)	20	25	32	40	50	65	80	100	125	150	200
Outlet Size (DN)	32	40	50	65	80	100	125	150	200	250	300
Orifice Area (mm ²)	254	416	661	1075	1662	2827	4301	6648	7543	12272	21382

Set pressure [bar]	Capacities [kg/h]										
0.5	137	224	356	579	895	1523	2316	3580	4062	6609	11516
1	199	329	518	843	1302	2215	3370	5209	5910	9616	16755
1.5	258	422	671	1093	1688	2873	4370	6755	7665	12471	21729
2	318	519	825	1343	2075	3531	5371	8302	9420	15326	26704
2.5	373	609	968	1575	2434	4142	6301	9740	11051	17980	31329
3	428	699	1111	1808	2794	4754	7232	11178	12683	20635	35954
3.5	481	785	1248	2031	3139.5	5341	8125	12558	14249.5	23183	40394
4	534	871	1385	2254	3485	5928	9018	13938	15816	25731	44834
4.5	587	957	1522	2477	3829	6513	9907	15313	17375	28268	49257
5	639	1043	1658	2699	4172	7097	10796	16687	18934	30804	53673
5.5	692	1129	1794	2921	4514	7680	11682	18057	20488	33333	58079
6	744	1214	1930	3142	4856	8262	12568	19426	22042	35861	62484
6.5	795	1297.5	2063	3358	5190.5	8830.5	13432.5	20762	23558	38327.5	66782
7	846	1381	2196	3574	5525	9399	14297	22098	25074	40794	71080
7.5	898	1466	2331	3794	5865	9977.5	15177	23458	26617.5	43305	75455
8	950	1551	2466	4014	6205	10556	16057	24818	28161	45816	79830
8.5	1002	1636	2601	4234	6545	11134	16936	26177	29703	48324	84200
9	1054	1721	2736	4454	6884	11712	17815	27535	31244	50831	88569
9.5	1106	1806	2871	4674	7223	12289	18693	28893	32784	53337	92935
10	1158	1891	3006	4893	7562	12866	19571	30250	34324	55842	97300
11	1262	2061	3276	5332	8241	14020	21326	32963	37402	60850	106026
12	1366	2230	3545	5770	8919	15174	23081	35675	40480	65858	114751
13	1468	2396	3809	6200	9583	16304	24800	38331	43494	70761	123294
14	1569	2562	4073	6629	10247	17433	26518	40987	46507	75664	131837
15	1673	2731	4342	7067	10924	18584	28269	43694	49579	80661	140543
16	1776	2900	4610	7505	11600	19735	30020	46400	52650	85657	149249
17	1880	3070	4880	7944	12278	20888	31773	49110	55725	90660	157966
18	1984	3239	5149	8382	12955	22041	33526	51820	58800	95663	166683
19	2088	3409	5419	8821	13634	23196	35283	54535	61880	100674	175414
20	2191	3578	5688	9260	14312	24350	37039	57249	64960	105685	184145

Compressed Air Capacity Chart

Inlet Size (DN)	20	25	32	40	50	65	80	100	125	150	200
Outlet Size (DN)	32	40	50	65	80	100	125	150	200	250	300
Orifice Area (mm ²)	254	416	661	1075	1662	2827	4301	6648	7543	12272	21382

Set pressure [bar]	Capacities [m ³ /h]										
0.5	161	263	418	680	1051	1789	2721	4206	4772	7764	13528
1	238	388	617	1004	1552	2641	4017	6209	7045	11461	19970
1.5	311	508	807	1313	2030	3453	5252	8118	9211	14985	26111
2	384	627	996	1622	2507	4265	6487	10026	11377	18509	32251
2.5	454	741	1177	1916	2961	5037	7662	11842	13437	21861	38091
3	523	854	1357	2209	3414	5809	8836	13657	15497	25212	43930
3.5	590	963	1530	2491	3850	6550	9964	15400	17475	28430	49536
4	656	1071	1703	2773	4286	7291	11091	17143	19452	31647	55142
4.5	723	1180	1877	3055	4722	8033	12219	18886	21430	34865	60748
5	790	1289	2050	3337	5157	8774	13346	20629	23407	38082	66354
5.5	857	1398	2223	3619	5593	9516	14474	22372	25385	41299	71960
6	923	1507	2396	3900	6029	10257	15601	24114	27362	44516	77565
6.5	990	1616	2569	4182	6465	10998	16729	25857	29340	47734	83171
7	1057	1725	2742	4464	6900	11739	17857	27600	31317	50951	88777
7.5	1124	1834	2916	4746	7336	12481	18985	29343	33295	54169	94383
8	1190	1943	3089	5028	7771	13222	20112	31086	35273	57386	99989
8.5	1257	2052	3262	5310	8207	13963	21240	32829	37251	60603.5	105595
9	1323	2161	3435	5592	8643	14704	22367	34571	39228	63821	111201
9.5	1390	2270	3608	5874	9079	15446	23495	36314	41206	67038	116807
10	1457	2379	3781	6155	9514	16187	24622	38057	43183	70255	122413
11	1591	2597	4128	6719	10386	17670	26877	41543	47138	76690	133625
12	1724	2814	4474	7283	11257	19152	29132	45028	51093	83125	144836
13	1858	3032	4821	7847	12129	20635	31387	48514	55048	89560	156048
14	1991	3250	5167	8411	13000	22117	33642	52000	59003	95994	167260
15	2124	3468	5513	8975	13872	23600	35898	55486	62959	102429	178472
16	2257	3686	5859	9538	14743	25082	38153	58971	66914	108863	189684
17	2391	3904	6205.5	10102	15615	26565	40408	62457	70869	115298	200896
18	2524	4121	6552	10666	16486	28047	42663	65942	74824	121733	212107
19	2658	4339	6899	11230	17357	29530	44918	69428	78779	128168	223319
20	2791	4557	7245	11793	18228	31012	47173	72913	82734	134602	234531

Water Capacity Chart

Inlet Size (DN)	20	25	32	40	50	65	80	100	125	150	200
Outlet Size (DN)	32	40	50	65	80	100	125	150	200	250	300
Orifice Area (mm ²)	254	416	661	1075	1662	2827	4301	6648	7543	12272	21382

Set pressure [bar]	Capacities [ton/h]										
0.5	4.51	7.37	11.7	19.1	29.5	50.1	76.3	118	134	218	379
1	6.11	9.97	15.9	25.8	39.9	67.9	103	160	181	295	513
1.5	7.38	12.04	19.15	31.15	48.15	81.95	124.5	193	218.5	356	619.5
2	8.64	14.1	22.4	36.5	56.4	96	146	226	256	417	726
2.5	9.62	15.7	24.95	40.6	62.75	107	162.5	251	285	463.5	807.5
3	10.6	17.3	27.5	44.7	69.1	118	179	276	314	510	889
3.5	11.4	18.6	29.6	48.2	74.5	127	192.5	297.5	338	549.5	958
4	12.2	19.9	31.7	51.6	79.8	136	206	319	362	589	1027
4.5	12.95	21.1	33.6	54.65	84.5	144	218.5	338	383.5	624	1087.5
5	13.7	22.3	35.5	57.7	89.2	152	231	357	405	659	1148
5.5	14.35	23.35	37.15	60.45	93.45	159	242	374	424.5	690.5	1202.5
6	15	24.4	38.8	63.2	97.7	166	253	391	444	722	1257
6.5	15.6	25.4	40.4	65.75	101.85	173	263	406.5	461.5	750.5	1307.5
7	16.2	26.4	42	68.3	106	180	273	422	479	779	1358
7.5	16.75	27.3	43.4	70.65	109.5	186	282.5	436.5	495.5	806	1405
8	17.3	28.2	44.8	73	113	192	292	451	512	833	1452
8.5	17.8	29.05	46.2	75.2	116.5	198	301	465	527.5	858.5	1496
9	18.3	29.9	47.6	77.4	120	204	310	479	543	884	1540
9.5	18.8	30.7	48.85	79.5	123	209.5	318	492	558	908	1581.5
10	19.3	31.5	50.1	81.6	126	215	326	505	573	932	1623
11	20.25	33.05	52.5	85.5	132	225	342	529	600	976.5	1700.5
12	21.2	34.6	54.9	89.4	138	235	358	553	627	1021	1778
13	22.05	35.95	57.1	93	143.5	244.5	372	575	652.5	1061.5	1849.5
14	22.9	37.3	59.3	96.6	149	254	386	597	678	1102	1921
15	23.65	38.6	61.35	99.8	154.5	263	399.5	617.5	701	1140	1987
16	24.4	39.9	63.4	103	160	272	413	638	724	1178	2053
17	25.15	41.1	65.35	106.5	164.5	280	425.5	657.5	746	1214	2115.5
18	25.9	42.3	67.3	110	169	288	438	677	768	1250	2178
19	26.6	43.45	69.1	112.5	173.5	296	450	695.5	789	1283.5	2237
20	27.3	44.6	70.9	115	178	304	462	714	810	1317	2296

Safety information, installation and maintenance

*For full details see the installation and maintenance instructions, supplied with the product.