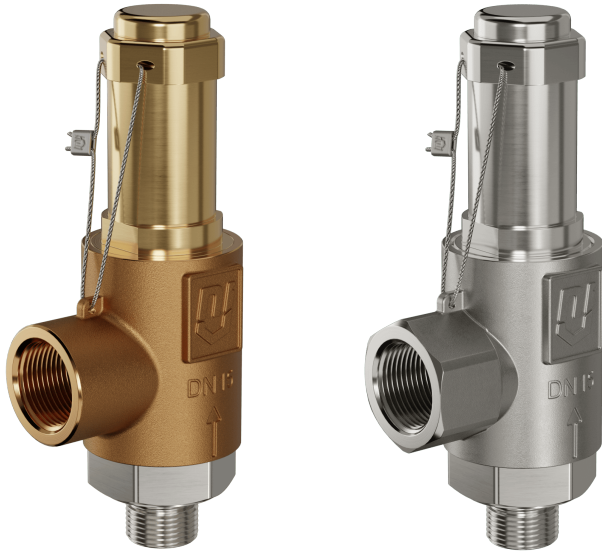


Safety Valve TYPE SV19 / SV20



Description:

Safety valves are used to protect against or prevent overpressure in a vessel or closed system.

Product Features:

- Suitable for neutral and non-neutral, **liquid and gaseous media, such as water vapor and steam***
- EU type examination S/G, L
- TÜV component test mark TÜV 2061 D/G, F
- Safety valves are delivered pre-set and sealed

Inlet connection:

G 1/4", G 3/8", G 1/2"

Temperature:

-60°C to 225°C – depending on model

Pressure:

0.5 bar – 70.0 bar – depending on model

Design:

Full-lift safety valve as D/G valve
Normal-stroke safety valve as F valve

Inlet body material:

Stainless steel 1.4404 / AISI 316 L

Outlet body material:

SV19: Red brass CC499K

SV20: Stainless steel CF8M / AISI CF8M

Material of internal parts:

SV19: Brass CW617N

SV20: Stainless steel 1.4404 / AISI 316 L

Compression spring:

Stainless steel 1.4310 / AISI 302

Connection:

Inlet: BSP-P male thread / Outlet: BSP-P female thread

Seal:

EPDM** (up to 20.0 bar set pressure) -40°C to +170°C

PTFE (up to 25.0 bar set pressure) -60°C to +225°C

PTFE + carbon (from 25.1 bar set pressure) -60°C to +225°C

Installation position:

Vertical with the spring cover facing upward

Type of lift:

without lift

Valve design:

Gas-tight design of the spring bonnet

For neutral and non-neutral media, not backpressure-compensated

Environment protected from media influences

Requirements:

AD 2000 Data Sheet A2

DGR 2014/68/EU

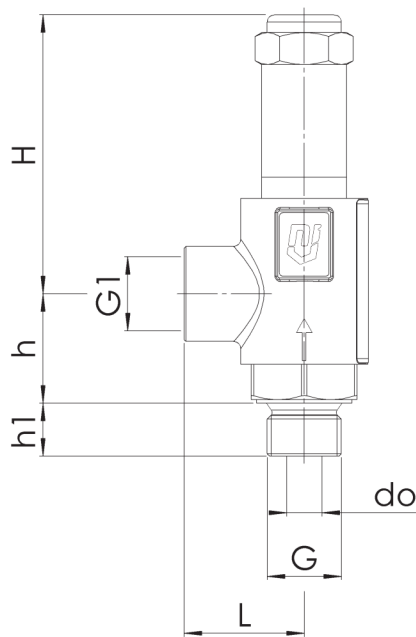
DIN EN ISO 4126-1

TRD 421

*For medium steam, set pressure only up to 25 bar

**Available only for stainless steel versions

Dimensions:



According to DIN EN ISO 228:

DN	8	10	15 ²	
Inlet DIN EN ISO 228 G	1/4" (DN8)	3/8" (DN10)	1/2" (DN15)	1/2" (DN15)
Outlet DIN EN ISO 228 G1	1/2" (DN15)	1/2" (DN15)	1/2" (DN15)	1/2" (DN15)
L	34	34	34	34
H	79	79	79	133
h	31	31	31	31
h1	12	12	15	15
Discharge coefficient c_{dw} / K_{dr} (F)	0.50	0.44	0.47	0.47
Discharge coefficient c_{dw} / K_{dr}	0.68	0.64	0.71	0.71
d0	6	8	10	10
Set pressure (bar) for SV19	0.5 – 50	0.5 – 50	0.5 – 30	30.1 – 50
Set pressure (bar) for SV20	0.5 – 70	0.5 – 70	0.5 – 30	30.1 – 70
Weight kg	0.5	0.5	0.6	1.0

¹ Flow rates for blow-off pressures >3.0 bar. For lower pressures, see performance table

