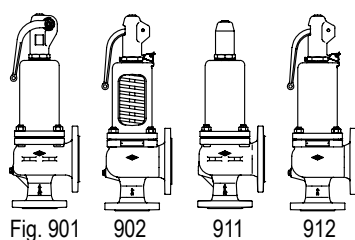


Full lift safety valve / Standard safety valve

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

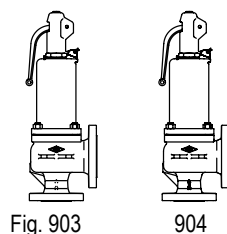


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ARI-SAFE

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**

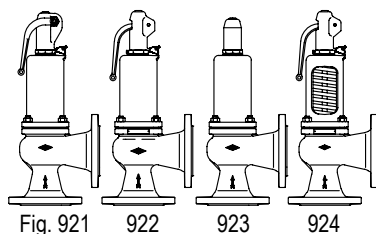


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ARI-SAFE-P

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**

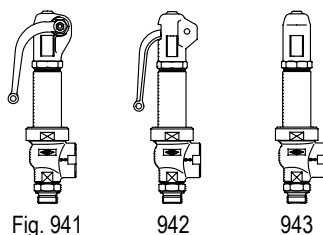


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ARI-SAFE-TC

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**

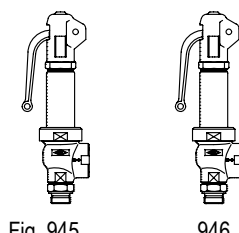


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ARI-SAFE-TC

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**

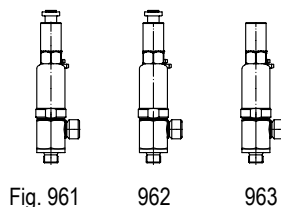


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ARI-SAFE-TCP

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**

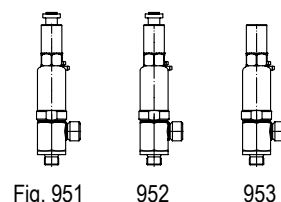


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ARI-SAFE-TCS

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**



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ALSO FOR HORIZONTAL APPLICATION



Fig. 900



Fig. 940

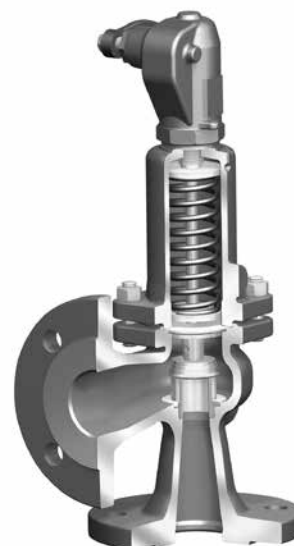


Fig. 920



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

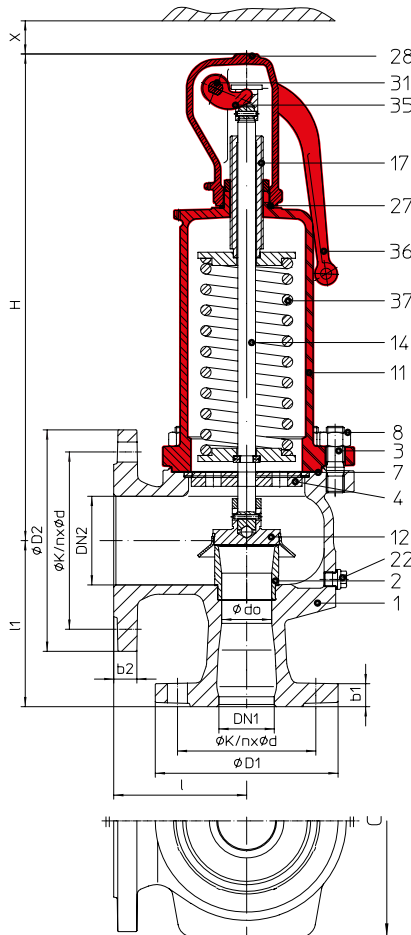
ARI-SAFE-- Full lift safety valve D/G, Standard safety valve F


