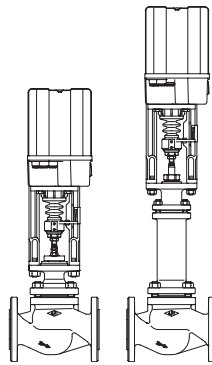


**Control valve - straight through with flanges and shaft guided plug**  
1" to 8" (DN 25 - 200)

**ARI-STEVI® 470 / 471 - ANSI**  
**Electric actuator ARI-PREMIO**

- Enclosure IP 65
- 2 torque switches
- Handwheel
- Additional devices available, e.g. potentiometer



Page 2

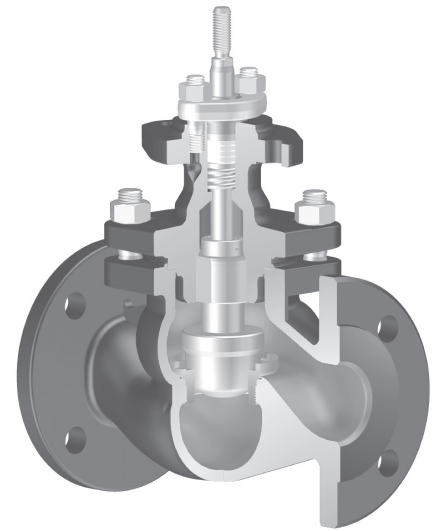
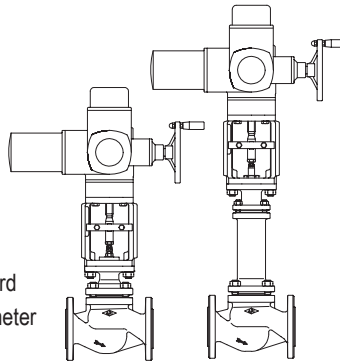


Fig. 470 - ANSI

**ARI-STEVI® 470 / 471 - ANSI**  
**Electric actuator AUMA SAR**

- Electric multiturn actuator, capable of high closing pressures
- Enclosure IP 67
- 2 torque switches
- 2 travel switches
- Handwheel
- Overheating protection for motor as standard
- Additional devices available, e.g. potentiometer
- Explosion proof version available



Page 6

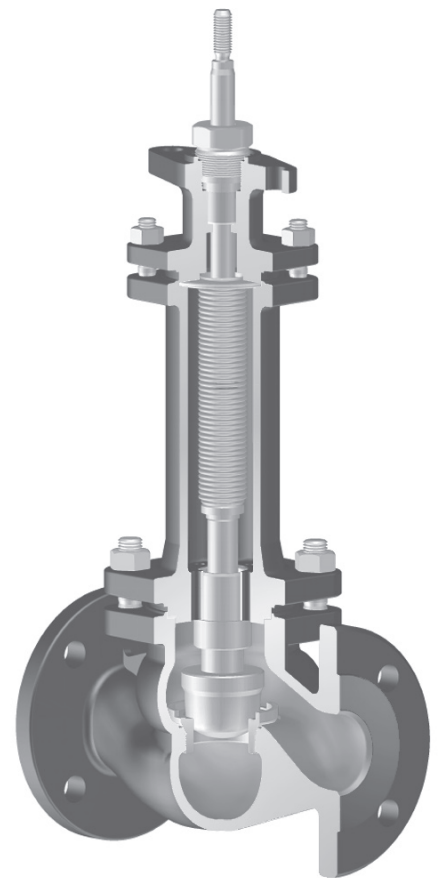
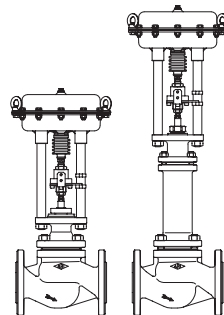


Fig. 471 - ANSI

**ARI-STEVI® 470 / 471 - ANSI**  
**Pneumatic actuator ARI-DP**

- Reversible pneumatic actuator
- Actuator with rolling diaphragm
- Air supply pressure max. 87 psi / 6 bar
- Stem protection by bellow
- Maintenance-free O-ring sealing
- Assembly of additional devices acc. to DIN IEC 60534-6



Page 10

**Features:**

- Compact design
- Precision guided stem
- Burnished stem
- Tapered seat ring
- Replaceable seal and plug
- Screwed seat ring
- Cv- / Kvs-values reducible up to 6 times
- Rangeability  
50 : 1 (1"-6" / DN25-150)  
30 : 1 (8" / DN200)
- Post guided plug
- Spring loaded PTFE-V ring packing unit
- Two-ply bellows seal as standard
- Travel indicator

Control valve in straightway form with electric actuator ARI-PREMIO

Figure	Nominal pressure	Material	Nominal diameter
35.470...90 / 35.471...90	ANSI 300	SA 216 WCB	1" - 8" / DN 25-200
Other materials and versions on request.			
<b>Stem sealing</b>			
Fig. 470: <ul style="list-style-type: none"> <li>• PTFE-V-ring unit ( to 6" / DN150) +14°F to +428°F / -10°C to +220°C</li> <li>• PTFE-packing +14°F up to +482°F / -10°C up to +250°C</li> <li>• Pure graphite-packing +14°F up to +842°F / -10°C up to +450°C</li> </ul>			
Fig. 471: <ul style="list-style-type: none"> <li>• Stainless steel bellows seal (for restricted pressure range) -76°F up to +842°F / -60°C up to +450°C</li> </ul>			
<b>Plug design standard:</b> <ul style="list-style-type: none"> <li>• Parabolic plug, metal seat (1"-6" / DN25-150)</li> <li>• V-port plug, metal seat (8" / DN200)</li> </ul> <b>optional:</b> <ul style="list-style-type: none"> <li>• Parabolic plug with PTFE soft seat (max. 392°F / 200°C) (1"-6" / DN25-150)</li> <li>• V-port plug, metal seat (from seat-ø 2,56 in / 65 mm)</li> <li>• Perforated plug, metal seat</li> <li>• Parabolic pressure balanced plug (or perforated plug), metal seat; Material of piston seal: PTFE with stainless steel spring (max. 392°F / 200°C)</li> </ul>			
<b>Guiding</b> <ul style="list-style-type: none"> <li>• Parabolic plug: post guiding</li> <li>• Perforated / V-port plug: post and port guiding</li> </ul>			
<b>Flow characteristic</b> <ul style="list-style-type: none"> <li>• Equal percentage or linear (from Kvs 100 modified equal percentage, Miniature-Kvs-values ≤ 0,63 only equal percentage)</li> </ul>			
<b>Rangeability</b> <ul style="list-style-type: none"> <li>• 50 : 1 on parabolic plug</li> <li>• 30 : 1 on perforated plug / V-port plug</li> </ul>			
<b>Shut off class (seat / plug leakage classes)</b> <ul style="list-style-type: none"> <li>• Metal seat - Leakage class IV acc. to ANSI / FCI 70-2</li> <li>• Soft seat - Leakage class VI acc. to ANSI / FCI 70-2 (from Cv 1,2 / Kvs 1,0)</li> </ul>			
Closing pressures refer to page 4.			
Technical data for actuator refer to data sheet.			

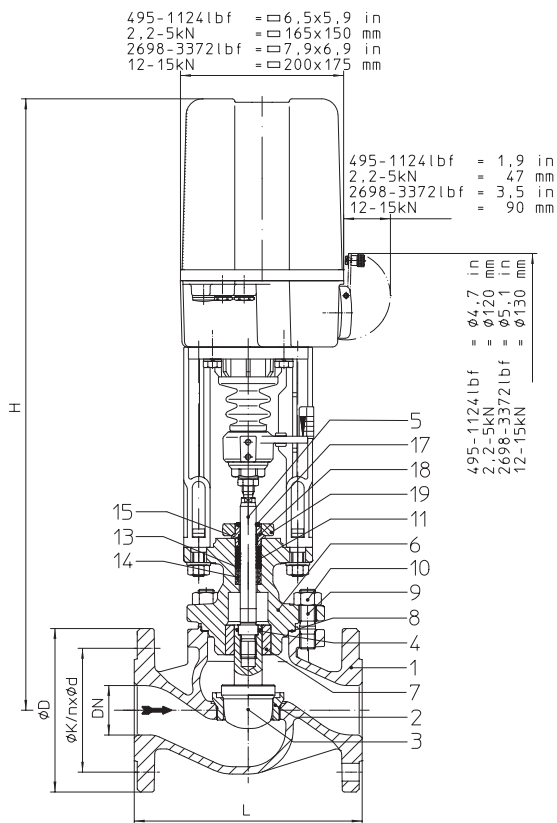


Fig. 470 - ANSI

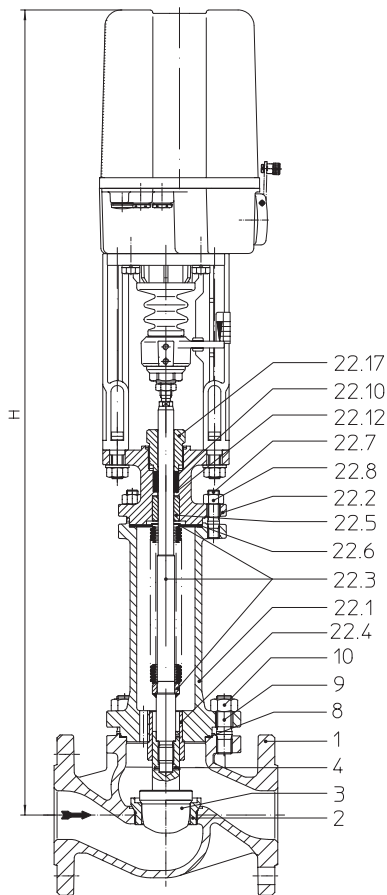


Fig. 471 - ANSI

**Selection of possible applications**

Industrial installations, processing technology, plant manufacturing, etc.  
(other applications on request)

**Selection of possible flow media**

Fig. 470-ANSI: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 471-ANSI: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.  
(other flow media on request)

**Dimensions and weights**

Nominal diameter		1"	1 1/2"	2"	3"	4"	6"	8"	
L	(in)	7,75	9,25	10,5	12,5	14,5	18,62	22,38	
Fig. 470	H	(in)	23,1	24,3	24,3	25,5	25,6	28,8	--
	ARI-PREMIO 495 lbf	(lb)	35,1	52,7	57,1	101,2	157	292	--
	ARI-PREMIO 1124 lbf	(lb)	37,5	55,1	59,5	103,6	160	294	--
	H	(in)	--	30,2	30,2	31,4	31,5	34,6	37,5
	ARI-PREMIO 2698 lbf	(lb)	--	63,9	68,4	112,5	169	303	506
	ARI-PREMIO 3372 lbf	(lb)	--	63,9	68,4	112,5	169	303	506
Fig. 471	H	(in)	29,3	32,6	32,6	33,3	34,5	41,7	--
	ARI-PREMIO 495 lbf	(lb)	41,2	62	66,4	114,4	165	310	--
	ARI-PREMIO 1124 lbf	(lb)	43,7	64,4	68,8	116,9	167	312	--
	H	(in)	--	38,5	38,5	39,3	40,4	47,5	56,4
	ARI-PREMIO 2698 lbf	(lb)	--	73,2	77,6	125,7	176	321	530
	ARI-PREMIO 3372 lbf	(lb)	--	73,2	77,6	125,7	176	321	530
Nominal diameter		DN 25	DN 40	DN 50	DN 80	DN100	DN150	DN200	
L	(mm)	197	235	267	318	368	473	568	
Fig. 470	H	(mm)	587	618	618	647	649	731	--
	ARI-PREMIO 2,2 kN	(kg)	15,9	23,9	25,9	45,9	71	132	--
	ARI-PREMIO 5 kN	(kg)	17	25	27	47	73	134	--
	H	(mm)	--	768	768	797	799	879	953
	ARI-PREMIO 12 kN	(kg)	--	29	31	51	77	138	230
	ARI-PREMIO 15 kN	(kg)	--	29	31	51	77	138	230
Fig. 471	H	(mm)	744	829	829	847	877	1058	--
	ARI-PREMIO 2,2 kN	(kg)	18,7	28,1	30,1	51,9	75	140	--
	ARI-PREMIO 5 kN	(kg)	19,8	29,2	31,2	53	76	142	--
	H	(mm)	--	979	979	997	1027	1206	1434
	ARI-PREMIO 12 kN	(kg)	--	33,2	35,2	57	80	146	241
	ARI-PREMIO 15 kN	(kg)	--	33,2	35,2	57	80	146	241

Standard-flange dimensions refer to page 25.

Face to face dimension Form RF acc. to ANSI / ISA-S75.03 - 1992 (Face to face dimensions for flanges Form RTJ on request.)

