

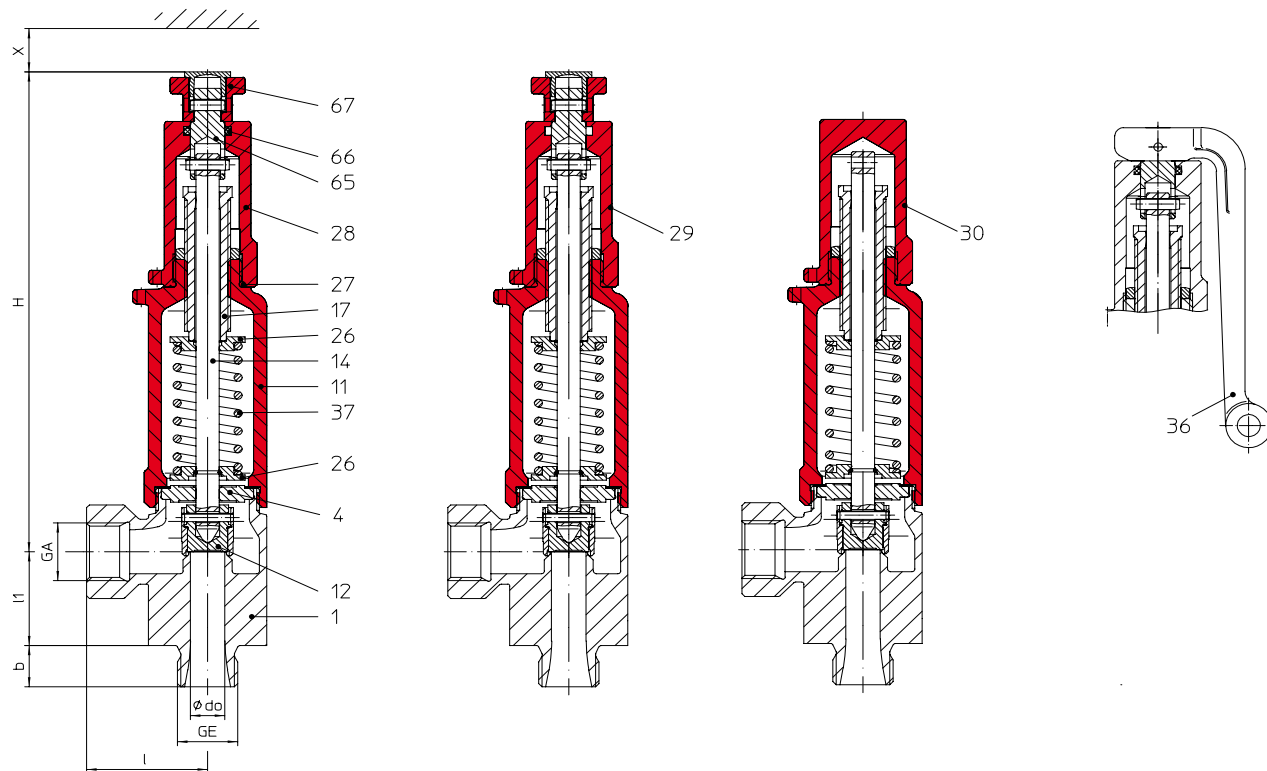
ARI-SAFE-TCP - Standard safety valve D/G/F

 Fig.961
closed lifting device

 Fig.962
open lifting device

 Fig.963
gastight cap

 Fig.961 / Fig.962
optional with lever

Figure	Nominal pressure	Material	Nominal diameter	Temperature range	Thread
67.961 / 962 / 963	PN100	1.4581/EN-JS1049	DN15 - 25	-10°C to +300°C (up to +400°C on request)	DIN ISO 228 Part 1
57.961 / 963	PN100	1.4581	DN15 - 25	-60°C to +300°C (up to +400°C on request)	DIN ISO 228 Part 1