Fig. ... 901
closed lifting device,
closed bonnet

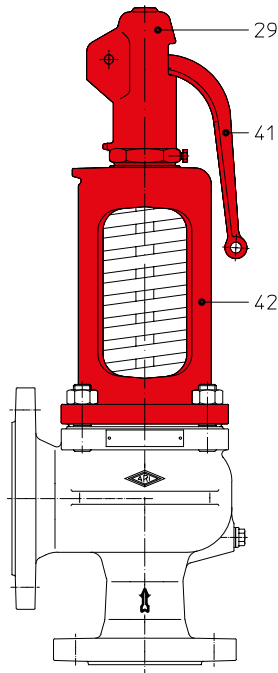


Fig. ... 902
open lifting device,
open bonnet

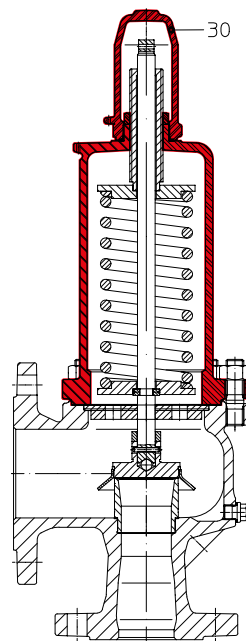


Fig. ... 911
gastight cap,
closed bonnet

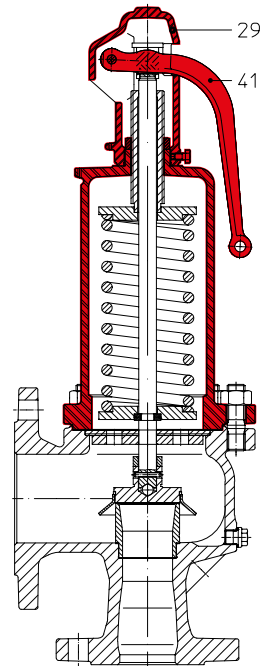


Fig. ... 912
open lifting device,
closed bonnet

Figure	Nominal pressure	Material	Nominal diameter	Temperature range	Flange	Flangeholes / -thickness tolerances
12.901 / 902 / 911 / 912	PN16/16	EN-JL 1040	DN20/32 - 150/250	-10°C to +300°C	DIN EN 1092-2	DIN 2533/2533
23.901 / 902 / 911 / 912	PN25/16 (PN25/10)	EN-JS1049	DN200/300 - 250/350	-10°C to +350°C	DIN EN 1092-2	DIN 2534/2533
25.901 / 902 / 911 / 912	PN40/16	EN-JS1049	DN20/32 - 250/350	-10°C to +350°C	DIN EN 1092-2	DIN 2535/2533
34.901 / 902 / 911 / 912	PN25/16 (PN25/10)	1.0619+N	DN200/300 - 250/350	-10°C to +450°C	DIN EN 1092-1	DIN 2544/2543
35.901 / 902 / 911 / 912	PN40/16	1.0619+N	DN15/25 - 250/350	-10°C to +450°C	DIN EN 1092-1	DIN 2545/2543
55.901 / 911	PN40/16	1.4408	DN15/25 - 250/350	-60°C to +400°C	DIN EN 1092-1	DIN 2545/2543

Construction

Safety valve, spring loaded, direct loaded

Requirement

Acc. to EN ISO 4126-1, VdTÜV-leaflet 100, AD2000-A2, material selection observe TRB 801 No. 45!

Type-test approval

Full lift safety valve: (acc. to VdTÜV-leaflet 663)	Fig. 901/902/911/912	TÜV · SV · · · -663 · D/G
Standard safety valve:	Fig. 901/911	TÜV · SV · · · -663 · F

Sizing

for steam, air and water refer to capacity tables, calculations acc. to EN ISO 4126-1, TRD421 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/m³), viscosity, temperature (°C), set pressure (barg), back pressure (barg)

Order data:

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

	standard: without metal bellows	DN15/25 - 100/150 optional: with metal bellows (refer to page 14)
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. 12.901/902/911/912	Fig. 23./25.901/902/911/912	Fig. 34./35.901/902/911/912	Fig. 55.901/911
1		Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
2		Seat	X6CrNiMoTi17-12-2, 1.4571			
3		Studs	25CrMo4, 1.7218			
4		Spindle guide	X20Cr13+QT, 1.4021+QT (≥ DN65: EN-GJS-400-18U-LT, EN-JS1049)			
7	x	Gasket	Pure graphite (CrNi laminated with graphite)			
8		Hexagon nut	C35E, 1.1181			
11		Bonnet, closed	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049 ¹⁾		GX5CrNiMo19-11-2, 1.4408
12		Disc	X39CrMo17-1+QT, 1.4122+QT			
14	x	Spindle	X20Cr13+QT, 1.4021+QT			
17		Adjusting screw	X20Cr13+QT, 1.4021+QT			
22		Plug screw	5.8			
27	x	Sealing ring	CuFA (≥ DN125: Graphit)			
28		Cap, closed	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049 ¹⁾		GX5CrNiMo19-11-2, 1.4408
29		Cap, open	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049		--
30		Cap, gastight	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049 ¹⁾		GX5CrNiMo19-11-2, 1.4408
31	x	Packing rings	Pure graphite			
35		Lift fork	EN-GJS-400-15, EN-JS1030 (DN200: GP240GH+N, 1.0619+N)			
36		Lever, closed	EN-GJS-400-18U-LT, EN-JS1049			
37	x	Spring	FDSiCr / 51CrV4, 1.8159			
41		Lever, open	EN-GJS-400-18U-LT, EN-JS1049			
42		Bonnet, open	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049		--
43		Bellows (optional)	EPDM 70 Shore A			
55		Bellows unit (optional)	X6CrNiMoTi17-12-2, 1.4571			
70		Balanced piston (at bellows)	X6CrNiMoTi17-12-2, 1.4571			
	L Spare parts					

¹⁾ Optional: GP240GH, 1.0619

²⁾ Special coating

DN1 / DN2	15 / 25	20 / 32	25 / 40	32 / 50	40 / 65	50 / 80	65 / 100	80 / 125	100 / 150	125 / 200	150 / 250	200 / 300	250 / 350
Special-DN			25 / 50	40 / 50	40 / 80		80 / 100			150 / 200			