² For the DN15 version >30 bar, the STEP file is available upon request. The DN15 version <=30 bar can be downloaded from the web shop

Options (upon request):

- For stainless steel version SV20: EPDM seal with set pressure from 20.1 bar to 25.0 bar
- For the SV20 stainless steel version: EPDM seal in conjunction with DVGW drinking water approval
- For the SV20 stainless steel version: FKM seal
- For the red brass version SV19: Chemically nickel-plated, electroplated nickel-plated, or chrome-plated finish
- Oil- and grease-free manufacturing
- Specially designed for applications with gaseous O₂ through the use of special materials, including oil- and grease-free manufacturing
- Non-gas-tight version of the spring bonnet with rotary vent or vent lever
- Type approval: Det Norske Veritas (DNV), Lloyd's Register (LR), American Bureau of Shipping (ABS), Bureau Veritas (BV), Registro Italiano Navale (RINA)

Assembly part number:

Component	SV19 Series	Series SV20
Housing	Red brass	Stainless steel
Internal parts	Brass	Stainless steel
Spring cover	Gas-tight	Gas-tight
For media	gaseous & liquid	gaseous & liquid

Design	Lifting	Inlet/outlet connection	Seal	Size (Inlet x Outlet)
SV19 Red brass SV20 Stainless steel	00 – without	0 – BSP-P male thread / BSP-P female thread 1 – Male NPT thread / Female NPT thread	1 – EPDM* (set pressure max. 20 bar) 3 – PTFE** (set pressure max. 70 bar)	01 – 1/4" x 1/2" 02 – 3/8" x 1/2" 03 – 1/2" x 1/2"

Example No. SV19000302:

SV19 | **00** | **0** | **3** | **02**

Item No. SV19000302

Stainless steel safety valve

Lifting: None

Inlet/outlet connection: BSP-P male thread / BSP-P female thread

Seal: PTFE

Size (inlet x outlet): 3/8" x 1/2"

*EPDM seal available only for SV20 stainless steel versions

**For set pressures >25.0 bar, the seal is made of PTFE + carbon

Illustration for illustrative purposes only; subject to technical and dimensional changes

Performance table:

Medium: 1 = Air Nm³/hDischarge capacity at 10% pressure exceedance, full-stroke safety valve
(according to AD2000 A2)

2 = Steam kg/h

Discharge capacity at 10% pressure exceedance, full-stroke safety valve
(according to AD2000 A2)3 = Water m³/hDischarge capacity at 10% pressure exceedance
(according to ISO 4126-1)

DN	8			10			15		
Set pressure in bar	1	2	3	1	2	3	1	2	3
0.5	18.9	15.5	0.6	29.7	24.3	0.9	49.4	40.4	1.4
1.0	26.1	20.8	0.8	41.9	33.4	1.2	73.5	58.5	2.0
1.5	33.8	26.7	0.9	55.3	43.8	1.4	97.5	77.2	2.4
2.0	41.3	32.5	1.1	68.4	53.8	1.7	120.1	94.5	2.8
2.5	48.8	38.2	1.2	81.0	63.4	1.9	141.7	110.9	3.1
3.0	56.2	43.8	1.3	93.4	72.8	2.0	163.3	127.3	3.4
3.5	63.4	49.3	1.4	105.8	82.2	2.2	184.2	143.1	3.7
4.0	70.6	54.7	1.5	118.3	91.6	2.4	205.1	158.8	3.9
4.5	77.8	60.1	1.6	130.4	100.7	2.5	226.0	174.5	4.2
5.0	85.1	65.5	1.7	142.4	109.7	2.6	246.9	190.2	4.4
5.5	92.3	70.9	1.8	154.5	118.8	2.8	267.8	205.9	4.6
6.0	99.5	76.3	1.8	166.6	127.8	2.9	288.7	221.5	4.8
6.5	106.7	81.7	1.9	178.6	136.8	3.0	309.6	237.1	5.0
7.0	113.9	87.1	2.0	190.7	145.8	3.1	330.5	252.7	5.2
7.5	121.1	92.5	2.1	202.7	154.8	3.2	351.4	268.3	5.4
8.0	128.3	97.8	2.1	214.8	163.7	3.3	372.3	283.8	5.6
8.5	135.5	103.2	2.2	226.8	172.7	3.4	393.2	299.4	5.7
9.0	142.8	108.6	2.3	238.9	181.7	3.5	414.1	314.9	5.9
9.5	150.0	113.9	2.3	250.9	190.7	3.6	435.0	330.5	6.1
10	157.2	119.3	2.4	263.0	199.6	3.7	455.8	346.0	6.2
11	171.6	130.0	2.5	287.1	217.6	3.9	497.6	377.1	6.5
12	186.0	140.7	2.6	311.2	235.5	4.1	539.4	408.1	6.8
13	200.4	151.4	2.7	335.3	253.3	4.3	581.2	439.1	7.1
14	214.8	162.1	2.8	359.4	271.3	4.4	623.0	470.2	7.4
15	229.2	172.9	2.9	383.5	289.2	4.6	664.8	501.4	7.6
16	243.6	183.5	3.0	407.6	307.1	4.7	706.6	532.3	7.9
17	258.0	194.3	3.1	431.7	325.1	4.9	748.3	563.4	8.1
18	272.4	205.0	3.2	455.8	343.0	5.0	790.1	594.6	8.4
19	286.8	215.8	3.3	479.9	361.0	5.2	831.9	625.8	8.6
20	301.2	226.5	3.4	504.0	379.0	5.3	873.7	657.0	8.8
21	315.7	237.3	3.5	528.1	397.0	5.4	915.5	688.2	9.0
22	330.1	248.0	3.5	552.3	415.0	5.5	957.3	719.4	9.3
23	344.5	258.8	3.6	576.4	433.1	5.7	999.1	750.7	9.5
24	358.9	269.6	3.7	600.5	451.2	5.8	1,040.8	782.0	9.7
25	373.3	280.4	3.8	624.6	469.2	5.9	1,082.6	813.4	9.9

