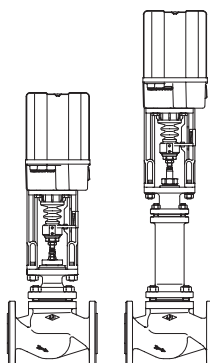


Control valve - straight through with flanges and shaft guided plug
1" to 8" (DN 25 - 200)

ARI-STEVI® 470 / 471 - ANSI

Electric actuator ARI-PREMIO

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

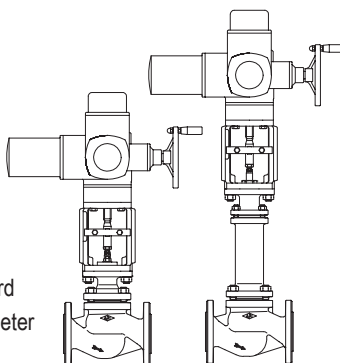


Page 2

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

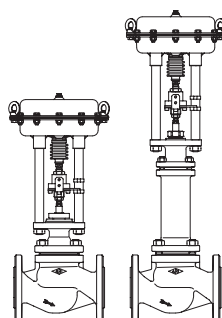


Page 6

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

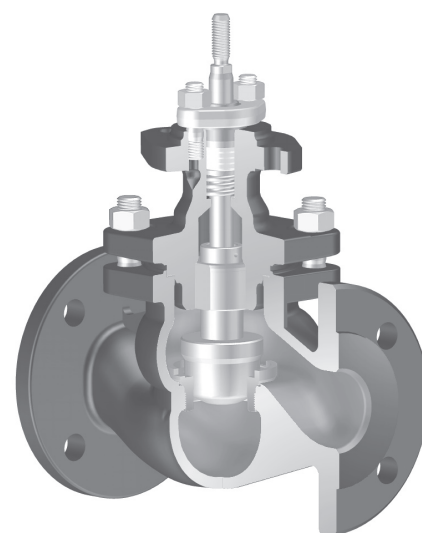


Fig. 470 - ANSI

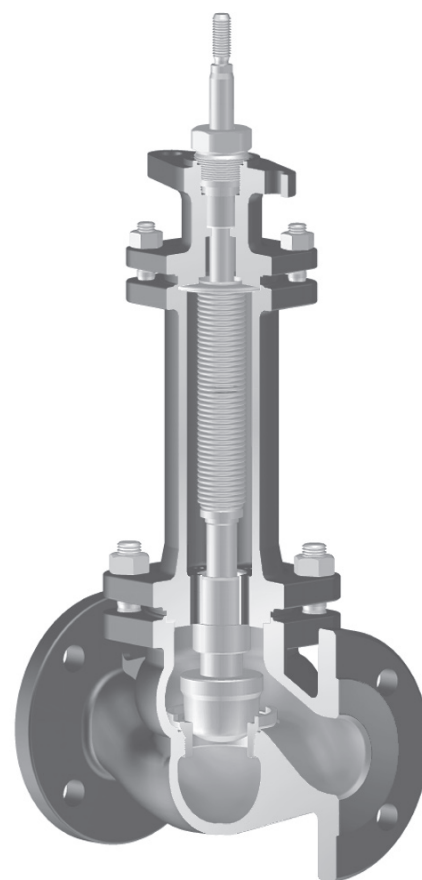


Fig. 471 - ANSI

Features:

- Compact design
- Precision guided stem
- Burnished stem
- Tapered seat ring
- Replaceable seat 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