Spring ranges: Standard design													
Full lift safety valve Fig. 901/902/911/912	(barü)	0,2 - 0,45	0,2 - 0,5		0,2 - 0,5		0,2 - 0,5	0,2 - 0,5	0,2 - 0,4	0,2 - 0,5	0,2 - 0,3	0,2 - 0,3	
	(barü)	> 0,45 - 0,9	> 0,5 - 1		> 0,5 - 1		> 0,5 - 1	> 0,5 - 1	> 0,4 - 0,75	> 0,5 - 1	> 0,3 - 0,5	> 0,3 - 0,35	
	(barü)	> 0,9 - 1,3	> 1 - 1,5		> 1 - 1,5		> 1 - 1,5	> 1 - 1,5	> 0,75 - 1,1	> 1 - 1,5	> 0,5 - 0,85	> 0,35 - 0,6	
	(barü)	> 1,3 - 2	> 1,5 - 2,5		> 1,5 - 2		> 1,5 - 2	> 1,5 - 2	> 1,1 - 1,5	> 1,5 - 1,9	> 0,85 - 1,1	> 0,6 - 0,7	
	(barü)	> 2 - 2,5	> 2,5 - 4,5		> 2 - 2,7		> 2 - 2,7	> 2 - 2,5	> 1,5 - 1,9	> 1,9 - 2,3	> 1,1 - 1,4	> 0,7 - 0,9	
	(barü)	> 2,5 - 3,2	> 4,5 - 8,5		> 2,7 - 3,6		> 2,7 - 3,6	> 2,5 - 3	> 1,9 - 2,5	> 2,3 - 2,7	> 1,4 - 1,8	> 0,9 - 1,5	
	(barü)	> 3,2 - 4,3	> 8,5 - 19		> 3,6 - 5		> 3,6 - 5	> 3 - 3,6	> 2,5 - 2,95	> 2,7 - 3,3	> 1,8 - 2,0	> 1,5 - 1,9	
	(barü)	> 4,3 - 5,6	> 19 - 28		> 5 - 9		> 5 - 9	> 3,6 - 5	> 2,95 - 4	> 3,3 - 4,1	> 2,0 - 2,2	> 1,9 - 2,6	
	(barü)	> 5,6 - 10	> 28 - 35		> 9 - 16		> 9 - 14	> 5 - 9	> 4 - 5,7	> 4,1 - 5,5	> 2,2 - 2,4	> 2,6 - 3,0	
	(barü)	> 10 - 20	> 35 - 40		> 16 - 22		> 14 - 19	> 9 - 14	> 5,7 - 8,2	> 5,5 - 7,4	> 2,4 - 2,7	> 3,0 - 4,5	
	(barü)	> 20 - 25,9			> 22 - 28		> 19 - 25	> 14 - 19	> 8,2 - 12	> 7,4 - 11	> 2,7 - 3,1	> 4,5 - 6,0	
	(barü)	> 25,9 - 40			> 28 - 34			> 19 - 24	> 12 - 17	> 11 - 16	> 3,1 - 4,0	> 6,0 - 7,0	
	(barü)				> 34 - 40				> 17 - 24	> 16 - 21	> 4,0 - 4,8	> 7,0 - 8,5	
	(barü)								> 24 - 27	> 21 - 26	> 4,8 - 5,6	> 8,5 - 10,0	
	(barü)										> 5,6 - 6,8	> 10,0 - 11,5	
	(barü)										> 6,8 - 7,8	> 11,5 - 13,0	
	(barü)										> 7,8 - 9,5	> 13,0 - 14,0	
	(barü)										> 9,5 - 11,0	> 14,0 - 15,0	
	(barü)										> 11,0 - 13,0	> 15,0 - 16,0	
	(barü)										> 13,0 - 15,0	> 16,0 - 20,0	
	(barü)										> 15,0 - 17,5		
	(barü)										> 17,5 - 21,0		
	(barü)										> 21,0 - 25,0		

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).

Spring ranges: Bellows design (optional)													
Standard safety valve Fig. 901/911	(barü)	5 - 6,4	3 - 3,7	2,5 - 3,3	2,5 - 3,2	2,6 - 3,6	2,8 - 3,4	2,5 - 3,7	2,5 - 3,3	2,5 - 3,5	1,1 - 1,5	1,1 - 1,3	2,4 - 2,7
	(barü)	> 6,4 - 7,7	> 3,7 - 4,6	> 3,3 - 4,6	> 3,2 - 4	> 3,6 - 4,5	> 3,4 - 4,5	> 3,7 - 4,6	> 3,3 - 4,5	> 3,5 - 4,2	> 1,5 - 2	> 1,3 - 1,7	> 2,7 - 2,9
	(barü)	> 7,7 - 10	> 4,6 - 6,3	> 4,6 - 5,4	> 4 - 5,5	> 4,5 - 5,6	> 4,5 - 8,4	> 4,6 - 5,9	> 4,5 - 5,8	> 4,2 - 4,9	> 2 - 2,5	> 1,7 - 2,1	> 2,9 - 3,1
	(barü)	> 10 - 16	> 6,3 - 8,4	> 5,4 - 7	> 5,5 - 6,4	> 5,6 - 7,5	> 8,4 - 10	> 5,9 - 8	> 5,8 - 7,5	> 4,9 - 5,6	> 2,5 - 2,9	> 2,1 - 2,4	> 3,1 - 3,3
	(barü)	> 16 - 18,5	> 8,4 - 10,2	> 7 - 9	> 6,4 - 7,9	> 7,5 - 10	> 10 - 11,5	> 8 - 10	> 7,5 - 8,9	> 5,6 - 7	> 2,9 - 3,5	> 2,4 - 2,8	> 3,3 - 3,6
	(barü)	> 18,5 - 26	> 10,2 - 13	> 9 - 11,7	> 7,9 - 11,5	> 10 - 12,5	> 11,5 - 16	> 10 - 18	> 8,9 - 10,5	> 7 - 8	> 3,5 - 4,2	> 2,8 - 3,1	> 3,6 - 3,9
	(barü)	> 26 - 40	> 13 - 17	> 11,7 - 16	> 11,5 - 18,5	> 12,5 - 16	> 16 - 18,5	> 18 - 24	> 10,5 - 13	> 8 - 9,3	> 4,2 - 5,1	> 3,1 - 3,4	> 3,9 - 4,1
	(barü)		> 17 - 27,5	> 16 - 22	> 18,5 - 25	> 16 - 22	> 18,5 - 23	> 24 - 26	> 13 - 18	> 9,3 - 11,5	> 5,1 - 6,5	> 3,4 - 3,9	> 4,1 - 4,3
	(barü)			> 22 - 30					> 18 - 23	> 11,5 - 14	> 6,5 - 7,5	> 3,9 - 4,8	> 4,3 - 4,8
	(barü)								> 14 - 20	> 7,5 - 9	> 4,8 - 5,8	> 4,8 - 5,5	> 5,8 - 6,5
	(barü)									> 9 - 10,5	> 5,8 - 6,8	> 5,5 - 6,5	> 6,5 - 7,2
	(barü)									> 10,5 - 12,6	> 6,8 - 8,1	> 6,5 - 7,9	> 7,2 - 8,3
	(barü)									> 12,6 - 17	> 8,1 - 9,7	> 7,9 - 9,5	> 8,3 - 9,3
	(barü)									> 17 - 25	> 9,7 - 11,3	> 9,5 - 12,3	> 9,3 - 10
	(barü)										> 11,3 - 13	> 12,3 - 15,9	> 10 - 10,8
	(barü)										> 13 - 15	> 15,9 - 20	> 10,8 - 11,5
	(barü)										> 15 - 18		> 11,5 - 12,2
	(barü)												> 12,2 - 13

