

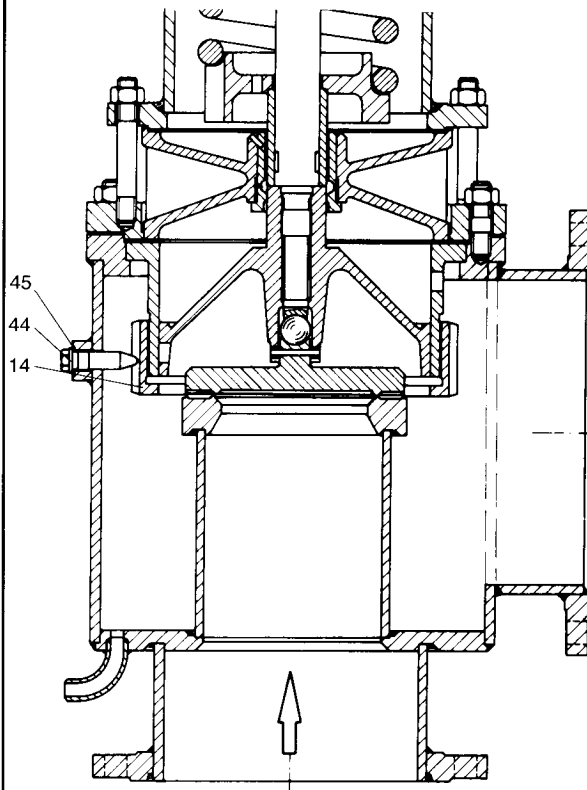
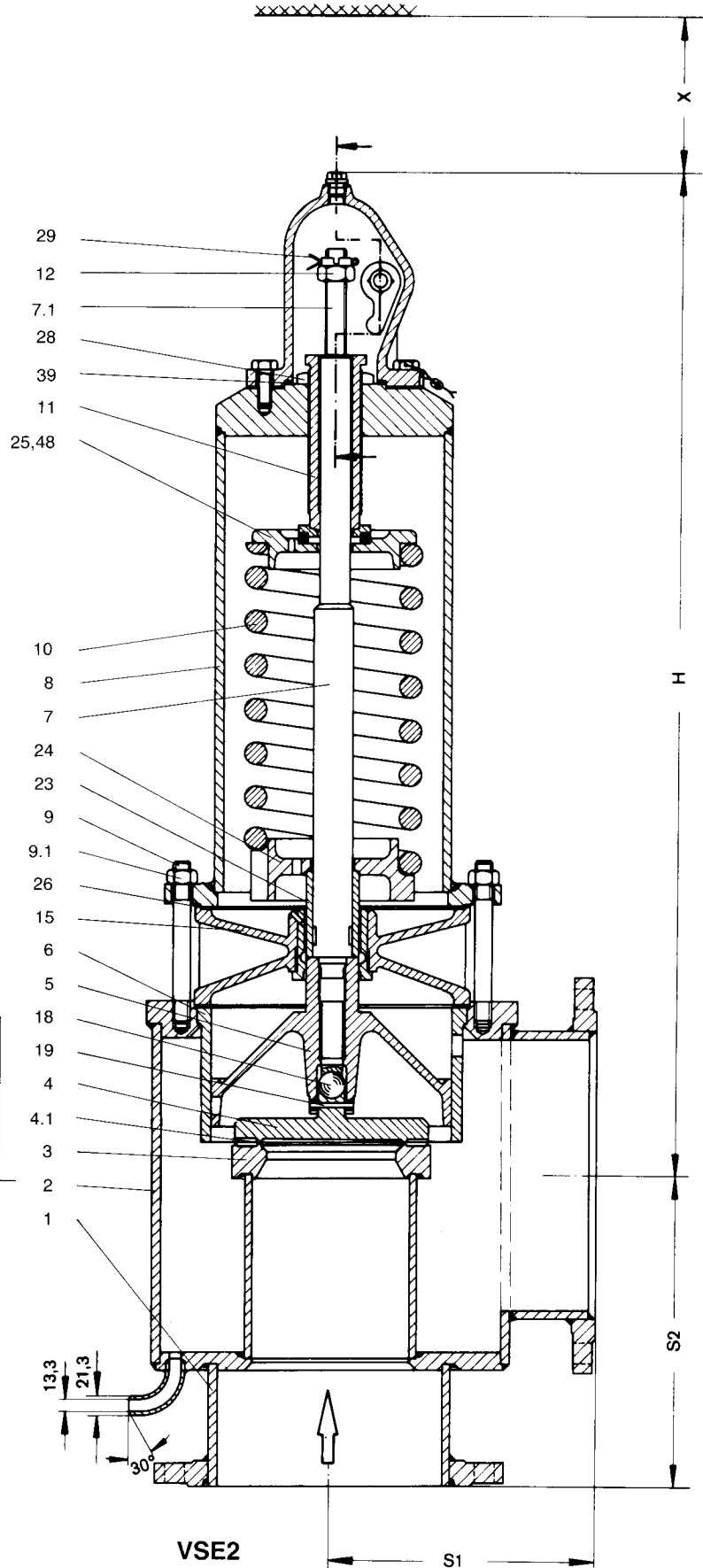
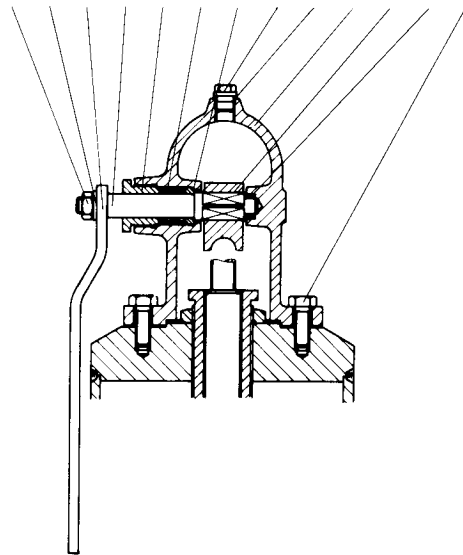
Safety Valve, TÜV Type Tested
Type VSE 2 · VSR 2 · VSE 4, Closed Bonnet
Seat Code Letter SKB S – Z DN 250 – 700