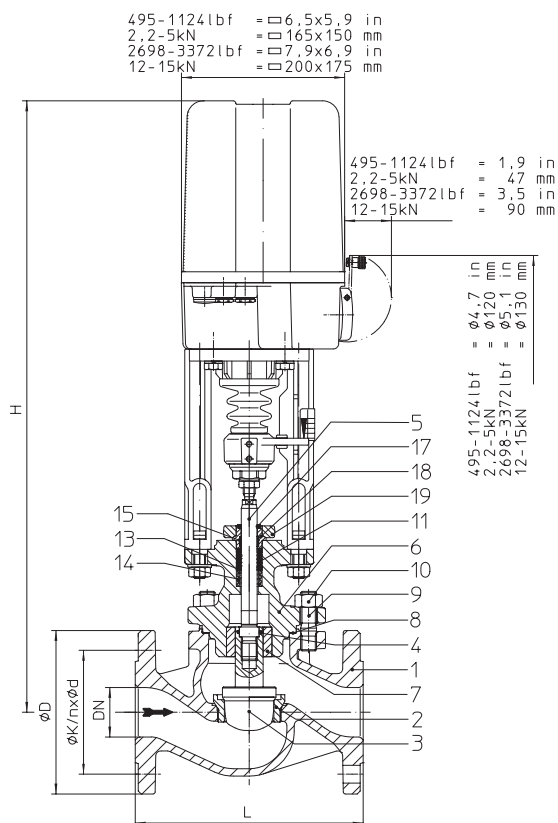


Fig. 470 - ANSI

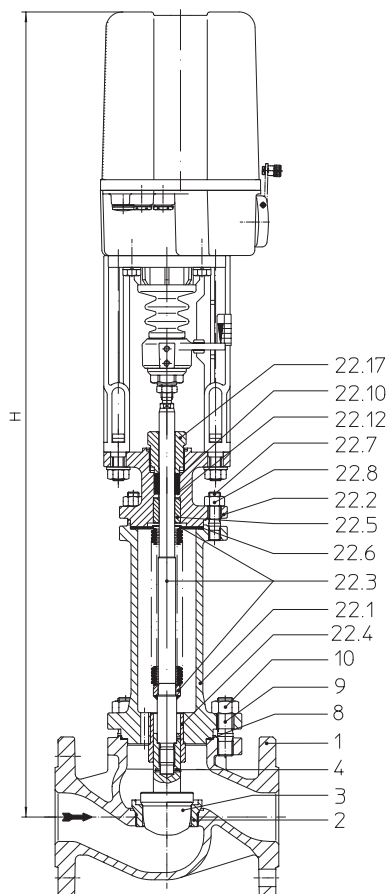


Fig. 471 - ANSI

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.			
Stem sealing			
Fig. 470: • PTFE-V-ring unit (to 6" / DN150) +14°F to +428°F / -10°C to +220°C • 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 bellows seal (for restricted pressure range) -76°F up to +842°F / -60°C up to +450°C			
Plug design standard:			
• Parabolic plug, metal seat (1"-6" / DN25-150) • V-port plug, metal seat (8" / DN200)			
optional:			
• Parabolic plug with PTFE soft seat (max. 392°F / 200°C) (1"-6" / DN25-150) • V-port plug, metal seat (from seat-ø 2,56 in / 65 mm) • 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 ≤ 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 4.			
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 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	--
	ARI-PREMIO 495 lbf	(lb)	35,1	52,7	57,1	101,2	157	--
	ARI-PREMIO 1124 lbf	(lb)	37,5	55,1	59,5	103,6	160	--
	H	(in)	--	30,2	30,2	31,4	31,5	37,5
	ARI-PREMIO 2698 lbf	(lb)	--	63,9	68,4	112,5	169	506
	ARI-PREMIO 3372 lbf	(lb)	--	63,9	68,4	112,5	169	506
Fig. 471	H	(in)	29,3	32,6	32,6	33,3	34,5	--
	ARI-PREMIO 495 lbf	(lb)	41,2	62	66,4	114,4	165	--
	ARI-PREMIO 1124 lbf	(lb)	43,7	64,4	68,8	116,9	167	--
	H	(in)	--	38,5	38,5	39,3	40,4	56,4
	ARI-PREMIO 2698 lbf	(lb)	--	73,2	77,6	125,7	176	530
	ARI-PREMIO 3372 lbf	(lb)	--	73,2	77,6	125,7	176	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	--
	ARI-PREMIO 2,2 kN	(kg)	15,9	23,9	25,9	45,9	71	--
	ARI-PREMIO 5 kN	(kg)	17	25	27	47	73	--
	H	(mm)	--	768	768	797	799	953
	ARI-PREMIO 12 kN	(kg)	--	29	31	51	77	230
	ARI-PREMIO 15 kN	(kg)	--	29	31	51	77	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	--
	ARI-PREMIO 5 kN	(kg)	19,8	29,2	31,2	53	76	--
	H	(mm)	--	979	979	997	1027	1434
	ARI-PREMIO 12 kN	(kg)	--	33,2	35,2	57	80	241
	ARI-PREMIO 15 kN	(kg)	--	33,2	35,2	57	80	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.

Edition 04/09 - Data subject to alteration

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Nominal diameter		1"						1 1/2"		2"		3"		4"		6"		8"																										
Standard Cv-values ³⁾	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 ³⁾	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 0,18 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		289	462																				
	Travel (in)	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		1,18	1,97		1,97	1,97																				
Actuator ¹⁾ 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 ²⁾ (s) (Op. Speed 0,01 in/s)		53						53		79		53		79		79		79		79																								
Actuator ¹⁾ 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	40	26																			
		III.	580	580	580	580	580	580	580	580	473	580	473	299	299	173	111	173	111	69	66	40	26	40	26																			
	Operating time ²⁾ (s) (Op. Speed 0,01 in/s)		53						53		79		53		79		79		79		79		132		132																			
Actuator ¹⁾ 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 ²⁾ (s) (Op. Speed 0,01 in/s)										79		79		79		79		79		132		132		171																			
Actuator ¹⁾ 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 ²⁾ (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									

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

²⁾ Indicated operating times with 50Hz.

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Nominal diameter		DN 25						DN 40		DN 50		DN 80		DN100		DN150		DN200														
Standard Kvs-values ³⁾	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 ³⁾	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 ¹⁾ ARI-PREMIO 2,2 kN	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 ²⁾ (s) (Op. Speed 0,38 mm/s)	53						53		79	53	79	79		79		79		79													
Actuator ¹⁾ ARI-PREMIO 5 kN	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	2,7	1,8							
		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	2,8	1,8							
	Operating time ²⁾ (s) (Op. Speed 0,38 mm/s)	53						53		79	53	79	79		79		79		79	132		132										
Actuator ¹⁾ ARI-PREMIO 12 kN	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	13,5	13,3	8,4	5,7	8,4	5,7	3,1							
	Operating time ²⁾ (s) (Op. Speed 0,38 mm/s)									79		79	79		79		79		79	132		132	171									
Actuator ¹⁾ ARI-PREMIO 15 kN	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 ²⁾ (s) (Op. Speed 0,38 mm/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			

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

²⁾ Indicated operating times with 50Hz.

