

Full lift safety valve / Standard safety valve
ARI-SAFE
**Full lift safety valve D/G
 Standard safety valve F**

- Type-test approved acc. to DIN EN ISO 4126-1 / AD2000-A2 / TRD421
- TÜV · SV · . . . -663 · D/G **Figure 901/911**
- TÜV · SV · . . . -663 · F **Figure 901/911**
- Further approvals: see inside

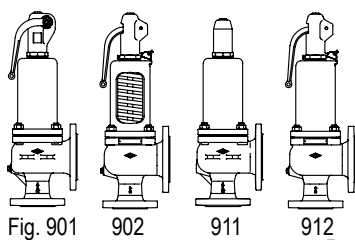


Fig. 901 902 911 912 Page 2

ARI-SAFE
**Standard safety valve
 for the heating technology**

- Type-test approved acc. to DIN EN ISO 4126-1 / DIN EN 12828 / TRD 721
- TÜV · SV · . . . -688 · D/G/H **Figure 903**
- TÜV · SV · . . . -688 · D **Figure 904**

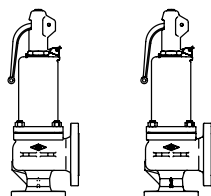


Fig. 903 904 Page 14

ARI-SAFE-P
Standard safety valve D/G/F

- Type-test approved acc. to DIN EN ISO 4126-1 / AD2000-A2
- TÜV · SV · . . . -811 · D/G **Figure 921/923**
- TÜV · SV · . . . -811 · F **Figure 921/923**

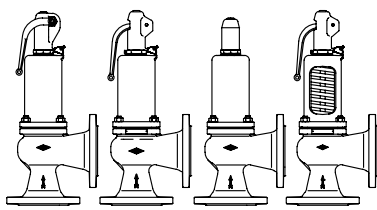


Fig. 921 922 923 924 Page 20

ARI-SAFE-TC
**Full lift safety valve D/G
 Standard safety valve F**

- Type-test approved acc. to DIN EN ISO 4126-1 / AD2000-A2 / TRD421
- TÜV · SV · . . . -995 · D/G **Figure 941-943**
- TÜV · SV · . . . -995 · F **Figure 941/943**

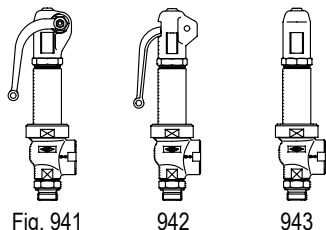


Fig. 941 942 943 Page 26

ARI-SAFE-TC
**Standard safety valve
 for the heating technology**

- Type-test approved acc. to DIN EN ISO 4126-1 / DIN EN 12828 / TRD 721
- TÜV · SV · . . . -997 · D/G/H **Figure 945**
- TÜV · SV · . . . -997 · D **Figure 946**

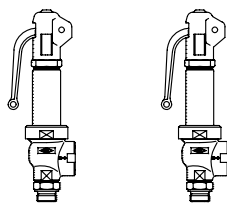


Fig. 945 946 Page 30

ARI-SAFE-TCP
Standard safety valve D/G/F

- Type-test approved acc. to DIN EN ISO 4126-1 / AD2000-A2
- TÜV · SV · . . . -1041 · D/G **Figure 961-963**
- TÜV · SV · . . . -1041 · F **Figure 961/963**

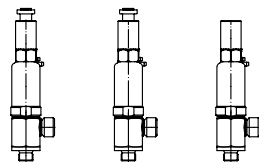


Fig. 961 962 963 Page 34

ARI-SAFE-TCS
Standard safety valve D/G/F

- Type-test approved acc. to DIN EN ISO 4126-1 / AD2000-A2
- TÜV · SV · . . . -1041 · D/G **Figure 951-953**
- TÜV · SV · . . . -1041 · F **Figure 951/953**

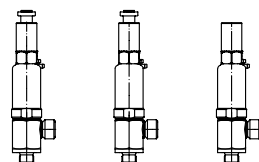


Fig. 951 952 953 Page 38

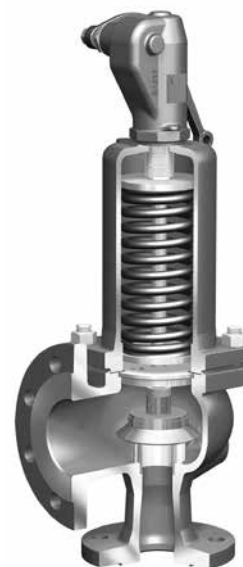
ALSO FOR HORIZONTAL APPLICATION


Fig. 900



Fig. 940



Fig. 920



Fig. 950/960

Features:

- Direct loaded with spring
- Wear resistant seat/disc
- Precision disc alignment and guide
- Possible with soft seal disc
- Possible with EPDM bellows
- Possible with stainless steel bellows
- ARI-SAFE-TC/TCP/TCS:
All common thread types