Performance table:

Medium: 1 = Air Nm³/h

2 = Steam kg/h

3 = Water m³/hDischarge capacity at 10% pressure exceedance, full-stroke safety valve
(according to AD2000 A2)Discharge capacity at 10% pressure exceedance, full-stroke safety valve
(according to AD2000 A2)Discharge capacity at 10% pressure exceedance
(according to ISO 4126-1)

DN	8			10			15		
Set pressure in bar	1	2	3	1	2	3	1	2	3
26.0	387.7	-	3.9	648.7	-	6.0	1,124.4	-	10.1
27.0	402.1	-	3.9	672.8	-	6.1	1,166.2	-	10.2
28.0	416.5	-	4.0	696.9	-	6.3	1,208.0	-	10.4
29.0	430.9	-	4.1	721.0	-	6.4	1,249.8	-	10.6
30.0	445.3	-	4.1	745.1	-	6.5	1,291.6	-	10.8
32.0	474.3	-	4.3	793.3	-	6.7	1,375.1	-	11.2
34.0	502.9	-	4.4	841.5	-	6.9	1,458.7	-	11.5
36.0	531.8	-	4.5	889.7	-	7.1	1,542.3	-	11.8
38.0	560.6	-	4.7	938.0	-	7.3	1,625.8	-	12.2
40.0	589.4	-	4.8	986.2	-	7.5	1,709.4	-	12.5
42.0	618.2	-	4.9	1,034.	-	7.7	1,793.0	-	12.8
44.0	647.0	-	5.0	1,082.	-	7.8	1,876.6	-	13.1
46.0	675.8	-	5.1	1,130.	-	8.0	1,960.1	-	13.4
48.0	704.6	-	5.2	1,179.	-	8.2	2,043.7	-	13.7
50.0	733.5	-	5.3	1,227.	-	8.4	2,127.3	-	13.9
51.0	747.9	-	5.4	1,251.	-	8.4	2,169.1	-	14.1
52.0	762.3	-	5.4	1,275.4	-	8.5	2,210.8	-	14.2
53.0	776.7	-	5.5	1,299.	-	8.6	2,252.6	-	14.4
54.0	791.1	-	5.6	1,323.	-	8.7	2,294.4	-	14.5
55.0	805.5	-	5.6	1,347.	-	8.8	2,336.2	-	14.6
56.0	819.9	-	5.7	1,371.	-	8.8	2,378.0	-	14.8
57.0	834.3	-	5.7	1,396.	-	8.9	2,419.8	-	14.9
58.0	848.7	-	5.8	1,420.	-	9.0	2,461.6	-	15.0
59.0	863.1	-	5.8	1,444.	-	9.1	2,503.4	-	15.2
60.0	877.5	-	5.9	1,468.	-	9.2	2,545.1	-	15.3
61.0	891.9	-	5.9	1,492.	-	9.2	2,586.9	-	15.4
62.0	906.3	-	5.9	1,516.	-	9.3	2,628.7	-	15.5
63.0	920.8	-	6.0	1,540.	-	9.4	2,670.5	-	15.7
64.0	935.2	-	6.0	1,564.	-	9.5	2,712.3	-	15.8
65.0	949.6	-	6.1	1,588.	-	9.5	2,754.1	-	15.9
66.0	964.0	-	6.1	1,612.	-	9.6	2,795.9	-	16.0
67.0	978.4	-	6.2	1,637.	-	9.7	2,837.6	-	16.1
68.0	992.8	-	6.2	1,661.	-	9.7	2,879.4	-	16.3
69.0	1,007.	-	6.3	1,685.	-	9.8	2,921.2	-	16.4
70.0	1,021.	-	6.3	1,709.	-	9.9	2,963.0	-	16.5

Only available for stainless steel version SV20

Available only for the SV20 stainless steel model