**Parts**

Pos.	Description	Fig. 35.470...90 / Fig. 35.471...90
1	Body	SA 216 WCB
2	Seat ring *	SA 276 Gr.420
3	Plug *	SA 276 Gr.420
4	Straight spin *	A2
5	Stem *	SA 276 Gr.420
6	Mounting bonnet	SA 216 WCB
7	Guide bushing	SA 276 Gr.420 (hardened)
8	Gasket *	Pure graphite (CrNi laminated with graphite)
9	Studs	SA 193 B7
10	Hexagon nuts	SA 194 2H
11	V-ring unit *	PTFE
13	Washer *	SA 240 Gr. 304
14	Spring *	AISI 301 A313 Gr.301
15	Strip *	PTFE25%C
17	Scraper *	PTFE
18	Stem guiding *	AISI 303
19	Packing box flange	SA 105
22.1	Bellows housing	SA 216 WCB
22.2	Mounting bonnet	SA 216 WCB
22.3	Stem- / Bellows unit *	SA 276 Gr.420 / SA 240 Gr.321
22.4	Guide bushing	SA 276 Gr.420 (hardened)
22.5	Guide bushing	SA 276 Gr.420 (hardened)
22.6	Gasket *	Pure graphite (CrNi laminated with graphite)
22.7	Studs	SA 193 B7
22.8	Hexagon nuts	SA 194 2H
22.10	Packing ring *	Pure graphite
22.12	Washer *	SA 240 Gr. 304
22.17	Screw joint *	AISI 303

\* Spare parts (Pos. 13-15 will be supplied as unit)

Information / restriction of technical rules need to be observed!

A production allowance acc. to TRB 801 No. 45 exists

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

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

Nominal diameter		1"						1 1/2"		2"		3"		4"		6"		8"							
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)						0,98		1,57			1,97			3,15		3,94		5,91		7,87				
	Cv-value						12		29			46			116		185		462		728				
	Travel (in)						0,79		1,18			1,18			1,18		1,18		1,97		2,56				
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)	0,12	0,2	0,47	0,71	0,87		0,98	1,26		1,26	1,57		1,97	2,56		2,56	3,15		3,94	4,92		4,92	5,91	
	Cv-value	0,29	0,73	2,9	1,8	4,6	7,3		12	18		18	29		46	73		73	116		185	289		289	462
	Travel (in)	0,12	0,46	1,2					0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,18		1,18	1,97		1,97	1,97
Actuator <sup>1)</sup> ARI-PREMIO 495 lbf	Closing pressure (psi)	I.	740	740	740	740	677	521	510	306	191	306	191	117	116	64	39	64	39	22	22				
		II.	740	740	740	740	634	488	466	279	173	279	173	106	103	56	34	56	34	19	19				
		III.	461	457	442	430	421	415	415	262	162	262	162	99	99	54	32	54	32	18	15				
Operating time <sup>2)</sup> (s) (Op. Speed 0,01 in/s)		53						53	79	53	79	79		79		79									
Actuator <sup>1)</sup> ARI-PREMIO 1124 lbf	Closing pressure (psi)	I.					740	740	740	740	502	740	502	318	316	183	118	183	118	73	73	45	29		
		II.					740	740	740	740	484	740	484	306	303	176	113	176	113	70	70	42	28		
		III.	580	580	580	580	580	580	580	580	473	580	473	299	299	173	111	173	111	69	66	40	26		
Operating time <sup>2)</sup> (s) (Op. Speed 0,01 in/s)		53						53	79	53	79	79		79		79	132								
Actuator <sup>1)</sup> ARI-PREMIO 2698 lbf	Closing pressure (psi)	I.								740		740	740	740	482	316	482	316	200	200	126	86			
		II.								740		740	740	740	474	311	474	311	197	197	124	85	121	83	45
		III.								580		580	580	580	472	309	472	309	196	193	122	83	122	83	45
Operating time <sup>2)</sup> (s) (Op. Speed 0,03 in/s)								38		38		38		38		38	63			63			63	82	
Actuator <sup>1)</sup> ARI-PREMIO 3372 lbf	Closing pressure (psi)	I.													610	401	610	401	255	255	161	111			
		II.													602	396	602	396	252	252	159	109	156	107	59
		III.													580	394	580	394	250	248	157	107	157	107	59
Operating time <sup>2)</sup> (s) (Op. Speed 0,01 in/s)														79		79		79	132			132		171	
I. Fig. 470: PTFE-V-ring unit;		II. Fig. 470: PTFE- / Pure graphite-packing;												III. Fig. 471: Bellows seal											

<sup>1)</sup> Motor voltage: 230V 50Hz  
Other voltages: 24V 50/60Hz; 115V 50/60Hz; 230V 60Hz  
Technical data for actuator refer to data sheet ARI-PREMIO.

<sup>2)</sup> Indicated operating times with 50Hz.

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

Nominal diameter		DN 25						DN 40			DN 50			DN 80			DN100			DN150			DN200			
Standard Kvs-values <sup>3)</sup>	Seat-Ø (mm)							25			40			50			80			100			150			200
	Kvs-value							10			25			40			100			160			400			630
	Travel (mm)							20			30			30			30			30			50			65
Reduced Kvs-values <sup>3)</sup>	Seat-Ø (mm)	3	5	12	18	22		25	32		32	40		50	65		65	80		100	125		125	150		
	Kvs-value	0,25 0,16 0,1	0,63 0,4	2,5 1,6 1	4	6,3		10	16		16	25		40	63		63	100		160	250		250	400		
	Travel (mm)	20	20	20	20	20		20	20		20	30		30	30		30	30		30	50		50	50		
Actuator <sup>1)</sup> <b>ARI-PREMIO</b> <b>2,2 kN</b>	Closing pressure (bar)	I.	51	51	51	51	46,7	35,9	35,2	21,1	13,2	21,1	13,2	8,1	8	4,4	2,7	4,4	2,7	1,5	1,5					
		II.	51	51	51	51	43,7	33,7	32,1	19,2	11,9	19,2	11,9	7,3	7,1	3,9	2,3	3,9	2,3	1,3	1,3					
		III.	31,8	31,5	30,5	29,6	29,1	28,6	28,6	18	11,2	18	11,2	6,8	6,8	3,7	2,2	3,7	2,2	1,2	1					
	Operating time <sup>2)</sup> (s) (Op. Speed 0,38 mm/s)	53						53	79	53	79	79	79	79	79	79	79	79	79	79						
Actuator <sup>1)</sup> <b>ARI-PREMIO</b> <b>5 kN</b>	Closing pressure (bar)	I.					51	51	51	51	34,6	51	34,6	21,9	21,8	12,6	8,2	12,6	8,2	5	5	3,1	2			
		II.					51	51	51	51	33,4	51	33,4	21,1	20,9	12,1	7,8	12,1	7,8	4,8	4,8	2,9	1,9			
		III.	40	40	40	40	40	40	40	40	32,6	40	32,6	20,6	20,6	11,9	7,7	11,9	7,7	4,7	4,5	2,8	1,8			
	Operating time <sup>2)</sup> (s) (Op. Speed 0,38 mm/s)	53						53	79	53	79	79	79	79	79	79	79	79	79	132						
Actuator <sup>1)</sup> <b>ARI-PREMIO</b> <b>12 kN</b>	Closing pressure (bar)	I.								51		51	51	51	33,2	21,8	33,2	21,8	13,8	13,8	8,7	5,9				
		II.								51		51	51	51	32,7	21,5	32,7	21,5	13,6	13,6	8,6	5,8	8,4	5,7	3,1	
		III.									40		40	40	40	32,5	21,3	32,5	21,3	13,3	13,3	8,4	5,7	8,4	5,7	3,1
	Operating time <sup>2)</sup> (s) (Op. Speed 0,79 mm/s)									38		38	38	38	38	38	38	38	38	63	63	63	82			
Actuator <sup>1)</sup> <b>ARI-PREMIO</b> <b>15 kN</b>	Closing pressure (bar)	I.													42,1	27,7	42,1	27,7	17,6	17,6	11,1	7,6				
		II.													41,5	27,3	41,5	27,3	17,3	17,3	11	7,5	10,8	7,4	4	
		III.													40	27,2	40	27,2	17,3	17,1	10,8	7,4	10,8	7,4	4,1	
	Operating time <sup>2)</sup> (s) (Op. Speed 0,38 mm/s)														79	79	79	79	79	132	132	132	171			

I. Fig. 470: PTFE-V-ring unit;

II. Fig. 470: PTFE- / Pure graphite-packing;

III. Fig. 471: Bellows seal

<sup>1)</sup> Motor voltage: 230V 50Hz  
Other voltages: 24V 50/60Hz; 115V 50/60Hz; 230V 60Hz  
Technical data for actuator refer to data sheet ARI-PREMIO.

<sup>2)</sup> Indicated operating times with 50Hz.

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

## Control valve in straightway form with electric actuator AUMA

SAR 07.1/07.5 = 10.4 in 265 mm SAR 07.1/07.5 = 9.8 in 249 mm  
 SAR 10.1 = 11.1 in 282 mm SAR 10.1 = 10 in 254 mm

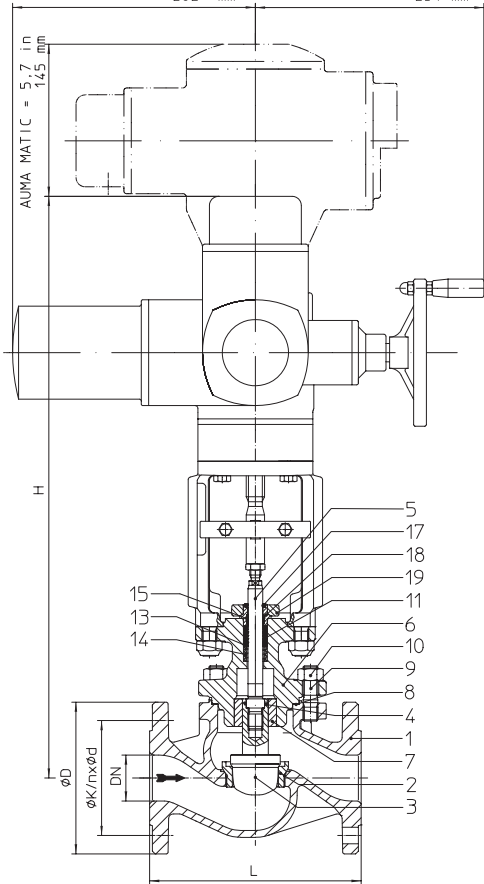


Fig. 470 - ANSI

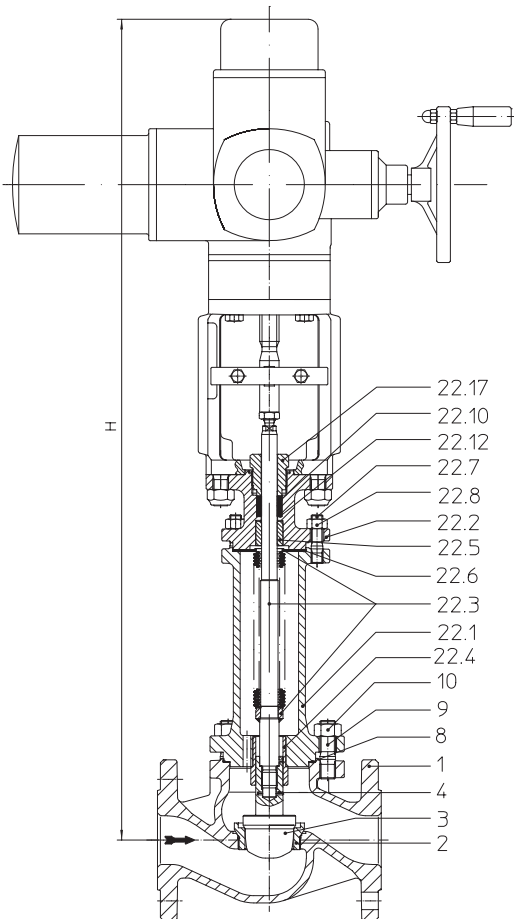


Fig. 471 - ANSI

Figure	Nominal pressure	Material	Nominal diameter
35.470...90 / 35.471...90	ANSI 300	SA 216 WCB	1 1/2" - 8" / DN40-200
Other materials and versions on request.			
<b>Stem sealing</b>			
Fig. 470: <ul style="list-style-type: none"> <li>• PTFE-V-ring unit ( to 6" / DN150) +14°F to +428°F / -10°C to +220°C</li> <li>• PTFE-packing +14°F up to +482°F / -10°C up to +250°C</li> <li>• Pure graphite-packing +14°F up to +842°F / -10°C up to +450°C</li> </ul>			
Fig. 471: <ul style="list-style-type: none"> <li>• Stainless steel bellows seal (for restricted pressure range) -76°F up to +842°F / -60°C up to +450°C</li> </ul>			
<b>Plug design standard:</b>			
<ul style="list-style-type: none"> <li>• Parabolic plug, metal seat (1 1/2"-6" / DN40-150)</li> <li>• V-port plug, metal seat (8" / DN200)</li> </ul>			
optional:			
<ul style="list-style-type: none"> <li>• Parabolic plug with PTFE soft seat (max. 392°F / 200°C) (1"-6" / DN25-150)</li> <li>• V-port plug, metal seat (from seat-ø 2,56 in / 65 mm)</li> <li>• Perforated plug, metal seat</li> <li>• Parabolic pressure balanced plug (or perforated plug), metal seat; Material of piston seal: PTFE with stainless steel spring (max. 392°F / 200°C)</li> </ul>			
<b>Guiding</b>			
<ul style="list-style-type: none"> <li>• Parabolic plug: post guiding</li> <li>• Perforated / V-port plug: post and port guiding</li> </ul>			
<b>Flow characteristic</b>			
<ul style="list-style-type: none"> <li>• Equal percentage or linear (from Kvs 100 modified equal percentage, Miniature-Kvs-values ≤ 0,63 only equal percentage)</li> </ul>			
<b>Rangeability</b>			
<ul style="list-style-type: none"> <li>• 50 : 1 on parabolic plug</li> <li>• 30 : 1 on perforated plug / V-port plug</li> </ul>			
<b>Shut off class (seat / plug leakage classes)</b>			
<ul style="list-style-type: none"> <li>• Metal seat - Leakage class IV acc. to ANSI / FCI 70-2</li> <li>• Soft seat - Leakage class VI acc. to ANSI / FCI 70-2 (from Cv 1,2 / Kvs 1,0)</li> </ul>			
Closing pressures refer to page 8.			
Technical data for actuator refer to data sheet.			