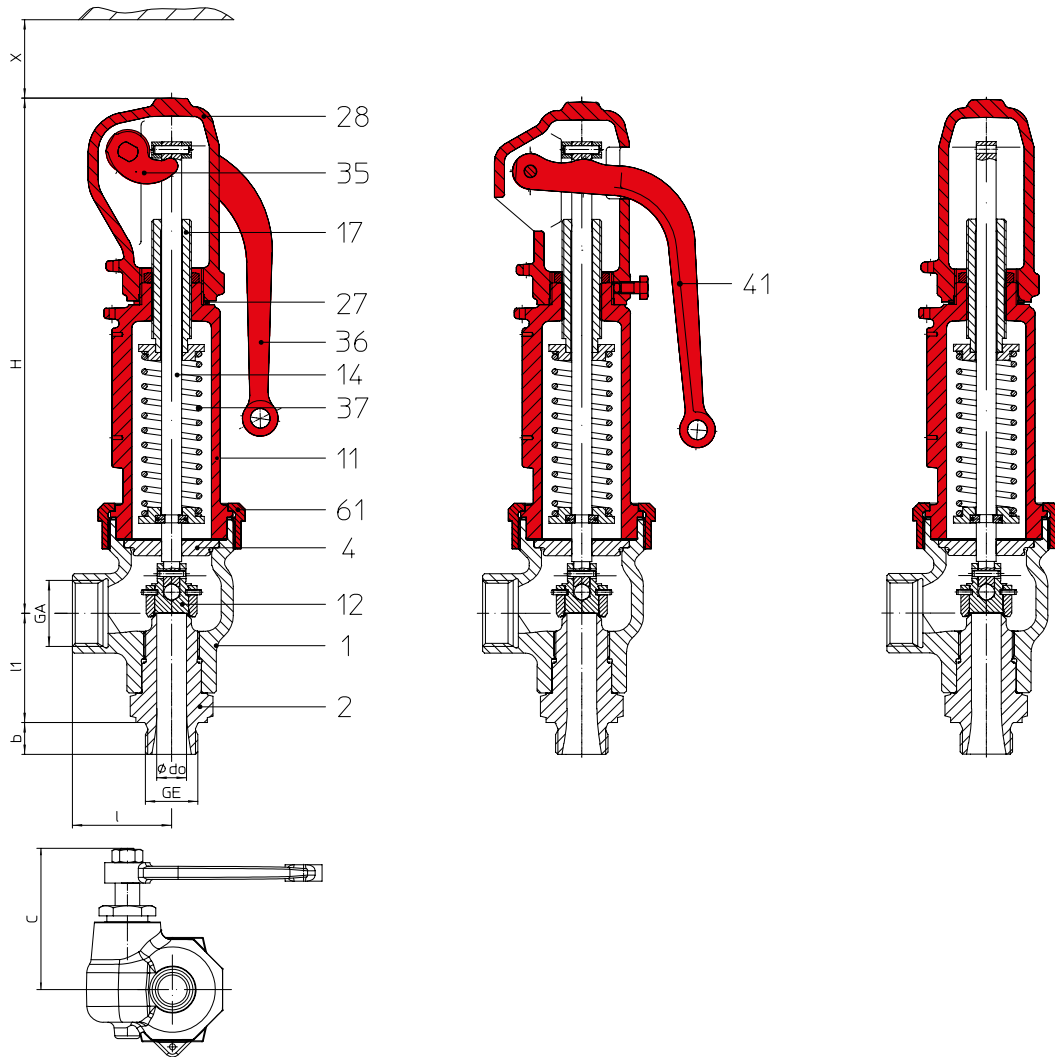
ARI-SAFE-TC - Full lift safety valve D/G, Standard safety valve F

Fig. ... 941
 closed lifting device,
 closed bonnet

Fig. ... 942
 open lifting device,
 closed bonnet

Fig. ... 943
 gastight cap,
 closed bonnet

Figure	Nominal pressure	Material	Nominal diameter	Temperature range	Thread
25.941 / 942 / 943	PN40	EN-JS1049	DN 15 - 25	-10°C to +350°C	DIN ISO 228 Part 1
55.941 / 943	PN40	1.4408	DN15 - 25	-60°C to +400°C	DIN ISO 228 Part 1

Construction

Safety valve, spring loaded, direct loaded

Requirement

acc. to EN ISO 4126-1, VdTÜV-leaflet 100, AD2000-A2, TRD 421

Type-test approval

Full lift safety valve: (acc. to VdTÜV-leaflet 995)	Fig. 941/942/943	TÜV · SV ... -995 · D/G
Standard safety valve:	Fig. 941/943	TÜV · SV ... -995 · F

Sizing

for steam, air and water refer to capacity tables, calculations acc. to EN ISO 4126-1, TRD 421 and AD2000-A2.

Details required

Medium gasform:	Mass flow (kg/h), molar mass (kg/kmol), Isotropic exponent, temperature (°C), set pressure (barg), back pressure (barg)
Medium liquid:	Mass flow (kg/h), density (kg/m ³), viscosity, temperature (°C), set pressure (barg), back pressure (barg)

Order data:

ARI-SAFE-TC - Safety valve, Figure, DN ... / ..., PN .. / .., Material, Set pressure bar

	standard: without metal bellows	optional: with metal bellows (refer to page 42)
Superimposed back pressure	no backpressure allowed	on request
Built up back pressure	max. 10% from set pressure (higher on request)	on request

Parts				
Pos.	Sp.p.	Description	Fig. 25.941/942/943	Fig. 55.941/943
1		Body	EN-GJS-400-18U-LT, EN-JS1049	GX5CrNiMo19-11-2, 1.4408
2		Screwed seat	X6CrNiMoTi17-12-2, 1.4571	
4		Spindle guide	X20Cr13+QT, 1.4021+QT	X6CrNiMoTi17-12-2, 1.4571
7	x	Gasket	Pure graphite (CrNi laminated with graphite)	
11		Bonnet, closed	EN-GJS-400-18U-LT, EN-JS1049	GX5CrNiMo19-11-2, 1.4408
12		Disc	X39CrMo17-1+QT, 1.4122+QT	X6CrNiMoTi17-12-2, 1.4571
14	x	Spindle	X20Cr13+QT, 1.4021+QT	X6CrNiMoTi17-12-2, 1.4571
17		Adjusting screw	X20Cr13+QT, 1.4021+QT	X2CrNiMo17-12-2, 1.4404
27	x	Sealing ring	CuFA	X6CrNiMoTi17-12-2, 1.4571
28		Cap, closed	EN-GJS-400-18U-LT, EN-JS1049	GX5CrNiMo19-11-2, 1.4408
35		Lift fork	EN-GJS-400-15, EN-JS1030	GX5CrNiMo19-11-2, 1.4408
36		Lever, closed	EN-GJS-400-18U-LT, EN-JS1049	GX5CrNiMo19-11-2, 1.4408
37	x	Spring	FDSiCr / 51CrV4, 1.8159	X10CrNi18-8, 1.4310
41		Lever, open	EN-GJS-400-18U-LT, EN-JS1049	--
43		Bellows (optional)	EPDM 70 Shore A	
55		Bellows unit (optional)	X6CrNiMoTi17-12-2, 1.4571	
61		Coupling	X6CrNiMoTi17-12-2, 1.4571	
70		Balanced piston (optional)	X6CrNiMoTi17-12-2, 1.4571	
L Spare parts				

