Technical data

Fig. 470/471

Figure	Version	Nominal pressure	Material	Nominal diameter
22.470 / 22.471	with flanges	PN16	EN-JS1049	DN15-150
23.470 / 23.471	with flanges	PN25	EN-JS1049	DN15-150
34.470 / 34.471	with flanges	PN25	1.0619+N	DN15-150
35.470 / 35.471	with flanges	PN40	1.0619+N	DN15-150
35.470....4 / 35.471....4	with butt weld ends	PN40	1.0619+N	DN25-150
54.470 / 54.471	with flanges	PN25	1.4581	DN15-150
55.470 / 55.471	with flanges	PN40	1.4581	DN15-150
Other materials and versions on request.				

Information / restriction of technical rules need to be observed!
ARI-Valves of EN-JL1040 are not allowed to be operated in systems acc. to TRD 110.
A production permission acc. to TRB 801 No. 45 is available.
(Acc. to TRB 801 No. 45 EN-JL1040 is not allowed.)
The engineer, designing a system or a plant, is responsible for the selection of the correct valve. Resistance and fitness must be verified, contact manufacturer for information
(refer to Product overview and Resistance list).

Stem sealing

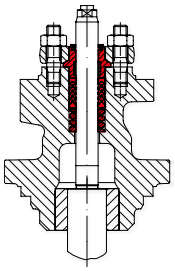
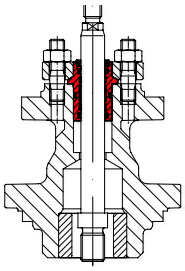
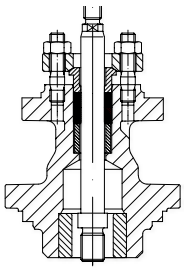
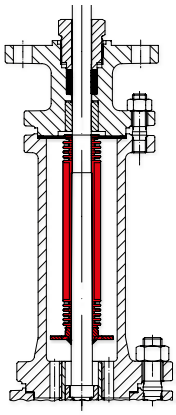
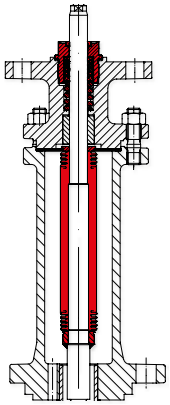
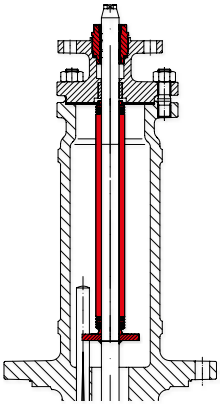
Fig. 470	standard	optional	
	DN15- 150	DN15- 150	DN15- 150
			
	I. PTFE-V-ring unit -10°C to 220°C	I. EPDM-sealing -10°C to 150°C (allowed for water and steam up to 180°C)	II. PTFE-packing -10°C to 250°C II. Pure graphite-packing -10°C to 450°C

Fig. 471	standard	optional	
	DN15- 150	DN15- 100	DN125-150
			
	III. Stainless steel-bellow with pure graphite-packing -60°C to 450°C	III. Stainless steel-bellow with V-ring unit -60°C to 220°C	III. Stainless steel bellows seal with EPDM-sealing -60°C to 150°C (allowed for water and steam up to 180°C)

Pressure-temperature-ratings

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

acc. to DIN EN 1092-2			-60°C to <-10°C [1]	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
EN-JS1049	PN16	(bar)	on request	16	15.5	14.7	13.9	12.8	11.2	--	--
EN-JS1049	PN25	(bar)	on request	25	24.3	23	21.8	20	17.5	--	--

acc. to manufacturers standard			-60°C to <-10°C [1]	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.0619+N	PN25	(bar)	18.7	25	23.9	22	20	17.2	16	14.8	8.2
1.0619+N	PN40	(bar)	30	40	38.1	35	32	28	25.7	23.8	13.1

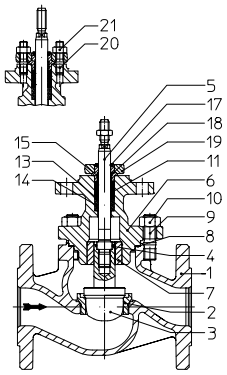
acc. to DIN EN 1092-1			-60°C to <-10°C [1]	-10°C to 100°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.4581	25	(bar)	12.5	25	24.5	23.3	22.1	20.8	20.1	19.5	--
1.4581	40	(bar)	20	40	39.2	37.3	35.4	33.3	32.1	31.2	--

[1] Valve with extended bonnet, studs and nuts made of A4-70 (at temperatures below -10°C)