DN1 / DN2	15 / 25	20 / 32	25 / 40	32 / 50	40 / 65	50 / 80	65 / 100	80 / 125	100 / 150	125 / 200	150 / 250	200 / 300	250 / 350
Sonder-DN			25 / 50	40 / 50	40 / 80		80 / 100			150 / 200			

Dimensions															
d0		(mm)	13	18	22,5	29	36	45	58,5	72	90	106	125	165	200
A0		(mm ²)	133	254	398	661	1018	1590	2688	4072	6362	8825	12272	21382	31416
I		(mm)	80	85	100	110	115	120	140	160	180	200 ¹⁾	225	300	325
I1		(mm)	90	95	105	115	140	150	170	195	220	250 ¹⁾	285	305	340
H		(mm)	260	270	280	330	390	435	545	610	690	845	890	1105	1175
H (Bellows design)		(mm)	290	310	335	390	445	500	620	690	808	919	953	1215	1262
X		(mm)	150	150	150	200	250	300	350	400	500	500	500	500	500
C (Widthsupport tongues)	EN-JL1040	(mm)	--	--	--	--	--	--	--	280	332	362	408	--	--
	EN-JS1049	(mm)	--	--	--	--	--	--	--	280	332	362	408	521	600
	1.0619+N	(mm)	--	--	--	--	--	204	242	280	332	362	408	521	600
	1.4408	(mm)	--	--	--	--	--	204	242	280	332	362	408	521	600
Drainhole with plug		(inch)	G1/4"						G3/8"						
		Standard for EN-JL1040, EN-JS1049 1.0619+N, optional at 1.4408													

¹⁾ DN150 / 200: I=241,3 I1=239,7

Weights														
standard	(kg)	7	8,5	10	14	20	28	40	53	80	125	165	280	430
optional: Bellows design	(kg)	7,5	9,5	11,5	16	22,5	32	47	59	93	140	180	310	470

Flanges														
ØD1	PN16	(mm)	95	105	115	140	150	165	185	200	220	250	285	--
	PN25	(mm)	--	--	--	--	--	--	--	--	--	--	360	425
	PN40	(mm)	95	105	115	140	150	165	185	200	235	270	300	375
ØD2	PN10	(mm)	--	--	--	--	--	--	--	--	--	--	445	505
	PN16	(mm)	115	140	150	165	185	200	220	250	285	340	405	460
b1	EN-JL1040	(mm)	--	16	16	18	18	20	20	22	24	26	26	--
	EN-JS1049	(mm)	--	18	18	18	19	20	22	24	24	27	29	37
	1.0619+N	(mm)	16	20	20	20	21	22	24	26	28	31	34	37
	1.4408	(mm)	16	16	16	18	19	20	22	22	23	26	28	37
b2	EN-JL1040	(mm)	--	18	18	20	20	22	24	26	26	30	32	--
	EN-JS1049	(mm)	--	19	19	20	20	20	22	22	22	31	33	33
	1.0619+N	(mm)	18	19	19	20	20	20	22	22	27	29	33	35
	1.4408	(mm)	18	15	16	17	17	17	17	19	19	24	26	33

Flanges acc. to DIN EN 1092-1 / -2, Flangeholes/-thickness tolerances acc. to DIN 2533 / 2543 / 2545 / 28605 / 28607, raised face, facing acc. to DIN EN 1092-1 form B1

Standard-Flangeholes																	
DN			15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
ØK	PN10 DIN 2532	(mm)	--	--	--	--	--	--	--	--	--	--	--	--	--	400	460
n x Ød		(mm)	--	--	--	--	--	--	--	--	--	--	--	--	--	12x22	16x22
ØK	PN16 DIN 2533	(mm)	65	75	85	100	110	125	145	160	180	210	240	295	355	410	470
n x Ød		(mm)	4x14	4x14	4x14	4x18	4x18	4x18	4x18 ¹⁾	8x18	8x18	8x18	8x22	12x22	12x26	12x26	16x26
ØK	PN25 DIN 2533	(mm)	--	--	--	--	--	--	--	--	--	--	--	310	370	--	--
n x Ød		(mm)	--	--	--	--	--	--	--	--	--	--	--	12x26	12x30	--	--
ØK	PN40 DIN 2545	(mm)	65	75	85	100	110	125	145	160	190	220	250	320	385	--	--
n x Ød		(mm)	4x14	4x14	4x14	4x18	4x18	4x18	8x18	8x18	8x22	8x26	8x26	12x30	12x33	--	--

¹⁾ also with 8 bore holes acc. to DIN EN 1092-1/-2 possible.

