

ARI-REYCO® R Series 971 / 973 / 974

Technical data



Your valve made by ARI®
ari-armaturen.com

Safety Relief Valve (Full Nozzle) acc. to API 526

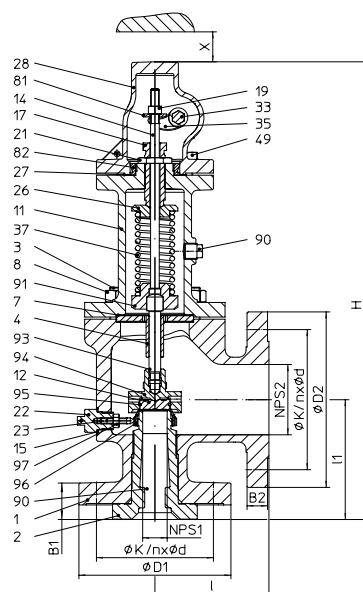


Fig. ... 971
closed lifting device

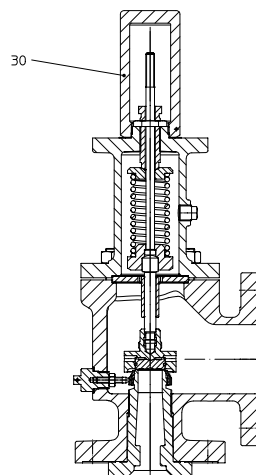


Fig. ... 973
gastight cap

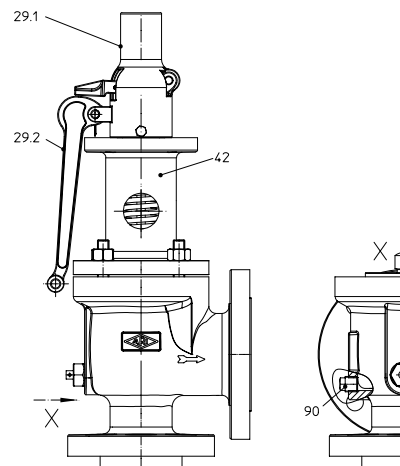


Fig. ... 974
open lifting device

Figure	Nominal pressure	Material	Valve size	Spring	Temperature range	Flanges
32.971 / 973 / 974	ANSI150/150	SA216WCC	1" x 2" - 8" x 10"	• Chrome alloy • SA313Gr.316 • Inconel	-20°F to +650°F ¹⁾ -20°F to +800°F ¹⁾ -20°F to +800°F ¹⁾	ASME B16.5
35.971 / 973 / 974	ANSI300/150	SA216WCC	1" x 2" - 8" x 10"			
37.971 / 973 / 974	ANSI600/150	SA216WCC	1" x 2" - 6" x 10"			
38.971 / 973 / 974	ANSI900/(150)300	SA216WCC	1,5" x 2" - 4" x 6"			
39.971 / 973 / 974	ANSI1500/(150)300	SA216WCC	1,5" x 2" - 4" x 6"			
3c.971 / 973 / 974	ANSI2500/300	SA216WCC	1,5" x 3" - 2" x 3"			
35.971 / 973 / 974	ANSI300/150	SA217WC6	1" x 2" - 8" x 10"	• Inconel	-20°F to +1000°F ¹⁾	ASME B16.5
37.971 / 973 / 974	ANSI600/150	SA217WC6	1" x 2" - 6" x 10"			
38.971 / 973 / 974	ANSI900/(150)300	SA217WC6	1,5" x 2" - 4" x 6"			
39.971 / 973 / 974	ANSI1500/(150)300	SA217WC6	1,5" x 2" - 4" x 6"			
3c.971 / 973 / 974	ANSI2500/300	SA217WC6	1,5" x 3" - 2" x 3"			
52.971 / 973	ANSI150/150	SA351CF8M	1" x 2" - 8" x 10"	• SA313Gr.316 • Inconel	-321°F to +800°F -75°F to +1000°F	ASME B16.5
55.971 / 973	ANSI300/150	SA351CF8M	1" x 2" - 8" x 10"			
57.971 / 973	ANSI600/150	SA351CF8M	1" x 2" - 6" x 10"			
58.971 / 973	ANSI900/(150)300	SA351CF8M	1,5" x 2" - 4" x 6"			
59.971 / 973	ANSI1500/300	SA351CF8M	1,5" x 2" - 3" x 6"			
5c.971 / 973	ANSI2500/300	SA351CF8M	1,5" x 3" - 2" x 3"			

¹⁾ Temperatures below 18°F on request.

Marking



Construction / Application

Safety valve, spring loaded, direct loaded, neutral gases, vapours and liquids

Details required

Medium gasform:	Mass flow (lb/h), SCFM, molar mass (kg/kmol), isotrope exponent, temperature (°F), set gauge pressure (psig), back pressure (psig)
	Mass flow (kg/h), molar mass (kg/kmol), isotrope exponent, temperature (°C), set gauge pressure (bar), back pressure (bar)
Medium liquid:	Volume flow (gal/min), density, viscosity, temperature (°F), set gauge pressure (psi gauge), back pressure (psig)
	Volume flow (kg/h), density (kg/m³), viscosity, temperature (°C), set gauge pressure (bar), back pressure (bar)



: @ALPHAGROUP



: 0-2792-9333



: www.alphagroup.co.th

ARI-REYCO® R Series 971 / 973 / 974

Technical data



Your valve made by ARI®
ari-armaturen.com

ALPHA GROUP

Parts					
Pos.	Sp.p.	Description	Fig. 32.971/973/974 - 3c.971/973/974		Fig. 52.971/973 - 5c.971/973
1		Body	SA216WCC	SA217WC6	SA351CF8M
2	x	Nozzle	SA479Gr.316L (>2": SA351CF8M)		
3		Stud	SA193-B7		SA193-B8
4		Guide	SA351CF8M		
7	x	Gasket (body/bonnet)	Soft iron		Monel alloy 400
8		Stud nut	SA194-2H		SA194-8
11		Bonnet, closed	SA216WCC	SA217WC6	SA351CF8M
12	x	Disc	SA479Gr.316L		
14		Stem, top	SA479Gr.316L		
15	x	Gasket	Soft iron		Monel alloy 400
17		Compression screw	SA479Gr.316L		
19		Spindle cap	SA58Gr.303 SS		
21		Compression nut	SA479Gr.316L		
22		Locking screw (ring pin assembly)	SA479Gr.316L		
26		Top spring step	AISI1015		SA479Gr.316L
27	x	Gasket (cap)	Soft iron		Monel alloy 400
28		Cap, closed (Fig. 971)	SA216WCC		SA351CF8M
29.1		Cap, open (Fig. 974)	Gray iron		
29.2		Lever, open (Fig. 974)	Gray iron		
30		Cap, gastight (Fig. 973)	SA216WCC		SA351CF8M
35		Lift fork	SA216WCC		SA351CF8M
36		Lifting lever	Gray iron		
37		Spring	SA231/401, Chrome alloy (up to 650°F)		SA313Gr.316 (up to 800°F)
			SA313Gr.316 (up to 800°F)	--	--
			Inconel X750 (up to 800°F)	Inconel X750 (up to 1000°F)	Inconel X750 (up to 1000°F)
42		Bonnet, open	SA216WCC	SA217WC6	SA351CF8M
49		Bolt	SA193-B7		
71	x	Gasket (gag screw)	Soft iron		Monel alloy 400
72		Gag screw	SA479Gr.316L		
74		Retaining plate	SA479Gr.316L		
75	x	O-ring	Viton		
77		Retaining screw	SA479Gr.304L		
90		Pipe plug	SA193-B7		SA193-B8
91		Bottom spring step	AISI1015		SA479Gr.316L
93		Point	SA479Gr.316L		
94		Disc holder	SA479Gr.316L (> Orifice K: SA351CF8M)		
95		Snap ring	SA313Gr.302		
96		Adjusting screw	SA351CF8M		
	L Spare parts				

Certified coefficient of discharge K	UV-/NB-stamp									
	1"x2"	1 1/2"x2" 1 1/2"x2 1/2"	1 1/2"x3"	2"x3"	3"x4"	3"x6"	4"x6"	6"x8"	6"x10"	8"x10"
Steam / Gas	0,860									
Liquid	0,724									



@ALPHAGROUP



0-2792-9333



www.alphagroup.co.th

ARI-REYCO® R Series 971 / 973 / 974

Technical data



Your valve made by ARI®
ari-armaturen.com

Coeff. of discharge: 0,860	Orifice							
	D	E	F	G	H	J	K	L
Design area [A ₀]	0,122 in²	0,217 in²	0,34 in²	0,558 in²	0,869 in²	1,427 in²	2,036 in²	3,16 in²
Design diameter [d ₀]	0,394 in	0,526 in	0,658 in	0,843 in	1,052 in	1,348 in	1,61 in	2,006 in
Set pressure [psig]								

Capacity Charts „Air & Gas in SCFM“ ¹⁾ (incl. 10% overpressure): Orifice D - L

< 30 psig with + 3 psig overpressure	15	63	112	175	288	448	736	1050	1629
	20	73	129	202	332	516	848	1210	1878
	30	92	163	256	420	653	1073	1531	2376
40		113	201	315	516	804	1321	1884	2924
50		134	238	374	613	955	1568	2237	3472
60		155	276	433	710	1106	1815	2590	4020
70		176	314	492	807	1256	2063	2943	4568
80		198	351	550	903	1407	2310	3296	5116
90		219	389	609	1000	1558	2558	3649	5664
100		240	427	668	1097	1708	2805	4002	6212
110		261	464	727	1194	1859	3053	4356	6760
120		282	502	786	1290	2010	3300	4709	7308
130		303	539	845	1387	2160	3548	5062	7856
140		324	577	904	1484	2311	3795	5415	8404
150		346	615	963	1581	2462	4043	5768	8952

Capacity Charts „Steam in Lb/Hr“ (incl. 10% overpressure): Orifice D - L

< 30 psig with + 3 psig overpressure	15	177	314	492	808	1259	2067	2949	4577
	20	204	362	568	932	1451	2383	3400	5276
	30	258	458	718	1179	1836	3015	4301	6676
40		317	564	884	1451	2259	3710	5293	8215
50		377	670	1050	1723	2683	4405	6285	9755
60		436	776	1215	1994	3106	5100	7277	11294
70		495	881	1381	2266	3529	5796	8269	12834
80		555	987	1547	2538	3953	6491	9261	14374
90		614	1093	1712	2810	4376	7186	10253	15913
100		674	1198	1878	3082	4799	7881	11245	17453
110		733	1304	2043	3354	5223	8576	12237	18992
120		793	1410	2209	3626	5646	9272	13229	20532
130		852	1516	2375	3897	6070	9967	14221	22071
140		912	1621	2540	4169	6493	10662	15212	23611
150		971	1727	2706	4441	6916	11357	16204	25150

Capacity Charts „Water & Liquid in Gal/Min“ (incl. 10% overpressure): Orifice D - L

< 30 psig with + 3 psig overpressure	15	14	25	40	65	101	167	238	369
	20	16	29	45	74	115	188	269	417
	30	19	34	54	88	137	226	322	499
40		22	40	62	102	159	260	372	577
50		25	44	69	114	177	291	415	645
60		27	48	76	125	194	319	455	706
70		29	52	82	135	210	344	492	763
80		31	56	88	144	224	368	525	816
90		33	59	93	153	238	391	557	865
100		35	63	98	161	251	412	587	912
110		37	66	103	169	263	432	616	956
120		39	69	107	176	275	451	644	999
130		40	71	112	184	286	469	670	1040
140		42	74	116	191	297	487	695	1079
150		43	77	120	197	307	504	719	1117

