

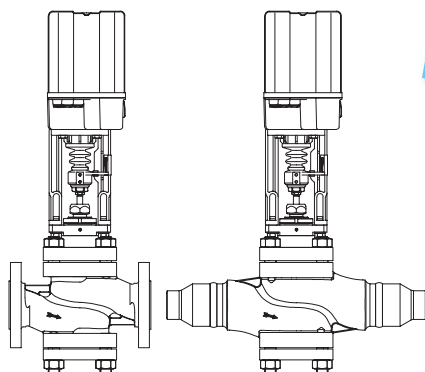
Control valve in straightway form with flanges and butt weld ends (shoed ends)

DN 15 - 100

ARI-STEVI® 472

Electric actuator ARI-PREMIO

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



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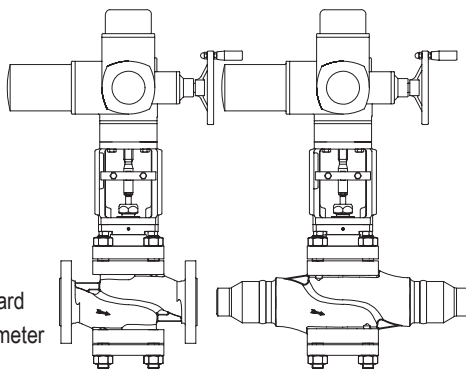


Fig. 472...1

ARI-STEVI® 472

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



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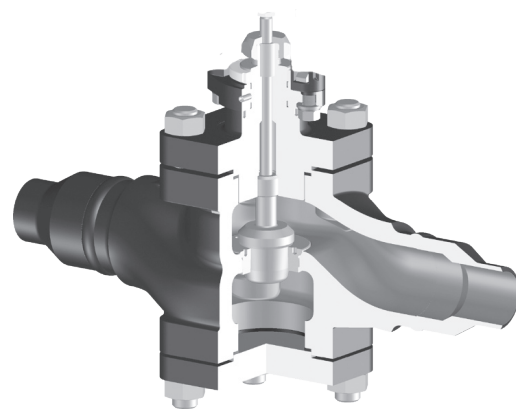
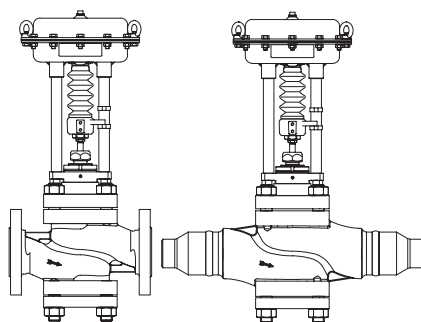


Fig. 472...4

ARI-STEVI® 472

Pneumatic actuator ARI-DP

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



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Features:

- Compact design
- Precision guided stem
- Burnished stem
- Tapered seat ring
- Replaceable seat and plug
- to close 5 Reducible kvs-values
- Rangeability 25 : 1
- Guided plug
- Travel indicator

Control valve in straightway form with electric actuator ARI-PREMIO

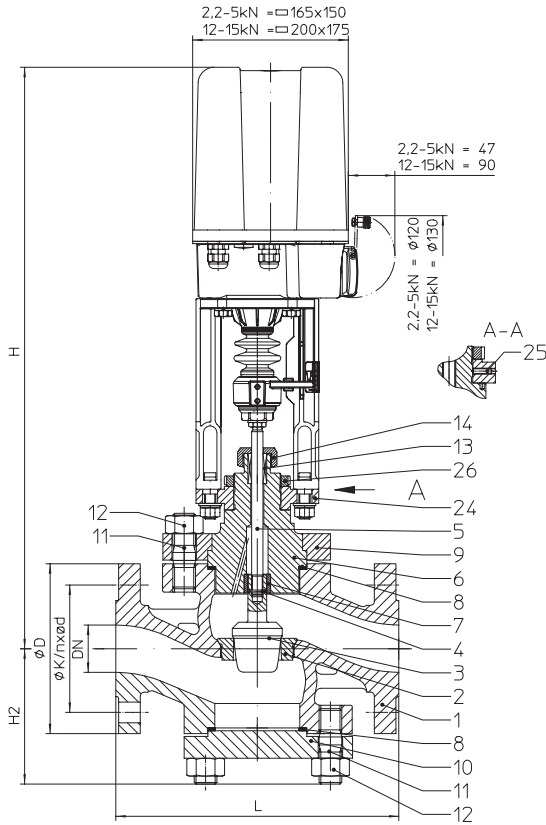


Fig. 472....1

Figure	Nominal pressure	Material	Nominal diameter
36.472	PN63	1.0619+N	DN15-100
37.472	PN100	1.0619+N	DN15-100
38.472	PN160	1.0619+N	DN15-100
86.472	PN63	1.7379	DN15-100
87.472	PN100	1.7379	DN15-100
88.472	PN160	1.7379	DN15-100

Other materials and versions on request.

Stem sealing

- Pure graphite-packing -10°C to 550°C

Plug design

standard: • Parabolic plug, metal seat

optional:

- Perforated plug, metal seat (from DN25)
- Pressure balanced plug, metal seat.
Material of piston seal:
O-ring and glyd ring (max. 200°C)
multi-plate rings (max. 450°C)
piston rings (max. 550°C)

Guiding

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

Flow characteristic

- Equal percentage or linear
(Perforated plug only linear)

Rangeability

- 25 : 1

Shut off class (seat / plug leakage classes) acc. to IEC 60534-4

standard: • Metal / metal - Leakage class IV

optional: • Metal / metal - Pressure balanced plug with O-ring and glyd ring,
Leakage class III

- Metal / metal - Pressure balanced plug with multi-plate rings or piston rings,
Leakage class II

Closing pressures refer to page 4-5.