### Selection of possible applications

Industrial installations, processing technology, plant manufacturing, etc. (other applications on request)

### Selection of possible flow media

Fig. 470-ANSI: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 471-ANSI: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc. (other flow media on request)

**Dimensions and weights**

Nominal diameter		1 1/2"	2"	3"	4"	6"	8"	
L	(in)	9,25	10,5	12,5	14,5	18,62	22,38	
Fig. 470	H	(in)	25,9	25,9	27	27,1	29,5	33,2
	SAR 07.1	(lb)	98,8	106,5	150,6	207	--	--
	SAR 07.5	(lb)	98,8	106,5	150,6	207	341	544
	H	(in)	--	--	27,5	27,6	30	33,7
	SAR 10.1	(lb)	--	--	160,5	217	351	554
	H	(in)	--	--	--	--	35	36,7
Fig. 471	SAR 14.1	(lb)	--	--	--	426	629	
	H	(in)	34,2	34,2	34,9	36,1	42,4	50,7
	SAR 07.1	(lb)	108	115,8	163,8	214	359	568
	SAR 07.5	(lb)	108	115,8	163,8	214	359	568
	H	(in)	--	--	35,4	36,6	42,8	51,2
	SAR 10.1	(lb)	--	--	173,8	224	369	578
Nominal diameter		DN 40	DN 50	DN 80	DN100	DN150	DN200	
L	(mm)	235	267	318	368	473	568	
Fig. 470	H	(mm)	658	658	687	689	749	844
	SAR 07.1	(kg)	44,8	48,3	68,3	94	--	--
	SAR 07.5	(kg)	44,8	48,3	68,3	94	155	247
	H	(mm)	--	--	699	701	761	856
	SAR 10.1	(kg)	--	--	72,8	98	159	251
	H	(mm)	--	--	--	--	888	931
Fig. 471	SAR 14.1	(kg)	--	--	--	194	285	
	H	(mm)	869	869	887	917	1076	1289
	SAR 07.1	(kg)	49	52,5	74,3	97	163	258
	SAR 07.5	(kg)	49	52,5	74,3	97	163	258
	H	(mm)	--	--	899	929	1088	1301
	SAR 10.1	(kg)	--	--	78,8	102	167	262

Standard-flange dimensions refer to page 23.

(For version with AUMA SAR Ex other heights.)

Face to face dimension Form RF acc. to ANSI / ISA-S75.03 - 1992 (Face to face dimensions for flanges Form RTJ on request.)

**Parts**

Pos.	Description	Fig. 35.470...90 / Fig. 35.471...90
1	Body	SA 216 WCB
2	Seat ring *	SA 276 Gr.420
3	Plug *	SA 276 Gr.420
4	Straight spin *	A2
5	Stem *	SA 276 Gr.420
6	Mounting bonnet	SA 216 WCB
7	Guide bushing	SA 276 Gr.420 (hardened)
8	Gasket *	Pure graphite (CrNi laminated with graphite)
9	Studs	SA 193 B7
10	Hexagon nuts	SA 194 2H
11	V-ring unit *	PTFE
13	Washer *	SA 240 Gr. 304
14	Spring *	AISI 301 A313 Gr.301
15	Strip *	PTFE25%C
17	Scraper *	PTFE
18	Stem guiding *	AISI 303
19	Packing box flange	SA 105
22.1	Bellows housing	SA 216 WCB
22.2	Mounting bonnet	SA 216 WCB
22.3	Stem- / Bellows unit *	SA 276 Gr.420 / SA 240 Gr.321
22.4	Guide bushing	SA 276 Gr.420 (hardened)
22.5	Guide bushing	SA 276 Gr.420 (hardened)
22.6	Gasket *	Pure graphite (CrNi laminated with graphite)
22.7	Studs	SA 193 B7
22.8	Hexagon nuts	SA 194 2H
22.10	Packing ring *	Pure graphite
22.12	Washer *	SA 240 Gr. 304
22.17	Screw joint *	AISI 303

\* Spare parts (Pos. 13-15 will be supplied as unit)

Information / restriction of technical rules need to be observed!

A production allowance acc. to TRB 801 No. 45 exists

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

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

Fig. 470 - ANSI																				
Nominal diameter				1 1/2"		2"		3"		4"		6"		8"						
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)			1,57		1,97			3,15			3,94			5,91			7,87		
	Cv-value			29		46			116			185			462			728		
	Travel (in)			1,18		1,18			1,18			1,18			1,97			2,56		
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)		0,98	1,26		1,26	1,57		1,97	2,56		2,56	3,15		3,94	4,92		4,92	5,91	
	Cv-value		12	18		18	29		46	73		73	116		185	289		289	462	
	Travel (in)		0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,18		1,18	1,97		1,97	1,97	
Actuator <sup>1)</sup> <b>AUMA SAR 07.1</b> Output drive Form A TR 20 x 4	Closing pressure (psi)	I./II.	shut off	740	740	740	740	740	740	673	443	673	443	282						
			controlling	740	740	740	740	545	542	318	207	318	207	130						
	Torque (ft lbf)			11		11		15	15	22		22								
	Operating time <sup>2)</sup> (s)			54	56	54	56	56		56		56								
Output drive (rpm)			5,6	8	5,6	8	8		8		8									
Actuator <sup>1)</sup> <b>AUMA SAR 07.5</b> Output drive Form A TR 26 x 5	Closing pressure (psi)	I./II.	shut off					740	740	740	624	740	624	398	398	253	175	251	173	96
			controlling					740	740	455	298	455	298	189	189	119	81	116	79	43
	Torque (ft lbf)			22		22		37	44	37	44		44		44		44		44	
	Operating time <sup>2)</sup> (s)							64	64		64		64		64	55	55		71	
Output drive (rpm)							5,6	5,6		5,6		5,6		5,6	11	11		11		
Actuator <sup>1)</sup> <b>AUMA SAR 10.1</b> Output drive Form A TR 26 x 5	Closing pressure (psi)	I./II.	shut off						740	740	740	740	678	678	433	300	520	360	301	
			controlling						740	624	740	624	398	398	253	175	251	173	96	
	Torque (ft lbf)								44	59	44	59	74	74		89		89		
	Operating time <sup>2)</sup> (s)								64		64		64		64	55	55		71	
Output drive (rpm)								5,6		5,6		5,6		5,6	11	11		11		
Actuator <sup>1)</sup> <b>AUMA SAR 14.1</b> Output drive Form A TR 30 x 6	Closing pressure (psi)	I./II.	shut off											740	740	620	740	620	348	
			controlling												656	419	290	419	290	162
	Torque (ft lbf)													111	166	184	166	184		
	Operating time <sup>2)</sup> (s)													38	63		63		59	
Output drive (rpm)													8	8		8		11		

I. Fig. 470: PTFE-V-ring unit; II. Fig. 470: PTFE- / Pure graphite-packing

Fig. 471 - ANSI																			
Nominal diameter				1 1/2"		2"		3"		4"		6"		8"					
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)			1,57		1,97			3,15			3,94			5,91			7,87	
	Cv-value			29		46			116			185			462			728	
	Travel (in)			1,18		1,18			1,18			1,18			1,97			2,56	
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)		0,98	1,26		1,26	1,57		1,97	2,56		2,56	3,15		3,94	4,92		4,92	5,91
	Cv-value		12	18		18	29		46	73		73	116		185	289		289	462
	Travel (in)		0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,18		1,18	1,97		1,97	1,97
Actuator <sup>1)</sup> <b>AUMA SAR 07.1</b> Output drive Form A TR 20 x 4	Closing pressure (psi)	III.	shut off	580	580	580	580	580	580	580	441	580	441	281					
			controlling	580	580	580	580	580	538	538	315	206	315	206	129				
	Torque (ft lbf)			11		11		15	15	22		22							
	Operating time <sup>2)</sup> (s)			54	56	54	56	56		56		56							
Output drive (rpm)			5,6	8	5,6	8	8		8		8								
Actuator <sup>1)</sup> <b>AUMA SAR 07.5</b> Output drive Form A TR 26 x 5	Closing pressure (psi)	III.	shut off					580	580	580	580	580	397	395	251	173	251	173	96
			controlling					580	580	452	296	452	296	188	185	116	79	116	79
	Torque (ft lbf)							22	22	30	44	30	44		44		44		
	Operating time <sup>2)</sup> (s)							64	64		64		64		64	55	55		71
Output drive (rpm)							5,6	5,6		5,6		5,6		5,6	11	11		11	
Actuator <sup>1)</sup> <b>AUMA SAR 10.1</b> Output drive Form A TR 26 x 5	Closing pressure (psi)	III.	shut off						580	580	580	580	467	580	430	298	386	267	149
			controlling						580	580	580	580	397	395	251	173	251	173	96
	Torque (ft lbf)								44	44		52		74		66		66	
	Operating time <sup>2)</sup> (s)								64		64		64		64	55	55		71
Output drive (rpm)								5,6		5,6		5,6		5,6	11	11		11	

III. Fig. 471: Bellows seal (Higher closing pressures for 6" in connection with AUMA SAR 14.1 on request)

1) Motor voltage: 400V 50Hz 3~  
(Other voltages on request)  
Technical data for actuator refer to price list.

2) Indicated operating times with 50Hz.

3) Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0  
 (Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

Fig. 470 - ANSI																				
Nominal diameter				DN 40		DN 50		DN 80		DN100		DN150		DN200						
Standard Kvs-values <sup>3)</sup>	Seat-Ø (mm)			40		50		80		100		150		200						
	Kvs-value			25		40		100		160		400		630						
	Travel (mm)			30		30		30		30		50		65						
Reduced Kv <sup>s</sup> -values <sup>3)</sup>	Seat-Ø (mm)			25	32	32	40	50	65	65	80	100	125	125	150					
	Kvs-value			10	16	16	25	40	63	63	100	160	250	250	400					
	Travel (mm)			20	20	20	30	30	30	30	30	30	50	50	50					
Actuator <sup>1)</sup> <b>AUMA SAR 07.1</b> Output drive Form A TR 20 x 4	Closing pressure (bar)	I./II.	shut off	51	51	51	51	51	51	46,4	30,6	46,4	30,6	19,4						
			controlling	51	51	51	51	51	37,6	37,4	21,9	14,3	21,9	14,3	9					
	Torque (Nm)			15		15		20	20	30		30								
	Operating time <sup>2)</sup> (s)			54	56	54	56	56		56										
Output drive (rpm)			5,6	8	5,6	8	8		8											
Actuator <sup>1)</sup> <b>AUMA SAR 07.5</b> Output drive Form A TR 26 x 5	Closing pressure (bar)	I./II.	shut off					51	51	51	43,1	51	43,1	27,5	27,5	17,5	12	17,3	11,9	6,6
			controlling					51	51	31,3	20,6	31,3	20,6	13	13	8,2	5,6	8	5,5	2,9
	Torque (Nm)							30	30	50	60	50	60	60		60				
	Operating time <sup>2)</sup> (s)							64	64	64		64		64	55	55		71		
Output drive (rpm)							5,6	5,6	5,6		5,6		5,6	11	11					
Actuator <sup>1)</sup> <b>AUMA SAR 10.1</b> Output drive Form A TR 26 x 5	Closing pressure (bar)	I./II.	shut off							51	51	51	51	46,7	46,7	29,8	20,7	35,8	24,8	13,9
			controlling								51	43,1	51	43,1	27,5	27,5	17,5	12	17,3	11,9
	Torque (Nm)									60	80	60	80	100	100		120			
	Operating time <sup>2)</sup> (s)										64	64	64		64	55	55		71	
Output drive (rpm)										5,6	5,6	5,6		5,6	11	11				
Actuator <sup>1)</sup> <b>AUMA SAR 14.1</b> Output drive Form A TR 30 x 6	Closing pressure (bar)	I./II.	shut off											51	51	42,7	51	42,7	24	
			controlling												45,2	28,9	20	28,9	20	11,1
	Torque (Nm)													150	225	250	225	250		
	Operating time <sup>2)</sup> (s)													38	63	63		59		
Output drive (rpm)													8	8		11				