Pressure-temperature-ratings	Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.													
------------------------------	---	--	--	--	--	--	--	--	--	--	--	--	--	--

acc. to DIN EN 1092-2			-60°C to <-10°C ¹⁾	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
EN-JL1040	PN16	(bar)	--	16	14,4	12,8	11,2	9,6	--	--	--
EN-JS1049	PN25	(bar)	on request	25	24,3	23	21,8	20	17,5	--	--
EN-JS1049	PN40	(bar)	on request	40	38,8	36,8	34,8	32	28	--	--

acc. to manufacturers standard			-60°C to <-10°C ¹⁾	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.0619+N	PN25	(bar)	18,7	25	23,9	22	20	17,2	16	14,8	8,2
1.0619+N	PN40	(bar)	30	40	38,1	35	32	28	25,7	23,8	13,1

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	PN40	(bar)	40	40	36,3	33,7	31,8	29,7	28,5	27,4	--

¹⁾ Studs and nuts made of A4-70 (at temperatures below -10°C)

Certified coefficient of discharge Kdr (Values for D/G variable: DN15-100; 250 < 3,5 bar, DN125-200 < 4,0 bar)														
DN1 / DN2	15 / 25	20 / 32	25 / 40	32 / 50	40 / 65	50 / 80	65 / 100	80 / 125	100 / 150	125 / 200	150 / 250	200 / 300	250 / 350	
TÜV · SV · ... · 663 · D/G	0,74										0,7	0,75	0,7	
TÜV · SV · ... · 663 · F	0,52	0,54					0,48				0,45	0,56	0,52	

Capacity saturated steam (incl. 10% overpressure)

DN1 / DN2		15 / 25	20 / 32	25 / 40	32 / 50	40 / 65	50 / 80	65 / 100	80 / 125	100 / 150	125 / 200	150 / 250	200 / 300	250 / 350
Set pressure		Saturated steam (kg/h)												
← max. set pressure stainless steel version - Spring	0,2 (barg)	42	81	126	210	324	506	855	1295	2024	2510	3490	6937	8931
	0,4 (barg)	60	120	185	307	473	739	1250	1890	2960	3630	5050	9694	12615
	0,5 (barg)	67	132	207	344	529	827	1400	2120	3310	4070	5660	10859	14204
	0,6 (barg)	74	147	230	383	590	923	1560	2360	3690	4470	6220	11934	15698
	0,8 (barg)	87	174	272	453	698	1090	1840	2790	4360	5240	7280	13901	18492
	1 (barg)	100	203	317	526	811	1270	2140	3245	5070	6030	8385	15868	21306
	1,5 (barg)	133	272	425	707	1090	1700	2875	4355	6800	8050	11200	20739	28637
	2 (barg)	164	305	477	792	1220	1900	3220	4880	7625	10125	14080	25647	36333
	2,5 (barg)	194	366	572	950	1460	2285	3865	5855	9145	11990	16660	30689	43601
	3 (barg)	224	424	662	1100	1695	2645	4475	6775	10600	13880	19300	35874	50185
	4 (barg)	280	535	837	1390	2140	3350	5650	8570	13400	17550	24400	45676	62689
	5 (barg)	335	640	1000	1665	2565	4000	6770	10260	16000	21000	29250	54723	75043
	6 (barg)	390	745	1165	1940	2990	4665	7890	11950	18650	24500	34050	63698	87350
	7 (barg)	445	850	1330	2210	3400	5320	9000	13600	21300	27900	38800	72658	99638
	8 (barg)	500	957	1495	2485	3820	5980	10100	15300	23900	31350	43600	81599	111898
	9 (barg)	554	1060	1660	2755	4245	6630	11200	16950	26500	34800	48400	90525	124139
	10 (barg)	609	1165	1820	3025	4665	7290	12300	18650	29150	38250	53200	99452	136381
	11 (barg)	664	1270	1985	3300	5080	7940	13400	20300	31750	41600	58000	108370	148610
	12 (barg)	718	1375	2150	3570	5500	8590	14500	22000	34350	45100	62700	117282	160831
	13 (barg)	773	1480	2310	3840	5920	9250	15600	23650	37000	48500	67500	126197	173057
	14 (barg)	827	1580	2475	4110	6340	9900	16700	25350	39600	52000	72300	135113	185284
	15 (barg)	882	1690	2640	4385	6760	10550	17800	27000	42200	55400	77000	144035	197518
	16 (barg)	936	1790	2800	4655	7170	11200	18950	28700	44800	58800	81800	152960	209758
	17 (barg)	991	1900	2965	4930	7590	11850	20050	30350	47400	62200	86600	161889	222002
	18 (barg)	1046	2000	3130	5200	8010	12500	21150	32050	50100	65700	91400	170826	234257
	19 (barg)	1101	2100	3295	5470	8430	13150	22250	33700	52700	69100	96200	179777	246532
	20 (barg)	1156	2210	3460	5750	8850	13800	23350	35400	55300	72600	101000	188724	258800
	21 (barg)	1210	2320	3620	6020	9250	14500	24500	37100	57900	76000	105800	197693	
	22 (barg)	1265	2420	3790	6290	9700	15150	25600	38800	60600	79500	110900	206658	
	24 (barg)	1375	2635	4120	6840	10500	16450	27850	42100	65900	86500	120600	224640	
	25 (barg)	1431	2740	4280	7120	10950	17100	28950	43800		90200	125500	233648	
	26 (barg)	1486	2850	4450	7390	11350	17800	30050			93700	130300		
	27 (barg)	1541	2950	4620	7670	11820	18460	31220			96950			
	28 (barg)	1597	3060	4780	7950	12250	19100	32300						
	30 (barg)	1708	3270	5120	8500	13100	20450	34550						
	32 (barg)	1819	3490	5450	9060	13950	21800	36800						
	34 (barg)													
	40 (barg)													

Capacity air (incl. 10% overpressure)