DN	15	20	25
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Spring ranges: Standard design

Full lift safety valve Fig. 941/942/943	(barg)	0,3 - 0,6	0,3 - 0,48	0,2 - 0,4
	(barg)	> 0,6 - 0,9	> 0,48 - 0,68	> 0,4 - 0,88
	(barg)	> 0,9 - 1,35	> 0,68 - 1,35	> 0,88 - 1,5
	(barg)	> 1,35 - 2,2	> 1,35 - 2,1	> 1,5 - 2,1
	(barg)	> 2,2 - 3,3	> 2,1 - 3	> 2,1 - 2,6
	(barg)	> 3,3 - 4,5	> 3 - 4	> 2,6 - 3,2
	(barg)	> 4,5 - 5,5	> 4 - 5,5	> 3,2 - 4,2
	(barg)	> 5,5 - 6,7	> 5,5 - 7,7	> 4,2 - 6,2
	(barg)	> 6,7 - 8,2	> 7,7 - 11,4	> 6,2 - 8
	(barg)	> 8,2 - 11	> 11,4 - 15	> 8 - 10
	(barg)	> 11 - 13	> 15 - 20	> 10 - 15,5
	(barg)	> 13 - 18,5	> 20 - 28	> 15,5 - 18
	(barg)	> 18,5 - 32,4	> 28 - 35	> 18 - 29,9
(barg)	> 32,4 - 40	> 35 - 40	> 30 - 40	

Spring ranges: Bellows design (optional)

Standard safety valve Fig. 941/943	(barg)	5,7 - 6,5	4 - 5,7	4 - 5,4
	(barg)	> 6,5 - 8	> 5,7 - 7	> 5,4 - 6,4
	(barg)	> 8 - 9,3	> 7 - 9,9	> 6,4 - 7,4
	(barg)	> 9,3 - 11	> 9,9 - 14	> 7,4 - 8,4
	(barg)	> 11 - 15	> 14 - 21	> 8,4 - 10,4
	(barg)	> 15 - 19	> 21 - 28,9	> 10,4 - 13,4
	(barg)	> 19 - 29	> 29,9 - 40	> 13,4 - 16,4
	(barg)	> 29 - 40		> 16,4 - 20,4
	(barg)			> 20,4 - 28

Information / restriction of technical rules need to be observed!

A production permission acc. to TRB 801 No. 45 is available.

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

DN	15	20	25
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Dimensions				
G	(inch)	1/2" x 3/4"	3/4" x 1"	1" x 1 1/4"
d0	(mm)	12	15	18
A0	(mm ²)	113	177	254
GE	(inch)	1/2"	3/4"	1"
GA	(inch)	3/4"	1"	1 1/4"
b	(mm)	15	16	18
l	(mm)	50	50	50
l1	(mm)	53	55	58
H	(mm)	260	260	260
H (Bellows design)	(mm)	295	295	300
X	(mm)	120	120	120
C	(mm)	69	69	69

Weights				
standard	(kg)	3,5	3,5	3,8
optional: Bellows design	(kg)	4,4	4,4	4,7

Pressure-temperature-ratings	Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.									
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acc. to DIN EN 1092-2			-60°C to <-10°C	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
EN-JS1049	40	(bar)	on request	40	38,8	36,8	34,8	32	28	--	--

acc. to DIN EN 1092-1			-60°C to <-10°C	-10°C to 100°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.4408	40	(bar)	40	40	36,3	33,7	31,8	29,7	28,5	27,4	--

Certified coefficient of discharge Kdr (Values for D/G variable: < 3,5 bar)			
DN	15	20	25
TÜV · SV · . . . -995 · D/G	0,64	0,60	0,75
TÜV · SV · . . . -995 · F	0,45	0,42	0,53

Capacity saturated steam / air / water (incl. 10% overpressure)

DN		15	20	25	
Inlet: Male	(inch)	G1/2"	G3/4"	G1"	
Outlet: Female	(inch)	G3/4"	G1"	G1 1/4"	G1 1/2"
do	(mm)	12	15	18	
Set pressure		Saturated steam (kg/h)			
0,2	(barg)			75	75
0,3	(barg)	35	47	94	94
0,5	(barg)	46	65	124	124
1	(barg)	72	103	188	188
2	(barg)	120	172	320	320
3	(barg)	162	238	430	430
4	(barg)	206	300	545	545
5	(barg)	246	360	650	650
6	(barg)	285	420	755	755
7	(barg)	325	480	860	860
8	(barg)	370	540	970	970
9	(barg)	410	600	1075	1075
10	(barg)	450	655	1180	1180
11	(barg)	490	715	1290	1290
12	(barg)	530	775	1395	1395
13	(barg)	570	835	1500	1500
14	(barg)	610	890	1605	1605
15	(barg)	650	950	1710	1710
16	(barg)	690	1010	1820	1820
17	(barg)	730	1070	1925	1925
18	(barg)	770	1130	2030	2030
19	(barg)	810	1190	2135	2135
20	(barg)	850	1245	2245	2245
22	(barg)	930	1365	2455	2455
24	(barg)	1015	1485	2670	2670
26	(barg)	1095	1600	2885	2885
28	(barg)	1175	1725	3100	3100
30	(barg)	1260	1845	3320	3320
32	(barg)	1340	1965	3535	3535
34	(barg)				
36	(barg)				
40	(barg)				