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

Water and steam

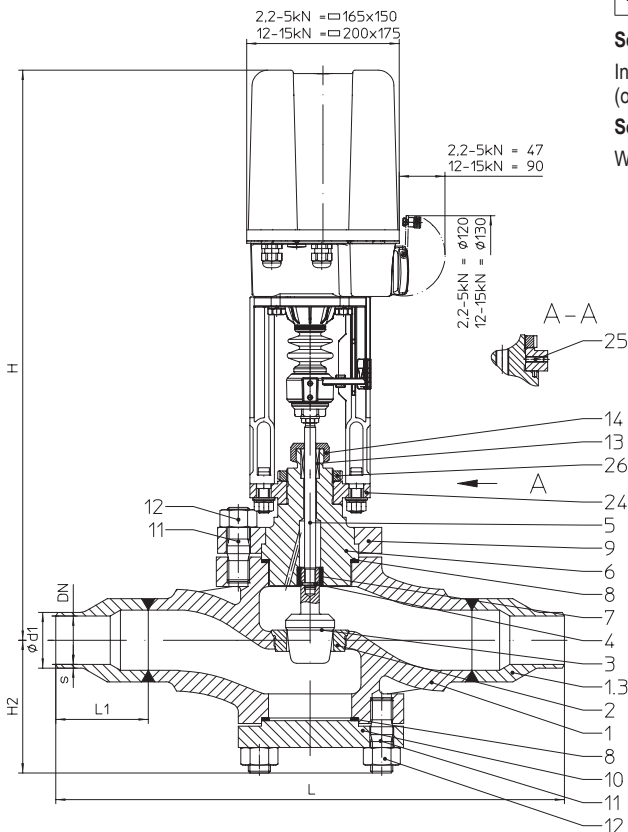


Fig. 472....4

Dimensions and weights

DN		15	25	40	50	65	80	100		
L	(mm)	210	230	260	300	340	380	430		
H2	(mm)	111	111	144	144	144	195	195		
Fig. 472....1	H	(mm)	581	581	622	622	622	679	679	
	H (extended bonnet) ¹⁾	(mm)	681	681	722	722	722	829	829	
	ARI-PREMIO 2,2 kN	PN63-160	(kg)	23,4	30,4	45,4	--	--	--	
	ARI-PREMIO 5 kN	PN63-160	(kg)	24,5	31,5	46,5	56,5	61,5	86,5	121,5
Fig. 472....1	H	(mm)	731	731	772	772	772	807	807	
	H (extended bonnet) ¹⁾	(mm)	831	831	872	872	872	957	957	
	ARI-PREMIO 12 kN	PN63-160	(kg)	28,5	35,5	50,5	60,5	65,5	90,5	125,5
	ARI-PREMIO 15 kN	PN63-160	(kg)	28,5	35,5	50,5	60,5	65,5	90,5	125,5

Standard-flange dimensions refer to page 15.

Face-to-face dimension FTF series 2 acc. to DIN EN 558

DN		15	25	40	50	65	80	100		
L	(mm)	450	450	560	560	560	800	800		
L1	(mm)	75	75	100	100	100	125	125		
H2	(mm)	111	111	144	144	144	195	195		
Fig. 472....4	H	(mm)	581	581	622	622	622	679	679	
	H (extended bonnet) ¹⁾	(mm)	681	681	722	722	700	829	829	
	ARI-PREMIO 2,2 kN	PN63-160	(kg)	25,4	25,4	55,4	--	--	--	
	ARI-PREMIO 5 kN	PN63-160	(kg)	26,5	26,5	56,5	56,5	56,5	86,5	86,5
Fig. 472....4	H	(mm)	731	731	772	772	772	807	807	
	H (extended bonnet) ¹⁾	(mm)	831	831	872	872	872	957	957	
	ARI-PREMIO 12 kN	PN63-160	(kg)	30,5	30,5	60,5	60,5	60,5	90,5	90,5
	ARI-PREMIO 15 kN	PN63-160	(kg)	30,5	30,5	60,5	60,5	60,5	90,5	90,5

Shoed butt weld ends refer to page 15.

¹⁾ at media temperatures >300°C (refer to page 16)

Parts

Pos.	Description	Fig. 36./37./38.472....1	Fig. 36./37./38.472....4	Fig. 86./87./88.472....1	Fig. 86./87./88.472....4
1	Body	GP240GH+N, 1.0619+N		G17CrMo9-10, 1.7379	
1.3	Shoed butt weld ends	--	P250 GH, 1.0460 (optional: 16Mo3, 1.5415)	--	16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)
2	Seat ring *	X6CrNiMoTi17-12-2, 1.4571			
3	Plug *	X6CrNiMoTi17-12-2, 1.4571			
4	Straight pin *	X6CrNiMoTi17-12-2, 1.4571			
5	Stem *	X39CrMo17-1+QT, 1.4122+QT			
6	Stuffing box housing	X6CrNiMoTi17-12-2, 1.4571			
7	Guide bushing	X17CrNi16-2, 1.4057			
8	Gasket *	Pure graphite (CrNi laminated with graphite)			
9	Clamping flange	P250 GH, 1.0460 or P265 GH, 1.0425		16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)	
10	Flange	P250 GH, 1.0460 or P265 GH, 1.0425		16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)	
11	Studs	25CrMo4, 1.7218		21CrMoV 5-7, 1.7709	
12	Hexagon nuts	C35E, 1.1181		25CrMo4, 1.7218	
13	Packing ring *	Pure graphite			
14	Sleeve nut	X5CrNi18-10, 1.4301			
24	Mounting bonnet	S235JR, 1.0037			
25	Grub screw	45H-A2K			
26	Slotted nut	5.8-A2G			

For applications above 400°C the materials may differ!

* Spare parts

Information / restriction of technical rules need to be observed!

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 15.

DN		15				25				40				50				65				
Standard ³⁾ Kvs-value	Seat-Ø (mm)				20				26				40				50				65	
	Kvs-value				4				10				25				40				63	
	Travel (mm)				20				20				30				30				30	
Reduced Kvs-values	Seat-Ø (mm)	6	12	20		12	20			20	26	32		20	26	32	40	26	32	40	50	
	Kvs-value	0,4 / 0,63	1,6 / 1,0	2,5		1,6 / 1,0 / 0,63	6,3 / 4,0 / 2,5			6,3 / 4,0 / 2,5	10	16		6,3	10	16	25	10	16	25	40	
	Travel (mm)	20	20	20		20	20			30	30	30		30	30	30	30	30	30	30	30	
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	15
Actuator ¹⁾ ARI-PREMIO 2,2 kN	Closing pressure (bar)	112,9	106,6	35,4	35,4	106,6	35,4	19,6	35,4	19,6	12,1	7										
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	53				53				79												
Actuator ¹⁾ ARI-PREMIO 5 kN	Closing pressure (bar)	160	160	106,7	106,7	160	106,7	61,8	106,7	61,8	39,9	24,8	106,7	61,8	39,9	24,8	15,3	61,8	39,9	24,8	15,3	8,5
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	53				53				79				79								
Actuator ¹⁾ ARI-PREMIO 12 kN	Closing pressure (bar)	160	160	160	160	160	160	160	160	160	109,6	69,4	160	160	109,6	69,4	43,8	160	109,6	69,4	43,8	25,4
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	53				53				79				79				79				
Actuator ¹⁾ ARI-PREMIO 15 kN	Closing pressure (bar)	160	160	160	160	160	160	160	160	160	139,4	86,5	160	160	139,4	88,5	56	160	139,4	88,5	56	32,6
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	53				53				79				79				79				

DN		80						100													
Standard ³⁾ Kvs-value	Seat-Ø (mm)													80							100
	Kvs-value													100							160
	Travel (mm)													40							40
Reduced Kvs-values	Seat-Ø (mm)	32	40	50	65									40	50	65	80				
	Kvs-value	16	25	40	63									25	40	63	100				
	Travel (mm)	40	40	40	40									40	40	40	40				
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
Actuator ¹⁾ ARI-PREMIO 5 kN	Closing pressure (bar)	38,2	23,7	14,6	8,1	5								23,7	14,6	8,1	5				2,9
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	105						105													
Actuator ¹⁾ ARI-PREMIO 12 kN	Closing pressure (bar)	107,8	38,3	43,1	25	16,1								68,3	43,1	25	16,1				10
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	105						105													
Actuator ¹⁾ ARI-PREMIO 15 kN	Closing pressure (bar)	137,7	87,4	55,3	32,2	20,9								87,4	55,3	32,2	20,9				13,1
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	105						105													

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 16).

⁴⁾ max. perm. differential pressure for perforated plug 40 bar.

max. permissible closing pressures on flow-to-open P2 = 0.
 Observe restrictions by Pressure-temperature-ratings, refer to page 15.

Fig. 472 Pressure balanced plug

DN		40				50					65				
Standard ³⁾ Kvs-value	Seat-Ø (mm)				40					50					65
	Kvs-value				25					40					63
	Travel (mm)				30					30					30
Reduced Kvs-values	Seat-Ø (mm)	20	26	32		20	26	32	40		26	32	40	50	
	Kvs-value	6,3 / 4,0 / 2,5	10	16		6,3	10	16	25		10	16	25	40	
	Travel (mm)	30	30	30		30	30	30	30		30	30	30	30	
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	15
Actuator ¹⁾ ARI-PREMIO 2,2 kN	Closing pressure (bar)	80	70	60	50	80	70	60	50	40					
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	79				79									
Actuator ¹⁾ ARI-PREMIO 5 kN	Closing pressure (bar)	160	160	160	160	160	160	160	160	160	160	160	160	160	160
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	79				79					79				
Actuator ¹⁾ ARI-PREMIO 12 kN	Closing pressure (bar)	160	160	160	160	160	160	160	160	160	160	160	160	160	160
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	79				79					79				
Actuator ¹⁾ ARI-PREMIO 15 kN	Closing pressure (bar)														
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)														

DN		80					100					
Standard ³⁾ Kvs-value	Seat-Ø (mm)						80					100
	Kvs-value						100					160
	Travel (mm)						40					40
Reduced Kvs-values	Seat-Ø (mm)	32	40	50	65		40	50	65	80		
	Kvs-value	16	25	40	63		25	40	63	100		
	Travel (mm)	40	40	40	40		40	40	40	40		
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30
Actuator ¹⁾ ARI-PREMIO 5 kN	Closing pressure (bar)	135	130	120	105	95	130	120	105	95	75	
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	105					105					
Actuator ¹⁾ ARI-PREMIO 12 kN	Closing pressure (bar)	160	160	160	160	160	160	160	160	160	160	
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	105					105					
Actuator ¹⁾ ARI-PREMIO 15 kN	Closing pressure (bar)	160	160	160	160	160	160	160	160	160	160	
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)	105					105					

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 16).

⁴⁾ max. perm. differential pressure for perforated plug 40 bar.

Control valve in straightway form with electric actuator AUMA

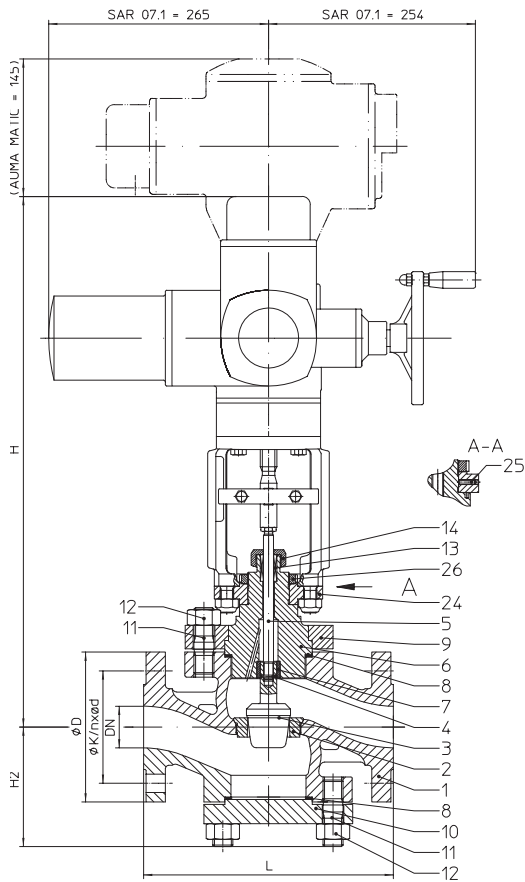


Fig. 472...1

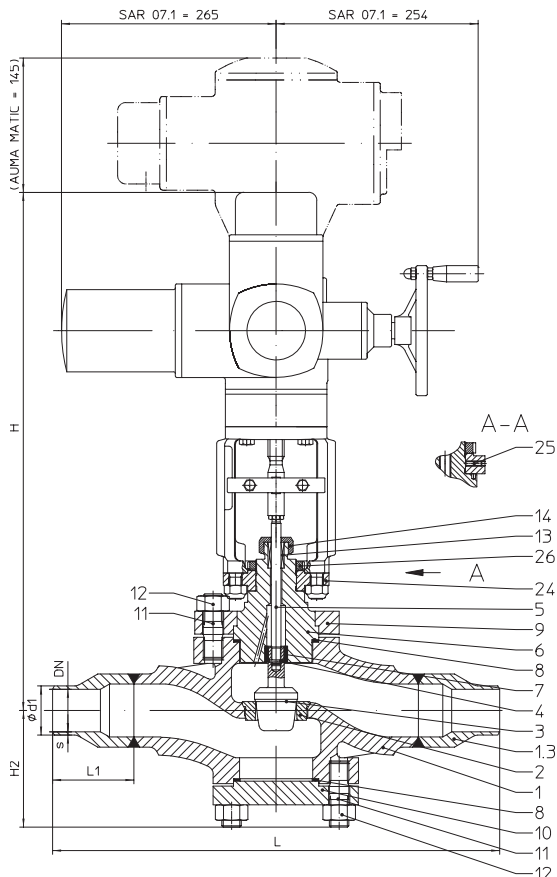


Fig. 472...4

Figure	Nominal pressure	Material	Nominal diameter
36.472	PN63	1.0619+N	DN15-100
37.472	PN100	1.0619+N	DN15-100
38.472	PN160	1.0619+N	DN15-100
86.472	PN63	1.7379	DN15-100
87.472	PN100	1.7379	DN15-100
88.472	PN160	1.7379	DN15-100

Other materials and versions on request.

Stem sealing

- Pure graphite-packing -10°C to 550°C

Plug design

standard: • Parabolic plug, metal seat

optional:

- Perforated plug, metal seat (from DN25)
 - Pressure balanced plug, metal seat.
- Material of piston seal:
 O-ring and glyd ring(max. 200°C)
 multi-plate rings (max. 450°C)
 piston rings (max. 550°C)

Guiding

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

Flow characteristic

- Equal percentage or linear (Perforated plug only linear)

Rangeability

- 25 : 1

Shut off class (seat / plug leakage classes) acc. to IEC 60534-4

standard: • Metal / metal - Leakage class IV

optional: • Metal / metal - Pressure balanced plug with O-ring and glyd ring, Leakage class III

- Metal / metal - Pressure balanced plug with multi-plate rings or piston rings, Leakage class II

Closing pressures refer to page 4-5.

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

Water and steam

Dimensions and weights

DN		15	25	40	50	65	80	100	
L	(mm)	210	230	260	300	340	380	430	
H2	(mm)	111	111	144	144	144	195	195	
Fig. 472....1	H	(mm)	621	621	662	662	719	719	
	H (extended bonnet) ¹⁾	(mm)	721	721	762	762	869	869	
	AUMA SAR 07.1	PN63-160	(kg)	44,3	51,3	66,3	77,8	82,8	107,8

Standard-flange dimensions refer to page 15.

Face-to-face dimension FTF series 2 acc. to DIN EN 558

DN		15	25	40	50	65	80	100	
L	(mm)	450	450	560	560	560	800	800	
L1	(mm)	75	75	100	100	100	125	125	
H2	(mm)	111	111	144	144	144	195	195	
Fig. 472....4	H	(mm)	621	621	662	662	719	719	
	H (extended bonnet) ¹⁾	(mm)	721	721	762	762	869	869	
	AUMA SAR 07.1	PN63-160	(kg)	46,3	46,3	56,3	77,8	77,8	107,8

Shoed butt weld ends refer to page 15.

(For version with AUMA SAR Ex other heights.)

¹⁾ at media temperatures >400°C (refer to page 16)

Parts

Pos.	Description	Fig. 36./37./38.472....1	Fig. 36./37./38.472....4	Fig. 86./87./88.472....1	Fig. 86./87./88.472....4
1	Body	GP240GH+N, 1.0619+N		G17CrMo9-10, 1.7379	
1.3	Shoed butt weld end	--	P250 GH, 1.0460 (optional: 16Mo3, 1.5415)	--	16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)
2	Seat ring *	X6CrNiMoTi17-12-2, 1.4571			
3	Plug *	X6CrNiMoTi17-12-2, 1.4571			
4	Straight pin *	X6CrNiMoTi17-12-2, 1.4571			
5	Stem *	X39CrMo17-1+QT, 1.4122+QT			
6	Stuffing box housing	X6CrNiMoTi17-12-2, 1.4571			
7	Guide bushing	X17CrNi16-2, 1.4057			
8	Gasket *	Pure graphite (CrNi laminated with graphite)			
9	Clamping flange	P250 GH, 1.0460 or P265 GH, 1.0425		16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)	
10	Flange	P250 GH, 1.0460 or P265 GH, 1.0425		16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)	
11	Studs	25CrMo4, 1.7218		21CrMoV 5-7, 1.7709	
12	Hexagon nuts	C35E, 1.1181		25CrMo4, 1.7218	
13	Packing ring *	Pure graphite			
14	Sleeve nut	X5CrNi18-10, 1.4301			
24	Mounting bonnet	S235JR, 1.0037			
25	Grub screw	45H-A2K			
26	Slotted nut	5.8-A2G			

For applications above 400°C the materials may differ!

* Spare parts

Information / restriction of technical rules need to be observed!

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 15.

Fig. 472

DN		15				25				40				50				65					
Standard ⁴⁾ Kvs-value	Seat-Ø (mm)	20				26				40				50				65					
	Kvs-value	4				10				25				40				63					
	Travel (mm)	20				20				30				30				30					
Reduced Kvs-values	Seat-Ø (mm)	6	12	20		12	20		20	26	32		20	26	32	40		26	32	40	50		
	Kvs-value	0,4 / 0,63	1,6 / 1,0	2,5		1,6 / 1,0 / 0,63	6,3 / 4,0 / 2,5		6,3 / 4,0 / 2,5	10	16		6,3	10	16	25		10	16	25	40		
	Travel (mm)	20	20	20		20	20		30	30	30		30	30	30	30		30	30	30	30		
max. perm. differential pressure (bar)	Parabolic plug ⁵⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	15	
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	shut off	160	160	160	160	160	160	160	160	160	128,3	81,4	160	160	128,3	81,4	51,5	160	128,3	81,4	51,5	29,9
		controlling ³⁾	160	160	160	160	160	160	112	160	112	73,1	46	160	112	73,1	46	28,9	112	73,1	46	28,9	16,5
	Torque (Nm)	25																					
	Operating time ²⁾ (s)	54											56										
	Output drive (rpm)	5,6											8										

DN		80								100							
Standard ⁴⁾ Kvs-value	Seat-Ø (mm)									80							
	Kvs-value									100							
	Travel (mm)									40							
Reduced Kvs-values	Seat-Ø (mm)	32	40	50	65					40	50	65	80				
	Kvs-value	16	25	40	63					25	40	63	100				
	Travel (mm)	40	40	40	40					40	40	40	40				
Max. differential pressure drop (bar)	Parabolic plug ⁵⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	shut off	154,3	98	62,1	36,2	23,6	98	62,1	36,2	23,6	14,8					
		controlling ³⁾	71,4	44,9	28,2	16,1	10,3	44,9	28,2	16,1	10,3	6,3					
	Torque (Nm)	30															
	Operating time ²⁾ (s)	75															
	Output drive (rpm)																

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 16).

⁵⁾ max. perm. differential pressure for perforated plug 40 bar.

max. permissible closing pressures on flow-to-open P2 = 0.
Observe restrictions by Pressure-temperature-ratings, refer to page 15.

Fig. 472 Pressure balanced plug

DN		40				50				65									
Standard ⁴⁾ Kvs-value	Seat-Ø (mm)				40					50					65				
	Kvs-value				25					40					63				
	Travel (mm)				30					30					30				
Reduced Kvs-values	Seat-Ø (mm)	20	26	32		20	26	32	40		26	32	40	50					
	Kvs-value	6,3 / 4,0 / 2,5	10	16		6,3	10	16	25		10	16	25	40					
	Travel (mm)	30	30	30		30	30	30	30		30	30	30	30					
max. perm. differential pressure (bar)	Parabolic plug ⁵⁾				30	30	30	30	30	30	30	30	30	30	30	30	30	15	
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	shut off	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	
		controlling ³⁾	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	
	Torque (Nm)		25																
	Operating time ²⁾ (s)		56																
	Output drive (rpm)		8																
DN		80						100											
Standard ⁴⁾ Kvs-value	Seat-Ø (mm)																	100	
	Kvs-value																	160	
	Travel (mm)																	40	
Reduced Kvs-values	Seat-Ø (mm)	32	40	50	65						40	50	65	80					
	Kvs-value	16	25	40	63						25	40	63	100					
	Travel (mm)	40	40	40	40						40	40	40	40					
Max. differential pressure drop (bar)	Parabolic plug ⁵⁾						30	30	30	30	30	30	30	30	30	30	30	30	30
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	shut off	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	
		controlling ³⁾	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	
	Torque (Nm)		30																
	Operating time ²⁾ (s)		75																
	Output drive (rpm)																		

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 16).

⁵⁾ max. perm. differential pressure for perforated plug 40 bar.

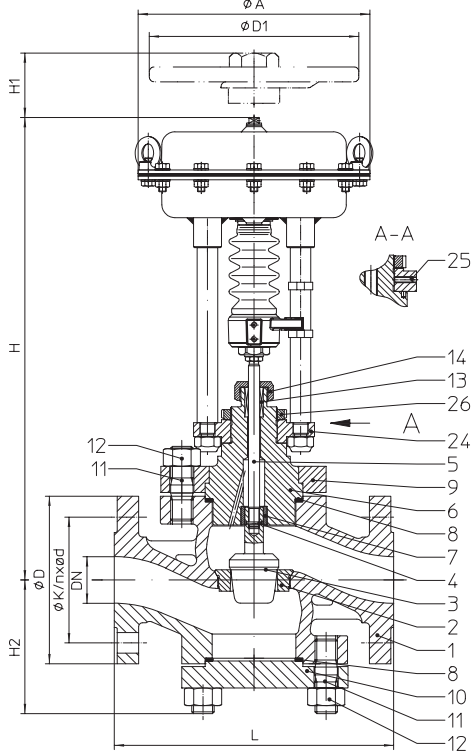
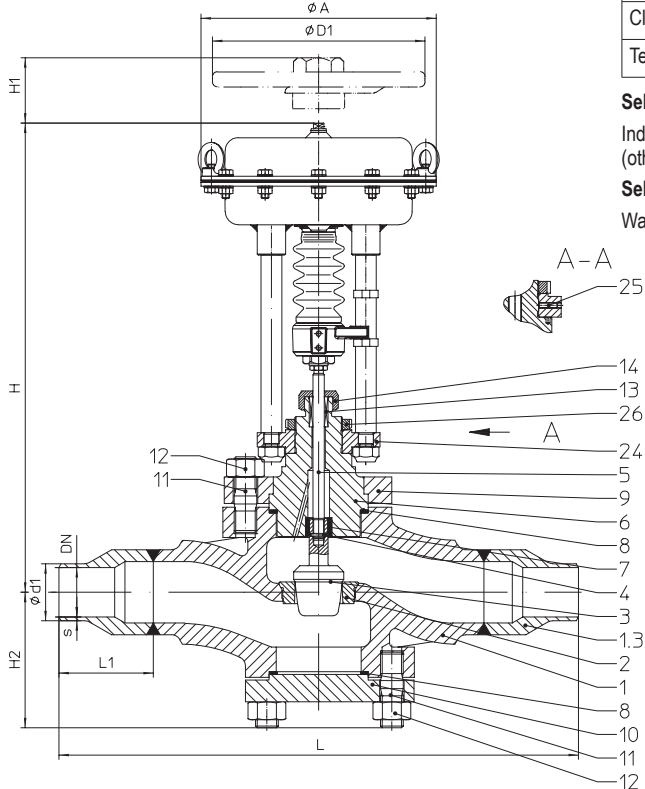
Control valve in straightway form with pneumatic actuator DP

Fig. 472....1

Fig. 472....4

Figure	Nominal pressure	Material	Nominal diameter
36.472	PN63	1.0619+N	DN15-100
37.472	PN100	1.0619+N	DN15-100
38.472	PN160	1.0619+N	DN15-100
86.472	PN63	1.7379	DN15-100
87.472	PN100	1.7379	DN15-100
88.472	PN160	1.7379	DN15-100

Other materials and versions on request.

Stem sealing

- Pure graphite-packing -10°C to 550°C

Plug design

standard: • Parabolic plug, metal seat

optional:

- Perforated plug, metal seat (from DN25)
- Pressure balanced plug, metal seat.
Material of piston seal:
O-ring and glyd ring (max. 200°C)
multi-plate rings (max. 450°C)
piston rings (max. 550°C)

Guiding

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

Flow characteristic

- Equal percentage or linear
(Perforated plug only linear)

Rangeability

- 25 : 1

Shut off class (seat / plug leakage classes) acc. to IEC 60534-4

standard: • Metal / metal - Leakage class IV

 optional: • Metal / metal - Pressure balanced plug with O-ring and glyd ring,
Leakage class III

- Metal / metal - Pressure balanced plug with multi-plate rings or piston rings,
Leakage class II

Closing pressures refer to page 4-5.

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

Water and steam

Top mounted handwheel

Actuator.		DP32	DP33	DP34
$\phi D1$	(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

DN		15	25	40	50	65	80	100		
L	(mm)	210	230	260	300	340	380	430		
H2	(mm)	111	111	144	144	144	195	195		
Fig. 472....1	DP32	H	(mm)	467	467	508	508	497	--	--
		H (extended bonnet) ¹⁾	(mm)	567	567	608	608	597	--	--
		PN63-160	(kg)	27	34	49	59	64	--	--
Fig. 472....1	DP33	H	(mm)	522	522	563	563	563	--	--
		H (extended bonnet) ¹⁾	(mm)	622	622	663	663	663	--	--
		PN63-160	(kg)	33	40	55	65	70	--	--
Fig. 472....1	DP34	H	(mm)	--	--	--	--	--	755	755
		H (extended bonnet) ¹⁾	(mm)	--	--	--	--	--	905	905
		PN63-160	(kg)	--	--	--	--	--	125	160

Standard-flange dimensions refer to page 15.

Face-to-face dimension FTF series 2 acc. to DIN EN 558

DN		15	25	40	50	65	80	100		
L	(mm)	450	450	560	560	560	800	800		
L1	(mm)	75	75	100	100	100	125	125		
H2	(mm)	111	111	144	144	144	195	195		
Fig. 472....4	DP32	H	(mm)	467	467	508	508	497	--	--
		H (extended bonnet) ¹⁾	(mm)	567	567	608	608	597	--	--
		PN63-160	(kg)	29	29	59	59	59	--	--
Fig. 472....4	DP33	H	(mm)	522	522	563	563	563	--	--
		H (extended bonnet) ¹⁾	(mm)	622	622	663	663	663	--	--
		PN63-160	(kg)	35	35	65	65	65	--	--
Fig. 472....4	DP34	H	(mm)	--	--	--	--	--	755	755
		H (extended bonnet) ¹⁾	(mm)	--	--	--	--	--	905	905
		PN63-160	(kg)	--	--	--	--	--	125	125

Shoed butt weld ends refer to page 15.

¹⁾ at media temperatures >300°C (refer to page 16)

Parts

Pos.	Description	Fig. 36./37./38.472....1	Fig. 36./37./38.472....4	Fig. 86./87./88.472....1	Fig. 86./87./88.472....4
1	Body	GP240GH+N, 1.0619+N		G17CrMo9-10, 1.7379	
1.3	Shoed butt weld end	--	P250 GH, 1.0460 (optional: 16Mo3, 1.5415)	--	16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)
2	Seat ring *	X6CrNiMoTi17-12-2, 1.4571			
3	Plug *	X6CrNiMoTi17-12-2, 1.4571			
4	Straight pin *	X6CrNiMoTi17-12-2, 1.4571			
5	Stem *	X39CrMo17-1+QT, 1.4122+QT			
6	Stuffing box housing	X6CrNiMoTi17-12-2, 1.4571			
7	Guide bushing	X17CrNi16-2, 1.4057			
8	Gasket *	Pure graphite (CrNi laminated with graphite)			
9	Clamping flange	P250 GH, 1.0460 or P265 GH, 1.0425		16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)	
10	Flange	P250 GH, 1.0460 or P265 GH, 1.0425		16Mo3, 1.5415 (optional: 10CrMo9-10, 1.7380)	
11	Studs	25CrMo4, 1.7218		21CrMoV 5-7, 1.7709	
12	Hexagon nuts	C35E, 1.1181		25CrMo4, 1.7218	
13	Packing ring *	Pure graphite			
14	Sleeve nut	X5CrNi18-10, 1.4301			
24	Mounting bonnet	S235JR, 1.0037			
25	Grub screw	45H-A2K			
26	Slotted nut	5.8-A2G			

For applications above 400°C the materials may differ!

* Spare parts

Information / restriction of technical rules need to be observed!

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 15.

Fig. 472 Spring closes on air failure																										
DN		15					25					40					50					65				
Standard ³⁾ Kvs-value	Seat-Ø (mm)				20				26				40				50				65					
	Kvs-value				4				10				25				40				63					
	Travel (mm)				20				20				30				30				30					
Reduced Kvs-values	Seat-Ø (mm)	6	12	20		12	20		20	26	32		20	26	32	40		26	32	40	50					
	Kvs-value	0,4 / 0,63	1,6 / 1,0	2,5		1,6 / 1,0 / 0,63	6,3 / 4,0 / 2,5		6,3 / 4,0 / 2,5	10	16		6,3	10	16	25		10	16	25	40					
	Travel (mm)	20	20	20		20	20		30	30	30		30	30	30	30		30	30	30	30					
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	15			
Actuator DP32	Spring range (bar)	Air supply pressure min. (bar)	1,5-2,5	2,8	160	160	73	73	160	73	41,8															
			2,0-3,3	3,6	160	160	104,1	104,1	160	104,1	60,3															
Actuator DP33	Spring range (bar)	Air supply pressure min. (bar)	1,5-3,0 (1,7-2,7)	3,3 (3,1)	(160)	(160)	(148,2)	(148,2)	(160)	(148,2)	(86,4)	128,3	74,6	48,4	30,2	128,3	74,6	48,4	30,2	18,7	74,6	48,4	30,2	18,7	10,6	
			2,0-4,0 (2,3-3,7)	4,5 (4)	(160)	(160)	(160)	(160)	(160)	(160)	(121,6)	160	104	67,8	42,6	160	104	67,8	42,6	26,7	104	67,8	42,6	26,7	15,3	
DN		80										100														
Standard ³⁾ Kvs-value	Seat-Ø (mm)																						100			
	Kvs-value																							160		
	Travel (mm)																							40		
Reduced Kvs-values	Seat-Ø (mm)																									
	Kvs-value																									
	Travel (mm)																									
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30			
Actuator DP34	Spring range (bar)	Air supply pressure min. (bar)	1,5-2,7	3,1	105,6a	66,8a	42,2a	24,4a	15,8a	66,8a	42,2a	24,4a	15,8a	9,8a												
			2,0-3,6	4	144,6	91,8	58,2	33,9	22	91,8	58,2	33,9	22	13,8												
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														

Closing pressures for Fig. 472 pressure balanced plug refer to page 14.

³⁾ Not for perforated plug (presentation ref. to page 16).

⁴⁾ max. perm. differential pressure for perforated plug 40 bar.

max. permissible closing pressures on flow-to-open P2 = 0.
 Observe restrictions by Pressure-temperature-ratings, refer to page 15.

Fig. 472 Spring opens on air failure																							
DN		15					25			40			50				65						
Standard ³⁾ Kvs-value	Seat-Ø (mm)				20			26			40				50					65			
	Kvs-value				4			10			25				40					63			
	Travel (mm)				20			20			30				30					30			
Reduced Kvs-values	Seat-Ø (mm)	6	12	20		12	20		20	26	32		20	26	32	40		26	32	40	50		
	Kvs-value	0,4 / 0,63	1,6 / 1,0	2,5		1,6 / 1,0 / 0,63	6,3 / 4,0 / 2,5		6,3 / 4,0 / 2,5	10	16		6,3	10	16	25		10	16	25	40		
	Travel (mm)	20	20	20		20	20		30	30	30		30	30	30	30		30	30	30	30		
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	15		
Actuator DP32	Air supply pressure min. (bar)	2	160	155,4	52,2	52,2	155,4	52,2	29,2	52,2	29,2	18,2	10,7	52,2	29,2	18,2	10,7	6,1	29,2	18,2	10,7	6,1	2,9
		3		160	130,2	130,2	160	130,2	75,4	130,2	75,4	48,7	30,2	130,2	75,4	48,7	30,2	18,6	75,4	48,7	30,2	18,6	10,3
		4			160	160		160	121,5	160	121,5	79,1	49,7	160	121,5	79,1	49,7	31,1	121,5	79,1	49,7	31,1	17,7
		5							160		160	109,6	69,2		160	109,6	69,2	43,5	160	109,6	69,2	43,5	25,1
		6										140,1	88,7			140,1	88,7	56		140,1	88,7	56	32,5
		Actuator DP33	Air supply pressure max. (bar)	2	160	160	98,4	98,4	160	98,4	56,5	98,4	56,5	36,2	22,2	98,4	56,5	36,2	22,2	13,5	56,5	36,2	22,2
3					160	160		160	130	160	130	84,7	53,3	160	130	47,7	53,3	33,4	130	84,7	53,3	33,4	19,1
4								160		160	133,2	84,3		160	133,2	84,3	53,2	160	133,2	84,3	53,2	30,8	
DN		80										100											
Standard ³⁾ Kvs-value	Seat-Ø (mm)											80									100		
	Kvs-value											100									160		
	Travel (mm)											40									40		
Reduced Kvs-values	Seat-Ø (mm)	32	40	50	65								40	50	65	80							
	Kvs-value	16	25	40	63								25	40	63	100							
	Travel (mm)	40	40	40	40								40	40	40	40							
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
Actuator DP34	Air supply pressure min. (bar)	2	98,8	62,3	39,1	22,5	14,4	62,3	39,1	22,5	14,4	8,8											
		3	160	124,8	79,1	46,1	30	124,8	79,1	46,1	30	18,8											
		4		160	119,1	69,8	45,6	160	119,1	69,8	45,6	28,8											
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																							

Closing pressures for Fig. 472 pressure balanced plug refer to page 14.

³⁾ Not for perforated plug (presentation ref. to page 16).

⁴⁾ max. perm. differential pressure for perforated plug 40 bar.

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

Observe restrictions by Pressure-temperature-ratings, refer to page 15.

Fig. 472 pressure balanced plug spring closes on air failure

DN		25				40				50				65				80				100			
Standard ³⁾ Kvs-value	Seat-Ø (mm)	26				40				50				65				80				100			
	Kvs-value	10				25				40				63				100				160			
	Travel (mm)	20				30				30				30				40				40			
Reduced Kvs-values	Seat-Ø (mm)	20	20	26	32	20	26	32	40	26	32	40	50	32	40	50	65	40	50	65	80	40	50	65	80
	Kvs-value	6,3 / 4,0 / 2,5	6,3 / 4,0 / 2,5	10	16	6,3	10	16	25	10	16	25	40	16	25	40	63	25	40	63	100	25	40	63	100
	Travel (mm)	20	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	40	40	40	40	40	40	40	40
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
Actuator DP32	Spring range (bar)	Air supply pressure min. (bar)	1,5-2,5	2,8	160	160																			
Actuator DP33			1,5-3,0	3,3		160	160	160	160	160	160	160	160	160	160	160	160	160							
Actuator DP34			1,5-2,7	3,1															160a)	160a)	160a)	160a)	160a)	160a)	160a)

Fig. 472 pressure balanced plug spring opens on air failure

DN		40				50				65				80				100							
Standard ³⁾ Kvs-value	Seat-Ø (mm)	40				50				65				80				100							
	Kvs-value	25				40				63				100				160							
	Travel (mm)	30				30				30				40				40							
Reduced Kvs-values	Seat-Ø (mm)	20	26	32	20	26	32	40	26	32	40	50	32	40	50	65	40	50	65	80	40	50	65	80	
	Kvs-value	6,3 / 4,0 / 2,5	10	16	6,3	10	16	25	10	16	25	40	16	25	40	63	25	40	63	100	25	40	63	100	
	Travel (mm)	30	30	30	30	30	30	30	30	30	30	30	30	40	40	40	40	40	40	40	40	40	40	40	
max. perm. differential pressure (bar)	Parabolic plug ⁴⁾	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
Actuator DP32	Air supply pressure min. (bar)	3	160	160	160	160	160	160	160	160	160	160	160	160											
Actuator DP34		2													160	160	160c)	160c)	160c)	160	160	160c)	160c)	160c)	
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			

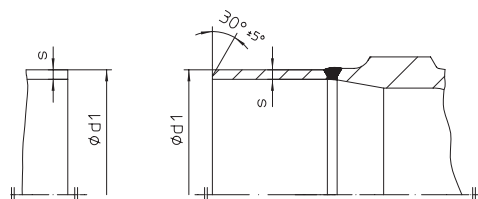
³⁾ Not for perforated plug (presentation ref. to page 16).

⁴⁾ max. perm. differential pressure for perforated plug 40 bar.

Standard-flange dimensions

Flanges acc. to DIN 2636, 2637, 2638

DN			15	25	40	50	65	80	100
PN63	ØD	(mm)	105	140	170	180	205	215	250
PN63	ØK	(mm)	75	100	125	135	160	170	200
PN63	n x Ød	(mm)	4x14	4x18	4x22	4x22	8x22	8x22	8x26
PN100	ØD	(mm)	105	140	170	195	220	230	265
PN100	ØK	(mm)	75	100	125	145	170	180	210
PN100	n x Ød	(mm)	4x14	4x18	4x22	4x26	8x26	8x26	8x30
PN160	ØD	(mm)	105	140	170	195	220	230	265
PN160	ØK	(mm)	75	100	125	145	170	180	210
PN160	n x Ød	(mm)	4x14	4x18	4x22	4x26	8x26	8x26	8x30


Standard-shoed butt weld ends

DN			15	25	40	50	65	80	100
Ød1		(mm)	21,3	33,7	48,3	60,3	76,1	88,9	114,3
s	PN63	(mm)	2	2,6	2,9	2,9	3,2	3,6	4
s	PN100	(mm)	2	2,6	2,9	3,2	3,6	4	6,3
s	PN160	(mm)	2	2,9	3,6	4	5	6,3	8

Pressure-temperature-ratings acc. to manufacturers standard

Material			-10°C to 50°C	100°C	200°C	250°C	300°C	350°C	400°C
1.0619+N	PN63	(bar)	63	55,1	45,9	42	38,1	35,4	34,1
1.0619+N	PN100	(bar)	100	87,5	72,9	66,7	60,4	56,3	54,2
1.0619+N	PN160	(bar)	160	140	116,7	106,7	96,7	90	86,7

Material			-10°C to 400°C	450°C	500°C	520°C	530°C	540°C	550°C
1.7379	PN63	(bar)	63	57,2	35,7	28,4	24,7	21	17,3
1.7379	PN100	(bar)	100	90,8	56,7	45	39,2	33,3	27,5
1.7379	PN160	(bar)	160	145,3	90,7	72	62,7	53,3	44

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

Please indicate when ordering

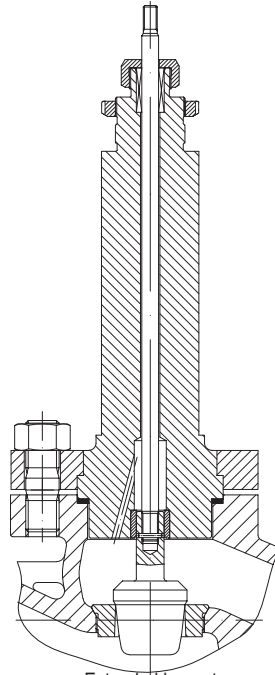
- Figure-No.
- Nominal diameter
- Nominal pressure
- Body material
- Plug design
- Kvs-value
- Flow characteristic
- Actuator
- Special design / accessories

At shoed butt weld ends, please indicate pipe material, pipe diameter, pipewall thickness and bevel form

 Dimensions in mm
 Weights in kg
 Pressures in barg (gauge)
 1 bar $\hat{=}$ 10⁵ Pa $\hat{=}$ 0,1 MPa
 Kvs in m³/h

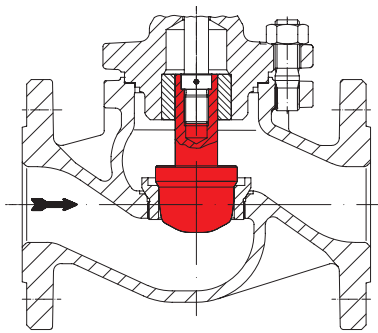
Example:

Figure 36.472, Nominal diameter DN100, Nominal pressure PN63, Body material 1.0619+N, Parabolic plug, Kvs 160, GLP, ARI-PREMIO 5kN.

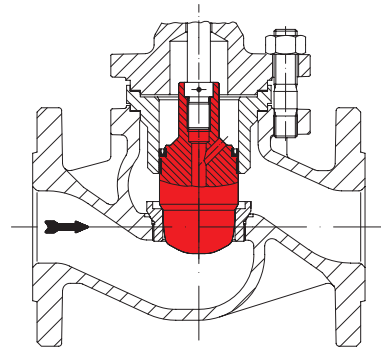


Extended bonnet
at media temperatures >300°C (with ARI-PREMIO and ARI-DP),
resp. >400°C (with AUMA SAR)

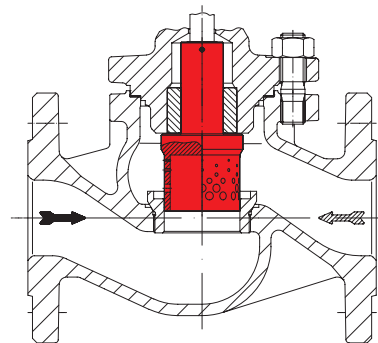
Plug designs



Parabolic plug with post guiding

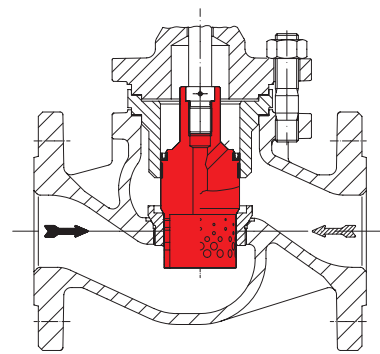


Parabolic pressure balanced plug



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



Perforated pressure balanced plug

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