DN1 / DN2		15 / 25	20 / 32	25 / 40	32 / 50	40 / 65	50 / 80	65 / 100	80 / 125	100 / 150	125 / 200	150 / 250	200 / 300	250 / 350
Set pressure		Air 0°C and 1,013 bara (Nm³/h)												
↓ max. set pressure stainless steel version - Spring	0,2 (barg)	49	95	148	246	380	594	1003	1520	2375	2945	4100	8150	10398
	0,4 (barg)	72	143	223	370	570	891	1505	2280	3565	4380	6090	11695	15219
	0,5 (barg)	82	161	252	419	646	1009	1705	2585	4035	4970	6910	13256	17340
	0,6 (barg)	91	182	284	472	728	1135	1920	2910	4545	5520	7675	14731	19376
	0,8 (barg)	110	218	341	567	873	1365	2305	3490	5460	6555	9115	17428	23182
	1 (barg)	126	255	398	661	1019	1590	2690	4075	6370	7575	10530	19963	26803
	1,5 (barg)	168	344	538	894	1378	2150	3640	5510	8610	10195	14180	26284	36294
	2 (barg)	209	388	607	1008	1550	2425	4100	6210	9700	12890	17920	32693	46314
	2,5 (barg)	248	468	731	1215	1870	2925	4945	7490	11700	15330	21300	39310	55850
	3 (barg)	288	544	850	1410	2175	3400	5750	8700	13600	17840	24800	46140	64547
	4 (barg)	362	692	1080	1800	2770	4330	7310	11080	17300	22725	31600	59135	81161
	5 (barg)	436	834	1300	2160	3330	5210	8800	13340	20840	27350	38000	71211	97653
	6 (barg)	510	975	1520	2530	3900	6090	10300	15600	24370	31900	44400	83238	114146
	7 (barg)	583	1115	1745	2900	4465	6970	11790	17860	27900	36600	50900	95264	130638
	8 (barg)	657	1255	1965	3260	5030	7860	13280	20100	31430	41200	57300	107291	147130
	9 (barg)	730	1395	2185	3630	5590	8740	14770	22370	34960	45800	63800	119318	163623
	10 (barg)	804	1540	2400	3990	6150	9610	16250	24600	38500	50500	70200	131344	180115
	11 (barg)	878	1680	2625	4360	6720	10500	17750	26900	42000	55100	76600	143371	196607
	12 (barg)	951	1820	2845	4730	7290	11380	19240	29150	45500	59700	83100	155398	213099
	13 (barg)	1025	1960	3070	5090	7850	12270	20730	31400	49000	64400	89500	167424	229592
	14 (barg)	1099	2100	3290	5460	8400	13150	22200	33650	52600	69000	96000	179451	246084
	15 (barg)	1173	2245	3500	5830	8980	14030	23700	35900	56100	73600	102400	191477	262576
	16 (barg)	1246	2385	3725	6190	9540	14900	25200	38200	59600	78200	108800	203504	279069
	17 (barg)	1320	2530	3950	6560	10100	15800	26700	40400	63100	82900	115300	215531	295561
	18 (barg)	1394	2670	4170	6920	10670	16650	28100	42700	66700	87500	121700	227557	312053
	19 (barg)	1467	2800	4390	7300	11240	17550	29600	44900	70200	92100	128100	239584	328546
	20 (barg)	1541	2950	4610	7660	11800	18400	31150	47200	73700	96800	134600	251610	345038
	21 (barg)	1614	3090	4830	8020	12370	19300	32650	49400	77300	101400	141000	263637	
	22 (barg)	1688	3230	5050	8390	12930	20200	34150	51700	80800	106000	147500	275664	
	24 (barg)	1835	3515	5490	9120	14060	21970	37100	56200	87900	115300	160400	299717	
	25 (barg)	1909	3655	5710	9490	14620	22850	38600	58500		120000	166900	311743	
	26 (barg)	1983	3800	5930	9850	15190	23730	40100			124600	173300		
	27 (barg)	2057	3930	6160	10240	15770	24630	41650			129350			
	28 (barg)	2130	4080	6370	10600	16320	25500	43100						
	30 (barg)	2277	4360	6810	11320	17450	27250	46100						
	32 (barg)	2425	4640	7250	12050	18570	29000	49100						
	34 (barg)	2572	4925	7700	12790	19700	30800	52050						
	40 (barg)	3014	5770	9030	14477	23810	36100	61000						

Capacity water (incl. 10% overpressure)

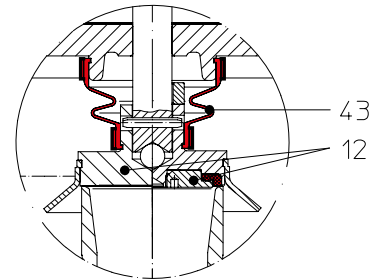
DN1 / DN2		15 / 25	20 / 32	25 / 40	32 / 50	40 / 65	50 / 80	65 / 100	80 / 125	100 / 150	125 / 200	150 / 250	200 / 300	250 / 350
Set pressure		Water 20°C (t/h)												
← max. set pressure stainless steel version - Spring	0,2 (bar)	1,63	3,28	5,13	8,53	13,1	20,5	30,8	46,7	73	94,9	132	286	390
	0,5 (bar)	2,60	5,19	8,12	13,5	20,8	32,5	48,8	73,9	115	150	209	452	616
	1 (bar)	3,68	7,35	11,5	19,1	29,4	45,9	69	104	163	212	295	639	872
	2 (bar)	5,20	10,4	16,2	27	41,6	64,9	97,5	148	231	300	417	903	1233
	3 (bar)	6,38	12,7	19,9	33	50,9	79,5	119	181	283	368	511	1106	1510
	4 (bar)	7,36	14,7	22,9	38,1	58,7	91,8	138	209	326	424	590	1278	1743
	5 (bar)	8,24	16,4	25,7	42,6	65,5	102	154	233	365	474	660	1428	1949
	6 (bar)	9,02	18	28,1	46,7	72	112	169	256	400	520	723	1565	2135
	7 (bar)	9,75	19,4	30,4	50,4	77,7	121	182	276	432	562	781	1690	2306
	8 (bar)	10,41	20,8	32,5	53,9	83,1	130	195	295	461	600	835	1807	2465
	9 (bar)	11,05	22	34,4	57,2	88,1	138	207	313	490	637	885	1917	2615
	10 (bar)	11,64	23,2	36,3	60,3	92,9	145	218	330	516	671	933	2020	2756
	11 (bar)	12,21	24,4	38	63,2	97,4	152	229	346	540	703	977	2119	2891
	12 (bar)	12,76	25,4	39,7	66	102	159	239	362	565	735	1022	2213	3019
	13 (bar)	13,28	26,5	41,4	68,7	106	165	249	376	587	764	1062	2303	3143
	14 (bar)	13,78	27,5	42,9	71,3	110	172	258	391	611	794	1104	2390	3261
	16 (bar)	14,73	29,4	45,9	76,3	117	184	276	418	653	849	1181	2555	3486
	18 (bar)	15,62	31,2	48,7	80,9	125	195	293	443	692	900	1252	2710	3698
	19 (bar)	16,05	32	49,9	82,9	128	200	300	454	710	923	1284	2785	3799
	20 (bar)	16,47	32,8	51,3	85,3	131	205	308	467	730	949	1320	2857	3898
	21 (bar)	16,87	33,7	52,6	87,4	135	210	316	479	748	973	1350	2928	
	24 (bar)	18,04	36	56,2	93,4	144	225	338	512	800	1040	1443	3130	
	25 (bar)	18,41	36,7	57,4	95,3	147	229	345	522		1059	1473	3194	
	26 (bar)	18,78	37,4	58,5	97,2	150	234	352			1080	1502		
	27 (bar)	19,13	38,2	59,6	99	153	238	358			1100			
	28 (bar)	19,49	38,9	60,7	101	155	243	365						
	30 (bar)	20,17	40,2	62,9	104	161	251	375						
	32 (bar)	20,83	41,5	64,8	108	166	259	380						
	34 (bar)	21,47	42,8	66,9	111	171	268	400						
	40 (bar)	23,29	46,4	72,5	124,8	185,4	289,7	435						