15	20	25	
G1/2"	G3/4"	G1"	
G3/4"	G1"	G1 1/4"	G1 1/2"
12	15	18	
Air 0°C and 1,013 bara (Nm³/h)			
		88	88
41	56	112	112
57	79	151	151
91	129	237	237
153	219	405	405
209	305	552	552
266	390	702	702
320	469	845	845
375	549	988	988
429	628	1130	1130
483	708	1275	1275
537	787	1415	1415
592	867	1560	1560
646	946	1705	1705
700	1026	1845	1845
754	1105	1990	1990
809	1185	2130	2130
863	1265	2275	2275
917	1345	2420	2420
971	1420	2560	2560
1025	1500	2705	2705
1080	1580	2850	2850
1135	1660	2990	2990
1240	1820	3275	3275
1350	1980	3560	3560
1460	2140	3850	3850
1570	2300	4135	4135
1675	2455	4420	4420
1785	2615	4705	4705
1895	2775	4990	4990
2000	2940	5270	5270
2220	3250	5850	5850

15	20	25	
G1/2"	G3/4"	G1"	
G3/4"	G1"	G1 1/4"	G1 1/2"
12	15	18	
Water 20°C (t/h)			
		3,22	3,22
1,49	2,17	3,94	3,94
1,92	2,80	5,10	5,10
2,72	3,96	7,19	7,19
3,85	5,60	10,17	10,17
4,71	6,86	12,46	12,46
5,44	7,92	14,39	14,39
6,08	8,85	16,10	16,10
6,66	9,70	17,62	17,62
7,20	10,47	19,04	19,04
7,69	11,20	20,30	20,30
8,16	11,88	21,60	21,60
8,60	12,52	22,70	22,70
9,02	13,13	23,80	23,80
9,42	13,72	24,90	24,90
9,81	14,27	25,90	25,90
10,18	14,81	26,90	26,90
10,54	15,33	27,90	27,90
10,88	15,84	28,80	28,80
11,22	16,32	29,70	29,70
11,54	16,80	30,50	30,50
11,86	17,26	31,40	31,40
12,17	17,71	32,20	32,20
12,76	18,57	33,70	33,70
13,33	19,40	35,20	35,20
13,87	20,20	36,70	36,70
14,40	20,90	38,10	38,10
14,90	21,70	39,40	39,40
15,39	22,40	40,70	40,70
15,86	23,10	41,90	41,90
16,28	23,8	43,1	43,1
17,21	25,00	45,50	45,50

ARI-SAFE-TC - Spring loaded Fig. 945, Low pressure steam - safety valve Fig. 946

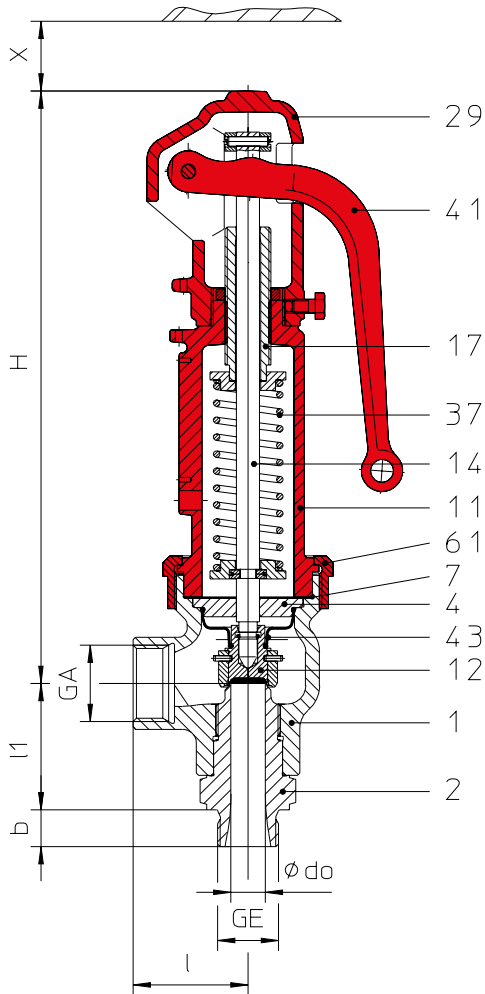


Fig.945
open lifting device,
closed bonnet

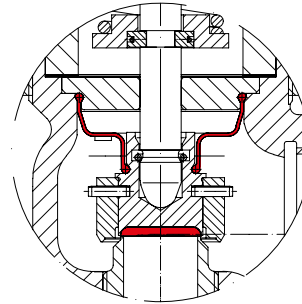


Fig.945
EPDM-disc, soft seal insert; EPDM-bellows

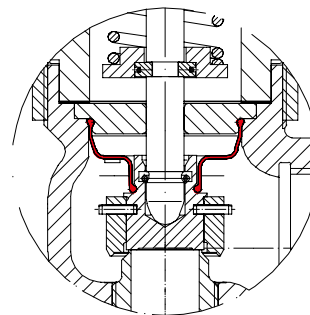


Fig.946
Disc metal seat, EPDM-Bellows seal

Figure	Nominal pressure	Material	Nominal diameter (inlet)	Temperature range	Thread
25.945	PN40	EN-JS1049	DN15 - 25	-10°C to +120°C	DIN ISO 228 Part 1
25.946	PN40	EN-JS1049	DN15 - 25	-10°C to +120°C	DIN ISO 228 Part 1

Fig. 945	Fig. 946
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Construction		
	Standard safety valve, spring loaded, direct loaded disc with EPDM insert, EPDM-bellows, closed spring bonnet with control hole, open lifting device, stainless steel seat and spindle	Standard safety valve, spring-/weight loaded, direct loaded with EPDM-bellows, closed bonnet with control hole, open lifting device, stainless steel seat and spindle
Application		
	acc. to DIN EN 12828 Heating systems in buildings	For low pressure steamgenerators up to 1 bar, acc. to DIN 4750 and DIN EN 12828 Heating systems in buildings
Requirement		
	acc. to DIN EN ISO 4126-1 / TRD 721 Part 6	acc. to DIN EN ISO 4126-1 / TRD 721 Part 5
Type-test approval		
	Spring loaded: TÜV · SV · . . -997 · D/G/H	Low pressure steam - safety valve: TÜV · SV · . . -997 · D
Sizing		
	Acc. to TRD 721 Part 6.2.5, refer to "Capacity".	refer to "Capacity"
Order data:		
	ARI-SAFE-TC - spring loaded, Figure, DN ... / ..., PN .. / .., Material, Set pressure barg	ARI-SAFE-TC - Low pressure steam - safety valve, Figure ..., DN ... / ..., PN .. / .., Material ..., Set pressure ...barg