I. Fig. 470: PTFE-V-ring unit; II. Fig. 470: PTFE- / Pure graphite-packing

Fig. 471 - ANSI																				
Nominal diameter				DN 40		DN 50		DN 80		DN100		DN150		DN200						
Standard Kvs-values <sup>3)</sup>	Seat-Ø (mm)			40		50		80		100		150		200						
	Kvs-value			25		40		100		160		400		630						
	Travel (mm)			30		30		30		30		50		65						
Reduced Kv <sup>s</sup> -values <sup>3)</sup>	Seat-Ø (mm)			25	32	32	40	50	65	65	80	100	125	125	150					
	Kvs-value			10	16	16	25	40	63	63	100	160	250	250	400					
	Travel (mm)			20	20	20	30	30	30	30	30	30	50	50	50					
Actuator <sup>1)</sup> <b>AUMA SAR 07.1</b> Output drive Form A TR 20 x 4	Closing pressure (bar)	III.	shut off	40	40	40	40	40	40	40	30,4	40	30,4	19,4						
			controlling	40	40	40	40	40	37,1	37,1	21,7	14,2	21,7	14,2	8,9					
	Torque (Nm)			15		15		20	20	30		30								
	Operating time <sup>2)</sup> (s)			54	56	54	56	56		56										
Output drive (rpm)			5,6	8	5,6	8	8		8											
Actuator <sup>1)</sup> <b>AUMA SAR 07.5</b> Output drive Form A TR 26 x 5	Closing pressure (bar)	III.	shut off					40	40	40	40	40	27,4	27,2	17,3	11,9	17,3	11,9	6,6	
			controlling					40	40	31,2	20,4	31,2	20,4	12,9	12,7	8	5,5	8	5,5	3
	Torque (Nm)							30	30	40	60	40	60	60		60				
	Operating time <sup>2)</sup> (s)							64	64	64		64		64	55	55		71		
Output drive (rpm)							5,6	5,6	5,6		5,6		5,6	11	11					
Actuator <sup>1)</sup> <b>AUMA SAR 10.1</b> Output drive Form A TR 26 x 5	Closing pressure (bar)	III.	shut off							40	40	40	40	32,2	40	29,7	20,5	26,6	18,4	10,2
			controlling								40	40	40	40	27,4	27,2	17,3	11,9	17,3	11,9
	Torque (Nm)									60	60	70	100		90					
	Operating time <sup>2)</sup> (s)									64	64	64		64	55	55		71		
Output drive (rpm)									5,6	5,6	5,6		5,6	11	11					

III. Fig. 471: Bellows seal (Higher closing pressures for DN150 in connection with AUMA SAR 14.1 on request)

<sup>1)</sup> Motor voltage: 400V 50Hz 3~  
 (Other voltages on request)  
 Technical data for actuator refer to price list.  
<sup>2)</sup> Indicated operating times with 50Hz.  
<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

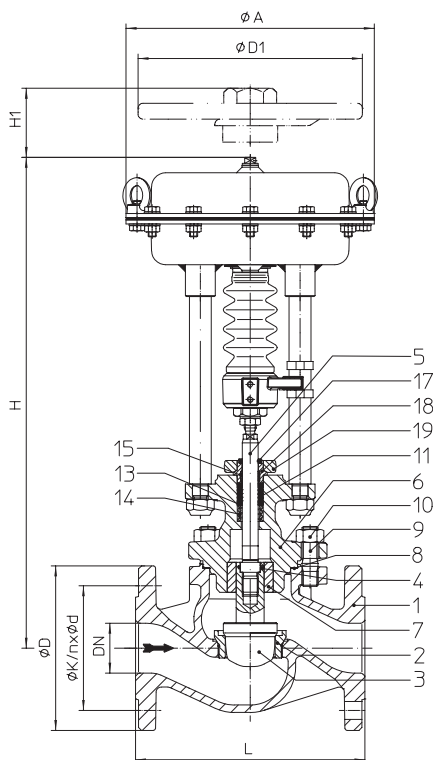
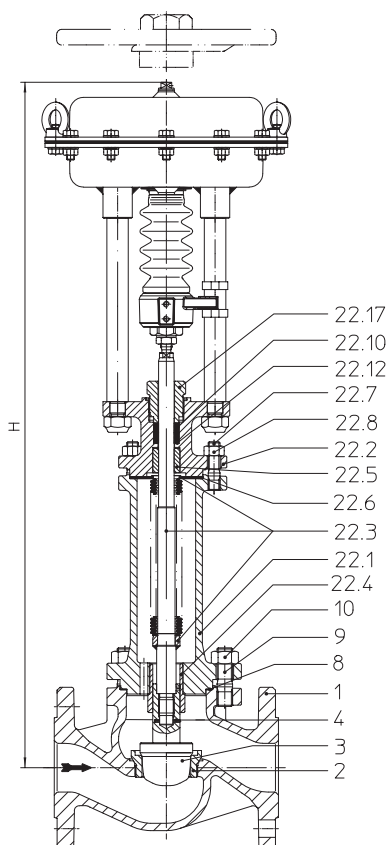
**Control valve in straightway form with pneumatic actuator DP**

**Fig. 470 - ANSI**

**Fig. 471 - ANSI**

Figure	Nominal pressure	Material	Nominal diameter
35.470...90 / 35.471...90	ANSI 300	SA 216 WCB	1" - 6" / DN25-150
Other materials and versions on request.			
<b>Stem sealing</b>			
Fig. 470: <ul style="list-style-type: none"> <li>• PTFE-V-ring unit ( to 6" / DN150) +14°F to +428°F / -10°C to +220°C</li> <li>• PTFE-packing +14°F up to +482°F / -10°C up to +250°C</li> <li>• Pure graphite-packing +14°F up to +842°F / -10°C up to +450°C</li> </ul>			
Fig. 471: <ul style="list-style-type: none"> <li>• Stainless steel bellows seal (for restricted pressure range) -76°F up to +842°F / -60°C up to +450°C</li> </ul>			
<b>Plug design standard:</b>			
<ul style="list-style-type: none"> <li>• Parabolic plug, metal seat</li> </ul>			
<b>optional:</b>			
<ul style="list-style-type: none"> <li>• Parabolic plug with PTFE soft seat (max. 392°F / 200°C)</li> <li>• V-port plug, metal seat (from seat-ø 2,56 in / 65 mm)</li> <li>• Perforated plug, metal seat</li> <li>• Parabolic pressure balanced plug (or perforated plug), metal seat; Material of piston seal: PTFE with stainless steel spring (max. 392°F / 200°C)</li> </ul>			
<b>Guiding</b>			
<ul style="list-style-type: none"> <li>• Parabolic plug: post guiding</li> <li>• Perforated / V-port plug: post and port guiding</li> </ul>			
<b>Flow characteristic</b>			
<ul style="list-style-type: none"> <li>• Equal percentage or linear (from Kvs 100 modified equal percentage, Miniature-Kvs-values ≤ 0,63 only equal percentage)</li> </ul>			
<b>Rangeability</b>			
<ul style="list-style-type: none"> <li>• 50 : 1 on parabolic plug</li> <li>• 30 : 1 on perforated plug / V-port plug</li> </ul>			
<b>Shut off class (seat / plug leakage classes)</b>			
<ul style="list-style-type: none"> <li>• Metal seat - Leakage class IV acc. to ANSI / FCI 70-2</li> <li>• Soft seat - Leakage class VI acc. to ANSI / FCI 70-2 (from Cv 1,2 / Kvs 1,0)</li> </ul>			
Closing pressures refer to page 12-15.			
Technical data for actuator refer to data sheet.			

**Selection of possible applications**

Industrial installations, processing technology, plant manufacturing, etc. (other applications on request)

**Selection of possible flow media**

Fig. 470-ANSI: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 471-ANSI: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.

(other flow media on request)

**Top mounted handwheel**

Actuator		DP32	DP33	DP34
Ø D1	(in)	8,9	11,8	15,7
H1	(in)	10,6	11,2	17,4
Weight	(lb)	11,3	17,6	37,5
Actuator		DP32	DP33	DP34
Ø D1	(mm)	225	300	400
H1	(mm)	270	284	442
Weight	(kg)	5	8	17
Technical data for actuator refer to data sheet DP32-34Tri.				

**Dimensions and weights**

Nominal diameter			1"	1 1/2"	2"	3"	4"	6"	
L			(in)	7,75	9,25	10,5	12,5	14,5	18,62
DP32	Ø A		(in)	9,8					
		H	(in)	18,6	19,8	19,8	20,5	21,1	23
	Fig. 470	Weight	(lb)	43	60,6	65	109,1	165	300
		Fig. 471	H	(in)	24,8	28,1	28,1	28,4	29,6
Weight	(lb)		49,2	69,9	74,3	122,4	173	318	
DP33	Ø A		(in)	11,8					
		H	(in)	20,8	22	22	23,1	23,2	25,6
	Fig. 470	Weight	(lb)	56,2	73,9	78,3	122,4	179	313
		Fig. 471	H	(in)	27	30,3	30,3	31	32,2
Weight	(lb)		62,4	83,1	87,5	135,6	186	331	
DP34	Ø A		(in)	--	15,9				
		H	(in)	--	27,3	27,3	28,5	28,5	30,9
	Fig. 470	Weight	(lb)	--	140	144,4	188,5	245	379
		Fig. 471	H	(in)	--	35,6	35,6	36,3	37,5
Weight	(lb)		--	149,3	153,7	201,8	252	397	
Nominal diameter			DN 25	DN 40	DN 50	DN 80	DN100	DN150	
L			(mm)	197	235	267	318	368	473
DP32	Ø A		(mm)	250					
		H	(mm)	473	504	504	522	524	584
	Fig. 470	Weight	(kg)	19,5	27,5	29,5	49,5	75	136
		Fig. 471	H	(mm)	630	715	715	722	752
Weight	(kg)		22,3	31,7	33,7	55,5	78	144	
DP33	Ø A		(mm)	300					
		H	(mm)	528	559	559	588	590	650
	Fig. 470	Weight	(kg)	25,5	33,5	35,5	55,5	81	142
		Fig. 471	H	(mm)	685	770	770	788	818
Weight	(kg)		28,3	37,7	39,7	61,5	84	150	
DP34	Ø A		(mm)	--	405				
		H	(mm)	--	694	694	723	725	785
	Fig. 470	Weight	(kg)	--	63,5	65,5	85,5	111	172
		Fig. 471	H	(mm)	--	905	905	923	953
Weight	(kg)		--	67,7	69,7	91,5	114	180	

Standard-flange dimensions refer to page 23.

Face to face dimension Form RF acc. to ANSI / ISA-S75.03 - 1992 (Face to face dimensions for flanges Form RTJ on request.)

**Parts**

Pos.	Description	Fig. 35.470...90 / Fig. 35.471...90	
1	Body	SA 216 WCB	
2	Seat ring *	SA 276 Gr.420	
3	Plug *	SA 276 Gr.420	
4	Straight spin *	A2	
5	Stem *	SA 276 Gr.420	
6	Mounting bonnet	SA 216 WCB	
7	Guide bushing	SA 276 Gr.420 (hardened)	
8	Gasket *	Pure graphite (CrNi laminated with graphite)	
9	Studs	SA 193 B7	
10	Hexagon nuts	SA 194 2H	
11	V-ring unit *	PTFE	
13	Washer *	SA 240 Gr. 304	
14	Spring *	AISI 301 A313 Gr.301	
15	Strip *	PTFE25%C	
17	Scraper *	PTFE	
18	Stem guiding *	AISI 303	
19	Packing box flange	SA 105	
22.1	Bellows housing	SA 216 WCB	
22.2	Mounting bonnet	SA 216 WCB	
22.3	Stem- / Bellows unit *	SA 276 Gr.420 / SA 240 Gr.321	Information / restriction of technical rules need to be observed!
22.4	Guide bushing	SA 276 Gr.420 (hardened)	
22.5	Guide bushing	SA 276 Gr.420 (hardened)	A production allowance acc. to TRB 801 No. 45 exists
22.6	Gasket *	Pure graphite (CrNi laminated with graphite)	The engineer, designing a system or a plant, is responsible for the selection of the correct valve.
22.7	Studs	SA 193 B7	
22.8	Hexagon nuts	SA 194 2H	
22.10	Packing ring *	Pure graphite	
22.12	Washer *	SA 240 Gr. 304	
22.17	Screw joint *	AISI 303	

\* Spare parts (Pos. 13-15 will be supplied as unit)

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring closes on air failure**