Construction

Safety valve, spring loaded, direct loaded

Requirement

Acc. to EN ISO 4126-1, VdTÜV-leaflet 100, AD2000-A2

Type-test approval

Standard safety valve:	Fig. 961/962/963	TÜV · SV · . . . -1041 · D/G
Standard safety valve:	Fig. 961/963	TÜV · SV · . . . -1041 · 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-TCP - Safety valve, Figure, DN ... / ..., PN .. / .., Material, Set pressure bar

standard: without metal bellows
Superimposed back pressure

no backpressure allowed

Built up back pressure

max. 10% from set pressure (higher on request)

Parts				
Pos.	Sp.p.	Description	Fig. 67.961/962/963	Fig. 57.961/963
1		Body	GX5CrNiMoN19-11-2, 1.4581	
4		Spindle guide	X6CrNiMoTi17-12-2, 1.4571	
7	x	Gasket	Pure graphite (CrNi laminated with graphite)	
11		Bonnet, closed	EN-GJS-400-18U-LT, EN-JS1049	GX5CrNiMoN19-11-2, 1.4581
12		Disc	X6CrNiMoTi17-12-2, 1.4571	
14	x	Spindle	X6CrNiMoTi17-12-2, 1.4571	
17		Adjusting screw	X2CrNiMo17-12-2, 1.4404	
27	x	O-ring	FPM	
28		Cap, closed	GX5CrNiMoN19-11-2, 1.4581	
29		Cap, open	GX5CrNiMoN19-11-2, 1.4581	
30		Cap, gastight	EN-GJS-400-18U-LT, EN-JS1049	GX5CrNiMoN19-11-2, 1.4581
36		Lever, closed (optional: Fig.961 / Fig.962)	EN AC-4420 (Al)	
37	x	Spring	FDSiCr	X10CrNi18-8, 1.4310
65		Coupling	X6CrNiMoTi17-12-2, 1.4571	
66		O-ring	FPM	
67		Lift button	X6CrNiMoTi17-12-2, 1.4571	
		L Spare parts		

DN	15	20	25
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Spring ranges: Standard design		
Standard safety valve Fig. 961/962/963	(barg)	0,2 - 0,25
	(barg)	> 0,25 - 0,5
	(barg)	> 0,5 - 1
	(barg)	> 1 - 1,4
	(barg)	> 1,4 - 2,95
	(barg)	> 2,95 - 4,9
	(barg)	> 4,9 - 12
	(barg)	> 12 - 20
	(barg)	> 20 - 27
	(barg)	> 27 - 35
	(barg)	> 35 - 45
	(barg)	> 45 - 59
	(barg)	> 59 - 100

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	15	20	25
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Dimensions							
G	(inch)	1/2" x 1/2"	1/2" x 3/4"	3/4" x 1/2"	3/4" x 3/4"	3/4" x 1"	1" x 1"
d0	(mm)	12	12	12	12	12	12
A0	(mm ²)	113	113	113	113	113	113
GE	(inch)	1/2"	1/2"	3/4"	3/4"	3/4"	1"
GA	(inch)	1/2"	3/4"	1/2"	3/4"	1"	1"
b	(mm)	15	15	16	16	16	18
l	(mm)	42	47	42	47	50	50
l1	(mm)	34	34	34	34	34	34
H	(mm)	189	189	189	189	189	189
X	(mm)	100	100	100	100	100	100

Weights							
standard	(kg)	1,2	1,2	1,2	1,2	1,2	1,2

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 1092-1		-60°C to <-10°C	-10°C to 100°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.4581	100 (bar)	50	100	98	93,3	88,5	83,3	80,4	78	--

Certified coefficient of discharge Kdr (Values for D/G variable: < 4 bar)			
DN	15	20	25
TÜV · SV · . . . - 1041 · D/G		0,30	
TÜV · SV · . . . - 1041 · F		0,23	

Capacity saturated steam / Air / Water (incl. 10% overpressure)

DN		15	20	25	15	20	25	15	20	25	
Connections	(inch)	G1/2" x 1/2"	G3/4" x 1/2"	G1" x 1"	G1/2" x 1/2"	G3/4" x 1/2"	G1" x 1"	G1/2" x 1/2"	G3/4" x 1/2"	G1" x 1"	
	(inch)	G1/2" x 3/4"	G3/4" x 3/4"		G1/2" x 3/4"	G3/4" x 3/4"		G1/2" x 3/4"	G3/4" x 3/4"		
	(inch)		G3/4" x 1"			G3/4" x 1"			G3/4" x 1"		
do	(mm)	12			12			12			
Set pressure		Saturated steam (kg/h)			Air 0°C and 1,013 bara (Nm³/h)			Water 20°C (t/h)			
↓ max. set pressure stainless steel version	0,2	(barg)	14	14	14	16	16	16	0,62	0,62	0,62
	0,5	(barg)	24	24	24	29	29	29	0,98	0,98	0,98
	1	(barg)	35	35	35	44	44	44	1,39	1,39	1,39
	2	(barg)	56	56	56	71	71	71	1,97	1,97	1,97
	3	(barg)	75	75	75	96	96	96	2,41	2,41	2,41
	4	(barg)	96	96	96	125	125	125	2,78	2,78	2,78
	5	(barg)	116	116	116	150	150	150	3,11	3,11	3,11
	6	(barg)	135	135	135	176	176	176	3,41	3,41	3,41
	7	(barg)	153	153	153	201	201	201	3,68	3,68	3,68
	8	(barg)	172	172	172	227	227	227	3,93	3,93	3,93
	9	(barg)	191	191	191	252	252	252	4,17	4,17	4,17
	10	(barg)	210	210	210	277	277	277	4,40	4,40	4,40
	11	(barg)	229	229	229	303	303	303	4,61	4,61	4,61
	12	(barg)	248	248	248	328	328	328	4,82	4,82	4,82
	13	(barg)	267	267	267	354	354	354	5,01	5,01	5,01
	14	(barg)	286	286	286	379	379	379	5,20	5,20	5,20
	15	(barg)	304	304	304	405	405	405	5,39	5,39	5,39
	16	(barg)	323	323	323	430	430	430	5,56	5,56	5,56
	17	(barg)	342	342	342	455	455	455	5,73	5,73	5,73
	18	(barg)	361	361	361	481	481	481	5,90	5,90	5,90
	19	(barg)	380	380	380	506	506	506	6,06	6,06	6,06
	20	(barg)	399	399	399	532	532	532	6,22	6,22	6,22
	25	(barg)	494	494	494	659	659	659	6,95	6,95	6,95
	30	(barg)	590	590	590	786	786	786	7,62	7,62	7,62
35	(barg)	686	686	686	913	913	913	8,23	8,23	8,23	
40	(barg)	784	784	784	1040	1040	1040	8,79	8,79	8,79	
45	(barg)	883	883	883	1165	1165	1165	9,33	9,33	9,33	
50	(barg)	983	983	983	1295	1295	1295	9,83	9,83	9,83	
55	(barg)	1085	1085	1085	1420	1420	1420	10,31	10,31	10,31	
60	(barg)	1185	1185	1185	1550	1550	1550	10,77	10,77	10,77	
65	(barg)	1290	1290	1290	1675	1675	1675	11,21	11,21	11,21	
70	(barg)	1400	1400	1400	1800	1800	1800	11,63	11,63	11,63	
75	(barg)	1500	1500	1500	1930	1930	1930	12,04	12,04	12,04	
80	(barg)				2055	2055	2055	12,44	12,44	12,44	
85	(barg)				2185	2185	2185	12,82	12,82	12,82	
90	(barg)				2310	2310	2310	13,19	13,19	13,19	
95	(barg)				2438	2438	2438	13,5	13,5	13,5	
100	(barg)				2565	2565	2565	13,76	13,76	13,76	