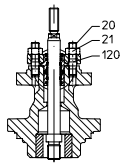
*last updated 02/23

Technical data

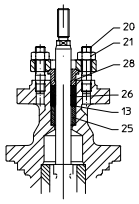
Fig. 470/471



I. PTFE-V-ring unit



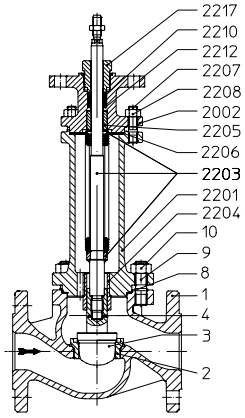
I. EPDM-sealing



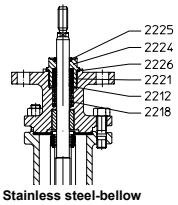
II. PTFE- / pure graphite-packing

Pos.	Sp.p.	Description	Fig. 22.470 / Fig. 23.470	Fig. 34.470 / Fig. 35.470	Fig. 54.470 / Fig. 55.470
1		Body	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMoN19-11-2, 1.4581
2	x	Seat ring	X20Cr13+QT, 1.4021+QT		X6CrNiMoTi17 12 2, 1.4571
3	x	Plug	X20Cr13+QT, 1.4021+QT		X6CrNiMoTi17 12 2, 1.4571
4	x	Clamping sleeve	X10CrNi18-8, 1.4310		
5	x	Stem	X20Cr13+QT, 1.4021+QT		X6CrNiMoTi17 12 2, 1.4571
6		Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMoN19-11-2, 1.4581
7		Giude bushing	X20Cr13+QT, 1.4021+QT (hardened)		X6CrNiMoTi17 12 2, 1.4571
8	x	Gasket	Pure graphite (CrNi laminated with graphite)		
9		Stud	25CrMo4, 1.7218		A4-70
10		Hexagon nuts	C35E, 1.1181		A4
11	Set: refer to Pos. 100	V-ring unit	PTFE		
13		Washer	X5CrNi18-10, 1.4301		
14		Compression spring	X10CrNi18-8, 1.4310		
15		Guide bush	PTFE25%C		
17		Scraper	PTFE		
18		Stem guiding	X8CrNiS18-9, 1.4305		
19		Packing box flange	P250GH, 1.0460		X6CrNiMoTi17 12 2, 1.4571
20		Stud	A4-70		
21		Hexagon nuts	A4		
25	x	Distance bush	X20Cr13+QT, 1.4021+QT		X6CrNiMoTi17 12 2, 1.4571
26	x	Packing ring	PTFE or Pure graphite		
28	x	Packing follower	X20Cr13+QT, 1.4021+QT		X6CrNiMoTi17 12 2, 1.4571

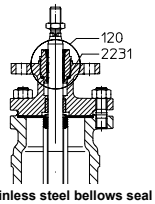
Stem sealings Fig. 470			
100	x	V-ring unit (set)	Set of Pos. 11, 13, 14, 15, 17, 18
120	x	EPDM-sealing, cpl.	EPDM / X8CrNiS18-9, 1.4305
26	x	Packing ring	PTFE
26	x	Packing ring	Pure graphite
		└ Spare parts	



III. Stainless steel-bellow with PTFE-packing / Pure graphite-packing



III. Stainless steel-bellow with V-ring unit



III. Stainless steel bellows seal with EPDM-sealing

Pos.	Sp.p.	Description	Fig. 22.471 / Fig. 23.471	Fig. 34.471 / Fig. 35.471	Fig. 54.471 / Fig. 55.471
1		Body	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	1.4581
2	x	Seat ring	X20Cr13+QT, 1.4021+QT		1.4571
3	x	Plug	X20Cr13+QT, 1.4021+QT		1.4571
4	x	Clamping sleeve	X10CrNi18-8, 1.4310		A2
8	x	Gasket	Pure graphite (CrNi laminated with graphite)		
9		Stud	25CrMo4, 1.7218		A4-70
10		Hexagon nuts	C35E, 1.1181		A4
2201		Bellows housing	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	1.4581
2202		Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	1.4581
2203	x	Stem- / Bellows unit	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541		1.4571
2204		Giude bushing	X20Cr13+QT, 1.4021+QT (hardened)		1.4571
2205		Giude bushing	X20Cr13+QT, 1.4021+QT (hardened)		1.4571
2206	x	Gasket	Pure graphite (CrNi laminated with graphite)		
2207		Stud	25CrMo4, 1.7218		A4-70
2208		Hexagon nuts	C35E, 1.1181		A4
2210	x	Packing ring	Pure graphite or PTFE		
2212	x	Washer	X5CrNi18-10, 1.4301		
2217	x	Screw joint	X8CrNiS18-9, 1.4305		
2212	Set: refer to Pos. 100	Washer	X5CrNi18-10, 1.4301		
2218		Compression spring	X10CrNi18-8, 1.4310		
2221		V-ring unit	PTFE		
2224		Screw joint	X8CrNiS18-9, 1.4305		
2225		Scraper	PTFE		
2226		Gasket	X6CrNiMoTi17-12-2, 1.4571		
2231	x	Gasket	Cu		

Stem sealings Fig. 471			
2210	x	Packing ring	Pure graphite or PTFE
100	x	V-ring unit (set)	Set of Pos. 2212, 2218, 2221, 2224, 2225, 2226
120	x	EPDM-sealing, cpl.	EPDM / X8CrNiS18-9, 1.4305
		└ Spare parts	