Parts			
Pos.	Sp.p.	Description	Fig. 25.945/946
1		Body	EN-GJS-400-18U-LT, EN-JS1049
2		Screwed seat	X6CrNiMoTi17-12-2, 1.4571
4		Spindle guide	X20Cr13+QT, 1.4021+QT
7	x	Gasket	Pure graphite (CrNi laminated with graphite)
11		Bonnet, closed	EN-GJS-400-18U-LT, EN-JS1049
12	x	Disc	X6CrNiMoTi17-12-2, 1.4571
14	x	Spindle	X20Cr13+QT, 1.4021+QT
17		Adjusting screw	X20Cr13+QT, 1.4021+QT
29		Cap, open	EN-GJS-400-18U-LT, EN-JS1049
37	x	Spring	FDSiCr
41		Lever, open	EN-GJS-400-18U-LT, EN-JS1049
43		Bellows (optional)	EPDM 70 Shore A
61		Coupling	X6CrNiMoTi17-12-2, 1.4571
L Spare parts			

DN (inlet)	15	20	25
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Spring ranges: Standard design				
Low pressure steam - safety valve Fig. 946	(barü)	0,3 - 0,6	0,3 - 0,5	0,2 - 0,4
	(barü)	> 0,6 - 0,9	> 0,5 - 0,7	> 0,4 - 0,9
	(barü)	> 0,9 - 1	> 0,7 - 1	> 0,9 - 1
Spring loaded Fig. 945	(barü)	> 1 - 1,35	> 1 - 1,35	> 1 - 1,5
	(barü)	> 1,35 - 2,2	> 1,35 - 2,1	> 1,5 - 2,1
	(barü)	> 2,2 - 3,3	> 2,1 - 3	> 2,1 - 2,6
	(barü)	> 3,3 - 4,5	> 3 - 4	> 2,6 - 3,2
	(barü)	> 4,5 - 5,5	> 4 - 5,5	> 3,2 - 4,2
	(barü)	> 5,5 - 6,7	> 5,5 - 7,7	> 4,2 - 6,2
	(barü)	> 6,7 - 8,2	> 7,7 - 11,5	> 6,2 - 8
	(barü)	> 8,2 - 11	> 11,5 - 15	> 8 - 10
	(barü)	> 11 - 13	> 15 - 16	> 10 - 15,5
(barü)	> 13 - 16		> 15,5 - 16	

Information / restriction of technical rules need to be observed!

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

DN (inlet)	15	20	25
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Dimensions					
G	(inch)	1/2" x 3/4"	3/4" x 1"	1" x 1 1/4"	1" x 1 1/2"
d0	(mm)	12	15	18	18
A0	(mm ²)	113	177	254	254
GE	(inch)	1/2"	3/4"	1"	1"
GA	(inch)	3/4"	1"	1 1/4"	1 1/2"
b	(mm)	15	16	18	18
l	(mm)	50	50	50	50
l1	(mm)	53	55	58	58
H	(mm)	260	260	260	260
X	(mm)	120	120	120	120

Weights					
standard	(kg)	3,5	3,5	3,8	3,8

Pressure-temperature-ratings	Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.
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acc. to DIN EN 1092-2			-60°C to <-10°C*	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
EN-JS1049	40	(bar)	on request	40	38,8	36,8	34,8	32	28	--	--

Certified coefficient of discharge Kdr (Values for D/G/H variable: < 3,5 bar)					
DN		15	20	25	
TÜV · SV · . . . - 997 · D/G/H	(bar)	0,64	0,60	0,75	

Capacity water incl. 10% overpressure

Sizing safety valves for the volume flow of water expansion (DIN 4751 T2 - item 8.1 / DIN EN 12828 - item E.3)						
Differential pressure			DN (inlet)			
			15	20	25	
1	(barg)	Water 20°C (kg/h)	(kg/h)	2700	3900	7000
2	(barg)		(kg/h)	3800	5600	10000
3	(barg)		(kg/h)	4700	6800	12400
4	(barg)		(kg/h)	5400	7900	14300
5	(barg)		(kg/h)	6000	8800	16000
6	(barg)		(kg/h)	6600	9700	17600
7	(barg)		(kg/h)	7200	10400	19000
8	(barg)		(kg/h)	7600	11200	20300
9	(barg)		(kg/h)	8100	11800	21600
10	(barg)		(kg/h)	8600	12500	22700
11	(barg)		(kg/h)	9000	13000	23800
12	(barg)		(kg/h)	9400	13700	24900
13	(barg)		(kg/h)	9800	14200	25900
14	(barg)		(kg/h)	10000	14800	26900
15	(barg)		(kg/h)	10500	15300	27900
16	(barg)		(kg/h)	10800	15800	28800