Nominal diameter		1"						1 1/2"		2"		3"		4"		6"										
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)							0,98			1,57			1,97			3,15			3,94			5,91			
	Cv-value							12			29			46			116			185			462			
	Travel (in)							0,79			1,18			1,18			1,18			1,18			1,97			
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)	0,12	0,2	0,47	0,71	0,87		0,98	1,26		1,26	1,57		1,97	2,56		2,56	3,15		3,94	4,92					
	Cv-value	0,29	0,73	2,9	1,8	4,6	7,3		12	18		18	29		46	73		73	116		185	289				
	Travel (in)	0,12	0,46	1,2					0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,18		1,18	1,97				
Actuator DP32	Spring range (psi)	3 - 15	17	I.	444	423	308	118	69	47	36															
				II.	290	269	173	55	26	14																
				III.																						
		6 - 17	20	I.	740	740	740	374	243	183	172	97	55	97	55	30	29									
				II.	740	740	724	311	200	150	128	69	38	69	38	19	16									
				III.	141	137	122	109	101	95	95	52	27	52	27											
	12 - 35	39	I.				740	592	455	444	265	164	265	164	100	99	54	32	54	32	18	18				
			II.				740	549	422	399	238	146	238	146	89	86	46	27	46	27	15	15				
			III.	398	394	379	367	358	352	320	220	135	220	135	82	82	44	25	44	25						
	22 - 36	41	I.					740	740	740	559		559													
			II.					740	740	740	532		532													
			III.	580	580	580	580	580	580	580	515		515													
29 - 48	52	I.								740		740														
		II.								740		740														
		III.								580		580														
Actuator DP33	Spring range (psi)	3 - 15	17	I.	740c)	740c)	634c)	269c)	172c)	128c)	116a)	62a)	33a)	62a)	33a)	16a)	14									
				II.	662c)	641c)	499c)	207c)	129c)	94c)	72a)	35a)	16a)	35a)	16a)											
				III.	88a)	84a)	69a)	57a)	48a)	42a)	42a)	18a)		18a)												
		6 - 17	20	I.			740c)	580c)	449c)	344c)	333a)	196a)	120a)	196a)	120a)	72a)	70	37	21	37	21					
				II.	740c)	740c)	740c)	580c)	407c)	311c)	288a)	169a)	102a)	169a)	102a)	60a)	57	29	16	29	16					
				III.	293a)	289a)	274a)	262a)	253a)	247a)	152a)	91a)	152a)	91a)	53a)	53	26	14	26	14						
	12 - 35	39	I.				740 <sup>a)</sup>	740 <sup>a)</sup>	740 <sup>a)</sup>	740	464	293	464	293	183	182	103	65	103	65	39	39				
			II.				740 <sup>a)</sup>	740 <sup>a)</sup>	740 <sup>a)</sup>	721	437	275	437	275	172	169	96	60	96	60	36	36				
			III.	580	580	580	580	580	580	580	420	264	420	264	165	165	93	58	93	58	35	32				
	22 - 44	48	I.									596		596	379	377	220	142	220	142	89	89				
			II.									578		578	367	364	212	137	212	137	85	85				
			III.									567		567	360	360	209	135	209	135	84	81				
25 - 39	45	I.							740		740															
		II.							740		740															
		III.								580		580														
29 - 58	65	I.								740		740	518	517	303	197	303	197	124	124						
		II.								740		740	507	504	295	192	295	192	121	121						
		III.								580		580	499	499	293	191	293	191	120	117						
Actuator DP34	Spring range (psi)	3 - 15	17	I.						121e)	121e)	72e)	71	37	21	37	21									
				II.							103e)	103e)	61e)	58	29	16	29	16								
				III.							92e)	92e)	54e)	54b)	27b)	14b)	27b)	14b)								
		6 - 17	20	I.							295d)	295d)	185d)	183	104	66	104	66	39	39	23	14				
				II.								277d)	277d)	173d)	170	96	61	96	61	36	36	21		18		
				III.								266d)	266d)	166d)	166b)	94b)	59b)	94b)	59b)	35b)	32	18		18		
	12 - 35	39	I.							644b)	644b)	409b)	408	238	154	238	154	96	96	60	40					
			II.								626b)	626b)	398b)	395	230	149	230	149	93	93	57	38	55	36		
			III.								580b)	580b)	391b)	391	228	148	228	148	92	89	55	37	55	37		
	15 - 29	35	I.																							
			II.																							
			III.																							
22 - 44	48	I.																		124	84					
		II.																		122	83	119	81			
		III.																		119	81	119	81			
30 - 44	48	I.						740a)	740a)	740a)	740	740	443	673	443	282	282									
		II.						740a)	740a)	740a)	740	740	438	666	438	279	279									
		III.							580a)	580	580	436	580	436	277	275										
29 - 58	65	I.																		169	116					
		II.																		167	115	165	113			
		III.																		165	113	165	113			
35 - 52	58	I.									740	510	740	510	325	325										
		II.									740	505	740	505	321	321										
		III.										503		503	320	318										

I. Fig. 470: PTFE-V-ring unit; II. Fig. 470: PTFE- / Pure graphite-packing; III. Fig. 471: Bellows seal  
 Air supply pressure max. of pneumatic actuators DP: max. permissible 87psi  
 Air supply pressure max. limit of control valve: max. permissible a) 73 psi b) 65 psi c) 58 psi d) 51 psi e) 44 psi

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring opens on air failure**

Nominal diameter		1"					1 1/2"					2"			3"			4"			6"						
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)						0,98					1,57			1,97			3,15			3,94			5,91			
	Cv-value						12					29			46			116			185			462			
	Travel (in)						0,79					1,18			1,18			1,18			1,18			1,97			
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)	0,12	0,2	0,47	0,71	0,87	0,98					1,26	1,26		1,57	1,97		2,56	2,56		3,15	3,94		4,92			
	Cv-value	0,29 0,18 0,12	0,73 0,46	2,9 1,8 1,2	4,6	7,3	12					18	18		29	46		73	73		116	185		289			
	Travel (in)	0,79	0,79	0,79	0,79	0,79	0,79					0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,18		1,97			
Actuator DP32	Air supply pressure min. (psi)	20	I.	740	740	740	374	243	183	172	97	55	97	55	30	29											
			II.	740	740	724	311	200	150	128	69	38	69	38	19	16											
			III.	141	137	122	109	101	95	95	52	27	52	27													
		29	I.						740	740	591	580	349	219	349	219	135	134	75	46	75	46	27	27			
			II.						740	740	723	557	535	322	201	322	201	124	121	67	41	67	41	23	23		
			III.	527	523	508	496	487	481	481	481	304	190	304	190	117	117	64	39	64	39	22	20				
		44	I.						740	740	740	490	740	490	311	309	179	115	179	115	71	71					
			II.						740	740	740	473	740	473	299	296	171	110	171	110	68	68					
			III.	580	580	580	580	580	580	580	580	580	462	580	462	292	292	169	109	169	109	67	64				
		58	I.											740	740		486	484	284	185	284	185	116	116			
			II.											740	740		474	472	276	180	276	180	113	113			
			III.											580	580		467	467	273	178	273	178	111	109			
	73	I.													661	660	388	254	388	254	160	160					
		II.													650	647	381	249	381	249	157	157					
		III.													580	580	378	247	378	247	156	153					
	87	I.													740	740	493	323	493	323	205	205					
		II.													740	740	485	318	485	318	202	202					
		III.													482	316	482	316	200	198							
	Actuator DP33	Air supply pressure min. (psi)	20	I.	740d)	740d)	740d)	676d)	449d)	344d)	333d)	196d)	120d)	196d)	120d)	72d)	70d)	37d)	21d)	37d)	21d)						
				II.	740d)	740d)	740d)	614d)	407d)	311d)	288d)	169d)	102d)	169d)	102d)	60d)	57d)	29d)	16d)	29d)	16d)						
				III.	293d)	289d)	274d)	262d)	253d)	247d)	247d)	152d)	91d)	152d)	91d)	53d)	53d)	26d)	14d)	26d)	14d)						
			29	I.						740d)	740d)	740d)	740d)	598d)	380d)	598d)	380d)	239d)	238d)	137d)	87d)	137d)	87d)	53d)	53d)		
				II.						740d)	740d)	740d)	740d)	571d)	362d)	571d)	362d)	228d)	225d)	129d)	82d)	129d)	82d)	50d)	50d)		
				III.	580d)	580d)	580d)	580d)	580d)	580d)	580d)	580d)	553d)	351d)	553d)	351d)	220d)	220d)	136d)	80d)	126d)	80d)	49d)	46d)			
44			I.											740d)	740d)	740d)	740d)	518d)	517d)	303d)	197d)	303d)	197d)	124d)	124d)		
			II.											740d)	740d)	740d)	740d)	507d)	504d)	295d)	192d)	295d)	192d)	121d)	121d)		
			III.											580d)	580d)	580d)	580d)	499d)	499d)	293d)	191d)	293d)	191d)	120d)	117d)		
58			I.													740a)	740	469	308	469	308	195	195				
			II.													740a)	740	462	303	462	303	192	192				
			III.													580a)	580	459	301	459	301	190	188				
73		I.															636	418	636	418	266	266					
		II.															628	413	628	413	262	262					
		III.															580	411	580	411	261	259					
87		I.															740	528	740	528	337	337					
		II.															740	523	740	523	333	333					
		III.															522	522	332	330							
Actuator DP34		Air supply pressure min. (psi)	20	I.						295e)	295e)	185e)	183	104	66	104	66	39	39	23	14						
				II.						277e)	277e)	173e)	170	96	61	96	61	36	36	21	18						
				III.						266e)	266e)	166e)	166b)	94b)	59b)	94b)	59b)	35b)	32	18	18 a)						
			29	I.						740e)	740e)	522e)	520	305	199	305	199	125	125	78	53						
				II.						740e)	740e)	510e)	507	297	194	297	194	122	122	76	51	73	49	26	26		
				III.						580e)	580e)	503e)	503b)	295b)	192b)	295b)	192b)	121b)	118	73	49	73 a)	49 a)	26 a)			
	44		I.						740e)	740	640	421	640	421	268	268	169	116									
			II.						740e)	740	632	416	632	416	264	264	167	115	165	113	165 a)	113 a)	62	62			
			III.						580e)	580b)	580b)	414b)	580b)	414b)	263b)	260	165	113	165 a)	113 a)	62 a)						
	58		I.											740	643	740	643	410	410	261	180						
			II.											740	638	740	638	407	407	259	179	256	177	98			
			III.											580b)	580b)	406b)	403	256	177	256 a)	177 a)	98 a)					
73	I.											740	740	553	553	353	244										
	II.											740	740	550	550	351	242	348	240	134							
	III.													546	348	241	348 a)	241 a)	134 a)								
87	I.													696	696	444	308										
	II.													692	692	442	306	439	304	170							
	III.													580	440												

I. Fig. 470: PTFE-V-ring unit; II. Fig. 470: PTFE- / Pure graphite-packing; III. Fig. 471: Bellows seal  
 Air supply pressure max. of pneumatic actuators DP: max. permissible 87psi  
 Air supply pressure max. limit of control valve: max. permissible a) 73 psi b) 65 psi c) 58 psi d) 51 psi e) 44 psi

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring closes on air failure**

Nominal diameter		DN 25					DN 40			DN 50			DN 80		DN100		DN150							
Standard Kvs-values <sup>3)</sup>	Seat-Ø (mm)						25			40			50			80			100			150		
	Kvs-value						10			25			40			100			160			400		
	Travel (mm)						20			30			30			30			30			50		
Reduced Kvs-values <sup>3)</sup>	Seat-Ø (mm)	3	5	12	18	22		25	32		32	40		50	65		65	80		100	125			
	Kvs-value	0,25 0,16 0,1	0,63 0,4	2,5 1,6 1	4	6,3		10	16		16	25		40	63		63	100		160	250			
	Travel (mm)	20	20	20	20	20		20	20		20	30		30	30		30	30		30	50			
Actuator DP32	Spring range (bar)	1,2	I.	30,6	29,2	21,2	8,1	4,8	3,3	2,5														
			II.	20	18,6	11,9	3,8	1,8	1															
			III.																					
		1,4	I.	51	51	51	25,8	16,8	12,6	11,9	6,7	3,8	6,7	3,8	2,1	2								
			II.	51	51	49,9	21,4	13,8	10,3	8,8	4,8	2,6	4,8	2,6	1,3	1,1								
			III.	9,7	9,4	8,4	7,5	7	6,5	6,5	3,6	1,8	3,6	1,8										
	2,7	I.				51	40,8	31,4	30,6	18,3	11,3	18,3	11,3	6,9	6,8	3,7	2,2	3,7	2,2	1,2	1,2			
		II.				51	37,8	29,1	27,5	16,4	10,1	16,4	10,1	6,1	5,9	3,2	1,9	3,2	1,9	1	1			
		III.	27,5	27,2	26,2	25,3	24,7	24,3	24,3	15,2	9,3	15,2	9,3	5,6	5,6	3	1,8	3	1,8					
	2,8	I.					51	51	51	38,6		38,6												
		II.					51	51	51	36,7		36,7												
		III.	40	40	40	40	40	40	40	35,5		35,5												
	3,6	I.								51		51												
		II.								51		51												
		III.								40		40												
	Actuator DP33	Spring range (bar)	1,2	I.	51c)	51c)	43,7c)	18,6c)	11,9c)	8,8c)	8a)	4,3a)	2,3a)	4,3a)	2,3a)	1,1a)	1							
				II.	45,6c)	44,2c)	34,4c)	14,2c)	8,9c)	6,5c)	5a)	2,4a)	1,1a)	2,4a)	1,1a)									
				III.	6,1a)	5,8a)	4,8a)	3,9a)	3,3a)	2,9a)	2,9a)	1,2a)		1,2a)										
1,4			I.			51c)	46,6c)	31c)	23,7c)	22,9a)	13,5a)	8,3a)	13,5a)	8,3a)	4,9a)	4,8	2,5	1,4	2,5	1,4				
			II.	51c)	51c)	51c)	42,3c)	28c)	21,4c)	19,9a)	11,6a)	7a)	11,6a)	7a)	4,1a)	3,9	2	1,1	2	1,1				
			III.	20,2a)	19,9a)	18,9a)	18a)	17,5a)	17a)	17a)	10,5a)	6,3a)	10,5a)	6,3a)	3,7a)	3,7	1,8	1	1,8	1				
2,7		I.				51a)	51a)	51a)	51	32	20,2	32	20,2	12,6	12,5	7,1	4,5	7,1	4,5	2,7	2,7			
		II.				51a)	51a)	51a)	49,7	30,1	19	30,1	19	11,8	11,6	6,6	4,1	6,6	4,1	2,5	2,5			
		III.	40	40	40	40	40	40	40	28,9	18,2	28,9	18,2	11,3	11,3	6,4	4	6,4	4	2,4	2,2			
3,3		I.									41,1		41,1	26,1	26	15,1	9,8	15,1	9,8	6,1	6,1			
		II.									39,9		39,9	25,3	25,1	14,6	9,5	14,6	9,5	5,9	5,9			
		III.									39,1		39,1	24,8	24,8	14,4	9,3	14,4	9,3	5,8	5,6			
3,1		I.								51		51												
		II.								51	51		51											
		III.								40		40												
4,5		I.									51		51	35,7	35,6	20,9	13,6	20,9	13,6	8,5	8,5			
		II.									51		51	34,9	34,7	20,4	13,3	20,4	13,3	8,3	8,3			
		III.									40		40	34,4	34,4	20,2	13,1	20,2	13,1	8,2	8,1			
Actuator DP34	Spring range (bar)	1,2	I.						8,3e)	8,3e)	5e)	4,9	2,6	1,5	2,6	1,5								
			II.							7,1e)	7,1e)	4,2e)	4	2	1,1	2	1,1							
			III.							6,4e)	6,4e)	3,7e)	3,7b)	1,9b)	1b)	1,9b)	1b)							
		1,4	I.							20,4d)	20,4d)	12,7d)	12,6	7,2	4,5	7,2	4,5	2,7	2,7	1,6	1			
			II.							19,1d)	1,91d)	11,9d)	11,7	6,6	4,2	6,6	4,2	2,5	2,5	1,4		1,2		
			III.							18,4d)	8,4d)	11,4b)	11,4d)	6,5b)	4,1b)	6,5b)	4,1b)	2,4b)	2,2	1,3		1,3 a)		
	2,7	I.							44,4b)	44,4b)	28,2b)	28,1	16,4	10,6	16,4	10,6	6,6	6,6	4,1	2,7				
		II.							43,2b)	43,2b)	27,4b)	27,2	15,9	10,3	15,9	10,3	6,4	6,4	4	2,6	3,8	2,5		
		III.							40b)	40b)	26,9b)	26,9	15,7	10,2	15,7	10,2	6,3	6,2	3,8	2,5	3,8	2,5		
	2,4	I.																						
		II.																					1,8	
		III.																					1,8	
	3,3	I.																	8,5	5,8				
		II.																	8,4	5,7	8,2	5,6		
		III.																	8,2	5,6	8,2	5,6		
	3,3	I.							51a)		51a)	51a)	51	46,4	30,5	46,4	30,5	19,4	19,4					
		II.							51a)		51a)	51	45,9	30,2	45,9	30,2	19,2	19,2						
		III.									40a)	40	40	30,1	40	30,1	19,1	18,9						
4,5	I.																	11,7	8					
	II.																	11,5	7,9	11,3	7,8	4,3		
	III.																	11,4	7,8	11,4	7,8	4,3		
4	I.											51	35,1	51	35,1	22,4	22,4							
	II.											51	34,8	51	34,8	22,2	22,2							
	III.												34,7		34,7	22,1	21,9							

