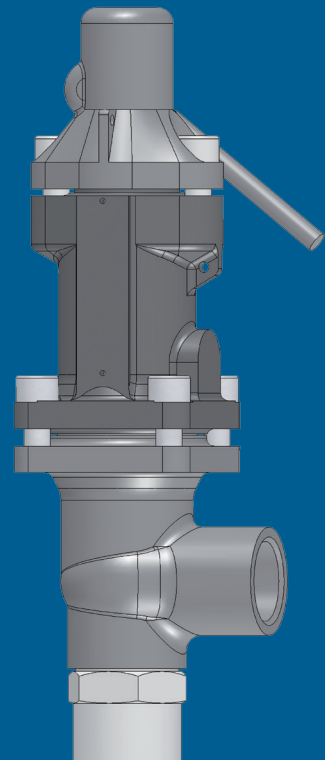




Spring Loaded Safety Valve

SiC 11/13/14





General

- Acc. Directive 97/23/EC of the European Parliament and the Council of 29 May 1997 on the approximation of the laws of the Member States concerning pressure equipment (PED)
- Certified acc. to
 - EN ISO 4126-1:2004-05
 - TÜV type test approval
 - ASME Section VIII
 - Type test approval acc. to PED
- Sizing acc. to
 - AD 2000-Merkblatt A2 and TRD 421
 - ASME Section VIII
- Set pressure range up to 200 bar [2900 psi]
- DIN + ASME Materials available
- Sizes from
 - DN 15 × 25 to 25 × 40
 - NPS ½" × 1" to 1" × 1 ½"

Applications

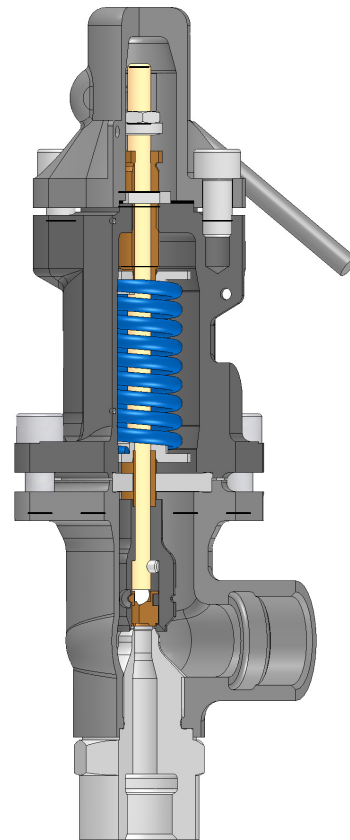
- Steam, gases or liquids
- Thermal expansion
- Protection of pipelines
- Chemical industry
- Petrochemicals
- Industrial gases
- Cooling and oxygen applications, liquefied gases
- OEM applications (e.g. pumps and compressors)
- Low and high capacity

Approvals

VdTÜV type approval; PED 97/23/EC (CE); ASME: III (NV), VIII (UV)

Features and Benefits

- Maximum lift with lift stop for the certified capacity provides a stable position of the disc.
- One-trim-design for steam, vapour, gas and liquids
- High discharge coefficients due to optimized flow geometry
- Overpressure and blowdown
 - Steam, gas, vapour G/S +10 % /-10 %
 - Liquids L +10 % /-20 %
- Easy maintenance because of special design features, e.g. one part spindle
- Dismantling of the valve for lapping of seat and disc without change of set pressure
- Bellows in safe location because outside the flowpath