Sizing: 1 l/h $\hat{=}$ 1 kW

Fig. 945: Capacity saturated steam incl. 10% overpressure

Set pressure			DN (inlet)		
			15	20	25
1	(barg)	(kg/h)	72	103	188
		(kW)	44	63	115
1,5	(barg)	(kg/h)	97	136	254
		(kW)	58	82	154
2	(barg)	(kg/h)	120	172	320
		(kW)	72	103	191
2,5	(barg)	(kg/h)	142	205	376
		(kW)	85	122	224
3	(barg)	(kg/h)	162	238	430
		(kW)	96	140	253
3,5	(barg)	(kg/h)	185	272	489
		(kW)	109	159	287
4	(barg)	(kg/h)	206	300	545
		(kW)	120	176	316
4,5	(barg)	(kg/h)	226	331	596
		(kW)	131	192	346
5	(barg)	(kg/h)	246	360	650
		(kW)	142	208	375
5,5	(barg)	(kg/h)	267	391	703
		(kW)	153	224	403
6	(barg)	(kg/h)	285	420	755
		(kW)	164	240	432
6,5	(barg)	(kg/h)	307	450	810
		(kW)	174	256	460
7	(barg)	(kg/h)	325	480	860
		(kW)	185	271	488
7,5	(barg)	(kg/h)	348	509	917
		(kW)	195	286	516
8	(barg)	(kg/h)	370	540	970
		(kW)	206	302	543
9	(barg)	(kg/h)	410	600	1075
		(kW)	227	332	598
10	(barg)	(kg/h)	450	655	1180
		(kW)	247	362	651
11	(barg)	(kg/h)	490	715	1290
		(kW)	267	391	705
12	(barg)	(kg/h)	530	775	1395
		(kW)	287	421	757
13	(barg)	(kg/h)	570	835	1500
		(kW)	307	449	809
14	(barg)	(kg/h)	610	890	1605
		(kW)	326	478	860
15	(barg)	(kg/h)	650	950	1710
		(kW)	346	506	911
16	(barg)	(kg/h)	690	1010	1820
		(kW)	365	534	962

Fig. 946: Capacity saturated steam incl. 10% overpressure

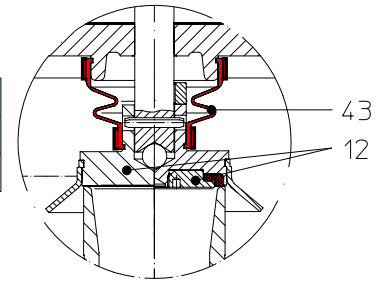
Set pressure			DN (inlet)		
			15	20	25
0,2	(barg)	(kg/h)	--	--	67
0,3	(barg)	(kg/h)	32	43	86
0,4	(barg)	(kg/h)	38	53	103
0,5	(barg)	(kg/h)	44	62	117
0,6	(barg)	(kg/h)	50	71	133
0,7	(barg)	(kg/h)	56	78	146
0,8	(barg)	(kg/h)	62	86	163
0,9	(barg)	(kg/h)	67	95	175
1	(barg)	(kg/h)	72	103	188
Conversionrates:		1 kW = 860 kcal/h* = 0,86 Mcal/h* = 3,6 MJ/h		* not lawful units	
		1 Mcal/h* = 1000 kcal/h* = 1,163 kW			

Soft sealing disc						
Body design	Pos.	Description	P min.	Material	Temperature range	Abbreviation
EN-JL1040, EN-JS1049, 1.0619+N	12	Disc	0,5 bar	X20Cr13+QT, 1.4021+QT / EPDM	-40 °C to +150 °C	E
			0,5 bar	X20Cr13+QT, 1.4021+QT / FPM Viton (FKM)	-20 °C to +180 °C	V
			0,5 bar	X20Cr13+QT, 1.4021+QT / CR Neoprene	-30 °C to +100 °C	N
			1,0 bar ¹⁾	X20Cr13+QT, 1.4021+QT / SHR ²⁾	-20 °C to +220 °C	S
1.4408, 1.4581	12	Disc	0,5 bar	X6CrNiMoTi17-12-2, 1.4571 / EPDM	-40 °C to +150 °C	E
			0,5 bar	X6CrNiMoTi17-12-2, 1.4571 / FPM Viton (FKM)	-20 °C to +180 °C	V
			0,5 bar	X6CrNiMoTi17-12-2, 1.4571 / CR Neoprene	-30 °C to +100 °C	N
			1,0 bar ¹⁾	X6CrNiMoTi17-12-2, 1.4571 / SHR ²⁾	-20 °C to +220 °C	S
SA216WCB	12	Disc	0,5 bar	SA276 Gr. 440 / EPDM	-40 °C to +150 °C	E
			0,5 bar	SA276 Gr. 440 / FPM Viton (FKM)	-20 °C to +180 °C	V
			0,5 bar	SA276 Gr. 440 / CR Neoprene	-30 °C to +100 °C	N
			1,0 bar	SA276 Gr. 440 / SHR	-20 °C to +220 °C	S

Fig. 950/960 with soft sealing disc max. 40 bar

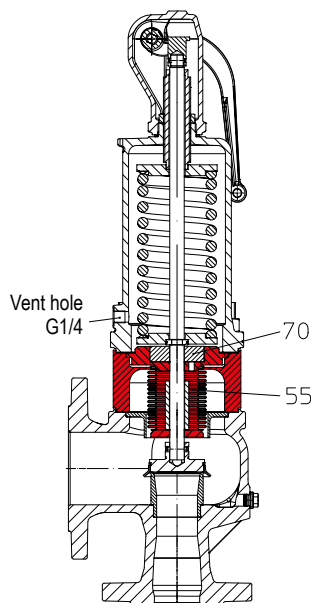
¹⁾ DN20/32 min. 2,0 bar ²⁾ only Fig. 900

EPDM-Bellows seal (DN15 - 150)			
Pos.	Description	Material	Temperature range
43	EPDM-Bellows seal	EPDM 70 Shore A	-10 °C to +120 °C

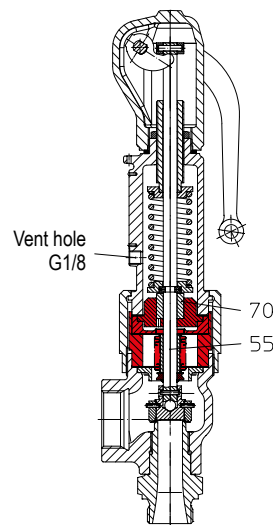


Balanced stainless steel-bellows (Only for closed version!)		
Pos.	Description	Material
55	Bellows unit	X6CrNiMoTi17-12-2, 1.4571; SA240 / SA479 Gr.316 Ti (SAFE-SN ANSI)
70	Balanced piston (DN15-100)	X6CrNiMoTi17-12-2, 1.4571; SA479 Gr.316 Ti (SAFE-SN ANSI)

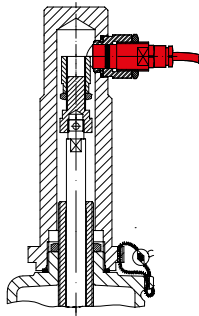
Test: German "TA-Air TÜV-Test-No. 922-960324"