*last updated 02/23

Control valve in straightway form with flanges — Fig. 470/471

Dimensions: Standard design with flanges

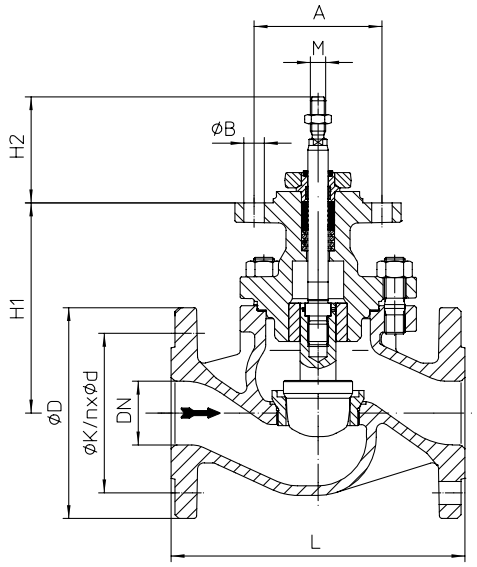


Fig. 470
DN15-150
(e.g.: DP32-34; PREMIO 2,2-25kN; AUMA 07.2-10.2)

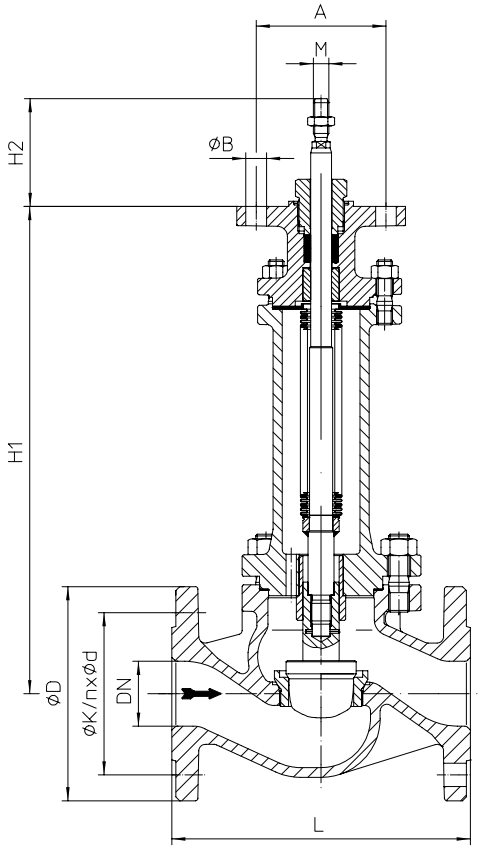


Fig. 471
DN15-150
(e.g.: DP32-34; PREMIO 2,2-25kN; AUMA 07.2-10.2)

DN			15	20	25	32	40	50	65	80	100	125	150
Dimensions													
M	Fig. 470	(mm)	M10				M12			M16 x 1,5			
	Fig. 471	(mm)	M12							M14 x 1,5		M16 x 1,5	
H1	Fig. 470	(mm)	131	131	134	134	165	165	161	194	196	251	256
	Fig. 471	(mm)	288	288	291	291	376	376	385	394	424	577	583
H2	Fig. 470 / 471	(mm)	83										
A	Fig. 470 / 471	(mm)	100										
ØB	Fig. 470 / 471	(mm)	16										
Face-to-face dimension FTF series 1 according to DIN EN 558													
L		(mm)	130	150	160	180	200	230	290	310	350	400	480
Flanges acc. to DIN EN 1092-1/-2			Flange holes / -thickness tolerances acc. to DIN 2533/2544/2545										
ØD	PN16	(mm)	95	105	115	140	150	165	185	200	220	250	285
	PN25 / 40	(mm)									235	270	300
ØK	PN16	(mm)	65	75	85	100	110	125	145	160	180	210	240
	PN25 / 40	(mm)									190	220	250
n x Ød	PN16	(mm)	4 x 14			4 x 18				8 x 18			8 x 22
	PN25 / 40	(mm)	4 x 14			4 x 18			8 x 18		8 x 22	8 x 26	
Weights													
Fig. 470	PN16 / 25	(kg)	7	8	9	10	15	17	21	31	45	66	90
	PN40	(kg)	7	9	10	12	17	19	24	36	52	74	100
Fig. 471	PN16 / 25	(kg)	9	10	10	12	18	20	30	38	53	80	107
	PN40	(kg)	10	11	11	13	19	21	32	41	57	90	114
max. permissible thrust													
Fig. 470		(kN)	12.7				18.2			40.6			
Fig. 471		(kN)	18.2							29.6		40.6	

*last updated 02/23

Control valve in straightway form with pneumatic actuator ARI-DP — Fig. 470/471

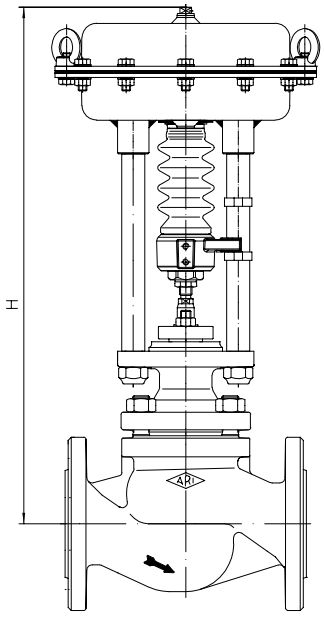


Fig. 470

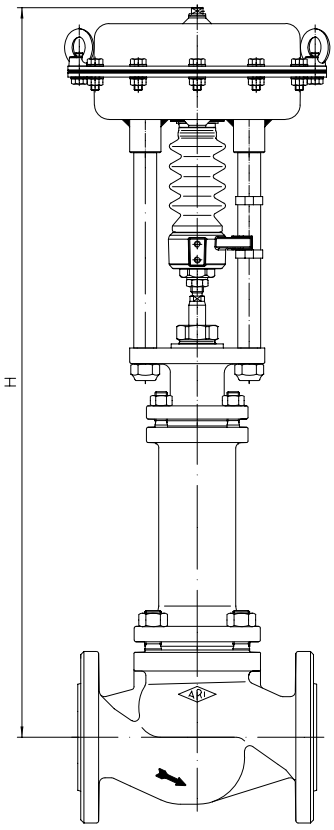


Fig. 471

Applications:

Selection criteria: complex control task, critical operating conditions, specific requirements
Application: process technology, (heavy-) industrial complex, plant construction, chemical industry, power plant technology

Heights and weights

DN				15	20	25	32	40	50	65	80	100	125	150
Fig. 470	DP32	H	(mm)	470	470	473	473	504	504	489	522	524	579	584
		PN16 / 25	(kg)	16	17	18	19	24	26	30	40	54	75	99
		PN 40	(kg)	16	18	19	21	26	28	33	45	61	83	109
	DP33	H	(mm)	525	525	528	528	559	559	555	588	590	645	650
		PN16 / 25	(kg)	22	23	24	25	30	32	36	46	60	81	105
		PN 40	(kg)	22	24	25	27	32	34	39	51	67	89	115
	DP34	H	(mm)	--	--	--	--	694	694	690	723	725	780	785
		PN16 / 25	(kg)	--	--	--	--	60	62	66	76	90	111	135
		PN40	(kg)	--	--	--	--	62	64	69	81	97	119	145
Fig. 471	DP32	H	(mm)	627	627	630	630	715	715	713	722	752	905	911
		PN16 / 25	(kg)	18	19	19	21	27	29	39	47	62	89	116
		PN 40	(kg)	19	20	20	22	28	30	41	50	66	99	123
	DP33	H	(mm)	682	682	685	685	770	770	779	788	818	971	977
		PN16 / 25	(kg)	24	25	25	27	33	35	45	53	68	95	122
		PN40	(kg)	25	26	26	28	34	36	47	56	72	105	129
	DP34	H	(mm)	--	--	--	--	905	905	914	923	953	1106	1112
		PN16 / 25	(kg)	--	--	--	--	63	65	75	83	98	125	152
		PN 40	(kg)	--	--	--	--	64	66	77	86	102	135	159

*last updated 02/23

Closing pressures: Pneumatic actuator ARI-DP32 — Fig. 470/471

DN							15				20					25						32			40		
Parabolic plug	Kvs-value					(m³/h)	0.25/ 0.16/ 0.1	0.63/ 0.4	2.5/ 1.6/ 1	4	0.25/ 0.16/ 0.1	0.63/ 0.4	2.5/ 1.6/ 1	4	6.3	0.25/ 0.16/ 0.1	0.63/ 0.4	2.5/ 1.6/ 1	4	6.3	10	6.3	10	16	10	16	25
	max. diff. pressure[1]					(bar)	40				40					40						40			40		30
Perforated plug	Kvs-value					(m³/h)	--		1.6/ 1	2.5	--			2.5	4	--			2.5	4	6.3	4	6.3	10	6.3	10	16
	max. diff. pressure[1]					(bar)	--		40		--			40		--			40			40			40		
Seat-Ø						(mm)	3	5	12	18	3	5	12	18	22	3	5	12	18	22	25	22	25	32	25	32	40
Travel						(mm)	20				20					20						20			20		30
DP32 250 cm² Spring closes on air failure (stem extending by spring)	Spring range (bar)	0.4-1.2	Air supply pressure min. (bar)[2]	1.4	I.	(bar)	40			25.8	40			25.8	16.8	40			25.8	16.8	12.6	16.8	12.6	7.1	11.9	6.7	3.8
					II.	(bar)	40			21.4	40			21.4	13.8	40			21.4	13.8	10.3	13.8	10.3	5.7	8.8	4.8	2.6
					III.	(bar)	11.2	10.9	9.9	9	11.2	10.9	9.9	9	8.4	9.7	9.4	8.4	7.5	7	6.5	7	6.5	3.6	6.5	3.6	1.8
		0.8-2.4		2.7	I.	(bar)				40				40	40				40	40	31.4	40	31.4	18.7	30.6	18.3	11.3
					II.	(bar)				40				40	37.8				40	37.8	29.1	37.8	29.1	17.3	27.5	16.4	10.1
					III.	(bar)	28.9	28.6	27.6	26.7	28.9	28.6	27.6	26.7	26.2	27.5	27.2	26.2	25.3	24.7	24.3	24.7	24.3	15.2	24.3	15.2	9.3
		1.5-2.9		3.2	I.	(bar)															40		40	39	40	38.6	
					II.	(bar)									40					40		40		37.6	40	36.7	
					III.	(bar)	40				40					40						40		35.5	40	35.5	
		2.0-3.8		4.1	I.	(bar)																	40		40	
					II.	(bar)																	40		40	
					III.	(bar)																	40		40	

DN						50			65			80			100			125		150
Parabolic plug	Kvs-value	(m³/h)	16	25	**40**	25	40	**63**	40	63	**100**	63	100	**160**	100	160	160
	max. diff. pressure[1]	(bar)	40	30		30		15	30	15	8	15	8	4	8	4	4
V-port plug	Kvs-value	(m³/h)	--			--		**63**	--	63	**100**	63	100	**160**	100	160	160
	max. diff. pressure[1]	(bar)	--			--		30	--	30		30		25	30	25	25
Perforated plug	Kvs-value	(m³/h)	10	16	**25**	16	25	**40**	25	40	**63**	40	63	**100**	63	100	100
	max. diff. pressure[1]	(bar)	40	40		40			40			40			40		40
Seat-Ø		(mm)	32	40	50	40	50	65	50	65	80	65	80	100	80	100	100
Travel		(mm)	20	30		30			30			30			30		30
DP32 250 cm² Spring closes on air failure (stem extending by spring)	Spring range (bar)	0.4-1.2	Air supply pressure min. (bar)[2]	1.4	**I.**	(bar)	6.7	3.8	2.1	3.8	2.1		2								
					II.	(bar)	4.8	2.6	1.3	2.6	1.3		1.1								
					III.	(bar)	3.6	1.8		1.8											
		0.8-2.4		2.7	**I.**	(bar)	18.3	11.3	6.9	11.3	6.9	3.8	6.8	3.7	2.2	3.7	2.2	1.2	2.2	1.2	1.2
					II.	(bar)	16.4	10.1	6.1	10.1	6.1	3.3	5.9	3.2	1.9	3.2	1.9	1	1.9	1	1
					III.	(bar)	15.2	9.3	5.6	9.3	5.6	3	5.6	3	1.8	3	1.8		1.5		
		1.5-2.9		3.2	**I.**	(bar)	38.6														
					II.	(bar)	36.7														
					III.	(bar)	35.5														
		2.0-3.8		4.1	**I.**	(bar)	40														
					II.	(bar)	40														
					III.	(bar)	40														

I. Fig. 470: PTFE-V-ring unit / EPDM-sealing
II. Fig. 470: PTFE- / pure graphite-packing
III. Fig. 471: Bellows seal

[1] max. differential pressure drop

[2] Air supply pressure max. to actuator: 6 bar Restriction: a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar

*last updated 02/23

Closing pressures: Pneumatic actuator ARI-DP33 — Fig. 470/471

DN							15				20					25						32			40		
Parabolic plug	Kvs-value					(m^3/h)	0.25/ 0.16/ 0.1	0.63/ 0.4	2.5/ 1.6/ 1	**4**	0.25/ 0.16/ 0.1	0.63/ 0.4	2.5/ 1.6/ 1	4	**6.3**	0.25/ 0.16/ 0.1	0.63/ 0.4	2.5/ 1.6/ 1	4	6.3	**10**	6.3	10	**16**	10	16	**25**
	max. diff. pressure[1]					(bar)	40				40					40						40			40		30
Perforated plug	Kvs-value					(m^3/h)	--		1.6/ 1	**2.5**	--			2.5	**4**	--			2.5	4	**6.3**	4	6.3	**10**	6.3	10	**16**
	max. diff. pressure[1]					(bar)	--		40		--			40		--			40			40			40		
Seat-Ø						(mm)	3	5	12	18	3	5	12	18	22	3	5	12	18	22	25	22	25	32	25	32	40
Travel						(mm)	20				20					20						20			20		30
.DP33 400 cm² Spring closes on air failure (stem extending by spring)	Spring range (bar)	0.2-1.0	Air supply pressure min. (bar)[2]	1.2	I.	(bar)	40c)			18,6c)	40c)			18,6c)	11,9c)	40c)			18,6c)	11,9c)	8,8c)	11,9c)	8,8c)	4,8c)	8a)	4,3a)	2,3a)
					II.	(bar)	40c)		34,4c)	14,2c)	40c)		34,4c)	14,2c)	8,9c)	40c)		34,4c)	14,2c)	8,9c)	6,5c)	8,9c)	6,5c)	3,4c)	5a)	2,4a)	1,1a)
					III.	(bar)	7,5a)	7,2a)	6,2a)	5,4a)	7,5a)	7,2a)	6,2a)	5,4a)	4,8a)	6,1a)	5,8a)	4,8a)	3,9a)	3,3a)	2,9a)	3,3a)	2,9a)	1,2a)	2,9a)	1,2a)	
		0.4-1.2		1.4	I.	(bar)				40c)				40c)	31c)				40c)	31c)	23,7c)	31c)	23,7c)	14c)	22,9a)	13,5a)	8,3a)
					II.	(bar)			40c)				40c)		28c)			40c)	28c)	21,4c)	28c)	21,4c)	12,6c)	19,9a)	11,6a)	7a)
					III.	(bar)	21,7a)	21,4a)	20,4a)	19,5a)	21,7a)	21,4a)	20,4a)	19,5a)	18,9a)	20,2a)	19,9a)	18,9a)	18a)	17,5a)	17a)	17,5a)	17a)	10,5a)	17a)	10,5a)	6,3a)
		0.8-2.4		2.7	I.	(bar)									40a)					40a)		40a)		32,5a)	40	32	20.2
					II.	(bar)									40a)					40a)		40a)		31,1a)	40	30.1	19
					III.	(bar)	40				40					40				40		40		28.9	40	28.9	18.2
		1.5-3.0		3.3	I.	(bar)																					40
					II.	(bar)																					39.9
					III.	(bar)																					39.1
		1.7-2.7		3.1	I.	(bar)																		40a)		40	
					II.	(bar)																		40a)		40	
					III.	(bar)																		40		40	
		2.0-4.0		4.5	I.	(bar)																					
					II.	(bar)																					40
					III.	(bar)																					40

DN						50			65			80			100			125		150
Parabolic plug	Kvs-value	(m^3/h)	16	25	**40**	25	40	**63**	40	63	**100**	63	100	**160**	100	160	160
	max. diff. pressure[1]	(bar)	40	30		30		15	30	15	8	15	8	4	8	4	4
V-port plug	Kvs-value	(m^3/h)	--			--		**63**	--	63	**100**	63	100	**160**	100	160	160
	max. diff. pressure[1]	(bar)	--			---		30	--	30		30		25	30	25	25
Perforated plug	Kvs-value	(m^3/h)	10	16	**25**	16	25	**40**	25	40	**63**	40	63	**100**	63	100	100
	max. diff. pressure[1]	(bar)	40	40		40			40			40			40		40
Seat-Ø		(mm)	32	40	50	40	50	65	50	65	80	65	80	100	80	100	100
Travel		(mm)	20	30		30			30			30			30		30
DP33 400 cm² Spring closes on air failure (stem extending by spring)	Spring range (bar)	0,2-1,0	Air supply pressure min. (bar)[2]	1,2	I.	(bar)	4,3a)	2,3a)	1,1a)	2,3a)	1,1a)		1								
					II.	(bar)	2,4a)	1,1a)		1,1a)											
					III.	(bar)	1,2a)														
		0,4-1,2		1,4	I.	(bar)	13,5a)	8,3a)	4,9a)	8,3a)	4,9a)	2,6a)	4.8	2.5	1.4	2.5	1.4		1.4		
					II.	(bar)	11,6a)	7a)	4,1a)	7a)	4,1a)	2,1a)	3.9	2	1.1	2	1.1		1.1		
					III.	(bar)	10,5a)	6,3a)	3,7a)	6,3a)	3,7a)	1,8a)	3.7	1.8	1	1.8	1				
		0,8-2,4		2,7	I.	(bar)	32	20.2	12.6	20.2	12.6	7.2	12.5	7.1	4.5	7.1	4.5	2.7	4.5	2.7	2,7
					II.	(bar)	30.1	19	11.8	19	11.8	6.7	11.6	6.6	4.1	6.6	4.1	2.5	4.1	2.5	2,5
					III.	(bar)	28.9	18.2	11.3	18.2	11.3	6.4	11.3	6.4	4	6.4	4	2.4	3.7	2.2	2,2
		1,5-3,0		3,3	I.	(bar)		40	26.1	40	26.1	15.2	26	15.1	9.8	15.1	9.8	6.1	9.8	6.1	6,1
					II.	(bar)		39.9	25.3	39.9	25.3	14.7	25.1	14.6	9.5	14.6	9.5	5.9	9.5	5.9	5,9
					III.	(bar)		39.1	24.8	39.1	24.8	14.4	24.8	14.4	9.3	14.4	9.3	5.8	9	5.6	5,6
		1,7-2,7		3,1	I.	(bar)	40														
					II.	(bar)	40														
					III.	(bar)	40														
		2,0-4,0		4,5	I.	(bar)			35.7		35.7	20.9	35.6	20.9	13.6	20.9	13.6	8.5	13.6	8.5	8,5
					II.	(bar)		40	34.9	40	34.9	20.5	34.7	20.4	13.3	20.4	13.3	8.3	13.3	8.3	8,3
					III.	(bar)		40	34.4	40	34.4	20.2	34.4	20.2	13.1	20.2	13.1	8.2	12.9	8.1	8,1

I. Fig. 470: PTFE-V-ring unit / EPDM-sealing
II. Fig. 470: PTFE- / pure graphite-packing
III. Fig. 471: Bellows seal

[1] max. differential pressure drop

[2] Air supply pressure max. to actuator: 6 bar Restriction: a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar

*last updated 02/23

Control valve in straightway form with electric actuator — Fig. 470/471

ARI-PREMIO / PREMIO-Plus 2G

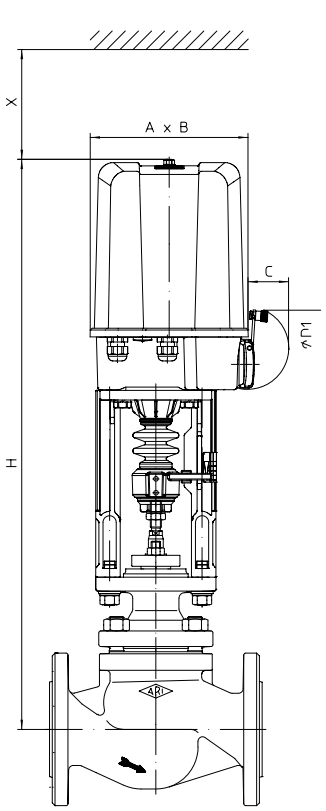


Fig. 470

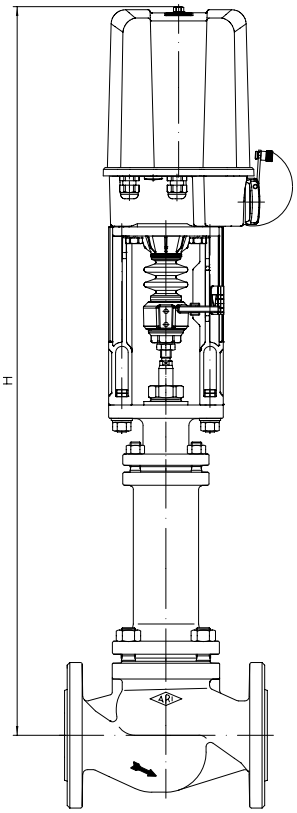


Fig. 471

Applications:

Selection criteria: complex control task, critical operating conditions, specific requirements
Application: process technology, (heavy-) industrial complex, plant construction, chemical industry, power plant technology

Actuator data		2.2 - 5 kN	12 - 25 kN
A	(mm)	171	210
B	(mm)	156	184
C	(mm)	50	90
Ø D1	(mm)	90	130
X	(mm)	150	200

Further technical data of the actuator:
refer to data sheet ARI-PREMIO/PREMIO-Plus 2G

Heights and weights

DN				15	20	25	32	40	50	65	80	100	125	150
Fig. 470	2.2 kN	H	(mm)	579	579	582	582	613	613	609	642	644	719	724
		PN16 / 25	(kg)	13	13	14	15	20	22	26	36	50	71	95
		PN40	(kg)	13	14	15	17	22	24	29	41	57	79	105
	5 kN	H	(mm)	579	579	582	582	613	613	609	642	644	719	724
		PN16 / 25	(kg)	13	14	15	17	21	23	28	38	52	73	97
		PN40	(kg)	14	15	16	18	23	25	31	42	58	81	107
Fig. 471	2.2 kN	H	(mm)	736	736	739	739	824	824	833	842	872	1045	1051
		PN16 / 25	(kg)	14	15	16	17	23	26	35	43	58	85	112
		PN40	(kg)	15	16	17	18	24	27	37	46	62	95	119
	5 kN	H	(mm)	736	736	739	739	824	824	833	842	872	1045	1051
		PN16 / 25	(kg)	15	16	17	18	25	27	36	44	60	87	114
		PN40	(kg)	16	17	18	20	25	28	38	47	63	97	121

*last updated 02/23

Closing pressures: Electric actuator ARI-PREMIO / PREMIO-Plus 2G — Fig. 470/471

DN				15				20					25						32			40		
Parabolic plug	Kvs-value		(m^3/h)	0.25/0.16/0.1	0.63/0.4	2.5/1.6/1	4	0.25/0.16/0.1	0.63/0.4	2.5/1.6/1	4	6.3	0.25/0.16/0.1	0.63/0.4	2.5/1.6/1	4	6.3	10	6.3	10	16	10	16	25
	max. diff. pressure[1]		(bar)	40				40					40						40			40		30
Perforated plug	Kvs-value		(m^3/h)	--		1.6/1	2.5	--			2.5	4	--			2.5	4	6.3	4	6.3	10	6.3	10	16
	max. diff. pressure[1]		(bar)	--		40		--			40		--			40			40			40		
Seat-Ø			(mm)	3	5	12	18	3	5	12	18	22	3	5	12	18	22	25	22	25	32	25	32	40
Travel			(mm)	20				20					20						20			20		30
2.2 kN	Closing pressure	I.	(bar)	40				40					40					35.9	40	35.9	21.6	35.2	21.1	13.2
		II.	(bar)	40				40					40					33.7	40	33.7	20.2	32.1	19.2	11.9
		III.	(bar)	33.3	33	32	31.1	33.3	33	32	31.1	30.5	31.8	31.5	30.5	29.6	29.1	28.6	29.1	28.6	18	28.6	18	11.2
	Operating time		(s)	53				53					53						53			53		79
	Operating speed[2]		(mm/s)	0.38																				
5 kN	Closing pressure	I.	(bar)															40		40		40		34.6
		II.	(bar)															40		40		40		33.4
		III.	(bar)	40				40					40						40			40		32.6
	Operating time		(s)	53				53					53						53			53		79
	Operating speed		(mm/s)	0.38																				
12 kN	Closing pressure	I.	(bar)																					40
		II.	(bar)																					40
		III.	(bar)																					40
	Operating time		(s)																					79
	Operating speed		(mm/s)																					0.38

DN				50			65			80			100			125			150		
Parabolic plug	Kvs-value		(m^3/h)	16	25	40	25	40	63	40	63	100	63	100	160	100	160	250	160	250	400
	max. diff. pressure[1]		(bar)	40	30		30		15	30	15	8	15	8	4	8	4	2	4	2	
V-port plug	Kvs-value		(m^3/h)	--			--		63	--	63	100	63	100	160	100	160	250	160	250	400
	max. diff. pressure[1]		(bar)	--			--		30	--	30		30		25	30	25	15	25	15	
Perforated plug	Kvs-value		(m^3/h)	10	16	25	16	25	40	25	40	63	40	63	100	63	100	160	100	160	250
	max. diff. pressure[1]		(bar)	40	40		40			40			40			40			40		
Seat-Ø			(mm)	32	40	50	40	50	65	50	65	80	65	80	100	80	100	125	100	125	150
Travel			(mm)	20	30		30			30			30			30		50	30	50	
2.2 kN	Closing pressure	I.	(bar)	21.1	13.2	8.1	13.2	8.1	4.5	8	4.4	2.7	4.4	2.7	1.5	2.7	1.5		1.5		
		II.	(bar)	19.2	11.9	7.3	11.9	7.3	4	7.1	3.9	2.3	3.9	2.3	1.3	2.3	1.3		1.3		
		III.	(bar)	18	11.2	6.8	11.2	6.8	3.7	6.8	3.7	2.2	3.7	2.2	1.2	1.9	1		1		
	Operating time		(s)	53	79		79			79			79			79			79		
	Operating speed[2]		(mm/s)	0.38																	
5 kN	Closing pressure	I.	(bar)	40	34.6	21.9	34.6	21.9	12.7	21.8	12.6	8.2	12.6	8.2	5	8.2	5	3.1	5	3,1	2
		II.	(bar)	40	33.4	21.1	33.4	21.1	12.2	20.9	12.1	7.8	12.1	7.8	4.8	7.8	4.8	2.9	4.8	2.9	1.9
		III.	(bar)	40	32.6	20.6	32.6	20.6	11.9	20.6	11.9	7.7	11.9	7.7	4.7	7.4	4.5	2.8	4.5	2.8	1.8
	Operating time		(s)	53	79		79			79			79			79		132	79	132	
	Operating speed		(mm/s)	0,38																	
12 kN	Closing pressure	I.	(bar)		40		40		33.3	40	33.2	21.8	33.2	21.8	13.8	21.8	13.8	8.7	13.8	8.7	5.9
		II.	(bar)		40		40		32.8	40	32.7	21.5	32.7	21.5	13.6	21.5	13.6	8.6	13.6	8.6	5.8
		III.	(bar)		40		40		32.5	40	32.5	21.3	32.5	21.3	13.5	21	13.3	8.4	13.3	8.4	5.7
	Operating time		(s)		79		79			79			79			79		132	79	132	
	Operating speed		(mm/s)		0.38																
15 kN	Closing pressure	I.	(bar)						40		40	27.7	40	27.7	17.6	27.7	17.6	11.1	17.6	11.1	7.6
		II.	(bar)						40		40	27.3	40	27.3	17.3	27.3	17.3	11	17.3	11	7.5
		III.	(bar)						40		40	27.2	40	27.2	17.3	26.9	17.1	10.8	17.1	10.8	7.4
	Operating time		(s)						79		79		79			79		132	79	132	
	Operating speed		(mm/s)				0.38														
25 kN	Closing pressure	I.	(bar)									40		40.1	30.1	40	30.1	19.2	30.1	19.2	13.2
		II.	(bar)									40		40	29.9	40	30.1	19	29.9	19	13.1
		III.	(bar)									40		40	29.8	40	29.6	18.8	29.6	18.8	13
	Operating time		(s)									79		79		79		132	79	132	
	Operating speed		(mm/s)							0.38											
Further operating speeds: refer to data sheet ARI-PREMIO/PREMIO-Plus 2G																					

I. Fig. 470: PTFE-V-ring unit / EPDM-sealing
II. Fig. 470: PTFE- / pure graphite-packing
III. Fig. 471: Bellows seal

$$\text{Operating time [s]} = \frac{\text{Travel [mm]}}{\text{Operating speed [mm/s]}}$$

[1] max. differential pressure drop
[2] Based on a frequency of 50Hz the control speed and power consumption of the synchronous motors PREMIO 2,2kN are 20% higher at frequency of 60 Hz.

*last updated 02/23