Type Coding

Example

1	Style	SiC 11	Open bonnet
		SiC 13	Conventional
		SiC 14	Balanced bellows
2	Inlet connection	Z	Screwed male
		M	Screwed female
		0	PN 10–40
		1	PN 63–160
		2	PN 250–320
		3	PN 400
		4	Class 150
		6	Class 300–600
		7	Class 900–1500
3	Outlet connection	M	Screwed female
		0	PN 10–40
		1	PN 63–160
		4	Class 150
		5	Class 300
4	Options	.59	Stellited disc
		.60	Stellited nozzle seat
			Other options upon request
5	Cap design	G	Gastight without lifting lever
		A	Packed lifting lever
		B	Test gag
6	Material code	00	GP240GH / 1.0619 SA-216 WCB -10 to +400 °C
		04	GX5CrNiMo 19-11-2 / 1.4408 SA-351 CF8M -270 to +400 °C

SiC 13
0
0
.59
AB
00

Order code:

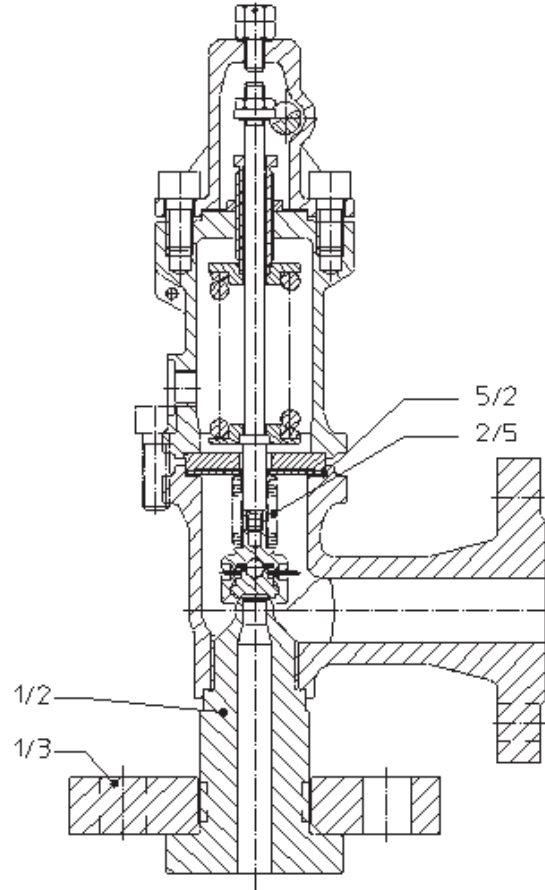
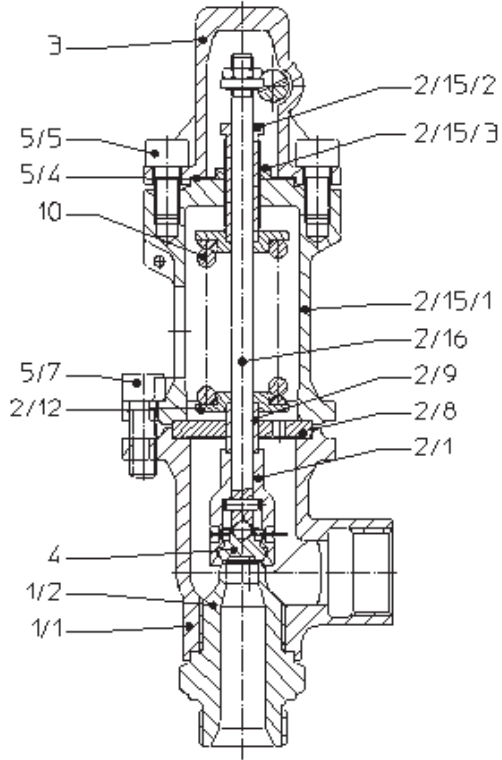
Please specify:

SiC 13 0 0 .59 AB 00	
Set pressure	15.0 barg
Cooling water, liquid	40 °C
Inlet size	DN 25 PN 40 B1
Outlet size	DN 25 PN 10 B1
Orifice diameter	12.2 mm
Code stamp	CE marking