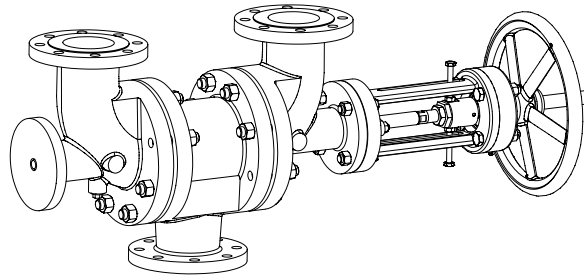
SAFE 900



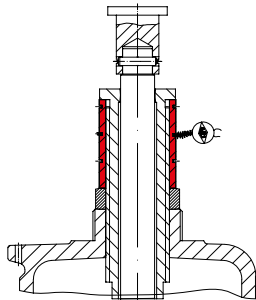
SAFE-TC 940



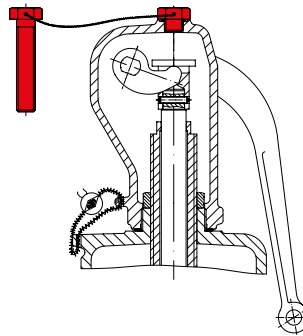
Proximity switch



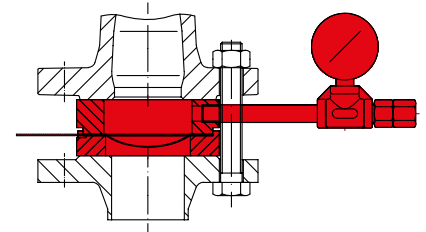
Changeover valve



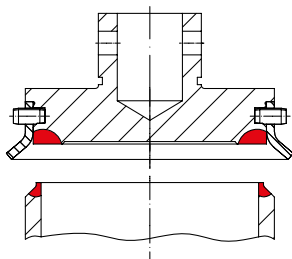
Lock bushing



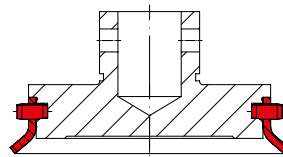
Test gag



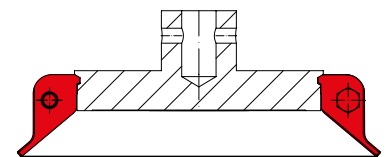
Rupture disc
(Sizing refer to page 40.)



Seat 1.4571 / Stellite No. 21
Disc 1.4571 / Stellite No. 6
Sitz SA479Gr.316Ti / Stellite No. 21 (SAFE-SN ANSI)
Kegel SA479Gr.316Ti / Stellite No. 6 (SAFE-SN ANSI)
removable lifting aid

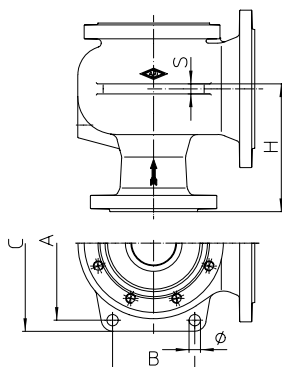


DN15-100



DN125-250

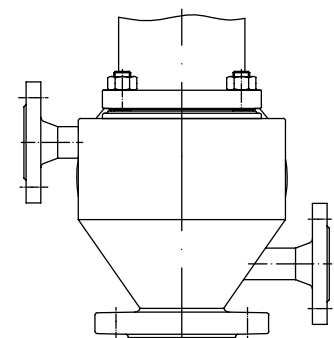
removable lifting aid



Body-Material	DN1 x DN2 (mmxmm)	A (mm)	B (mm)	C (mm)	Ø (mm)	S (mm)	H (mm)
1.0619+N	50 x 80	176	70	204	14	12	155
1.4408	65 x 100	212	90	242			175
EN-JL1040	80 x 125	245	130	280	18	16	205
EN-JS1049	100 x 150	295	165	332			230
1.0619+N	125 x 200	318	183	362	22	20	260
1.4408	150 x 250	360	200	408			295
EN-JL1040	125 x 125	226	110	254	14	10	205
1.0619+N	150 x 150	262	146	298			232
EN-JS1049	200 x 300	465	256	521	26	22	305
1.0619+N	250 x 350	544	300	600			337

Body-Material	NPS (inch)	A (mm)	B (mm)	C (mm)	Ø (mm)	S (mm)	H (mm)
SA216WCB	2" x 3"	176	70	204	14	12	143
	3" x 4"	212	90	242			162
	4" x 6"	295	165	332	18	16	186
	6" x 8"	318	183	362	22	20	248
	6" x 10"	360	200	405	22	22	251

Support tongues, drilled



Heating jacket

	SAFE Fig. 900			SAFE-SN BR 900	SAFE-P Fig. 920	SAFE-TC Fig. 940			SAFE- TCS/ TCP Fig. 950 / 960
	Fig. 901-912	Fig. 903	Fig. 904	Fig. 901-912	Fig. 921-924	Fig. 941-943	Fig. 945	Fig. 946	Fig. 951-953 Fig. 961-963
Pressure equipment directive PED 2014/68/EU Module H1, B+D	X	X	X	X	X	X	X	X	X
BV Bureau Veritas Frankreich / France	X	--	--	X	X	X	--	--	X
DNV Det Norske Veritas Norwegen / Norway	X	--	--	X	X	X	X	X	X
GL Germanischer Lloyd	X	--	--	X	X	X	--	--	X
LROS (LRS) Lloyds Register of Shipping	X	--	--	X	X	X	--	--	--
SELO (SQLO) China / Chine	X	X	X	X	X	X	X	X	X
ASME Code Section VIII-Division 1 (UV-stamp)	--	--	--	X	--	--	--	--	--
Canada Registration (UV-stamp)	X	--	--	X	--	--	--	--	--
EAC Russland / Russia	X	X	X	X	X	X	X	X	X
RMROS (RS) Russian Maritime Register of Shipping	X	X	X	X	X	X	X	X	X
Promatomnadzor White russia (Rep. of Belarus)	X	X	X	X	X	X	X	X	X
Prombezpeka Ukraine	X	X	X	X	X	X	X	X	X
Rostechnadzor (Gosgortekhnadsor) Russland / Russia	X	X	X	X	X	X	X	X	X