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

Control valve in straightway form with electric actuator AUMA

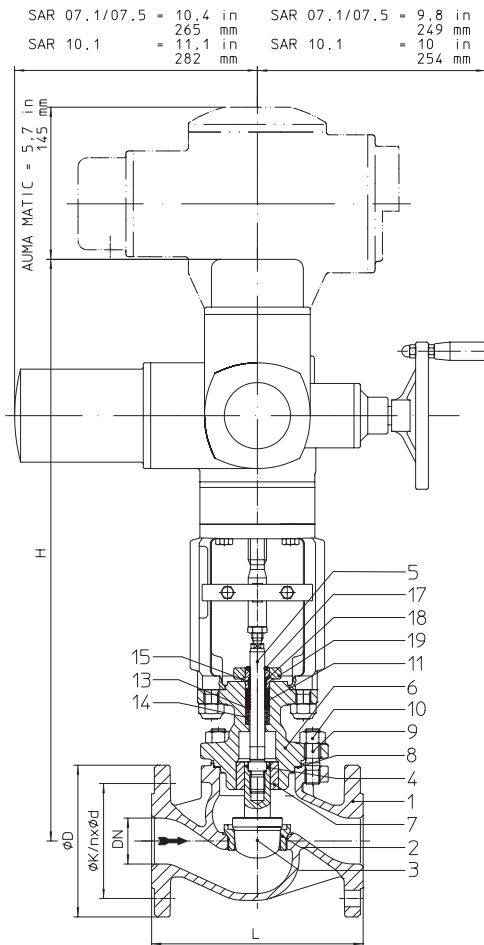


Fig. 470 - ANSI

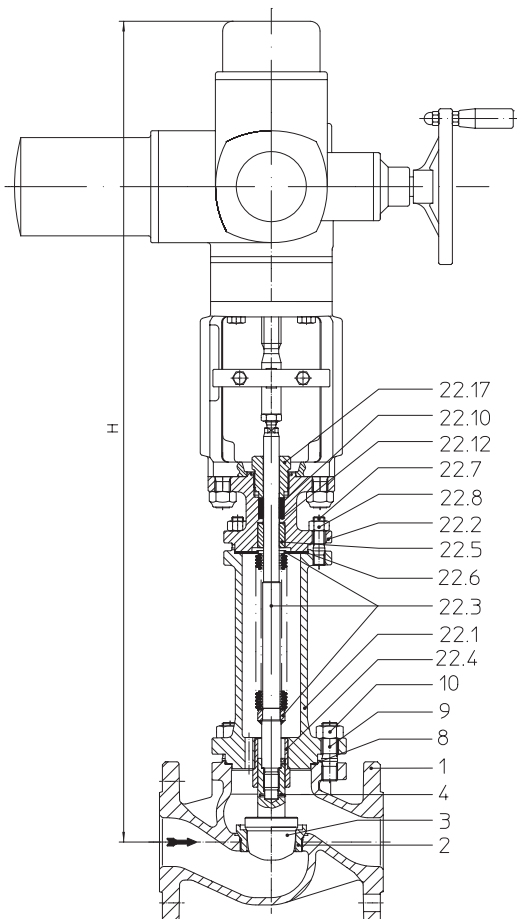


Fig. 471 - ANSI

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.			
Stem sealing			
Fig. 470: • PTFE-V-ring unit (to 6" / DN150) +14°F to +428°F / -10°C to +220°C			
• 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 bellows seal (for restricted pressure range)			
-76°F up to +842°F / -60°C up to +450°C			
Plug design standard:			
• Parabolic plug, metal seat (1 1/2"-6" / DN40-150)			
• V-port plug, metal seat (8" / DN200)			
optional:			
• Parabolic plug with PTFE soft seat (max. 392°F / 200°C) (1"-6" / DN25-150)			
• V-port plug, metal seat (from seat-ø 2,56 in / 65 mm)			
• 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 ≤ 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 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	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
	H	(in)	--	--	27,5	27,6	30
	SAR 10.1	(lb)	--	--	160,5	217	351
	H	(in)	--	--	--	35	36,7
	SAR 14.1	(lb)	--	--	--	426	629
Fig. 471	H	(in)	34,2	34,2	34,9	36,1	42,4
	SAR 07.1	(lb)	108	115,8	163,8	214	359
	SAR 07.5	(lb)	108	115,8	163,8	214	359
	H	(in)	--	--	35,4	36,6	42,8
	SAR 10.1	(lb)	--	--	173,8	224	369
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
	SAR 07.1	(kg)	44,8	48,3	68,3	94	--
	SAR 07.5	(kg)	44,8	48,3	68,3	94	155
	H	(mm)	--	--	699	701	761
	SAR 10.1	(kg)	--	--	72,8	98	159
	H	(mm)	--	--	--	888	931
	SAR 14.1	(kg)	--	--	--	194	285
Fig. 471	H	(mm)	869	869	887	917	1076
	SAR 07.1	(kg)	49	52,5	74,3	97	163
	SAR 07.5	(kg)	49	52,5	74,3	97	163
	H	(mm)	--	--	899	929	1088
	SAR 10.1	(kg)	--	--	78,8	102	167

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 restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Fig. 470 - ANSI

Nominal diameter				1 1/2"		2"		3"		4"		6"		8"	
Standard Cv-values ⁴⁾	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	Seat-Ø (in)			0,98	1,26		1,26	1,57		1,97	2,56		3,94	4,92	
	Cv-value			12	18		18	29		46	73		185	289	
	Travel (in)			0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,97	
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (psi)	I./II.	shut off controlling ³⁾	740	740	740	740	740	673	443	673	443	282		
	Torque (ft lbf)			740	740	740	740	545	542	318	207	318	207	130	
	Operating time ²⁾ (s)			11		11	15	15	22		22				
	Output drive (rpm)			54	56	54	56		56		56				
	Output drive (rpm)			5,6	8	5,6	8		8		8				
Actuator ¹⁾ AUMA SAR 07.5 Output drive Form A TR 26 x 5 - LH	Closing pressure (psi)	I./II.	shut off controlling ³⁾				740	740	740	624	740	624	398	398	253
	Torque (ft lbf)						740	740	455	298	455	298	189	189	119
	Operating time ²⁾ (s)						22	22	37	44	37	44		44	
	Output drive (rpm)						64		64		64		64	55	55
	Output drive (rpm)						5,6		5,6		5,6		5,6	11	11
Actuator ¹⁾ AUMA SAR 10.1 Output drive Form A TR 26 x 5 - LH	Closing pressure (psi)	I./II.	shut off controlling ³⁾				740	740	740	740	678	678	433	300	520
	Torque (ft lbf)						740	624	740	624	398	398	253	175	251
	Operating time ²⁾ (s)						44	59	44	59	74		74		89
	Output drive (rpm)						64		64		64		64	55	55
	Output drive (rpm)						5,6		5,6		5,6		5,6	11	11
Actuator ¹⁾ AUMA SAR 14.1 Output drive Form A TR 30 x 6 - LH	Closing pressure (psi)	I./II.	shut off controlling ³⁾									740	740	620	740
	Torque (ft lbf)											656	419	290	419
	Operating time ²⁾ (s)											111	166	184	166
	Output drive (rpm)											38	63		63
	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				1 1/2"		2"		3"		4"		6"		8"	
Standard Cv-values ⁴⁾	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	Seat-Ø (in)			0,98	1,26		1,26	1,57		1,97	2,56		3,94	4,92	
	Cv-value			12	18		18	29		46	73		185	289	
	Travel (in)			0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,97	
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (psi)	III.	shut off controlling ³⁾	580	580	580	580	580	580	441	580	441	281		
	Torque (ft lbf)			580	580	580	580	538	538	315	206	315	206	129	
	Operating time ²⁾ (s)			11		11	15	15	22		22				
	Output drive (rpm)			54	56	54	56		56		56				
	Output drive (rpm)			5,6	8	5,6	8		8		8				
Actuator ¹⁾ AUMA SAR 07.5 Output drive Form A TR 26 x 5 - LH	Closing pressure (psi)	III.	shut off controlling ³⁾				580	580	580	580	580	397	395	251	173
	Torque (ft lbf)						580	580	452	296	452	296	188	185	116
	Operating time ²⁾ (s)						22	22	30	44	30	44		44	
	Output drive (rpm)						64		64		64		64	55	55
	Output drive (rpm)						5,6		5,6		5,6		5,6	11	11
Actuator ¹⁾ AUMA SAR 10.1 Output drive Form A TR 26 x 5 - LH	Closing pressure (psi)	III.	shut off controlling ³⁾				580	580	580	580	467	580	430	298	386
	Torque (ft lbf)						580	580	580	580	397	395	251	173	251
	Operating time ²⁾ (s)						44		44		52	66	74		66
	Output drive (rpm)						64		64		64		64	55	55
	Output drive (rpm)						5,6		5,6		5,6		5,6	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⁾ Restrictions through max. permissible torque of the actuator at controlling operation.