Sempell

Full Lift Safety Relief Valve Type Test No. TÜV-SV-519
 Normal Safety Valve Type Test No. TÜV-SV-551

VSE2/VSR2 Spring loaded
 VSE4 Weight loaded

38 37 36 32 35 34 33 17 40 13 31 30 41



VSR2 with adjusting ring (only SKB S)

VSE2

Date _____

Name _____

Job-No. _____

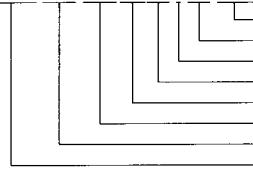
Item _____

Sheet-No. _____

TO 272.02.890 E

Example for valve specification

VSE2. 40-250 S300-I-22-142 Sempell-SKB and DIN-connections
 VSE2.150- 8 TA 10-I-22-142 API-seat code letter and ANSI-connections



- Standard accessories
- Material specification
- Pressure group
- Outlet nominal size DN
- Seat code letter SKB
- Inlet nominal size DN
- Inlet nominal pressure PN
- Type of valve

To be specified on enquiry or order

- Operating medium and state of medium (gaseous or liquid)
- Set pressure and design pressure
- Operating temperature
- Capacity
- Material specification
- Standardized accessories of design, materials and flanges
- Inlet with welding end

SN Standardized accessories acc. to TO.270.00

²⁾ For pressures in brackets () type VSE4 with direct weight-loading only.
 Type tested from p = 0,4 bar and above.

Sempell-Seat Code Letters and DIN Connections

¹⁾ PN of the inlet flange acc. to DIN 2401

1) Inlet DN	Seat code letter SKB	Outlet DN	Pressure group	2) Set pressure in bar		Smallest flow section A ₀ mm ²	Outlet flange PN	Dimensions in mm					H ca.	Weight kg	Dismantling-dimension x mm	
				min.	max.			S2 Inlet flange PN								
								S1	up to 40	64-160	250	320	400			
250	S	300	I	(0,2/0,63)	22,4	16971	10	300	350	—	—	—	—	1130	280	900
300	T	350	I	(0,2/0,5)	16	24052	10	320	390	—	—	—	—	1355	380	900
350	U	400	I	(0,2/0,45)	12,5	32047	10	350	430	—	—	—	—	1470	410	900
350	V	500	I	(0,2/0,4)	9	41547	10	420	460	—	—	—	—	1585	460	900
400	W	600	I	(0,2/0,4)	7,1	57255	10	450	530	—	—	—	—	1715	530	900
500	X	700	I	0,5	4,5	90258	6	550	550	—	—	—	—	1560	1260	900
600	Y	800	I	0,5	3,15	125664	6	600	600	—	—	—	—	1610	1600	900
700	Z	900	I	0,5	2	174974	6	650	650	—	—	—	—	1660	1870	900

API 526-Seat Code Letters and ANSI Connections

^{*} Not contained in API standard 526

Inlet DN	Seat code letter SKB	Outlet DN	Pressure group	Set pressure		Center-to-face dimension (inch)								H ca.	Weight ca.	Respective Sempell SKB	Dismantling-dimension x inch		
				min. psig	max. psig	S1 Outlet ASA		S2 Inlet ASA											
						150	300	150	300	600	900	1500	2500	*					
8	TA	10 10	I I	7 120	120 325	11 11	—	10 ^{7/8}	10 ^{7/8}	—	—	—	—	—	45 45	620 620	S	26 26	

³⁾ or alternative Spring materials acc. to DIN 17221, 17223 and 17225. Special materials possible.

^{*} or equivalent cast/forged materials
 ● wear parts in spare parts box

Other materials specifications can be offered acc. to customer's request

Material specification				22 -10 to +400 °C -14 to +752 °F		23 +400 to + 550 °C +752 to +1022 °F		26 -195 to +300 °C -320 to +572 °F	
Part	Part name	Material	DIN-No.	Material	DIN-No.	Material	DIN-No.		
1*	Inlet nozzle	C22.8	1.0460	13CrMo44	1.7335	X5CrNi189	1.4301		
2	Body	H11	1.0425	13CrMo44	1.7335	X5CrNi189	1.4301		
3	Seat zone	X20CrMo171	1.4115	X20CrMo171	1.4115	X5CrNi189	1.4301		
4●	Disc	H11	1.0425	13CrMo44	1.7335	X10CrNiMoTi1810	1.4571		
4.1	Disc seal	X20CrMo171	1.4115	X20CrMo171	1.4115	—	—		
5*	Guide piston	G-X6CrNi189	1.4308	G-X6CrNi189	1.4308	G-X6CrNi189	1.4308		
6*	Guide bush	G-X6CrNi189	1.4308	G-X6CrNi189	1.4308	G-X6CrNi189	1.4308		
7	Spindle	X20Cr13	1.4021	X20Cr13	1.4021	X10CrNiTi189	1.4541		
7.1	Screw bolt	5.6	—	5.6	—	X5CrNi189	1.4301		
8*	Bonnet	C22.8	1.0460	C22.8	1.0600	X10CrNiTi189	1.4541		
9	Stud	Ck35	1.1181	21CrMoV57	1.7709	X10CrNiMoTi1810	1.4571		
9.1	Nut	C35	1.0501	24CrMo5	1.7258	A2	1.4541		
10 ³⁾	Spring (weight with VSE 4)	50CrV4	1.8159	50CrV4	1.8159	50CrV4 Nickel-plated	1.8159		
11	Tightening screw	CuZn40Al2	2.0550	CuZn40Al2	2.0550	X20Cr13	1.4021		
12	Nut	St37	1.0110	St37	1.0110	X5CrNi189	1.4301		
13	Cap	GGG40.3	0.7043	GGG40.3	0.7043	GGG40.3	0.7043		
14*	Adjusting ring	X5CrNi189	1.4301	X5CrNi189	1.4301	X5CrNi189	1.4301		
15*	Cooling spacer	GS-C25	1.0619	GS-C25	1.0619	G-X7CrNiNb189	1.4552		
17	Gag plug	St37	1.0110	St37	1.0110	St37	1.0110		
18●	Ball	X45Cr13	1.3541	X45Cr13	1.3541	Hastelloy-C	2.4819		
19●	Pin	X12CrNiS188	1.4305	X12CrNiS188	1.4305	X12CrNiS188	1.4305		
20	Split ring	X20Cr13	1.4021	X20Cr13	1.4021	X20Cr13	1.4021		
21	Stop bush	X20Cr13	1.4021	X20Cr13	1.4021	X20Cr13	1.4021		
22	Distance tube	X20Cr13	1.4021	X20Cr13	1.4021	X20Cr13	1.4021		
23	Pressure bush	X20Cr13	1.4021	X20Cr13	1.4021	X20Cr13	1.4021		
24	Spring stop	GGG-50	0.7050	GGG-50	0.7050	G-X6CrNi189	1.4308		
25	Spring plate	St37	1.0110	St37	1.0110	X5CrNi189	1.4301		
26	Gasket	Kautschuk	—	Kautschuk	—	Kautschuk	—		
28	Nut	St37	1.0110	St37	1.0110	X5CrNi189	1.4301		
29	Split pin	St37	1.0110	St37	1.0110	X5CrNi189	1.4301		
30	Bush	X20Cr13	1.4021	X20Cr13	1.4021	X20Cr13	1.4021		
31	Fork	GTW35	—	GTW35	—	GTW35	—		
32	Square shaft	St37	1.0110	St37	1.0110	St37	1.0110		
33	Bottom ring	Sintered iron	—	Sintered iron	—	Sintered iron	—		
34	Packing	P4	—	P4	—	P4	—		
35	Screwing	CuZn40Al2	2.0550	CuZn40Al2	2.0550	X20Cr13	1.4021		
36	Lever	GTW35	—	GTW35	—	GTW35	—		
37	Washer	St37	1.0110	St37	1.0110	St37	1.0110		
38	Nut	St50-2	1.0050	St50-2	1.0050	St50-2	1.0050		
39	Gasket	Kautschuk	—	Kautschuk	—	Kautschuk	—		
40	Gasket	Soft iron	—	Soft iron	—	Soft iron	—		
41	Cap screw	Ck35	1.1181	Ck35	1.1181	Ck35	1.1181		
44	Adjusting screw	X20Cr13	1.4021	X20Cr13	1.4021	X5CrNi189	1.4301		
45	Gasket	Soft iron	—	Soft iron	—	X5CrNi189	1.4301		
48	Roller bearing (above 8000 kN spring force)	Steel	—	Steel	—	Steel	—		