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

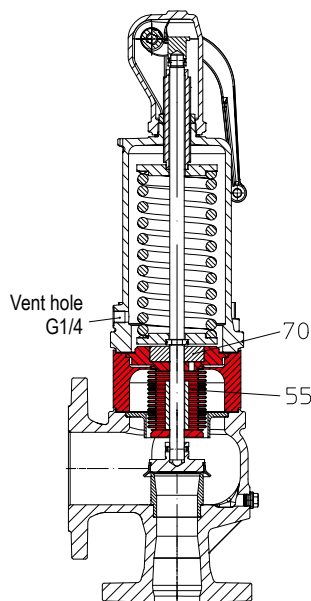
¹⁾ DN20/32 min. 2,0 bar ²⁾ only Fig. 900

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

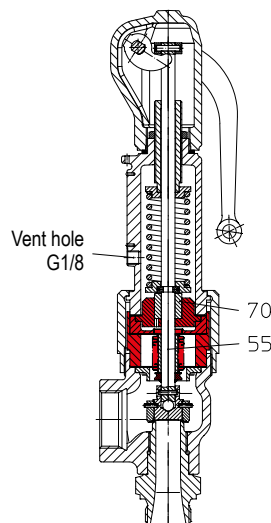


Balanced stainless steel-bellows (Only for closed version!)		
Pos.	Description	Material
55	Bellows unit	X6CrNiMoTi17-12-2, 1.4571; SA240 / SA479 Gr.316 Ti (SAFE-SN ANSI)
70	Balanced piston (DN15-100)	X6CrNiMoTi17-12-2, 1.4571; SA479 Gr.316 Ti (SAFE-SN ANSI)

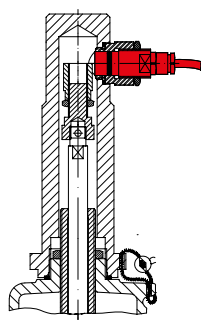
Test: German "TA-Luft



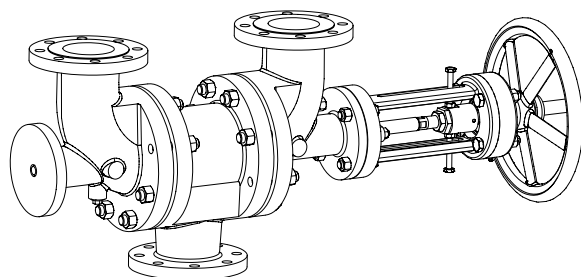
SAFE 900



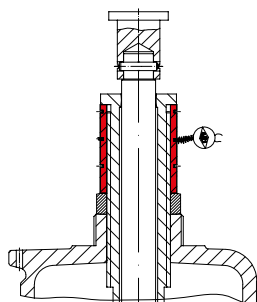
SAFE-TC 940



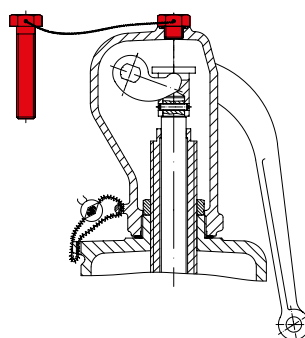
Proximity switch



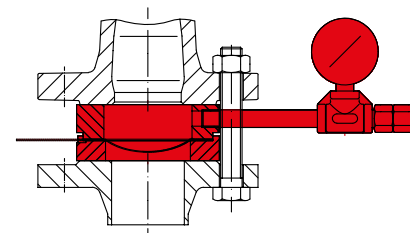
Changeover valve



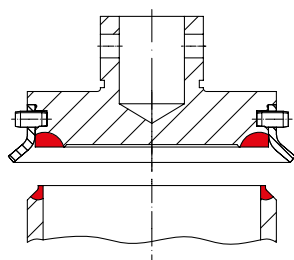
Lock bushing



Test gag

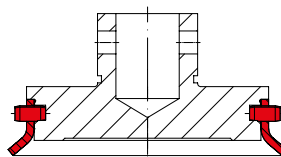


Rupture disc
(Sizing refer to page 40.)