⁴⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
Observe restrictions by Pressure-temperature-ratings, refer to page 23.
Observe standard values for selection of plugs, refer to page 22.

Fig. 470 - ANSI

Nominal diameter				DN 40		DN 50		DN 80		DN100		DN150		DN200							
Standard Kvs-values ⁴⁾	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 Kvs-values	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 ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	I./II.	shut off controlling ³⁾	51	51	51	51	51	51	46,4	30,6	46,4	30,6	19,4							
				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 ²⁾ (s)			54		56	54	56		56		56									
	Output drive (rpm)			5,6		8	5,6	8		8		8									
Actuator ¹⁾ AUMA SAR 07.5 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	I./II.	shut off controlling ³⁾					51	51	51	43,1	51	43,1	27,5	27,5	17,5	12	17,3	11,9	6,6	
								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		60		
	Operating time ²⁾ (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 ¹⁾ AUMA SAR 10.1 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	I./II.	shut off controlling ³⁾						51	51	51	51	46,7	46,7	29,8	20,7	35,8	24,8	13,9		
								51	43,1	51	43,1	27,5	27,5	17,5	12	17,3	11,9	6,6			
	Torque (Nm)								60	80	60	80	100		100		120		120		
	Operating time ²⁾ (s)									64	64		64		64	55		55		71	
	Output drive (rpm)									5,6	5,6		5,6		5,6	11		11		11	
Actuator ¹⁾ AUMA SAR 14.1 Output drive Form A TR 30 x 6 - LH	Closing pressure (bar)	I./II.	shut off controlling ³⁾											51	51	42,7	51	42,7	24		
														45,2	28,9	20	28,9	20	11,1		
	Torque (Nm)													150	225	250	225	250		250	
	Operating time ²⁾ (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				DN 40		DN 50		DN 80		DN100		DN150		DN200							
Standard Kvs-values ⁴⁾	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 ^s -values	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 ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	III.	shut off	40	40	40	40	40	40	40	30,4	40	30,4	19,4							
			controlling ³⁾	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 ²⁾ (s)			54		56	54	56		56		56									
	Output drive (rpm)			5,6		8	5,6	8		8		8									
Actuator ¹⁾ AUMA SAR 07.5 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	III.	shut off					40	40	40	40	40	40	27,4	27,2	17,3	11,9	17,3	11,9	6,6	
			controlling ³⁾					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		60			
	Operating time ²⁾ (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 ¹⁾ AUMA SAR 10.1 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	III.	shut off						40	40	40	40	32,2	40	29,7	20,5	26,6	18,4	10,2		
			controlling ³⁾						40	40	40	40	27,4	27,2	17,3	11,9	17,3	11,9	6,6		
	Torque (Nm)									60	60		70	90	100		90				
	Operating time ²⁾ (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)

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⁾ Restrictions through max. permissible torque of the actuator at controlling operation.

⁴⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

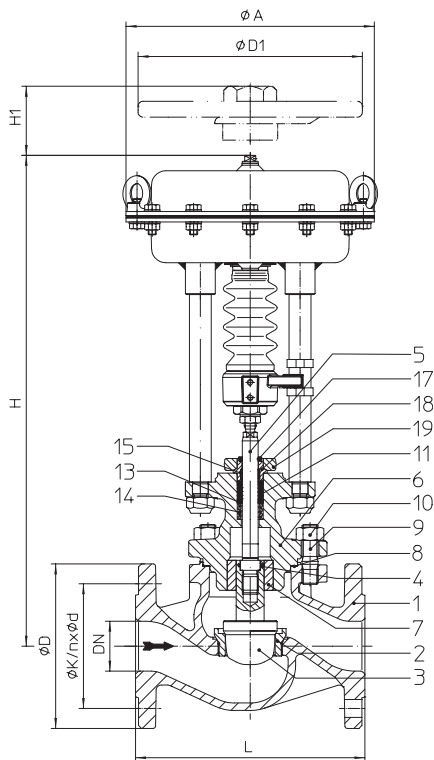
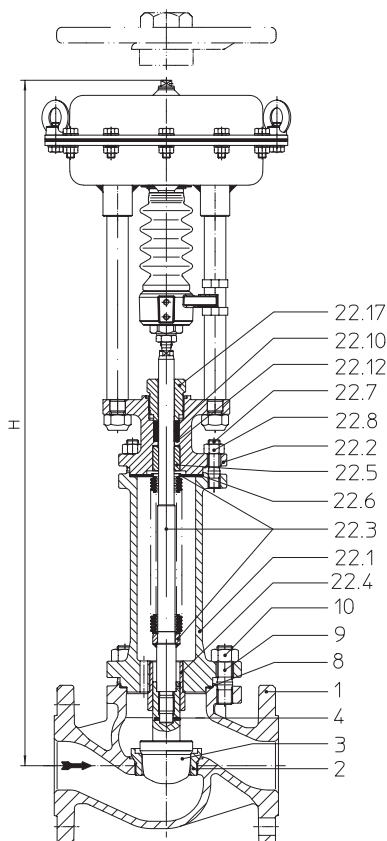
Control valve in straightway form with pneumatic actuator DP

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.			
Stem sealing			
Fig. 470: • PTFE-V-ring unit (to 6" / DN150) +14°F to +428°F / -10°C to +220°C • 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 bellows seal (for restricted pressure range) -76°F up to +842°F / -60°C up to +450°C			
Plug design standard: • Parabolic plug, metal seat optional: • Parabolic plug with PTFE soft seat (max. 392°F / 200°C) • V-port plug, metal seat (from seat-ø 2,56 in / 65 mm) • 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 ≤ 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 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					
	Fig. 470	H	(in)	18,6	19,8	19,8	20,5	21,1	23
		Weight	(lb)	43	60,6	65	109,1	165	300
	Fig. 471	H	(in)	24,8	28,1	28,1	28,4	29,6	35,9
		Weight	(lb)	49,2	69,9	74,3	122,4	173	318
DP33	Ø A		(in)	11,8					
	Fig. 470	H	(in)	20,8	22	22	23,1	23,2	25,6
		Weight	(lb)	56,2	73,9	78,3	122,4	179	313
	Fig. 471	H	(in)	27	30,3	30,3	31	32,2	38,5
		Weight	(lb)	62,4	83,1	87,5	135,6	186	331
	DP34	Ø A		(in)	15,9				
Fig. 470		H	(in)	--	27,3	27,3	28,5	28,5	30,9
		Weight	(lb)	--	140	144,4	188,5	245	379
Fig. 471		H	(in)	--	35,6	35,6	36,3	37,5	43,8
		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					
	Fig. 470	H	(mm)	473	504	504	522	524	584
		Weight	(kg)	19,5	27,5	29,5	49,5	75	136
	Fig. 471	H	(mm)	630	715	715	722	752	911
		Weight	(kg)	22,3	31,7	33,7	55,5	78	144
DP33	Ø A		(mm)	300					
	Fig. 470	H	(mm)	528	559	559	588	590	650
		Weight	(kg)	25,5	33,5	35,5	55,5	81	142
	Fig. 471	H	(mm)	685	770	770	788	818	977
		Weight	(kg)	28,3	37,7	39,7	61,5	84	150
DP34	Ø A		(mm)	405					
	Fig. 470	H	(mm)	--	694	694	723	725	785
		Weight	(kg)	--	63,5	65,5	85,5	111	172
	Fig. 471	H	(mm)	--	905	905	923	953	1112
		Weight	(kg)	--	67,7	69,7	91,5	114	180

Standard-flange dimensions refer to page 23

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
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 restrictions by Pressure-temperature-ratings, refer to page 23.

Observe standard values for selection of plugs, refer to page 22.

Spring closes on air failure

Nominal diameter			1"						1 1/2"			2"			3"			4"			6"		
Standard Cv-values ³⁾	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 ³⁾	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	4,6	7,3		12	18		18	29		46	73		73	116		185	289	
	Travel (in)		0,12	0,46	1,8	1,2			0,79	0,79		0,79	1,18		1,18	1,18		1,18	1,18		1,18	1,97	
Actuator DP32	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	352	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	515		515											
	29 - 48	52	I.							740		740											
			II.							740		740											
			III.							580		580											
Actuator DP33	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)	247a)	152a)	91a)	152a)	91a)	53a)	53	26	14	26	14			
	12 - 35	39	I.				740a)	740a)	740a)	740	464	293	464	293	183	182	103	65	103	65	39	39	
			II.				740a)	740a)	740a)	721	437	275	437	275	172	169	96	60	96	60	36	36	
			III.	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	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	
			III.								266d)		266d)	166d)	166b)	94b)	59b)	94b)	59b)	35b)	32	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
			III.								580b)		580b)	391b)	391	228	148	228	148	92	89	55	37
	15 - 29	35	I.																				
			II.																				
			III.																				
	22 - 44	48	I.																		124	84	
			II.																		122	83	
			III.																		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	
			III.																		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

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Spring opens on air failure

Nominal diameter			1"						1 1/2"			2"			3"			4"			6"				
Standard Cv-values ³⁾	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 ³⁾	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	1,18		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	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	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)	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		
			III.									266e)		266e)	166e)	166b)	94b)	59b)	94b)	59b)	35b)	32	18		
		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	
			III.									580e)		580e)	503e)	503b)	295b)	192b)	295b)	192b)	121b)	118	73	49	
		44	I.												740e)	740	640	421	640	421	268	268	169	116	
			II.												740e)	740	632	416	632	416	264	264	167	115	
			III.												580e)	580b)	580b)	414b)	580b)	414b)	263b)	260	165	113	
		58	I.															740	643	740	643	410	410	261	180
			II.															740	638	740	638	407	407	259	179
			III.															580b)		580b)	406b)	403	256	177	
		73	I.															740		740	553	553	353	244	
			II.															740		740	550	550	351	242	
			III.																			546	348	241	
		87	I.																			696	696	444	308
			II.																			692	692	442	306
			III.																			580	440	304	

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

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Spring closes 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	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)	Air supply pressure min. (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									
	0,8-2,4	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	35,5			35,5										
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			
	0,8-2,4	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	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.																				
			II.																				
			III.																				
Actuator DP34	Spring range (bar)	1,2	I.																				
			II.																				
			III.																				
		1,4	I.																				
			II.																				
			III.																				
	0,8-2,4	2,7	I.																				
			II.																				
			III.																				
		2,4	I.																				
			II.																				
			III.																				
Actuator DP34	Spring range (bar)	3,3	I.																				
			II.																				
			III.																				
		3,3	I.																				
			II.																				
			III.																				
	2,1-3,0	4,5	I.																				
			II.																				
			III.																				
		4	I.																				
			II.																				
			III.																				

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 refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to 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	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	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			
			III.								18,4e)		18,4e)	11,4b)	11,4e)	6,5b)	4,1b)	6,5b)	4,1b)	2,4b)	2,2	1,3			
		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		
			III.								40e)		40e)	34,7e)	34,7b)	20,3b)	13,2b)	20,3b)	13,2b)	8,3b)	8,1	5,1	3,4		
		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		
			III.											40e)	40b)	40b)	28,5b)	40b)	28,5b)	18,1b)	18	11,4	7,8		
		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		
			III.														40b)		40b)	28b)	27,8	17,7	12,2		
		5	I.														51		51	38,1	38,1	24,3	16,8		
			II.														51		51	37,9	37,9	24,2	16,7		
			III.																			27,6	24	16,6	
		6	I.																		48	48	30,6	21,2	
			II.																		47,7	47,7	30,5	21,1	
			III.																			40	30,3	21	

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 refer to „Selection STEVI“ in the Technical annex.

Control valve in straightway form with pneumatic actuator DP

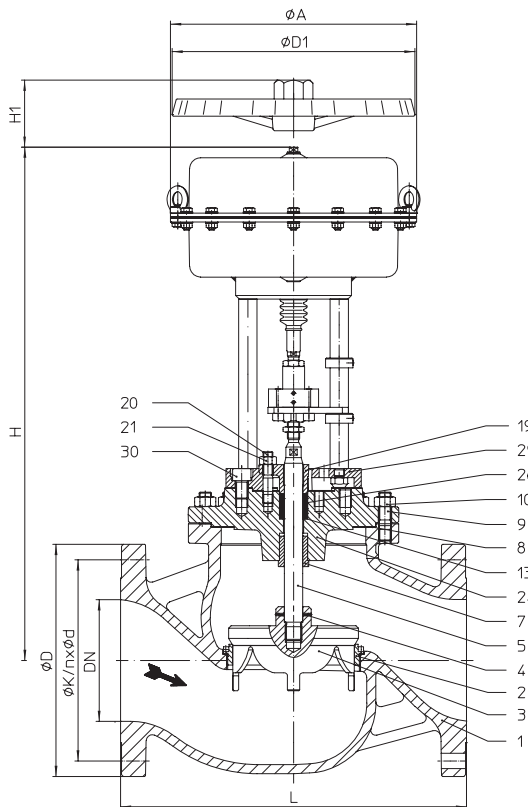


Fig. 470 - ANSI

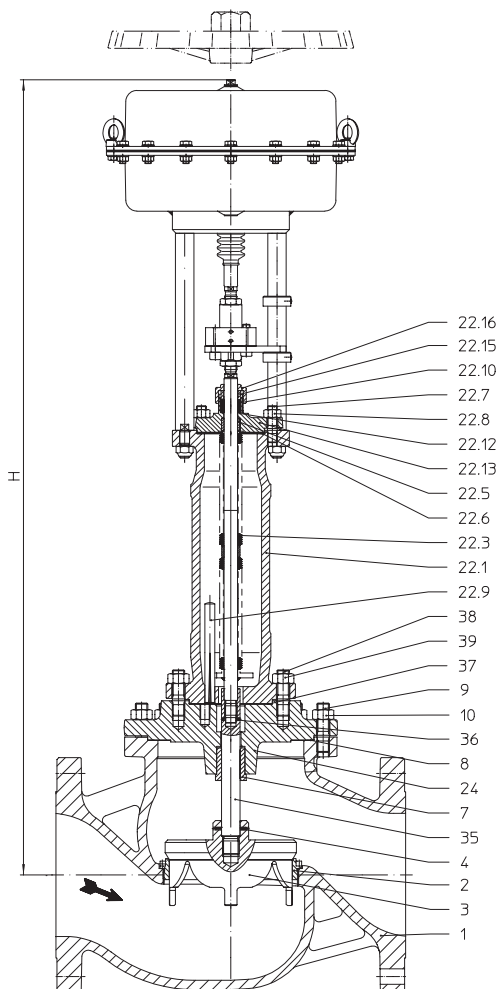


Fig. 471 - ANSI

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 ≤ 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.			

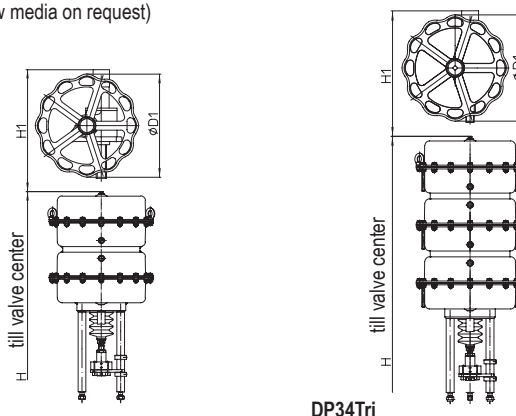
Selection of possible applications

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
Ø D1	(in)	15,7	15,7	15,7
H1	(in)	17,4	24,2	24,2
Weight	(lb)	37,5	90,4	90,4
Actuator		DP34	DP34T	DP34Tri
Ø D1	(mm)	400	400	400
H1	(mm)	460	615	615
Weight	(kg)	17	41	41
Technical data for actuator refer to data sheet DP32-34Tri.				

Dimensions and weights

Nominal diameter				6"v	8"
L				(in)	
				18,62	22,38
DP34	Ø A			(in)	--
	Fig. 470	H	(in)	--	15,9
		Weight	(lb)	--	33,2
	Fig. 471	H	(in)	--	582
		Weight	(lb)	--	49,3
DP34T	Ø A			(in)	15,9
	Fig. 470	H	(in)	41,4	43,1
		Weight	(lb)	536	739
	Fig. 471	H	(in)	59	60,7
		Weight	(lb)	554	763
DP34Tri	Ø A			(in)	15,9
	Fig. 470	H	(in)	50,1	51,8
		Weight	(lb)	611	814
	Fig. 471	H	(in)	67,7	69,4
		Weight	(lb)	628	838

Nominal diameter				DN150v	DN200
L				(mm)	
				473	568
DP34	Ø A			(mm)	--
	Fig. 470	H	(mm)	--	405
		Weight	(kg)	--	844
	Fig. 471	H	(mm)	--	264
		Weight	(kg)	--	1251
DP34T	Ø A			(mm)	405
	Fig. 470	H	(mm)	1051	1094
		Weight	(kg)	243	335
	Fig. 471	H	(mm)	1498	1541
		Weight	(kg)	251	346
DP34Tri	Ø A			(mm)	405
	Fig. 470	H	(mm)	1273	1316
		Weight	(kg)	277	369
	Fig. 471	H	(mm)	1720	1763
		Weight	(kg)	285	380

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 *	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	A4-70
21	Hexagon nuts	A4
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	St
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 restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Spring closes on air failure

Nominal diameter					6"v			8"		
Standard Cv-values ³⁾	Seat-Ø (in)						5,91			7,87
	Cv-value						462			728
	Travel (in)						1,97			2,56
Reduced Cv-values ³⁾	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		
					III.			18 a)		
			12 - 35	39	II.			55	36	
					III.			55	37	
			15 - 29	35	II.					26
					III.					26
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)
					III.	89 d)	55 d)	37 d)	55 d)	37 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)				
Actuator DP34Tri	Spring range (psi)	Air supply pressure min. (psi)	3 - 15	22	II.	60 d)	36 d)	24 d)	36 d)	24 d)
					III.	61 f)	37 f)	24 f)	37 f)	24 f)
			6 - 17	25	II.	146 d)	91 d)	62 d)	91 d)	62 d)
					III.	146 f)	92 f)	62 f)	92 f)	62 f)
			12 - 35	42	II.	317 b)	201 b)	138 b)	201 b)	138 b)
					III.	318 d)	202 d)	139 d)	202 d)	139 d)
			15 - 29	36	II.					98 b)
					III.					98 d)
			22 - 44	51	II.		394 a)	272 a)	394 a)	272 a)
					III.		394 b)	272 b)	394 b)	272 b)
			30 - 44	51	II.	740 a)				
			29 - 58	65	II.		531 a)	368 a)	531 a)	268 a)

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

Air supply pressure max. of pneumatic actuators DP:

Air supply pressure max. limit of control valve:

III. Fig. 471: Bellows seal

max. permissible 87psi (DP34Tri: max. permissible 73 psi)

max. permissible a) 73 psi b) 65 psi c) 58 psi d) 51 psi e) 44 psi f) 36 psi

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Spring opens on air failure

Nominal diameter				6"v			8"		
Standard Cv-values ³⁾	Seat-Ø (in)					5,91			7,87
	Cv-value					462			728
	Travel (in)					1,97			2,56
Reduced Cv-values ³⁾	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
			III.						
Actuator DP34T	Air supply pressure min. (psi)	22	II.	117 b)	73 b)	49 b)	73 b)	49 b)	26 b)
			III.	118 e)	73 e)	49 e)	73 e)	49 e)	26 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)
			III.						
			II.						
			III.						

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

Air supply pressure max. of pneumatic actuators DP:

Air supply pressure max. limit of control valve:

III. Fig. 471: Bellows seal

max. permissible 87psi

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

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 23.
 Observe standard values for selection of plugs, refer to page 22.

Spring closes on air failure

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

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

Air supply pressure max. of pneumatic actuators DP:

III. Fig. 471: Bellows seal

max. permissible 6 bar (DP34Tri: max. permissible 5 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

³⁾ Not for perforated plug (presentation ref. to page 24). Kvs-values refer to „Selection STEVI“ in the Technical annex.

max. permissible closing pressures on flow-to-open P2 = 0
Observe restrictions by Pressure-temperature-ratings, refer to page 23.
Observe standard values for selection of plugs, refer to page 22.

Spring opens on air failure

Nominal diameter			DN150v			DN200		
Standard Kvs-values ³⁾	Seat-Ø (mm)				150			200
	Kvs-value				400			630
	Travel (mm)				50			65
Reduced Kvs-values ³⁾	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)
		4	II.			17,7	12,2	6,7
			III.			17,7 a)	12,2 a)	6,8 a)
		5	II.			24	16,6	9,2
			III.			24 a)	16,6 a)	9,2 a)
		6	II.			30,3	21	11,7
			III.					
Actuator DP34T	Air supply pressure min. (bar)	1,5	II.	8,1 b)	5 b)	3,4 b)	5 b)	3,4 b)
			III.	8,1 e)	5,1 e)	3,4 e)	5,1 e)	3,4 e)
		2	II.	17,9 b)	11,3 b)	7,8 b)	11,3 b)	7,8 b)
			III.	18 e)	11,4 e)	7,8 e)	11,4 e)	7,8 e)
		3	II.	37,6 b)	24 b)	16,6 b)	24 b)	16,6 b)
			III.	37,6 e)	24 e)	16,6 e)	24 e)	16,6 e)
		4	II.	51 b)	36,6 b)	25,4 b)	36,6 b)	25,4 b)
			III.					

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

Air supply pressure max. of pneumatic actuators DP:

Air supply pressure max. limit of control valve:

III. Fig. 471: Bellows seal

max. permissible 6 bar

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 refer to „Selection STEVI“ in the Technical annex.

Fig. / Plug design	Max. differential pressure drop																
470/471-ANSI	Seat-ø	(inch)	0,12	0,2	0,47	0,71	0,87	0,98	1,36	1,58	1,97	2,56	3,15	3,94	4,92	5,91	7,87
Parabolic plug (post guiding)	Δ Ps	(psi)	580	580	580	580	580	580	580	435	435	217	116	58	29	29	
V-port plug (post and seat guiding)	Δ Ps	(psi)										435	435	362	217	217	174
Perforated plug (post and seat guiding)	Δ Ps	(psi)				580	580	580	580	580	580	580	580	580	580	580	435

Fig. / Plug design	Max. differential pressure drop																
470/471-ANSI	Seat-ø	(mm)	3	5	12	18	22	25	32	40	50	65	80	100	125	150	200
Parabolic plug (post guiding)	Δ Ps	(bar)	40	40	40	40	40	40	40	30	30	15	8	4	2	2	
V-port plug (post and seat guiding)	Δ Ps	(bar)										30	30	25	15	15	12
Perforated plug (post and seat guiding)	Δ Ps	(bar)				40	40	40	40	40	40	40	40	40	40	40	30

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.

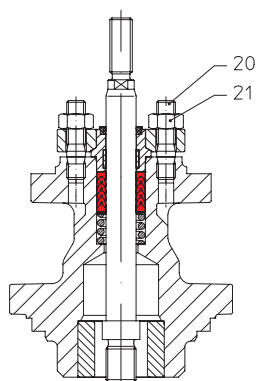
Please indicate when ordering:

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

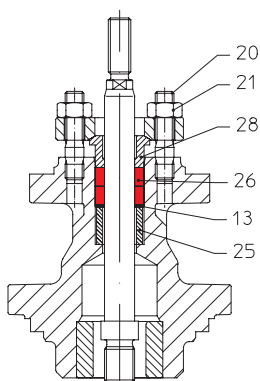
Example:

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.

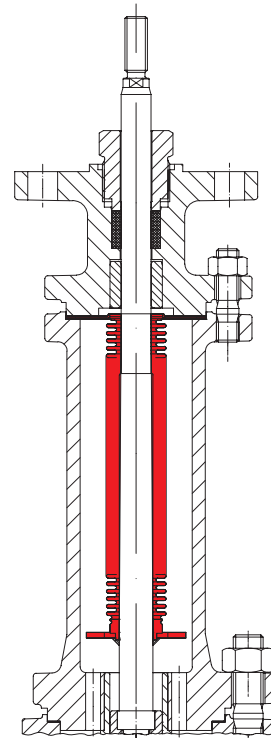
Dimensions in inch	1 inch Δ 25,4 mm
Dimensions in mm	
Weights in lb	1 lb Δ 0,45 kg
Weights in kg	
Pressures in psig	14,5 psi Δ 1 bar
Pressures in barg	
1 bar Δ 10 ⁵ Pa Δ 0,1 MPa	
Cv in us-gallone/min	0,86 Cv Δ 1 Kvs
Kvs in m ³ /h	

Stem sealing


Spring loaded PTFE-V ring packing unit



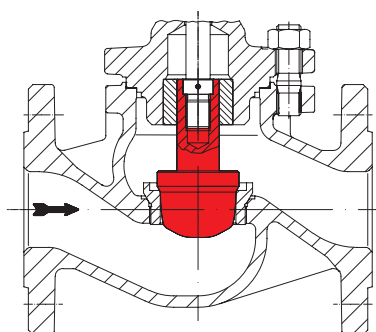
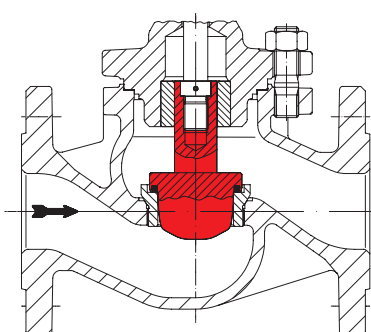
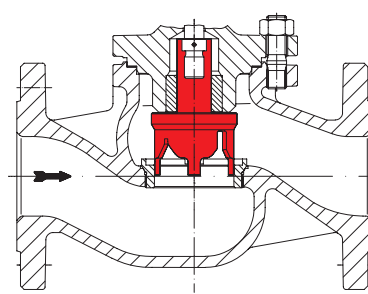
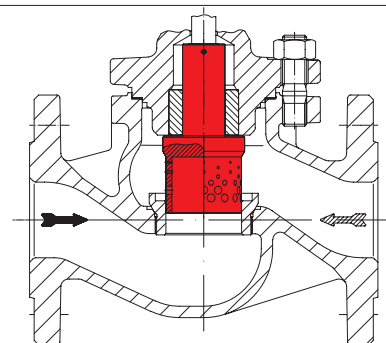
PTFE-/ Pure graphite-packing




Bellows seal with safety stuffing box

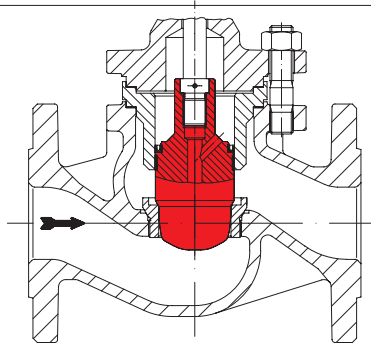
Pos.	Description	
13	Washer *	SA 240 Gr. 304
20	Studs	A4-70
21	Hexagon nuts	A4
25	Distance bush *	SA 276 Gr.420
26	Packing ring *	PTFE or Pure graphite
28	Packing follower *	SA 276 Gr.420

* Spare part

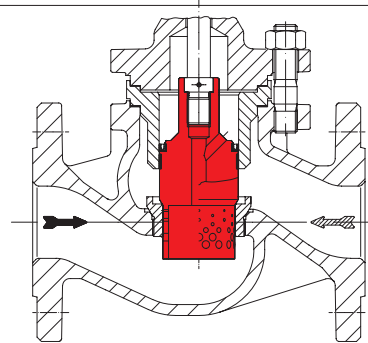
Plug design

 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

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GERMAN QUALITY VALVES

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