Single approvals

Arbejdstilsynet Danish emploment protection	X	X	X	X	X	X	X	X	X
ABS American Bureau of Shipping	X	X	X	X	X	X	X	X	X
AIB Vincotte Belgien / Belgium	X	X	X	X	X	X	X	X	X
IBR Indien Boiler Regulations	X	--	--	X	X	X	--	--	--
ISPESL Italien / Italy	X	X	X	X	X	X	X	X	X
RINA Italien / Italy	X	--	--	X	X	X	--	--	--
Stoomwezen Niederlande / Netherlands	X	X	X	X	X	X	X	X	X
NK Japan	X	X	X	X	X	X	X	X	X
UDT Polen / Poland	X	X	X	X	X	X	X	X	X

myValve® - Your Valve Sizing-Program.

myValve® is a powerful software tool that not only helps you size your system components; it also gives you instant access to all other data about the selected product, such as order information, spare parts drawings, operating instructions, data sheets, etc., whenever you need it.

Product data

PROPERTY	INDICATION
Produktkey	15101600110
Article code	35901002SAG1
Type	ARI-SAFE-ANSI
Designation	ANSI-Full W/Standard safety valve with flanges
Material	SA216WC8
Pressure	ANSI300
Connection	Flanged
Nominal diameter	1" x 2"
Feature1	Design: closed bonnet/ closed lifting device Plug
Feature2	Pressure range: 30 - 39 psig/02,05 - 02,70 bar
TAG-No.	
Note	

Figure	NPS	Class	API	ASME	d0	d1	d2	AD-cal.	Kd	Capacity	Design	Version
35.901-ANSI	1" x 2"	ANSI300	F		22.6	29.0	661.0	245.944	0.817	109.828	closed bonnet/...	standard
35.901-ANSI	1 1/2" x 2"	ANSI300	G		29.0	36.0	661.0	245.944	0.817	1511.045	closed bonnet/...	standard
35.901-ANSI	1 1/2" x 3"	ANSI300	H		36.0	45.0	1018.0	245.944	0.817	2327.147	closed bonnet/...	standard
35.901-ANSI	2" x 3"	ANSI300	J (H)		45.0	55.0	1590.0	245.944	0.817	3634.739	closed bonnet/...	standard

Contents:

Module ARI-Safety valve SAFE-Calculation

- Sizing of valve-size with given capacity, temperature, set pressure and back pressure;
- Sizing acc. to SAFE DIN EN, AD2000, ASME VIII, API520.

Media:

Integrated media-databank (more than 160 media) with conditions:

- Vapours / gases
- Steam (saturated and superheated)
- Liquids

Special features:

- Project administration of the calculation and product data incl. spare part drawings concerning to project and tag number.
- Direct output of calculation and product data in PDF format.
- Product data could be taken for a direct order.
- SI- and ANSI-units with direct conversion to another databank.
- Settings with over pressure or absolute pressure.
- All ARI valves are integrated in a databank.
- Direct access relating to the product on data sheets, operating instructions, pressure-temperature-diagram, controller characteristics, spare part drawings and CAD-symbols on the website.
- Operation in company networks possible (no complex installations on individually PC's necessary).
- Extensive catalogue extending over several product groups.

System requirements:

Windows operating systems, Linux, etc.

To ARI-Armaturen to the att. of Mrs./Mr. Fax No. +49 52 07 / 994 -

If the type of bursting disc is not yet determined, we are offering our assistance for sizing.
Please send us the questionnaire containing the appropriate data.

Customer:
.....
Handled by:
Date:

Telephone:
Fax:
E-mail:

Necessary data

Medium:
 liquid gas

Temperature:°C

Safety valve

Type / Figure:	.....	Set pressure:	..... bar(g)
Nominal diameter: (Input / Output)	DN /	Flow diameter d_0:	..... mm
Nominal pressure: (Input / Output)	PN /	Flow cross-section A_0:	..... mm ²
		Certified coefficient of discharge $K_{dr}(\alpha_w)$:	.....

Rupture disc

Bursting pressure:	..... bar(g)	Material:	<input type="checkbox"/> 1.4401
(Bursting pressure = Set pressure of the safety valve)			<input type="checkbox"/> Nickel
Tolerance:	<input type="checkbox"/> + 10%		<input type="checkbox"/> Inconel
	<input type="checkbox"/>%		<input type="checkbox"/> Monel
Quantity:	..... piece		<input type="checkbox"/> Aluminium
(incl. reserve)	(minimum 3 pieces recommended)		<input type="checkbox"/> Teflon foil medium side
TÜV-approval:	<input type="checkbox"/> yes <input type="checkbox"/> no		<input type="checkbox"/> other

Halter (incl. 1/4"-vent)

Nominal pressure:	PN	Material:	<input type="checkbox"/> 1.4571
Quantity (Holder):	..... piece		<input type="checkbox"/> other

Indication device

(Pressure gauge / excess flow valve)

Quantity: piece

Burst disc alarm

Quantity: piece

Bursting disc selection

Construction

Reverse buckling bursting disc
 other

Manufacturer / Type:

Nominal size selection of the bursting disc

• Acc. to DIN EN ISO 4126-3 and API 520 „90%-determination“
Example:

Max. capacity SAFE 900, DN 50, 10 bar without bursting disc	= 9610 Nm ³ /h
Max. capacity SAFE 900, DN 50, 10 bar with bursting disc	= 0,9 x 9610 Nm ³ /h = 8649 Nm ³ /h

• Acc. to AD2000-A1 (5.4.2.2)

$$A_{geom} \times \alpha > 1,5 \times A_0 \times \alpha_w$$

DN

Remark:

