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

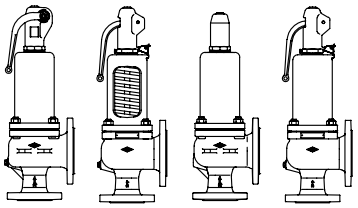

Fig. 901 902 911 912

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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**

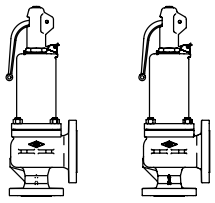

Fig. 903 904

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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**

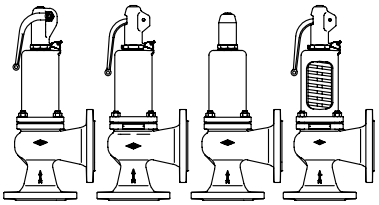

Fig. 921 922 923 924

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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**

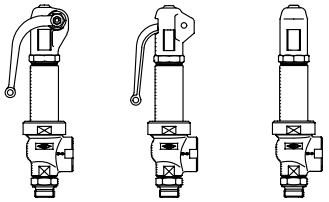

Fig. 941 942 943

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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**

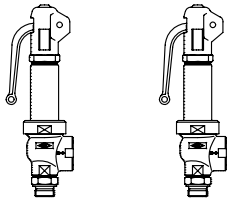

Fig. 945 946

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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**

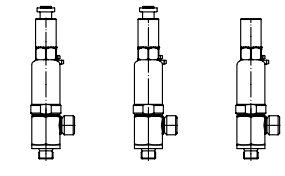

Fig. 961 962 963

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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**

ALSO FOR HORIZONTAL APPLICATION

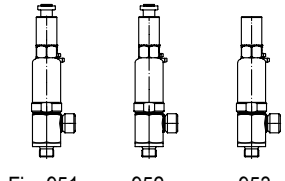

Fig. 951 952 953

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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-P - Standard safety valve D/G/F

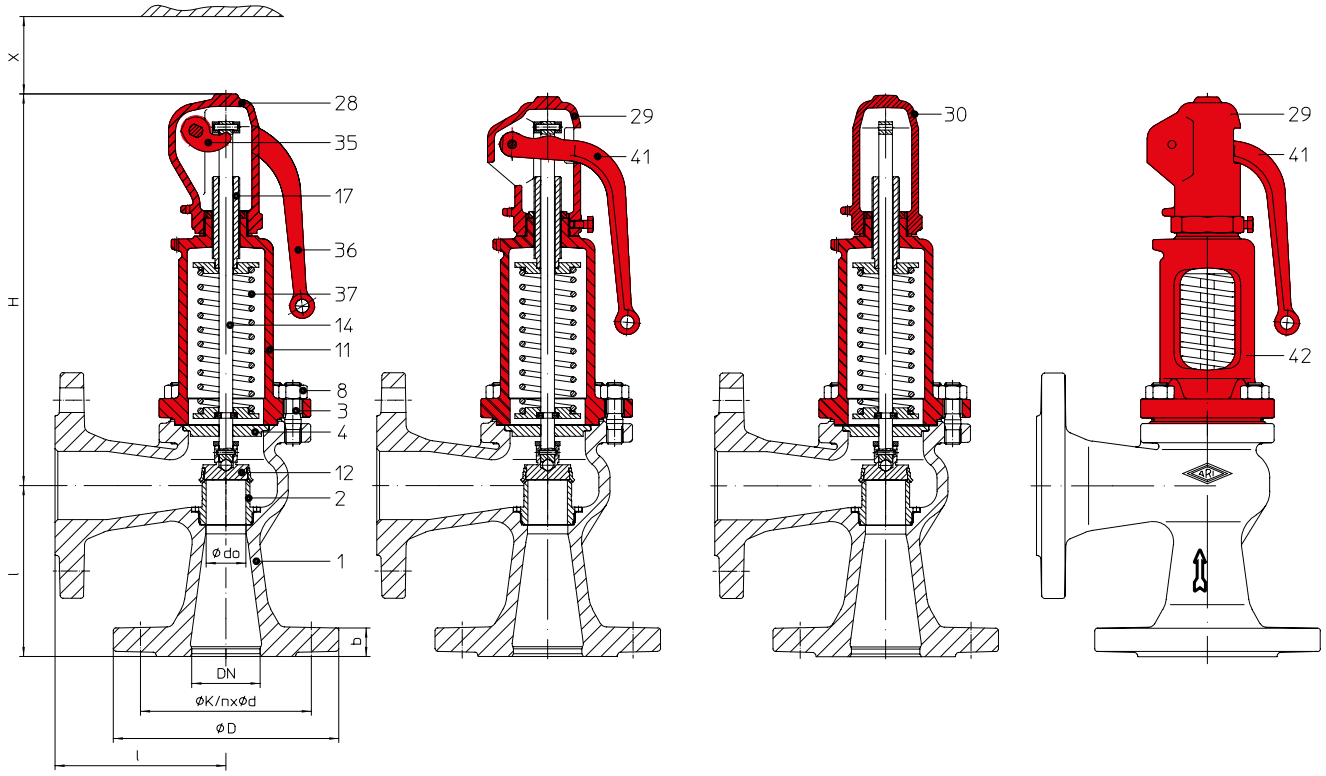


Fig. ... .921
closed lifting device, closed bonnet

Fig. ... .922
open lifting device, closed bonnet

Fig. ... .923
gastight cap, closed bonnet

Fig. ... .924
open lifting device, open bonnet

Figure	Nominal pressure	Material	Nominal diameter	Temperature range	Flange	Flangeholes / -thickness tolerances
12.921 / 922 / 923 / 924	PN16	EN-JL1040	DN15 - 100	-10°C to +300°C	DIN EN 1092-2	DIN 2533
22.921 / 922 / 923 / 924	PN16	EN-JS1049	DN125 - 150	-10°C to +350°C	DIN EN 1092-2	DIN 2533
35.921 / 922 / 923 / 924	PN40	1.0619+N	DN15 - 100	-10°C to +450°C	DIN EN 1092-1	DIN 2545
55.921 / 923	PN40	1.4408	DN15 - 100	-60°C to +400°C	DIN EN 1092-1	DIN 2545

Construction		
Safety valve, spring loaded, direct loaded		
Requirement		
Acc. to EN ISO 4126-1, VdTÜV-leaflet 100, AD2000-A2, TRD 421, observe TRB 801 No. 45 at material selection!		
Type-test approval		
Standard safety valve:	Fig. 921/923	TÜV · SV · . . -811 · D/G
Standard safety valve:	Fig. 921/923	TÜV · SV · . . -811 · F

Sizing	
for steam, air and water refer to capacity tables, calculations acc. to EN ISO 4126-1 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-P - Safety valve, Figure ....., DN ..., PN .. , Material ....., Set pressure .... barg	

	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. 12.921/922/923/924**	**Fig. 22.921/922/923/924**	**Fig. 35.921/922/923/924**	**Fig. 55.921/923**
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			A4 - 70
4		Spindle guide	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
7	x	Gasket	Pure graphite (CrNi laminated with graphite)			
8		Hexagon nut	C35E, 1.1181			A4
11		Bonnet, closed	EN-GJL-250 , EN-JL1040	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-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049		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		GX5CrNiMo19-11-2, 1.4408
31	x	Packingrings	Pure graphite			
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			--
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 (optional)	X6CrNiMoTi17-12-2, 1.4571			
	└ Spare parts					

DN		**15**	**20**	**25**	**32**	**40**	**50**	**65**	**80**	**100**	**125**	**150**
Spring ranges: Standard design												
Standard safety valve Fig. 921/922/923/924	(barg)	0,3 - 0,5	0,3 - 0,5	0,2 - 0,6	0,2 - 0,55	0,2 - 0,4	0,2 - 0,4	0,2 - 0,5	0,2 - 0,6	0,2 - 0,5	0,2 - 0,6	0,2 - 0,4
	(barg)	> 0,5 - 1	> 0,5 - 1	> 0,6 - 1,1	> 0,55 - 0,8	> 0,4 - 0,6	> 0,4 - 0,6	> 0,5 - 1,2	> 0,6 - 1,2	> 0,5 - 1,1	> 0,6 - 1,1	> 0,4 - 0,6
	(barg)	> 1 - 1,4	> 1 - 1,4	> 1,1 - 2	> 0,8 - 1,2	> 0,6 - 1,1	> 0,6 - 1,2	> 1,2 - 2	> 1,2 - 2,1	> 1,1 - 1,7	> 1,1 - 2	> 0,6 - 1
	(barg)	> 1,4 - 1,9	> 1,4 - 1,9	> 2 - 2,7	> 1,2 - 2	> 1,1 - 1,8	> 1,2 - 1,8	> 2 - 2,7	> 2,1 - 2,6	> 1,7 - 2,4	> 2 - 2,6	> 1 - 1,9
	(barg)	> 1,9 - 2,5	> 1,9 - 2,5	> 2,7 - 3,7	> 2 - 3,3	> 1,8 - 2,7	> 1,8 - 2,5	> 2,7 - 3,4	> 2,6 - 3,2	> 2,4 - 3,1	> 2,6 - 3,7	> 1,9 - 2,5
	(barg)	> 2,5 - 3,5	> 2,5 - 3,5	> 3,7 - 5	> 3,3 - 5,2	> 2,7 - 4,3	> 2,5 - 3,2	> 3,4 - 4,5	> 3,2 - 4,2	> 3,1 - 4	> 3,7 - 4,3	> 2,5 - 3,5
	(barg)	> 3,5 - 5	> 3,5 - 4	> 5 - 8	> 5,2 - 8	> 4,3 - 6	> 3,2 - 4,5	> 4,5 - 5,5	> 4,2 - 5,5	> 4 - 5	> 4,3 - 7	> 3,5 - 4,3
	(barg)	> 5 - 7	> 4 - 5,5	> 8 - 10,5	> 8 - 11,5	> 6 - 9	> 4,5 - 8,5	> 5,5 - 6,8	> 5,5 - 6,5	> 5 - 8	> 7 - 9	> 4,3 - 5,5
	(barg)	> 7 - 10	> 5,5 - 7	> 10,5 - 15	> 11,5 - 16,5	> 9 - 12	> 8,5 - 13	> 6,8 - 8,5	> 6,5 - 9	> 8 - 11	> 9 - 15	> 5,5 - 6,5
	(barg)	> 10 - 16	> 7 - 10,5	> 15 - 23	> 16,5 - 22	> 12 - 17	> 13 - 17	> 8,5 - 14	> 9 - 12	> 11 - 17,5	> 15 - 22	> 6,5 - 11
	(barg)	> 16 - 25	> 10,5 - 17	> 23 - 35	> 22 - 30	> 17 - 30	> 17 - 23	> 14 - 23	> 12 - 16,5	> 17,5 - 27,5	> 22 - 28	> 11 - 16
	(barg)	> 25 - 33	> 17 - 25	> 35,1 - 40	> 30 - 40	> 30 - 40	> 23 - 34	> 23 - 34	> 16,5 - 20	> 27,5 - 40	> 28 - 33	> 16 - 25
	(barg)	> 33 - 40	> 25 - 37				> 34 - 40	> 34 - 40	> 20 - 33		> 33 - 40	
	(barg)		> 37 - 40						> 33 - 40			
Spring ranges: Bellows design (optional)												
Standard safety valve Fig. 921/923	(barg)	4 - 5	3 - 5,5	3 - 4,8	3 - 4,5	3 - 4,5	3 - 3,5	3 - 3,5	3 - 3,5	3 - 4,5	5 - 7	5 - 5,3
	(barg)	> 5 - 6	> 5,5 - 8	> 4,8 - 6	> 4,5 - 8	> 4,5 - 5,7	> 3,5 - 5	> 3,5 - 4,3	> 3,5 - 4,9	> 4,5 - 6,5	> 7 - 8	> 5,3 - 7
	(barg)	> 6 - 9	> 8 - 12	> 6 - 8	> 8 - 11	> 5,7 - 10	> 5 - 7	> 4,3 - 5,9	> 5,9 - 7	> 6,5 - 10	> 8 - 9	> 7 - 9
	(barg)	> 9 - 14	> 12 - 21	> 8 - 12,5	> 11 - 14,5	> 10 - 16	> 7 - 10,5	> 6,9 - 7,5	> 7 - 9	> 10 - 18	> 9 - 12,5	> 9 - 12,5
	(barg)	> 14 - 26	> 21 - 27,5	> 12,5 - 16	> 14,5 - 21	> 16 - 22	> 10,5 - 15,5	> 7,5 - 8,8	> 9 - 11	> 18 - 35	> 12,5 - 18	> 12,5 - 16
	(barg)	> 26 - 30	> 27,5 - 40	> 16 - 20,5	> 21 - 40	> 22 - 31	> 15,5 - 20	> 8,8 - 14	> 11 - 14,7		> 18 - 23	> 16 - 18,5
	(barg)	> 30 - 40		> 20,5 - 30		> 31 - 40	> 20 - 40	> 14 - 21	> 14,7 - 18,8		> 23 - 29	> 18,5 - 25
	(barg)			> 30 - 40				> 21 - 30	> 18,8 - 35		> 29 - 34	
	(barg)							> 30 - 40			> 34 - 40	

Information / restriction of technical rules need to be observed!

ARI-Valves of EN-JL1040 are not allowed to be operated in systems acc. to TRD 110.

A production permission acc. to TRB 801 No. 45 is available (acc. to TRB 801 No. 45 EN-JL1040 is not allowed.)

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 1 / DN 2			15	20	25	32	40	50	65	80	100	125	150
Dimensions													
d0		(mm)	12	12	15	18	20	29	36	44	55	71	86
A0		(mm^2)	113	113	177	254	314	661	1018	1520	2376	3959	5808
l		(mm)	90	95	100	105	115	125	145	155	175	200	225
H		(mm)	260	260	270	285	290	290	340	400	450	563	631
H (Bellows design)		(mm)	285	285	300	325	330	345	400	455	515	631	703
X		(mm)	130	130	130	150	150	150	200	250	300	350	400
Y (Width support tongues)	EN-JL1040	(mm)	--	--	--	--	--	--	--	--	--	--	--
	EN-JS1049	(mm)	--	--	--	--	--	--	--	--	--	254	298
	1.0619+N	(mm)	--	--	--	--	--	--	--	--	--	254	298
	1.4408	(mm)	--	--	--	--	--	--	--	--	--	--	--
Weights													
standard		(kg)	5	5	5,5	8	9,5	11,5	15,5	20,5	33	57	66
optional: Bellows design		(kg)	5,4	5,4	6	9	10,5	12,8	17,5	23	37	64	72
Flanges													
ØD	PN16	(mm)	95	105	115	140	150	165	185	200	220	250	285
	PN40	(mm)	95	105	115	140	150	165	185	200	235	270	300
b	EN-JL1040	(mm)	14	16	16	18	18	20	20	22	24	--	--
	EN-JS1049	(mm)	--	--	--	--	--	--	--	--	--	26	26
	1.0619+N	(mm)	16	18	18	18	18	20	20	22	24	26	28
	1.4408	(mm)	16	18	18	18	18	20	20	22	24	--	--
Flanges acc. to DIN EN 1092-1 / -2, Flangeholes/-thickness tolerances acc. to DIN 2533 / 2545, 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**
ØK	PN16	(mm)	65	75	85	100	110	125	145	160	180	210	240
n x Ød	PN16	(mm)	4x14	4x14	4x14	4x18	4x18	4x18	4x18 [1]	8x18	8x18	8x18	8x22
ØK	PN40	(mm)	65	75	85	100	110	125	145	160	190	220	250
n x Ød	PN40	(mm)	4x14	4x14	4x14	4x18	4x18	4x18	8x18	8x18	8x22	8x26	8x26
[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	16	(bar)	--	16	14,4	12,8	11,2	9,6	--	--	--
EN-JS1049	16	(bar)	on request	16	15,5	14,7	13,9	12,8	11,2	--	--

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	40	(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** [1]	**-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	--

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

Certified coefficient of discharge Kdr (Values for D/G variable: < 3 bar)											
DN	**15**	**20**	**25**	**32**	**40**	**50**	**65**	**80**	**100**	**125**	**150**
TÜV · SV · . . -811 · D/G	0,37		0,34		0,37	0,34	0,37	0,34		0,44	0,46
TÜV · SV · . . -811 · F	0,26		0,23		0,26	0,23	0,26	0,23		0,28	0,32

Capacity saturated steam (incl. 10% overpressure)

DN			15	20	25	32	40	50	65	80	100	125	150
Set pressure			Saturated steam (kg/h)										
↓ max. set pressure stainless steel version	**0,2**	(barg)	--	--	22	33	44	85	142	195	305	710	1292
	0,3	(barg)	20	20	28	41	56	107	82	247	386	868	1333
	0,4	(barg)	23	23	34	48	65	126	209	290	450	1002	1581
	0,5	(barg)	27	27	39	55	74	144	239	332	520	1129	1765
	0,6	(barg)	30	30	43	62	82	162	267	372	580	1259	1959
	0,8	(barg)	36	36	51	73	100	189	323	435	680	1467	2289
	1	(barg)	41	41	59	84	114	218	370	500	785	1677	2613
	2	(barg)	68	68	99	139	188	362	610	830	1300	2789	4291
	3	(barg)	95	95	137	197	265	510	860	1180	1840	3846	5908
	4	(barg)	119	119	171	246	330	640	1070	1470	2300	4908	7532
	5	(barg)	142	142	205	295	396	765	1280	1760	2750	5943	9115
	6	(barg)	166	166	239	343	460	890	1495	2050	3200	6917	10611
	7	(barg)	189	189	272	391	525	1015	1700	2340	3650	7891	12103
	8	(barg)	213	213	306	440	590	1140	1910	2630	4100	8861	13593
	9	(barg)	236	236	339	490	655	1265	2120	2910	4550	9831	15080
	10	(barg)	259	259	370	535	720	1390	2330	3200	5000	10800	16567
	12	(barg)	306	306	440	630	850	1640	2750	3780	5900	12737	19537
	14	(barg)	352	352	505	730	980	1890	3170	4350	6800	14673	22507
	16	(barg)	400	400	570	825	1105	2140	3590	4920	7700	16612	25480
	18	(barg)	445	445	640	920	1235	2390	4000	5500	8600	18552	28456
	20	(barg)	490	490	705	1020	1365	2640	4430	6080	9500	20496	31438
	22	(barg)	540	540	775	1110	1495	2890	4850	6660	10400	22444	34425
	24	(barg)	585	585	840	1210	1630	3140	5270	7240	11300	24396	37421
	25	(barg)	609	609	875	1260	1690	3270	5480	7530	11760	25375	38921
	26	(barg)	630	630	910	1310	1760	3400	5700	7820	12200	26354	
	28	(barg)	680	680	975	1405	1890	3650	6120	8400	13100	28317	
	30	(barg)	730	730	1040	1505	2020	3900	6550	8990	14000	30286	
	32	(barg)	775	775	1110	1600	2150	4160	6980	9580	15000	32260	

Capacity air (incl. 10% overpressure)

DN			15	20	25	32	40	50	65	80	100	125	150
Set pressure			Air 0°C and 1,013 bara (Nm³/h)										
	0,2	(barg)	--	--	27	27	51	100	167	229	358	835	1225
	0,3	(barg)	24	24	34	49	67	128	217	294	460	1035	1588
	0,4	(barg)	28	28	41	41	78	152	252	349	546	1209	1908
	0,5	(barg)	32	32	47	47	90	176	292	405	632	1379	2156
	0,6	(barg)	37	37	53	53	102	199	330	459	717	1555	2418
	0,8	(barg)	45	45	63	63	125	237	404	545	852	1839	2871
	1	(barg)	52	52	73	73	144	274	466	631	986	2110	3288
	2	(barg)	86	86	123	123	240	461	777	1061	1657	3556	5471
	3	(barg)	123	123	176	176	340	658	1103	1514	2365	4947	7601
	4	(barg)	154	154	221	221	428	826	1385	1902	2970	6355	9754
	5	(barg)	185	185	266	266	515	995	1665	2290	3580	7735	11865
	6	(barg)	217	217	311	311	602	1165	1950	2680	4180	9041	13868
	7	(barg)	248	248	356	356	689	1330	2230	3065	4790	10348	15872
	8	(barg)	279	279	401	401	776	1500	2515	3450	5390	11654	17876
	9	(barg)	311	311	446	446	863	1670	2800	3840	6000	12961	19880
	10	(barg)	342	342	491	491	950	1835	3080	4225	6600	14267	21884
	12	(barg)	405	405	581	581	1125	2170	3645	5000	7800	16880	25892
	14	(barg)	468	468	671	671	1300	2510	4200	5780	9000	19493	29899
	16	(barg)	530	530	761	761	1475	2845	4770	6550	10200	22106	33907
	18	(barg)	593	593	851	851	1645	3180	5340	7320	11450	24718	37915
	20	(barg)	656	656	941	941	1820	3520	5900	8100	12650	27331	41922
	22	(barg)	718	718	1031	1031	1995	3855	6465	8870	13850	29944	45930
	24	(barg)	781	781	1121	1121	2170	4190	7030	9650	15100	32557	49938
	25	(barg)	812	812	1167	1167	2250	4360	7310	10040	15680	33863	51942
	26	(barg)	844	844	1211	1211	2340	4530	7595	10400	16300	35170	
	28	(barg)	907	907	1302	1302	2520	4860	8160	11200	17500	37782	
	30	(barg)	969	969	1390	1390	2690	5200	8720	12000	18700	40395	
	32	(barg)	1032	1032	1480	1480	2870	5540	9290	12750	19900	43008	
	35	(barg)	1126	1126	1620	1620	3130	6040	10130	13900	21700	46927	
	36	(barg)	1155	1155	1665	1665	3215	6220	10420	14300	22360	48234	
← max. set pressure stainless steel version	**40**	(barg)	1283	1283	1840	1840	3560	6880	11500	15850	24700	53459	

Capacity water (incl. 10% overpressure)

DN			15	20	25	32	40	50	65	80	100	125	150
Set pressure			Water 20°C (t/h)										
max. set pressure stainless steel version ↓	**0,2**	(bar)	--	--	0,97	1,4	1,95	3,63	6,33	8,36	13,06	26,4	44,3
	0,3	(bar)	0,84	0,84	1,16	1,67	2,33	4,30	7,46	9,80	15,22	32,3	54,3
	0,5	(bar)	1,11	1,11	1,54	2,21	3,09	5,74	10,0	13,22	20,6	41,8	70,1
	1	(bar)	1,57	1,57	2,17	3,13	4,37	8,12	14,15	18,69	29,2	59,1	99,1
	2	(bar)	2,22	2,22	3,07	4,42	6,17	11,48	20,0	26,4	41,3	83,6	140,2
	3	(bar)	2,72	2,72	3,76	5,42	7,56	14,07	24,5	32,4	50,6	102,4	171,7
	4	(bar)	3,14	3,14	4,35	6,26	8,73	16,24	28,3	37,4	58,4	118,2	198,3
	5	(bar)	3,51	3,51	4,86	7,0	9,76	18,16	31,6	41,8	65,3	132,2	221,7
	6	(bar)	3,85	3,85	5,32	7,66	10,69	19,89	34,6	45,8	71,6	144,8	242,9
	7	(bar)	4,16	4,16	5,75	8,28	11,55	21,5	37,4	49,5	77,3	156,4	262,3
	8	(bar)	4,45	4,45	6,14	8,85	12,35	23,0	40,0	52,9	82,6	167,2	280,4
	9	(bar)	4,72	4,72	6,52	9,39	13,1	24,4	42,4	56,1	87,6	177,4	297,5
	10	(bar)	4,97	4,97	6,87	9,89	13,81	25,7	44,7	59,1	92,4	187,0	313,5
	12	(bar)	5,44	5,44	7,53	10,84	15,12	28,1	49,0	64,8	100,2	204,8	343,5
	14	(bar)	5,88	5,88	8,13	11,71	16,34	30,4	52,9	69,9	109,3	221,2	371,0
	16	(bar)	6,29	6,29	8,69	12,51	17,46	32,5	56,6	74,8	116,8	236,5	396,6
	18	(bar)	6,67	6,67	9,22	13,27	18,52	34,4	60,0	79,3	123,9	250,9	420,7
	20	(bar)	7,03	7,03	9,72	14,0	19,53	36,3	63,3	83,6	130,6	264,4	443,4
	22	(bar)	7,37	7,37	10,19	14,7	20,5	38,1	66,3	87,7	137,0	277,4	465,1
	24	(bar)	7,7	7,7	10,64	15,33	21,4	39,8	69,3	91,6	143,1	289,7	485,8
	25	(bar)	7,86	7,86	10,86	15,64	21,8	40,6	70,7	93,3	146,0	295,7	495,8
	26	(bar)	8,0	8,0	11,06	15,92	22,2	41,3	72,0	95,1	148,6	301,5	
	28	(bar)	8,3	8,3	11,47	16,52	23,1	42,9	74,7	98,7	154,2	312,9	
	30	(bar)	8,6	8,6	11,88	17,1	23,9	44,4	77,3	102,2	159,7	323,9	
	35	(bar)	9,28	9,28	12,83	18,47	25,8	47,9	83,5	110,4	172,5	349,8	
	36	(bar)	9,4	9,4	13,0	18,7	26,1	48,7	84,7	111,9	174,9	354,8	
	40	(bar)	9,92	9,92	13,71	19,75	27,6	51,3	89,3	118,0	184,4	374,0	

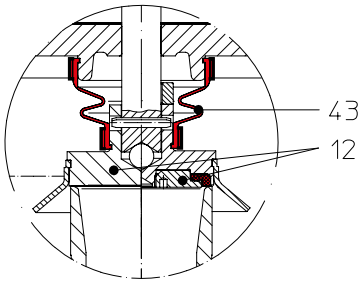
Soft sealing disc						
Body design	**Pos.**	**Description**	**P min.**	**Material**	**Temperature range**	**Abbreviation**
EN-JL1040, EN-JS1049, 1.0619+N	12	Disc	0,5 bar	X20Cr13+QT, 1.4021+QT / **EPDM**	-40 °C to +150 °C	**E**
			0,5 bar	X20Cr13+QT, 1.4021+QT / **FPM Viton (FKM)**	-20 °C to +180 °C	**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**

(lower values on request)

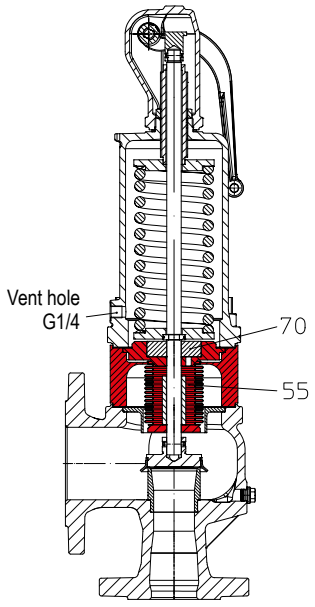
Fig. 950/960 with soft sealing disc max. 40 bar

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

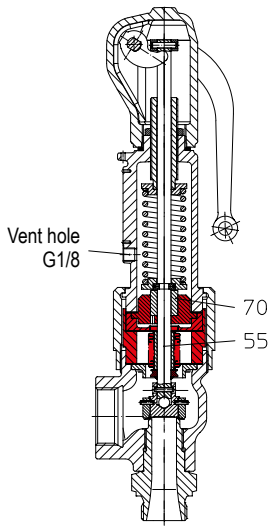
EPDM-Bellows seal (DN15 - 150)			
Pos.	**Description**	**Material**	**Temperature range**
43	EPDM-Bellows seal	EPDM 70 Shore A	-10 °C to +120 °C



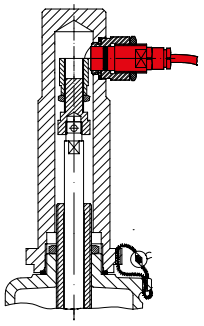
Balanced stainless steel-bellows (Only for closed version!)		
Pos.	**Description**	**Material**
55	Bellows unit	X6CrNiMoTi17-12-2, 1.4571; SA240 / SA479 Gr.316 Ti (SAFE-SN ANSI)
70	Balanced piston (DN15-100)	X6CrNiMoTi17-12-2, 1.4571; SA479 Gr.316 Ti (SAFE-SN ANSI)
Test: German "TA-Air TÜV-Test-No. 922-960324		



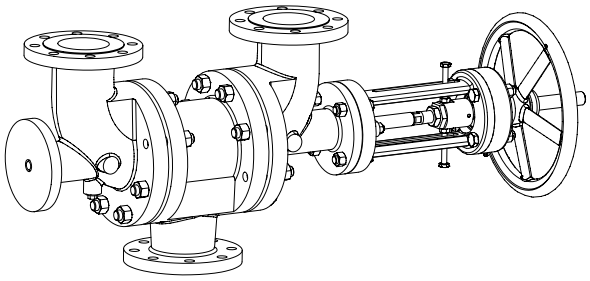
SAFE 900



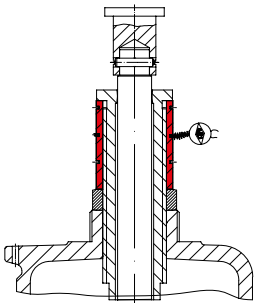
SAFE-TC 940



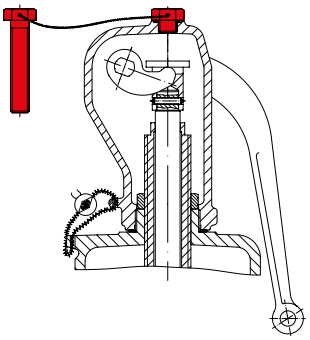
Proximity switch



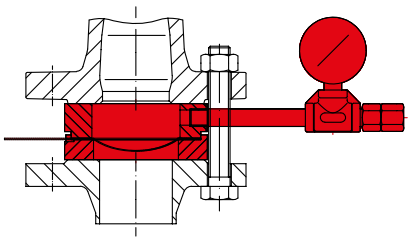
Changeover valve



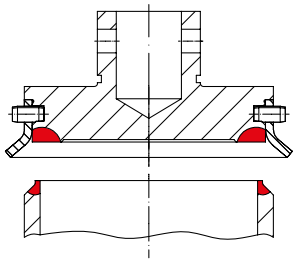
Lock bushing



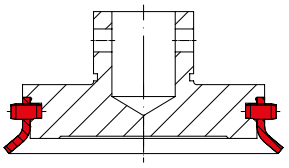
Test gag



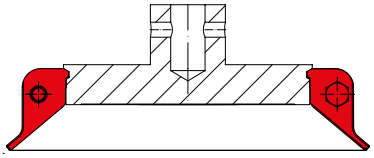
Rupture disc
(Sizing refer to page 40.)



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

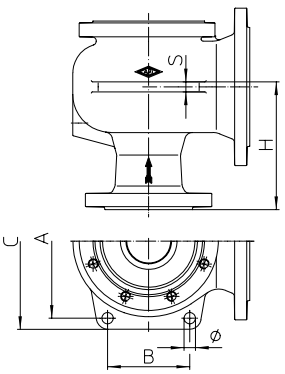


DN15-100



DN125-250

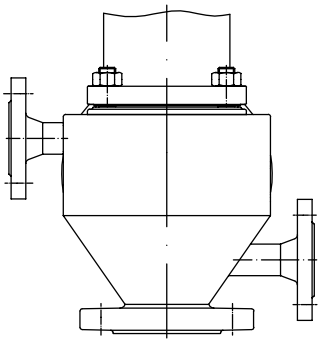
removable lifting aid



Body-Material	DN1 x DN2	A	B	C	Ø	S	H
	(mmxmm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1.0619+N 1.4408	50 x 80	176	70	204	14	12	155
	65 x 100	212	90	242			175
EN-JL1040 EN-JS1049 1.0619+N 1.4408	80 x 125	245	130	280	18	16	205
	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	A	B	C	Ø	S	H
	(inch)	(mm)	(mm)	(mm)	(mm)	(mm)	(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 (Gosgortechnadsor) 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 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 or 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:	.....	**Telephone:**	.....
	.....	**Fax:**	.....
Handled by:	.....	**E-mail:**	.....
Date:	.....		.....

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 Kdr (αw): .....

Rupture disc

Bursting pressure: ..... bar(g) Material: □ 1.4401

(Bursting pressure = Set pressure of the safety valve) □ Nickel

Tolerance: □ + 10% □ Inconel

□ .....% □ Monel

□ Aluminium

Quantity: piece □ Teflon foil medium side

(incl. reserve) (minimum 3 pieces recommended)

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

DN

Remark:

- 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 Nm³/h
  Max. capacity SAFE 900, DN 50, 10 bar with bursting disc = 0,9 x 9610 Nm³/h = 8649 Nm³/h
- Acc. to AD2000-A1 (5.4.2.2)
  $A_{geom} \times \alpha > 1{,}5 \times A_0 \times \alpha_w$

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