**SiC 13 Standard
SiC 11 Open Bonnet**

SiC 14 Balanced Bellows



Material

Part	Material code	00		04	
	Description	DIN / EN	ASME	DIN / EN	ASME
	Temperature Range	-10 °C to +400 °C ¹⁾	-29 °C to +427 °C -20 °F to +800 °F	-270 °C to +400 °C ¹⁾	-268 °C to +427 °C ²⁾ -450 °F to +800 °F
1/1	Body	1.0619	SA-216 WCB	1.4408	SA-351 CF8M
1/2	Nozzle	1.4404	SA-479 316L	1.4404	SA-479 316L
1/3	Flange	1.0460	SA 105 ³⁾	1.4571	SA-479 316Ti
2/1	Disc holder	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
2/5	Bellows	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
2/8	Guide	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
2/9	Guide bush	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
2/12	Spring washer	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
2/15/1	Bonnet	1.0619	SA-216 WCB	1.4408	SA-351 CF8M
2/15/2	Adjusting screw	1.4021	420	1.4571	SA-479 316Ti
2/15/3	Lock nut	Stainless steel	Stainless steel	Stainless steel	Stainless steel
2/16	Spindle	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
3	Cap	1.0619	SA-216 WCB	1.4408	SA-351 CF8M
4	Disc	1.4571	SA-479 316Ti	1.4571	SA-479 316Ti
5/2	Gasket	Graphite / 1.4401	Graphite / 316	Graphite / 1.4401	Graphite / 316
5/4	Gasket	Graphite / 1.4401	Graphite / 316	Graphite / 1.4401	Graphite / 316
5/5	Socket screw	8.8	CS	8.8	CS
5/7	Socket screw	A4-70	B8M	A4-70	B8M
10	Spring	1.4310	302	1.4310	302

¹⁾ For temperature below -10 °C the regulations AD2000 Merkblatt W10 have to be considered

²⁾ If used for noncorrosive medium

³⁾ Low temperature limit for carbon steelflanges is -20 °F (-29 °C)
Use 316 Ti (1.4571) between -20 °F (-29 °C) and -50 °F (-45.6 °C)

Other materials upon request

Recommended Spares

Commissioning: Set of gaskets

2-years operation: Set of gaskets, disc

Several years operation: Set of gaskets, disc, spring



Dimensions Table Screwed Connection

	Size	Inlet d_1	Outlet d_2	Flow diameter	Flow Area	Max. Set Press.	Center to face	Center to face	Height	Weight	Dimension
				d_0	A_0	p_{max}	S_1	S_2	H	M	L
				mm	mm ²	barg	mm	mm	mm	kg	mm
DN DIN 3852-2	15 × 25	G½	G1	9.0	63.6	200	57	48	265	3.0	14
				0.35	0.1	2901	2.24	1.89	10.43	6.61	0.55
	20 × 25	G¾	G1	9.0	63.6	200	57	48	265	3.0	16
				0.35	0.1	2901	2.24	1.89	10.43	6.61	0.63
	20 × 25	G¾	G1	12.2	116.9	100	57	48	272	3.0	16
				0.48	0.18	1450	2.24	1.89	10.71	6.61	0.63
	25 × 25	G1	G1	12.2	116.9	100	57	48	272	3.0	18
				0.48	0.18	1450	2.24	1.89	10.71	6.61	0.71
	25 × 40	G1	G1½	17.0	227.0	50	62	55	274	3.5	18
				0.67	0.35	725	2.44	2.17	10.79	7.72	0.71
NPS ASME B1.20.1	½ × 1	NPT½-14	NPT1-11.4	9.0	63.6	200	57	48	265	3.0	20
				0.35	0.1	2901	2.24	1.89	10.43	6.61	0.79
	¾ × 1	NPT¾-14	NPT1-11.4	9.0	63.6	200	57	48	265	3.0	20
				0.35	0.1	2901	2.24	1.89	10.43	6.61	0.79
	¾ × 1	NPT¾-14	NPT1-11.4	12.2	116.9	100	57	48	272	3.0	20
				0.48	0.18	1450	2.24	1.89	10.71	6.61	0.79
	1 × 1	NPT1-11.4	NPT1-11.4	12.2	116.9	100	57	48	272	3.0	25
				0.48	0.18	1450	2.24	1.89	10.71	6.61	0.98
	1 × 1½	NPT1-11.4	NPT1½-11.4	17.0	227.0	50	62	55	274	3.5	25
				0.67	0.35	725	2.44	2.17	10.79	7.72	0.98

Inlet/Outlet Connections

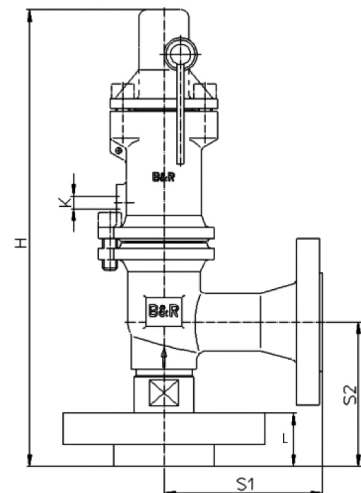
- Flanged acc to ASME, DIN
- Screwed connection NPT, metric, other upon request
- Swagelok
- Other types upon request

SiC 11 / 13

Max. set pressure 200 bar
Seat diameter: 9; 12.2; 17 mm

SiC 14

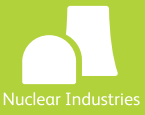
Max. set pressure 100 bar
Seat diameter 12.2; 17 mm
Bonnet with test connection G ¼



Dimensions Table Flanged Connection

	Size	Inlet PN/class	Outlet PN/class	Flow	Flow	Max. Set	Center to	Center to	Height H	Weight M	Dimen- sion L
				diameter	Area	Press.	face	face			
				d_0	A_0	P_{max}	S_1	S_2			
				mm	mm ²	barg	mm	mm	mm	kg	mm
				in	in ²	psig	in	in	in	lbm	in
Flanges acc. to EN 1092-1 facing type B	15 × 25	10–40	10–40	9.0	63.6	40.0	110	100	317	5.5	16
				0.35	0.1	580	4.33	3.94	12.48	12.13	0.63
	15 × 25	64–160	10–40	9.0	63.6	160.0	110	100	317	6.5	33
				0.35	0.1	2321	4.33	3.94	12.48	14.33	1.30
	15 × 25	250–320	10–40	9.0	63.6	200.0	110	100	317	7.5	39
				0.35	0.1	2901	4.33	3.94	12.48	16.53	1.54
	20 × 25	10–40	10–40	9.0	63.6	40.0	110	100	317	6.0	33
				0.35	0.1	580	4.33	3.94	12.48	13.23	1.30
	20 × 25	10–40	10–40	12.2	116.9	40.0	110	100	324	6.0	31
				0.48	0.18	580	4.33	3.94	12.76	13.23	1.22
	25 × 25	10–40	10–40	12.2	116.9	40.0	110	100	324	6.5	31
				0.48	0.18	580	4.33	3.94	12.76	14.33	1.22
25 × 25	64–160	10–40	12.2	116.9	100.0	110	100	324	7.5	37	
			0.48	0.18	1450	4.33	3.94	12.76	16.53	1.46	
25 × 40	10–40	10–40	17.0	227	40.0	125	100	319	8.0	31	
			0.67	0.35	580	4.92	3.94	12.56	17.64	1.22	
25 × 40	64–160	10–40	17.0	227	50.0	125	100	319	9.0	37	
			0.67	0.35	725	4.92	3.94	12.56	19.84	1.46	
Flanges acc. to ASME / ANSI B16.5	½ × 1	150	150	9.0	63.6	19.7	110	100	317	5.0	12
				0.35	0.1	286	4.33	3.94	12.48	11.02	0.47
	½ × 1	300–600	150	9.0	63.6	102.0	110	100	317	5.0	21
				0.35	0.1	1479	4.33	3.94	12.48	11.02	0.83
	½ × 1	300–600	300	9.0	63.6	102.0	110	100	317	6.0	21
				0.35	0.1	1479	4.33	3.94	12.48	13.23	0.83
	½ × 1	900–1500	150	9.0	63.6	200.0	110	100	317	6.5	42
				0.35	0.1	2901	4.33	3.94	12.48	14.33	1.65
	½ × 1	900–1500	300	9.0	63.6	200.0	110	100	317	7.0	42
				0.35	0.1	2901	4.33	3.94	12.48	15.43	1.65
	¾ × 1	150	150	9.0	63.6	19.7	110	100	317	5.5	28
				0.35	0.1	286	4.33	3.94	12.48	12.13	1.10
	¾ × 1	300–600	150	9.0	63.6	102.0	110	100	317	6.0	35
				0.35	0.1	1479	4.33	3.94	12.48	13.23	1.38
	¾ × 1	300–600	300	9.0	63.6	102.0	110	100	317	6.5	35
				0.35	0.1	1479	4.33	3.94	12.48	14.33	1.38
	¾ × 1	900–1500	150	9.0	63.6	200.0	110	100	317	7.0	44
				0.35	0.1	2901	4.33	3.94	12.48	15.43	1.73
	¾ × 1	900–1500	300	9.0	63.6	200.0	110	100	317	7.5	44
				0.35	0.1	2901	4.33	3.94	12.48	16.53	1.73
	¾ × 1	150	150	12.2	116.9	19.7	110	100	324	5.5	28
				0.48	0.18	286	4.33	3.94	12.76	12.13	1.10
	¾ × 1	300–600	150	12.2	116.9	100.0	110	100	324	6.0	35
				0.48	0.18	1450	4.33	3.94	12.76	13.23	1.38
	¾ × 1	300–600	300	12.2	116.9	100.0	110	100	324	6.5	35
				0.48	0.18	1450	4.33	3.94	12.76	14.33	1.38
	¾ × 1	900–1500	150	12.2	116.9	100.0	110	100	324	7.0	44
				0.48	0.18	1450	4.33	3.94	12.76	15.43	1.73
	¾ × 1	900–1500	300	12.2	116.9	100.0	110	100	324	7.5	44
				0.48	0.18	1450	4.33	3.94	12.76	16.53	1.73
	1 × 1	150	150	12.2	116.9	19.7	110	100	324	6.0	33
				0.48	0.18	286	4.33	3.94	12.76	13.23	1.30
1 × 1	300–600	150	12.2	116.9	100.0	110	100	324	6.5	37	
			0.48	0.18	1450	4.33	3.94	12.76	14.33	1.46	
1 × 1	300–600	300	12.2	116.9	100.0	110	100	324	7.0	37	
			0.48	0.18	1450	4.33	3.94	12.76	15.43	1.46	
1 × 1	900–1500	150	12.2	116.9	100.0	110	100	324	8.0	44	
			0.48	0.18	1450	4.33	3.94	12.76	17.64	1.73	
1 × 1	900–1500	300	12.2	116.9	100.0	110	100	324	9.0	44	
			0.48	0.18	1450	4.33	3.94	12.76	19.84	1.73	
1 × 1 ½	150	150	17.0	227.0	19.7	125	100	319	6.5	33	
			0.67	0.35	286	4.92	3.94	12.56	14.33	1.30	
1 × 1 ½	300–600	150	17.0	227.0	50.0	125	100	319	7.5	37	
			0.67	0.35	725	4.92	3.94	12.56	16.53	1.46	
1 × 1 ½	300–600	300	17.0	227.0	50.0	125	100	319	8.0	37	
			0.67	0.35	725	4.92	3.94	12.56	17.64	1.46	

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