<b>I. Fig. 470: PTFE-V-ring unit;</b>	<b>II. Fig. 470: PTFE- / Pure graphite-packing;</b>	<b>III. Fig. 471: Bellows seal</b>
Air supply pressure max. of pneumatic actuators DP:	max. permissible 6 bar	
Air supply pressure max. limit of control valve:	max. permissible a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar	

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring opens on air failure**

Nominal diameter		DN 25						DN 40			DN 50			DN 80			DN100			DN150						
Standard Kvs-values 3)	Seat-Ø (mm)							25	40		50		80			100			150							
	Kvs-value							10	25		40		100			160			400							
	Travel (mm)							20	30		30		30			30			50							
Reduced Kvs-values 3)	Seat-Ø (mm)	3	5	12	18	22		25	32		32	40		50	65		65	80		100	125					
	Kvs-value	0,25 0,16 0,1	0,63 0,4	2,5 1,6 1	4	6,3		10	16		16	25		40	63		63	100		160	250					
	Travel (mm)	20	20	20	20	20		20	20		20	30		30	30		30	30		30	30					
Actuator DP32	Air supply pressure min. (bar)	1,4	I.	51	51	51	25,8	16,8	12,6	11,9	6,7	3,8	6,7	3,8	2,1	2										
			II.	51	51	49,9	21,4	13,8	10,3	8,8	4,8	2,6	4,8	2,6	1,3	1,1										
			III.	9,7	9,4	8,4	7,5	7	6,5	6,5	3,6	1,8	3,6	1,8												
		2	I.				51	51	40,7	40	24,1	15,1	24,1	15,1	9,3	9,2	5,1	3,2	5,1	3,2	1,8	1,8				
			II.				51	51	49,9	38,4	36,9	22,2	13,8	22,2	13,8	8,5	8,3	4,6	2,8	4,6	2,8	1,6	1,6			
			III.	36,3	36,1	35	34,2	33,6	33,2	33,2	21	13,1	21	13,1	8	8	4,4	2,7	4,4	2,7	1,5	1,4				
		3	I.						51	51	51	33,8	51	33,8	21,4	21,3	12,4	8	12,4	8	4,9	4,9				
			II.						51	51	51	32,6	51	32,6	20,6	20,4	11,8	7,6	11,8	7,6	4,7	4,7				
			III.	40	40	40	40	40	40	40	40	31,8	40	31,8	20,1	20,1	11,6	7,5	11,6	7,5	4,6	4,4				
		4	I.									51		51	33,5	33,4	19,6	12,7	19,6	12,7	8	8				
			II.									51		51	32,7	32,5	19	12,4	19	12,4	7,8	7,8				
			III.									40		40	32,2	32,2	18,9	12,3	18,9	12,3	7,7	7,5				
		5	I.											45,6	45,5	26,8	17,5	26,8	17,5	11	11					
			II.											44,8	44,6	26,2	17,2	26,2	17,2	10,8	10,8					
			III.											40	40	26,1	17	26,1	17	10,8	10,6					
		6	I.											51	51	34	22,3	34	22,3	14,1	14,1					
			II.											51	51	33,4	21,9	33,4	21,9	13,9	13,9					
			III.													33,3	21,8	33,3	21,8	13,8	13,6					
		Actuator DP33	Air supply pressure min. (bar)	1,4	I.	51d)	51d)	51d)	46,6d)	31d)	23,7d)	22,9d)	13,5d)	8,3d)	13,5d)	8,3d)	4,9d)	4,8d)	2,5d)	1,4d)	2,5d)	1,4d)				
					II.	51d)	51d)	51d)	42,3d)	28d)	21,4d)	19,9d)	11,6d)	7d)	11,6d)	7d)	4,1d)	3,9d)	2d)	1,1d)	2d)	1,1d)				
					III.	20,2d)	19,9d)	18,9d)	18d)	17,5d)	17d)	17d)	10,5d)	6,3d)	10,5d)	6,3d)	3,7d)	3,7d)	1,8d)	1d)	1,8d)	1d)				
				2	I.				51d)	51d)	51d)	51d)	41,2d)	26,2d)	41,2d)	26,2d)	16,5d)	16,4d)	9,4d)	6d)	9,4d)	6d)	3,7d)	3,7d)		
					II.				51d)	51d)	51d)	51d)	39,3d)	24,9d)	39,3d)	24,9d)	15,7d)	15,5d)	8,9d)	5,7d)	8,9d)	5,7d)	3,4d)	3,4d)		
					III.	40d)	40d)	40d)	40d)	40d)	40d)	40d)	38,2d)	24,2d)	38,2d)	24,2d)	15,2d)	15,2d)	8,7d)	5,5d)	8,7d)	5,5d)	3,4d)	3,2d)		
3	I.											51d)	51d)	51d)	51d)	35,7d)	35,6d)	20,9d)	13,6d)	20,9d)	13,6d)	8,5d)	8,5d)			
	II.											51d)	51d)	51d)	51d)	34,9d)	34,7d)	20,4d)	13,3d)	20,4d)	13,3d)	8,3d)	8,3d)			
	III.											40d)	40d)	40d)	40d)	34,4d)	34,4d)	20,2d)	13,1d)	20,2d)	13,1d)	8,2d)	8,1d)			
4	I.													51a)	51	32,4	21,2	32,4	21,2	13,4	13,4					
	II.													51a)	51	31,8	20,9	31,8	20,9	13,2	13,2					
	III.													40a)	40	31,6	20,7	31,6	20,7	13,1	12,9					
5	I.															43,8	28,8	43,8	28,8	18,3	18,3					
	II.															43,3	28,5	43,3	28,5	18,1	18,1					
	III.															40	28,4	40	28,4	18	17,8					
6	I.															51	36,4	51	36,4	23,2	23,2					
	II.															51	36,1	51	36,1	23	23					
	III.																36		36	22,9	22,7					
Actuator DP34	Air supply pressure min. (bar)			1,4	I.						20,4e)		20,4e)	12,7e)	12,6	7,2	4,5	7,2	4,5	2,7	2,7	1,6	1			
					II.						19,1e)		19,1e)	11,9e)	11,7	6,6	4,2	6,6	4,2	2,5	2,5	1,4		1,2		
					III.						18,4e)		18,4e)	11,4e)	11,4e)	6,5b)	4,1b)	6,5b)	4,1b)	2,4b)	2,2	1,3		1,3 a)		
				2	I.						51e)		51e)	36e)	35,9	21	13,7	21	13,7	8,6	8,6	5,4	3,6			
					II.						51e)		51e)	35,2e)	35	20,5	13,4	20,5	13,4	8,4	8,4	5,2	3,5	5	3,4	1,8
					III.						40e)		40e)	34,7e)	34,7b)	20,3b)	13,2b)	20,3b)	13,2b)	8,3b)	8,1	5,1	3,4	5,1 a)	3,4 a)	1,8 a)
		3	I.								51e)	51	44,1	29	44,1	29	18,4	18,4	11,7	8						
			II.								51e)	51	43,6	28,7	43,6	28,7	18,2	18,2	11,5	7,9	11,3	7,8	4,3			
			III.								40e)	40b)	40b)	28,5b)	40b)	28,5b)	18,1b)	18	11,4	7,8	11,4a)	7,8 a)	4,3 a)			
		4	I.										51	44,3	51	44,3	28,3	28,3	18	12,4						
			II.										51	44	51	44	28,1	28,1	17,9	12,3	17,7	12,2	6,7			
			III.										40b)		40b)	28b)	27,8	17,7	12,2	17,7a)	12,2a)	6,8 a)				
		5	I.											51		51	38,1	38,1	24,3	16,8						
			II.											51		51	37,9	37,9	24,2	16,7	24	16,6	9,2			
			III.															27,6	24	16,6	24 a)	16,6a)	9,2 a)			
		6	I.														48	48	30,6	21,2						
			II.														47,7	47,7	30,5	21,1	30,3	21	11,7			
			III.															40	30,3	21	30,3	21	11,7			

I. Fig. 470: PTFE-V-ring unit;      II. Fig. 470: PTFE- / Pure graphite-packing;      III. Fig. 471: Bellows seal  
 Air supply pressure max. of pneumatic actuators DP:      max. permissible      6 bar  
 Air supply pressure max. limit of control valve:      max. permissible      a) 5 bar      b) 4,5 bar      c) 4 bar      d) 3,5 bar      e) 3 bar

3) Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

Control valve in straightway form with pneumatic actuator DP

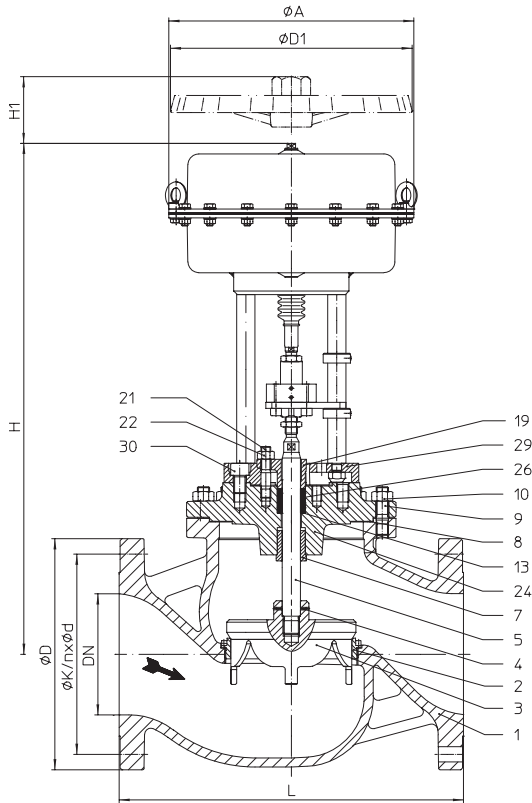


Fig. 470 - ANSI

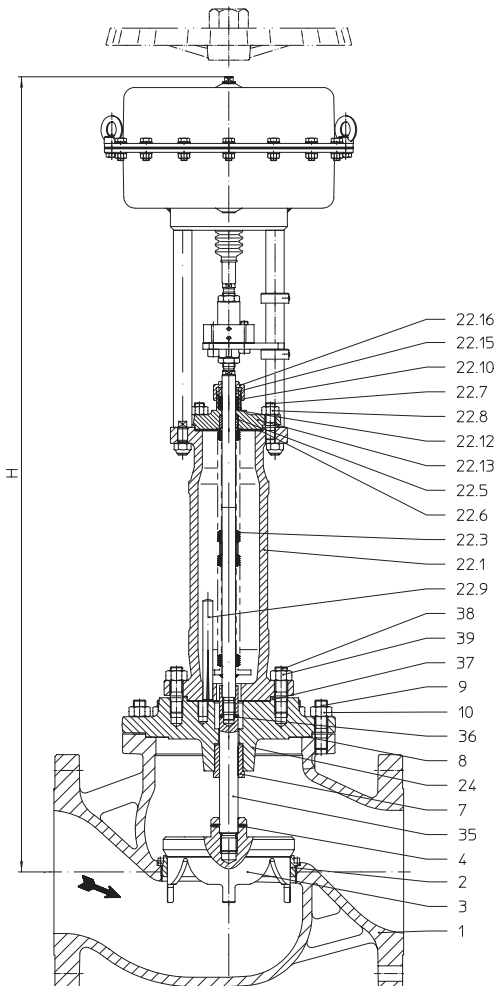


Fig. 471 - ANSI

Figure	Nominal pressure	Material	Nominal diameter
35.470...90 / 35.471...90	ANSI 300	SA 216 WCB	6"v - 8" / DN150v-200

Other materials and versions on request.

**Stem sealing**

- Fig. 470:
- PTFE-packing +14°F up to +482°F / -10°C up to +250°C
  - Pure graphite-packing +14°F up to +842°F / -10°C up to +450°C
- Fig. 471:
- Stainless steel-bellow (for restricted pressure range) -76°F to +842°F / -60°C to +450°C

**Plug design standard:**

- Parabolic plug, metal seat (6"v / DN150v)
  - V-port plug, metal seat (8" / DN200)
- optional:
- Parabolic plug with PTFE soft seat (max. 392°F / 200°C) (6"v / DN150v)
  - V-port plug, metal seat (6"v / DN150v)
  - Perforated plug, metal seat
  - Parabolic pressure balanced plug (or perforated plug), metal seat; Material of piston seal: PTFE with stainless steel spring (max. 392°F / 200°C)

**Guiding**

- Parabolic plug: post guiding
- Perforated / V-port plug: post and port guiding

**Flow characteristic**

- Equal percentage or linear
- (from Kvs 100 modified equal percentage, Miniature-Kvs-values  $\leq 0,63$  only equal percentage)

**Rangeability**

- 50 : 1 on parabolic plug
- 30 : 1 on perforated plug / V-port plug

**Shut off class (seat / plug leakage classes)**

- Metal seat - Leakage class IV acc. to ANSI / FCI 70-2
- Soft seat - Leakage class VI acc. to ANSI / FCI 70-2 (from Cv 1,2 / Kvs 1,0)

Closing pressures refer to page 18-21.

Technical data for actuator refer to data sheet.

**Selection of possible applications**

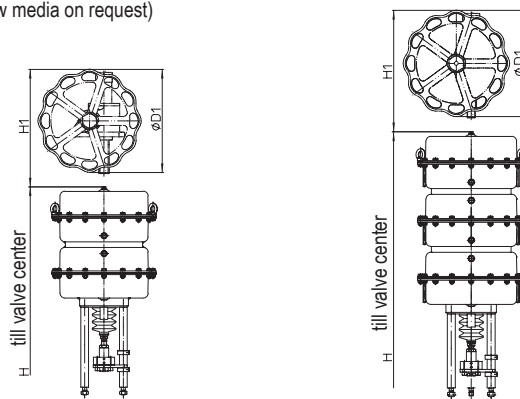
Industrial installations, processing technology, plant manufacturing, etc. (other applications on request)

**Selection of possible flow media**

Fig. 470-ANSI: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 471-ANSI: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.

(other flow media on request)



DP34T

DP34Tri

**Top mounted handwheel**

Actuator		DP34	DP34T	DP34Tri
$\phi D1$	(in)	15,7	15,7	15,7
	(in)	18,1	24,0	24,0
Weight	(lb)	37,5	90,4	90,4
	(kg)	17	41	41

Actuator		DP34	DP34T	DP34Tri
$\phi D1$	(mm)	400	400	400
H1	(mm)	460	610	610
Weight	(kg)	17	41	41

Technical data for actuator refer to data sheet DP32-34Tri.

**Dimensions and weights**

Nominal diameter			6"v	8"	Nominal diameter			DN150v	DN200				
L			(in)	18,62	22,38	L			(mm)	473	568		
DP34	Ø A		(in)	--	15,9	DP34	Ø A		(mm)	--	405		
		Fig. 470	H	(in)	--			33,2	Fig. 470	H	(mm)	--	844
	Weight		(lb)	--	582		Fig. 471	H		(mm)	--	1251	
	Fig. 471	H	(in)	--	49,3			Fig. 471	Weight	(kg)	--	275	
Weight		(lb)	--	606	DP34T				Ø A	(mm)	405		
DP34T	Ø A		(in)	15,9		DP34T	Ø A		(mm)	405			
		Fig. 470	H	(in)	41,4			43,1	Fig. 470	H	(mm)	1051	1094
	Weight		(lb)	536	739		Fig. 471	Weight		(kg)	243	335	
	Fig. 471	H	(in)	59	60,7			Fig. 471	H	(mm)	1498	1541	
Weight		(lb)	554	763	DP34Tri	Ø A			(mm)	405			
Ø A		(in)	15,9				DP34Tri	Fig. 470	H	(mm)	1273	1316	
	Fig. 470	H	(in)	50,1		51,8			Fig. 470	Weight	(kg)	277	369
Weight		(lb)	611	814		Fig. 471		H		(mm)	1720	1763	
Fig. 471	H	(in)	67,7	69,4	Fig. 471			Weight	(kg)	285	380		
	Weight	(lb)	628	838		Standard-flange dimensions refer to page 23.							

Face-to-face dimension Form RF acc. to ANSI / ISA - S75.03-1992 (Baulängen für Form RTJ on request)

**Parts**

Pos.	Description	Fig. 35.470...90 / Fig. 35.471...90
1	Body	SA 216 WCB
2	Seat ring *	SA 276 Gr.420
3	Plug *	SA 276 Gr.420
4	Straight spin *	AISI 301 A313 Gr.301
5	Stem *	SA 276 Gr.420
7	Guide bushing	SA 276 Gr.420 (hardened)
8	Gasket *	Pure graphite (CrNi laminated with graphite)
9	Studs	SA 193 B7
10	Hexagon nuts	SA 194 2H
13	Washer *	SA 240 Gr. 304
19	Packing box flange	SA 105
20	Studs	SA 193 B7
21	Hexagon nuts	SA 194 2H
22.1	Bellows housing	SA 216 WCB
22.3	Stem- / Bellows unit *	SA 276 Gr.420 / SA 240 Gr.321
22.5	Guide bushing	SA 276 Gr.420 (hardened)
22.6	Gasket *	Pure graphite (CrNi laminated with graphite)
22.7	Studs	SA 193 B7
22.8	Hexagon nuts	SA 194 2H
22.9	Straight pin	AISI 1146
22.10	Packing ring *	Pure graphite
22.12	Washer *	SA 240 Gr. 304
22.13	Stuffing box housing	SA 216 WCB
22.15	Packing follower	SA 276 Gr.420
22.16	Sleeve nut	AISI 1213
24	Stuffing box housing	SA 216 WCB
26	Packing ring *	PTFE
29	Adapter flange	SA 395
30	Hexagon socket head screw	8.8
35	Stem adapter *	SA 276 Gr.420
36	Straight spin *	AISI 301 A313 Gr.301
37	Gasket *	Pure graphite (CrNi laminated with graphite)
38	Studs	SA 193 B7
39	Hexagon nuts	SA 194 2H

\* Spare parts

Information / restriction of technical rules need to be observed!

A production allowance acc. to TRB 801 No. 45 exists

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

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring closes on air failure**

Nominal diameter		6"v			8"						
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)			5,91			7,87				
	Cv-value			462			728				
	Travel (in)			1,97			2,56				
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)	3,94	4,92		4,92	5,91					
	Cv-value	185	289		289	462					
	Travel (in)	1,18	1,97		1,97	1,97					
Actuator DP34	Spring range (psi)	Air supply pressure min. (psi)	6 - 17	20	II.			18			
			12 - 35	39	II.			18 a)			
					III.			55	36		
			15 - 29	35	II.			55	37		
					III.					26	
		22 - 44	48	II.			119	81			
				III.			119	81			
		29 - 58	65	II.			165	113	62		
				III.			165	113	62		
	Actuator DP34T	Spring range (psi)	Air supply pressure min. (psi)	3 - 15	17	II.	32 b)	18 b)		18 b)	
III.						32 e)	18 e)		18 e)		
6 - 17				20	II.	89 b)	55 b)	36 b)	55 b)	36 b)	19 b)
					III.	89 d)	55 d)	37 d)	55 d)	37 d)	19 d)
12 - 35				39	II.	203	128	87	128	87	
					III.	203 b)	128 b)	88 b)	128 b)	88 b)	
15 - 29				35	II.						62 a)
			III.						62 c)		
22 - 44		48	II.		256	177	256	177			
			III.		256 a)	177 a)	256 a)	177 a)			
30 - 44		48	II.	574							
			III.	574 a)							
29 - 58		65	II.		348	240	348	240	134		
			III.		348	241	348	241	134		
35 - 52	58	II.	659								
		III.									
Actuator DP34Tri	Spring range (psi)	Air supply pressure min. (psi)	3 - 15	17	II.	60 d)	36 d)	24 d)	36 d)	24 d)	
					III.	61 f)	37 f)	24 f)	37 f)	24 f)	
			6 - 17	20	II.	146 d)	91 d)	62 d)	91 d)	62 d)	33 d)
					III.	146 f)	92 f)	62 f)	92 f)	62 f)	33 f)
			12 - 35	39	II.	317 b)	201 b)	138 b)	201 b)	138 b)	76 b)
			III.	318 d)	202 d)	139 d)	202 d)	139 d)	76 d)		
	15 - 29	35	II.						98 b)		
			III.						98 d)		
	22 - 44	48	II.		394 a)	272 a)	394 a)	272 a)			
			III.		394 b)	272 b)	394 b)	272 b)			
30 - 44	48	II.	740 a)								
29 - 58	65	II.		531 a)	368 a)	531 a)	268 a)				
<b>II. Fig. 470: PTFE- / Pure graphite-packing;</b>		<b>III. Fig. 471: Bellows seal</b>									
Air supply pressure max. of pneumatic actuators DP:		max. permissible		87psi							
Air supply pressure max. limit of control valve:		max. permissible		a) 73 psi b) 65 psi c) 58 psi d) 51 psi e) 44 psi f) 36 psi							

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring opens on air failure**

Nominal diameter		6"v			8"				
Standard Cv-values <sup>3)</sup>	Seat-Ø (in)			5,91			7,87		
	Cv-value			462			728		
	Travel (in)			1,97			2,56		
Reduced Cv-values <sup>3)</sup>	Seat-Ø (in)	3,94	4,92		4,92	5,91			
	Cv-value	185	289		289	462			
	Travel (in)	1,18	1,97		1,97	1,97			
Actuator DP34	Air supply pressure min. (psi)	20	II.			18			
			III.			18 a)			
		29	II.			73	49	26	
			III.			73 a)	49 a)	26 a)	
		44	II.			165	113	62	
			III.			165 a)	113 a)	62 a)	
		58	II.			256	177	98	
			III.			256 a)	177 a)	98 a)	
73	II.			348	240	134			
	III.			348 a)	241 a)	134 a)			
87	II.			439	304	170			
Actuator DP34T	Air supply pressure min. (psi)	20	II.	89 b)	55 b)	36 b)	55 b)	36 b)	19 b)
			III.	89 e)	55 e)	37 e)	55 e)	37 e)	19 e)
		29	II.	260 b)	165 b)	113 b)	165 b)	113 b)	62 b)
			III.	260 e)	165 e)	113 e)	165 e)	113 e)	62 e)
		44	II.	545 b)	348 b)	240 b)	348 b)	240 b)	134 b)
			III.	546 e)	348 e)	241 e)	348 e)	241 e)	134 e)
		58	II.	740 b)	531 b)	368 b)	531 b)	368 b)	206 b)

**II. Fig. 470: PTFE- / Pure graphite-packing;**
**III. Fig. 471: Bellows seal**

Air supply pressure max. of pneumatic actuators DP:

max. permissible 87psi

Air supply pressure max. limit of control valve:

max. permissible a) 73 psi b) 65 psi c) 58 psi d) 51 psi e) 44 psi

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring closes on air failure**

Nominal diameter		DN150v			DN200					
Standard Kvs-values <sup>3)</sup>	Seat-Ø (mm)			150			200			
	Kvs-value			400			630			
	Travel (mm)			50			65			
Reduced Kvs-values <sup>3)</sup>	Seat-Ø (mm)	100	125		125	150				
	Kvs-value	160	250		250	400				
	Travel (mm)	30	50		50	50				
Actuator DP34	Spring range (bar)	Air supply pressure min. (bar)	0,4-1,2	II. 1,4 III.			1,2 1,3 a)			
			0,8-2,4	II. 2,7 III.			3,8 3,8	2,5 2,5		
			1,0-2,0	II. 2,4 III.					1,8 1,8	
			1,5-3,0	II. 3,3 III.			8,2 8,2	5,6 5,6		
			2,0-4,0	II. 4,5 III.			11,3 11,4	7,8 7,8	4,3 4,3	
Actuator DP34T	Spring range (bar)	Air supply pressure min. (bar)	0,2-1,0	II. 1,2 III.	2,2 b) 2,2 e)	1,2 b) 1,3 e)	1,2 b) 1,3 e)			
			0,4-1,2	II. 1,4 III.	6,1 b) 6,2 d)	3,8 b) 3,8 d)	2,5 b) 2,5 d)	3,8 b) 3,8 d)	2,5 b) 2,5 d)	1,3 b) 1,3 d)
			0,8-2,4	II. 2,7 III.	14 14 b)	8,8 8,8 b)	6 6 b)	8,8 8,8 b)	6 6 b)	
			1,0-2,0	II. 2,4 III.						4,3a) 4,3c)
			1,5-3,0	II. 3,3 III.		17,7 17,7 a)	12,2 12,2 a)	17,7 17,7 a)	12,2 12,2 a)	
			2,1-3,0	II. 3,3 III.	39,6 39,6 a)					
			2,0-4,0	II. 4,5 III.		24 24	16,6 16,6	24 24	16,6 16,6	9,2 9,2
			2,4-3,6	II. 4 III.	45,5					
Actuator DP34Tri	Spring range (bar)	Air supply pressure min. (bar)	0,2-1,0	II. 1,2 III.	4,1 d) 4,2 f)	2,5 d) 2,5 f)	1,6 d) 1,6 f)	2,5 d) 2,5 f)	1,6 d) 1,6 f)	
			0,4-1,2	II. 1,4 III.	10,1 d) 10,1 f)	6,3 d) 6,3 f)	4,3 d) 4,3 f)	6,3 d) 6,3 f)	4,3 d) 4,3 f)	2,3 d) 2,3 f)
			0,8-2,4	II. 2,7 III.	21,9 b) 21,9 d)	13,9 b) 13,9 d)	9,5 b) 9,6 d)	13,9 b) 13,9 d)	9,5 b) 9,6 d)	5,3 b) 5,3 d)
			1,0-2,0	II. 2,4 III.						6,7 b) 6,8 d)
			1,5-3,0	II. 3,3 III.		27,1 a) 27,2 b)	18,8 a) 18,8 b)	27,1 a) 27,2 b)	18,8 a) 18,8 b)	
			2,1-3,0	II. 3,3 III.	51 a)					
			2,0-4,0	II. 4,5 III.		36,6 a)	25,4 a)	36,6 a)	25,4 a)	14,2 a)

**II. Fig. 470: PTFE- / Pure graphite-packing;**
**III. Fig. 471: Bellows seal**

Air supply pressure max. of pneumatic actuators DP:

max. permissible 6 bar

Air supply pressure max. limit of control valve:

max. permissible a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar f) 2,5 bar

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe pressure-temperature-limits, plug design acc. to standard value, on page 22.)

**Spring opens on air failure**

Nominal diameter		DN150v			DN200				
Standard Kvs-values <sup>3)</sup>	Seat-Ø (mm)			150			200		
	Kvs-value			400			630		
	Travel (mm)			50			65		
Reduced Kvs-values <sup>3)</sup>	Seat-Ø (mm)	100	125		125	150			
	Kvs-value	160	250		250	400			
	Travel (mm)	30	50		50	50			
Actuator DP34	Air supply pressure min. (bar)	1,4	II.			1,2			
			III.			1,3 a)			
		2	II.			5	3,4	1,8	
			III.			5,1 a)	3,4 a)	1,8 a)	
		3	II.			11,3	7,8	4,3	
			III.			11,4 a)	7,8 a)	4,3 a)	
Actuator DP34T	Air supply pressure min.	1,4	II.	6,1 b)	3,8 b)	2,5 b)	3,8 b)	2,5 b)	1,3 b)
			III.	6,2 e)	3,8 e)	2,5 e)	3,8 e)	2,5 e)	1,3 e)
		2	II.	17,9 b)	11,3 b)	7,8 b)	11,3 b)	7,8 b)	4,3 b)
			III.	18 e)	11,4 e)	7,8 e)	11,4 e)	7,8 e)	4,3 e)
		3	II.	37,6 b)	24 b)	16,6 b)	24 b)	16,6 b)	9,2 b)
			III.	37,6 e)	24 e)	16,6 e)	24 e)	16,6 e)	9,2 e)
	II.	51 b)	36,6 b)	25,4 b)	36,6 b)	25,4 b)	14,2 b)		

**II. Fig. 470: PTFE- / Pure graphite-packing;**
**III. Fig. 471: Bellows seal**

Air supply pressure max. of pneumatic actuators DP:

max. permissible 6 bar

Air supply pressure max. limit of control valve:

max. permissible a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar

<sup>3)</sup> Not for perforated plug (presentation ref. to page 24). Kvs-values acc. to Selection STEVI, refer to techn. annex.

Standard values for selection of flow restrictors

Parabolic plug with post guiding Standard at 1"-6" (DN 25-150)				V-port plug with post and port guiding Standard at 8" (DN200)				Perforated plug with post and port guiding			
Seat-Ø (in)	Δ Ps (psi)	Seat-Ø (mm)	Δ Ps (bar)	Seat-Ø (in)	Δ Ps (psi)	Seat-Ø (mm)	Δ Ps (bar)	Seat-Ø (in)	Δ Ps (psi)	Seat-Ø (mm)	Δ Ps (bar)
≤ 1,26	580	≤ 32	40					0,71 - 5,91	740	18 - 150	51
1,57 - 1,97	435	40 - 50	30								
2,56	217	65	15	2,56 - 3,15	435	65 - 80	30				
3,15	116	80	8								
3,94	58	100	4	3,94	362	100	25				
4,92 - 5,91	29	125 - 150	2	4,92 - 5,91	217	125 - 150	15				
				7,87	174	200	12	7,87	435	200	30

Δ Ps = max. differential pressure drop

**Standard-flange dimensions**

Flanges acc. to ANSI B16.5

Nominal diameter			1"	1 1/2"	2"	3"	4"	6"	8"
ANSI300	ØD	(in)	4,88	6,12	6,5	8,25	10	12,5	15,0
ANSI300	ØK	(in)	3,5	4,5	5,0	6,62	7,88	10,62	13,0
ANSI300	n x Ød	(in)	4 x 0,75	4 x 0,88	8 x 0,75	8 x 0,88	8 x 0,88	12 x 0,88	12 x 1,0

Nominal diameter			DN 25	DN 40	DN 50	DN 80	DN100	DN150	DN200
ANSI300	ØD	(mm)	124	155	165	210	254	318	381
ANSI300	ØK	(mm)	89	114	127	168	200	270	330
ANSI300	n x Ød	(mm)	4 x 19	4 x 22	8 x 19	8 x 22	8 x 22	12 x 22	12 x 25

**Pressure-temperature-ratings acc. to ASME B16.34**

Observe regulations.

Material			-20°F to 100°F	200°F	300°F	400°F	500°F	600°F	650°F	700°F	750°F	800°F
Fig. 470-ANSI SA216WCB	ANSI300	(psi)	740	675	655	635	600	570	550	530	505	410
			-29°C to 38°C	93°C	149°C	204°C	260°C	315°C	343°C	371°C	399°C	427°C
	ANSI300	(bar)	51	46,6	45,2	43,6	41,4	39,2	37,9	36,6	34,8	28,8

Material			+14°F to 100°F	200°F	300°F	400°F	500°F	600°F	650°F	700°F	750°F	800°F
Fig. 471-ANSI SA216WCB restricted pressure	ANSI300	(psi)	580	544	504	436	404	366	352	343	335	328
			-10°C to 38°C	93°C	149°C	204°C	260°C	315°C	343°C	371°C	399°C	427°C
	ANSI300	(bar)	40	37,5	34,8	30,1	27,9	25,2	24,3	23,6	23,1	22,5

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

**Please indicate when ordering:**

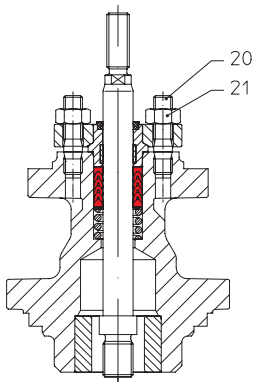
- Figure-No.
- Nominal diameter
- Nominal pressure
- Body material
- Plug design
- Kvs-value
- Flow characteristic
- Stem sealing
- Actuator
- Special design / accessories

**Example:**

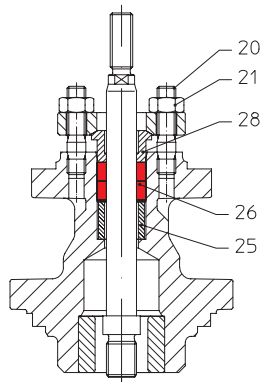
Figure 35.470...90, Nominal diameter 4" / DN100, Nominal pressure ANSI300, Body material SA216WCB, Parabolic plug, Cv 185 / Kvs 160, GLP, V-ring unit, ARI-PREMIO 1124 lbf / 5kN.

Dimensions in inch	1 inch $\Delta$ 25,4 mm
Dimensions in mm	
Weights in lb	1 lb $\Delta$ 0,45 kg
Weights in kg	
Pressures in psig	14,5 psi $\Delta$ 1 bar
Pressures in barg	
1 bar $\Delta$ 10 <sup>5</sup> Pa $\Delta$ 0,1 MPa	
Cv in us-gallone/min	0,85 Cv $\Delta$ 1 Kvs
Kvs in m <sup>3</sup> /h	

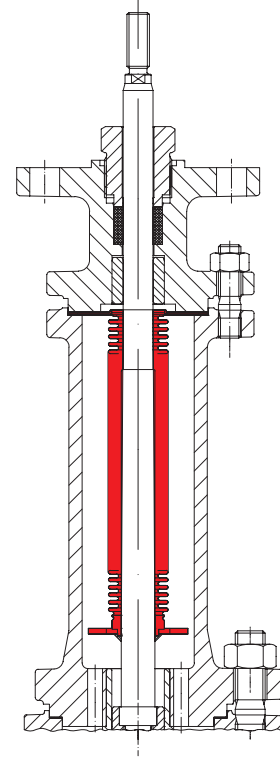
**Stem sealing**



Spring loaded PTFE-V ring packing unit



PTFE-/ Pure graphite-packing

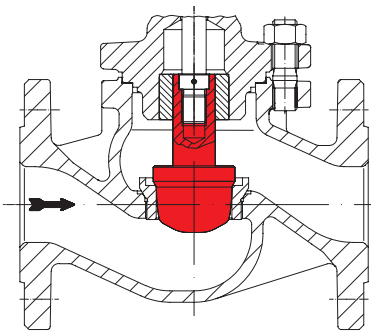


Bellows seal with safety stuffing box

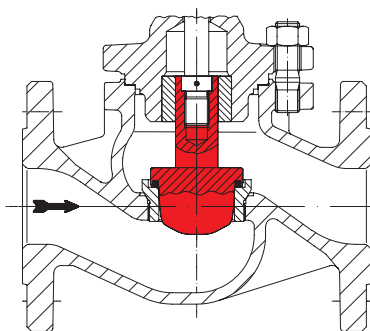
Pos.	Description	
20	Studs	A4-70
21	Hexagon nuts	A4
25	Distance bush *	SA 276 Gr.420
26	Packing ring *	PTFE or Pure graphite
28	Packing follower *	SA 276 Gr.420

\* Spare part

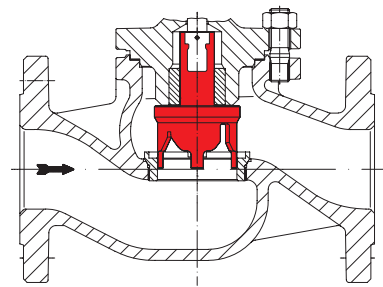
**Plug design**



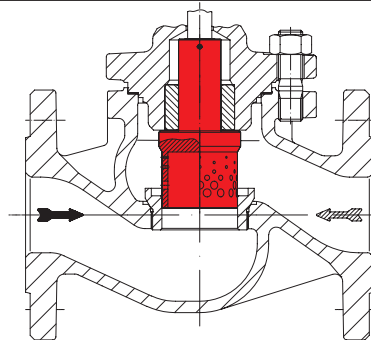
Parabolic plug with post guiding  
(1"-6" / DN 25-150)



Parabolic plug with PTFE soft seat and post guiding  
(1"-6" / DN 25-150)

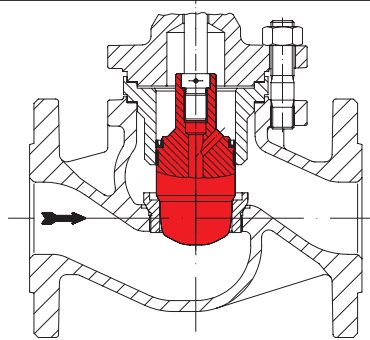


V-port plug with post and port guiding  
(Standard at 8" / DN200)

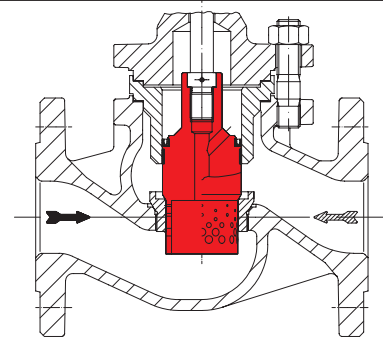


Perforated plug with post and port guiding

➡ Flow direction for gas and steam to reduce the sound level  
 ↗ Flow direction for liquids to reduce the cavitation



Parabolic pressure balanced plug



Perforated pressure balanced plug

➡ Flow direction for gas and steam to reduce the sound level  
 ↗ Flow direction for liquids to reduce the cavitation