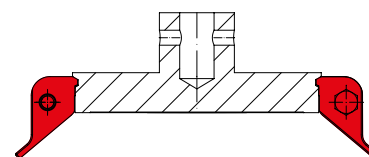


Seat 1.4571 / Stellite No. 21
Disc 1.4571 / Stellite No. 6
Sitz SA479Gr.316Ti / Stellite No. 21 (SAFE-SN ANSI)
Kegel SA479Gr.316Ti / Stellite No. 6 (SAFE-SN ANSI)

removable lifting aid

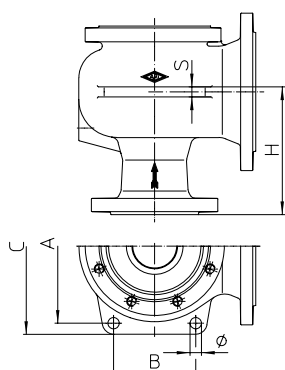


DN15-100



DN125-250

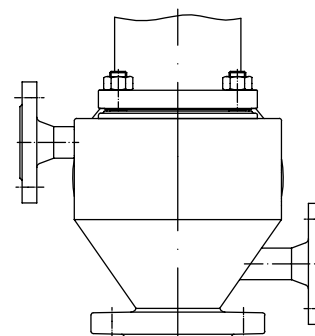
removable lifting aid



Body-Material	DN1 x DN2 (mmxmm)	A (mm)	B (mm)	C (mm)	Ø (mm)	S (mm)	H (mm)
1.0619+N 1.4408	50 x 80	176	70	204	14	12	155
	65 x 100	212	90	242			175
EN-JL1040	80 x 125	245	130	280	18	16	205
EN-JS1049 1.0619+N 1.4408	100 x 150	295	165	332			230
EN-JL1040 1.0619+N	125 x 200	318	183	362	22	20	260
	150 x 250	360	200	408		22	295
EN-JS1049 1.0619+N	125 x 125	226	110	254	14	10	205
	150 x 150	262	146	298	18	14	232
	200 x 300	465	256	521	26	22	305
	250 x 350	544	300	600	26	24	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

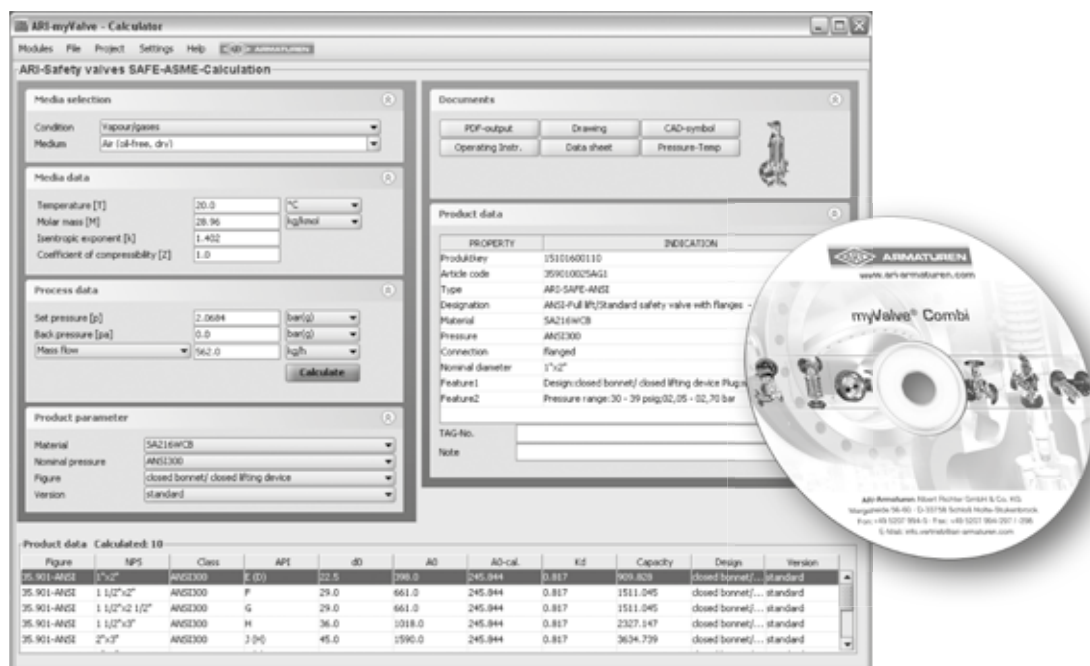
	SAFE Fig. 900			SAFE-SN BR 900	SAFE-P Fig. 920	SAFE-TC Fig. 940			SAFE- TCS/ TCP Fig. 950 / 960
	Fig. 901-912	Fig. 903	Fig. 904	Fig. 901-912	Fig. 921-924	Fig. 941-943	Fig. 945	Fig. 946	Fig. 951-953 Fig. 961-963
Pressure equipment directive PED 2014/68/EU Module H1, B+D	X	X	X	X	X	X	X	X	X
BV Bureau Veritas 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 XIII (UV-stamp)	--	--	--	X	--	--	--	--	--
Canada Registration (UV-stamp)	--	--	--	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 (Gosgortekhnadzor) 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.



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 XIII, 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:	☐ 1.4401
(Bursting pressure = Set pressure of the safety valve)			☐ Nickel
Tolerance:	☐ + 10%		☐ Inconel
	☐%		☐ Monel
			☐ Aluminium
Quantity: (incl. reserve)	(minimum 3 pieces recommended)		☐ Teflon foil medium side
TÜV-approval:	☐ yes ☐ no		☐ other

Halter (incl. 1/4"-vent)

Nominal pressure:	PN	Material:	☐ 1.4571
Quantity (Holder):	 piece		☐ 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:

