

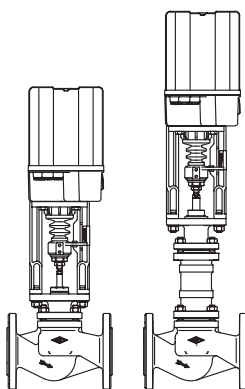
Control valve - straight through with flanges

DN 15 - 250

ARI-STEVI® 440 / 441

Electric actuator ARI-PREMIO

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

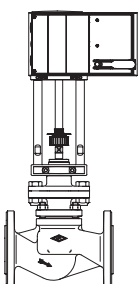


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ARI-STEVI® 440

**Electric actuator FR1
with safety reset**

- Operation mode for safety function CLOSE
- Enclosure IP 66
- Operating time adjustable
- Additional devices available, e.g. potentiometer

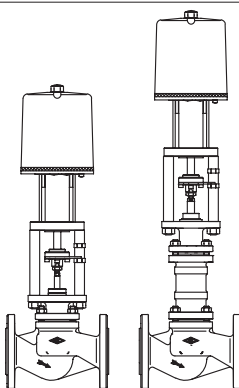


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ARI-STEVI® 440 / 441

**Electric actuator FR2
with safety reset**

- Type approval acc. to DIN 32730 for Fig. 440 with FR 2.1 
- CE-marking from DN15
- Optional direction for safety reset, OPEN or CLOSE, as required
- Enclosure IP 54
- 1 travel switch for OPEN and CLOSE
- Additional devices available, e.g. potentiometer

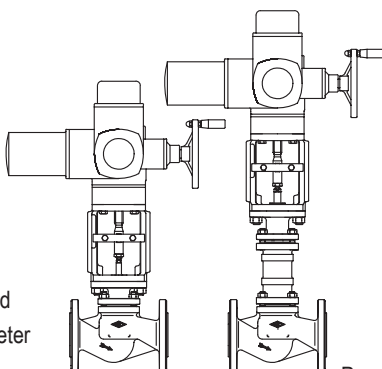


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ARI-STEVI® 440 / 441

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

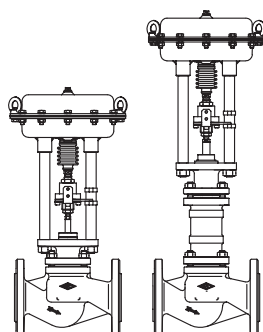


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ARI-STEVI® 440 / 441

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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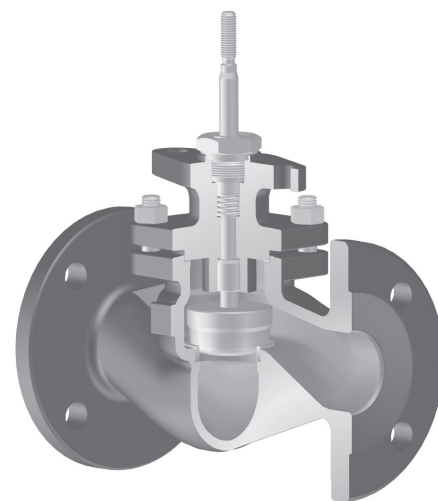


Fig. 440

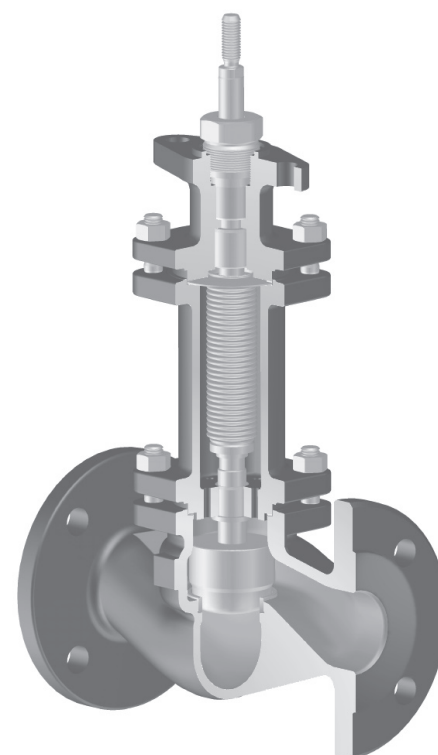


Fig. 441

Features:

- Compact design
- Precision guided stem
- Burnished stem
- Tapered seat ring
- Rangeability 50 : 1
- 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

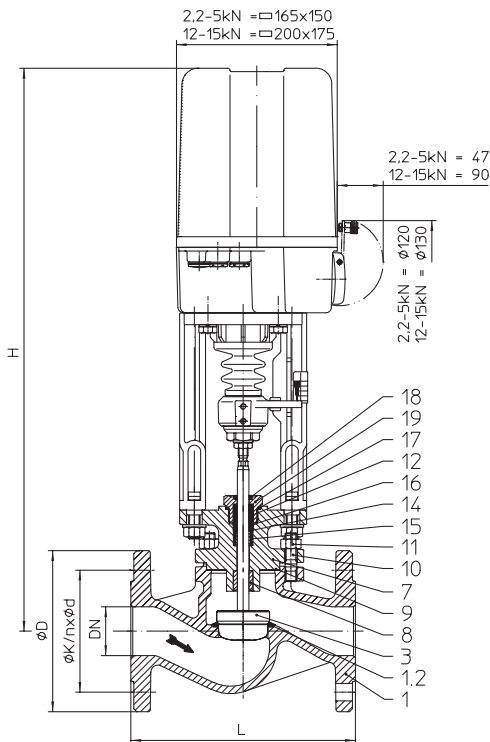


Fig. 440

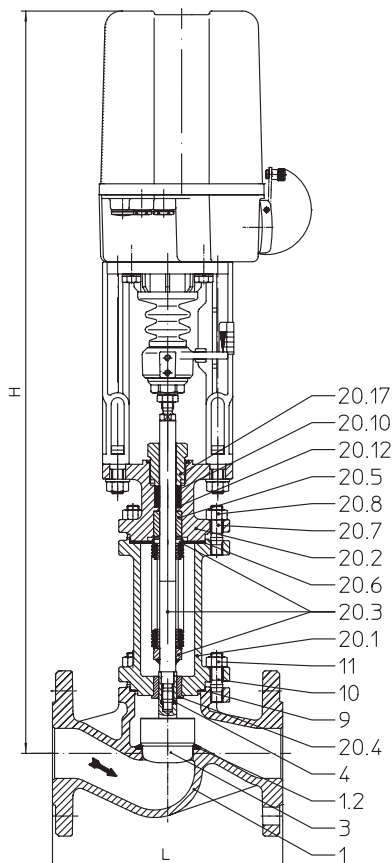


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN15-150
22.440 / 22.441	PN16	EN-JS1049	DN15-150
23.440 / 23.441	PN25	EN-JS1049	DN15-150
34.440 / 34.441	PN25	1.0619+N	DN15-150
35.440 / 35.441	PN40	1.0619+N	DN15-150
55.440 / 55.441	PN40	1.4408	DN15-150

Other materials and versions on request.

Stem sealing

Fig. 440: • PTFE-V-ring unit -10°C up to +220°C
 • PTFE-packing -10°C up to +250°C
 • Pure graphite-packing -10°C up to +450°C

Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard: • Parabolic plug, metal seat

optional:

- Parabolic plug with PTFE soft seat (max. 200°C)
- V-port plug, metal seat
- Parabolic pressure balanced plug, metal seat, Material of piston seal: PTFE with stainless steel spring (max. 200°C)

Guiding

- Parabolic plug: Stem guiding
- V-port plug: Stem and port guiding

Flow characteristic

- Equal percentage or linear (from Kvs 100 modified equal percentage)

Rangeability

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

Shut off class (seat / plug leakage classes)

- Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
- Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

 Fig. 441: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.
 (other flow media on request)

Dimensions and weights

DN			15	20	25	32	40	50	65	80	100	125	150	
L			(mm)	130	150	160	180	200	230	290	310	350	400	480
Fig. 440	H		(mm)	556	556	564	564	571	577	590	605	624	685	745
	ARI-PREMIO 2,2 kN	PN16	(kg)	9	9,7	10,6	12,2	14,1	17	22,1	27,8	38	--	--
		PN25/40	(kg)	9,8	10,6	11,9	13,7	16,2	18,9	26,1	32,3	45	--	--
	ARI-PREMIO 5 kN	PN16	(kg)	10,1	10,8	11,7	13,3	15,2	18,1	23,2	28,9	39	58	80
		PN25/40	(kg)	10,9	11,7	13	14,8	17,3	20	27,2	33,4	46	64	84
	H		(mm)	--	--	---	--	721	727	740	755	774	833	893
	ARI-PREMIO 12 kN	PN16	(kg)	--	--	--	--	19,2	22,1	27,2	32,9	43	62	84
	ARI-PREMIO 15 kN	PN25/40	(kg)	--	--	--	--	21,3	24	31,2	37,4	50	68	88
Fig. 441	H		(mm)	741	741	749	749	740	742	826	838	854	1040	1071
	ARI-PREMIO 2,2 kN	PN16	(kg)	13,4	13,4	14,4	16,9	19,4	21,9	24,9	35,9	51	--	--
		PN25/40	(kg)	15,4	16,9	19,4	22,4	28,4	30,9	37,9	47,9	64	--	--
	ARI-PREMIO 5 kN	PN16	(kg)	14,5	14,5	15,5	18	20,5	23	26	37	53	74	95
		PN25/40	(kg)	16,5	18	20,5	23,5	29,5	32	39	49	66	82	103
	H		(mm)	--	--	--	--	890	892	976	988	1004	1188	1219
	ARI-PREMIO 12 kN	PN16	(kg)	--	--	--	--	24,5	27	30	41	57	78	99
	ARI-PREMIO 15 kN	PN25/40	(kg)	--	--	--	--	33,5	36	43	53	70	86	107

Standard-flange dimensions refer to page 35.

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 55.440 Fig. 55.441
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
5	Stem	X20Cr13+QT, 1.4021+QT (DN125-150)			X6CrNiMoTi17-12-2, 1.4571
7	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
12	V-ring unit *	PTFE			
14	Washer *	X5CrNi18-10, 1.4301			
15	Spring *	X10CrNi18-8, 1.4310			
16	Bushing *	PTFE (reinforced)			
17	Sealing ring *	Cu / Soft iron			
18	Scraper *	PTFE (reinforced)			
19	Screw joint *	X8CrNiS18-9, 1.4305			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.2	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			X6CrNiMoTi17-12-2, 1.4571
20.4	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			
20.7	Studs	25CrMo4, 1.7218			A4 - 70
20.8	Hexagon nuts	C35E, 1.1181			A4
20.10	Packing ring *	Pure graphite			
20.12	Washer *	X5CrNi18-10, 1.4301			
20.17	Screw joint *	X8CrNiS18-9, 1.4305			

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

DN			15	20	25	32	40	50	65	80	100	125	150
Seat-ø (mm)			21	21	27	31	41	51	66	81	101	126	151
Kvs-values	Standard		4	6,3	10	16	25	40	63	100	160	250	400
	Reduced ³⁾		2,5	4; 2,5	6,3	10	16	25	40	63	100	160	250
Travel (mm)			20						30			50	
Max. differential pressure drop (bar)	Parabolic plug		40	40	40	40	30	20	8	4	1,5	1	1
	V-port plug								30	25	25	10	10
Actuator ¹⁾ ARI-PREMIO 2,2 kN	Closing pressure (bar)	I.	40	40	30,8	23,1	12,8	8	4,3	2,7	1,5		
		II.	40	40	28,8	21,6	11,9	7,4	3,9	2,3	1,3		
		III.	30,7	30,7	27,1	20,4	10,6	6,5	3,6	2,2	1,2		
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)		53						79				
Actuator ¹⁾ ARI-PREMIO 5 kN	Closing pressure (bar)	I.			40	40	33,2	21,3	12,3	8	4,9	3	2
		II.			40	40	32,3	20,7	11,9	7,6	4,7	2,9	1,9
		III.	40	40	40	40	31	19,8	11,6	7,5	4,6	2,7	1,8
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)		53						79			132	
Actuator ¹⁾ ARI-PREMIO 12 kN	Closing pressure (bar)	I.					40	40	32,3	21,2	13,5	8,5	5,9
		II.					40	40	31,8	20,9	13,3	8,4	5,8
		III.					40	40	31,6	20,7	13,2	8,2	5,6
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)						53		79			132	
Actuator ¹⁾ ARI-PREMIO 15 kN	Closing pressure (bar)	I.							40	26,9	17,2	10,9	7,5
		II.							40	26,6	17	10,8	7,4
		III.							40	26,4	16,9	10,6	7,3
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)								79			132	

I. Fig. 440: PTFE-V-ring unit;

II. Fig. 440: PTFE- / pure graphite-packing;

III. Fig. 441: Bellows seal

¹⁾ Motor voltage: 230V 50Hz
Special 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⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator ARI-PREMIO

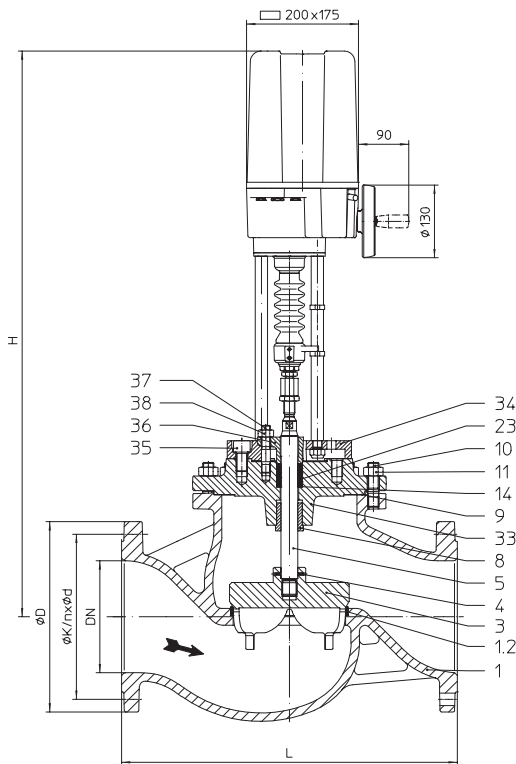


Fig. 440

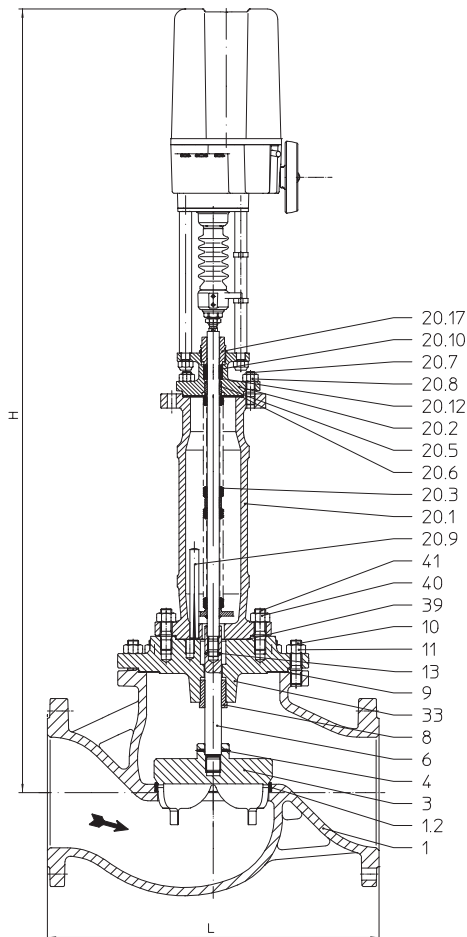


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN200-250
22.440 / 22.441	PN16	EN-JS1049	DN200-250
34.440 / 34.441	PN25	1.0619+N	DN200-250
35.440 / 35.441	PN40	1.0619+N	DN200-250
54.440	PN25	1.4408	DN200-250

Other materials and versions on request.

Stem sealing

Fig. 440: • PTFE-packing -10°C up to +250°C

• Pure graphite-packing -10°C up to +450°C

Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard: • V-port plug, metal seat

optional:

• V-port pressure balanced plug, metal seat,

Material of piston seal:

PTFE with stainless steel spring (max. 200°C)

Guiding

• V-port plug: Stem and port guiding

Flow characteristic

• Modified equal percentage or linear

Rangeability

• 30 : 1

Shut off class (seat / plug leakage classes)

• Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4

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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.

(other flow media on request)

Dimensions and weights

DN				200	250
L		(mm)		600	730
Fig. 440	H	(mm)		1011	1071
	ARI-PREMIO 12 kN	PN16	(kg)	156	261
	ARI-PREMIO 15 kN	PN25/40	(kg)	174	260
Fig. 441	H	(mm)		1433	1493
	ARI-PREMIO 12 kN	PN16	(kg)	178	283
	ARI-PREMIO 15 kN	PN25/40	(kg)	211	317

Standard-flange dimensions refer to page 35.

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 Fig. 22.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 54.440
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		GP240GH+N, 1.0619+N	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
5	Stem *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
6	Stem extension *	X20Cr13+QT, 1.4021+QT			--
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
13	Spannstift *	X10CrNi18-8, 1.4310			--
14	Washer *	X5CrNi18-10, 1.4301			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	--
20.2	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	--
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			--
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			--
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			--
20.7	Studs	25CrMo4, 1.7218			--
20.8	Hexagon nuts	C35E, 1.1181			--
20.9	Straight pin	X20Cr13+QT, 1.4021+QT (hardened)			--
20.10	Packing ring *	Pure graphite			--
20.12	Washer *	X5CrNi18-10, 1.4301			--
20.17	Screw joint *	X8CrNiS18-9, 1.4305			--
23	Packing ring *	PTFE			
33	Stuffing box housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	X6CrNiMoTi17-12-2, 1.4571
34	Adapter flange	EN-GJS-400-18U-LT, EN-JS1049			
35	Hexagon socket head screw	8.8			A2 - 70
36	Packing box flange	EN-GJS-400-15, EN-JS1030			X6CrNiMoTi17-12-2, 1.4571
37	Studs	25CrMo4, 1.7218			A4 - 70
38	Hexagon nuts	C35E, 1.1181			A4
39	Gasket *	Pure graphite (CrNi laminated with graphite)			--
40	Studs	25CrMo4, 1.7218			--
41	Hexagon nuts	C35E, 1.1181			--

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

DN		200	250
Seat-ø (mm)		201	251
Kvs-values	Standard	630	1000
	Reduced ³⁾	400	630
Travel (mm)		65	
Max. differential pressure drop (bar)	V-port plug	5	5
Actuator ¹⁾ ARI-PREMIO 12 kN	Closing pressure (bar)	II.	3,1
		III.	3
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)		171
Actuator ¹⁾ ARI-PREMIO 15 kN	Closing pressure (bar)	II.	4
		III.	4
	Operating time ²⁾ (s) (Op. speed 0,38 mm/s)		171
II. Fig. 440: PTFE- / pure graphite-packing;		III. Fig. 441: Bellows seal	

¹⁾ Motor voltage: 230V 50Hz
Special 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⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator FR 1.2 with safety reset

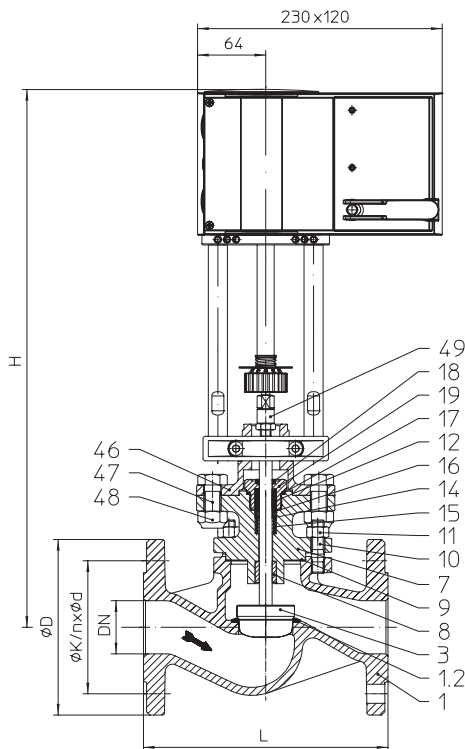


Fig. 440

Figure	Nominal pressure	Material	Nominal diameter
12.440	PN16	EN-JL1040	DN15-100
22.440	PN16	EN-JS1049	DN15-100
23.440	PN25	EN-JS1049	DN15-100
34.440	PN25	1.0619+N	DN15-100
35.440	PN40	1.0619+N	DN15-100
55.440	PN40	1.4408	DN15-100
Other materials and versions on request.			
Stem sealing			
Fig. 440: • PTFE-V-ring unit -10°C to 200°C			
Plug design			
standard: • Parabolic plug, metal seat			
optional:			
• Parabolic plug with PTFE soft seat (max. 200°C)			
• V-port plug, metal seat			
• Parabolic pressure balanced plug, metal seat,			
Material of piston seal:			
PTFE with stainless steel spring (max. 200°C)			
Guiding			
• Parabolic plug: Stem guiding			
• V-port plug: Stem and port guiding			
Flow characteristic			
• Equal percentage or linear			
(from Kvs 100 modified equal percentage)			
Rangeability			
• 50 : 1 on parabolic plug			
• 30 : 1 on V-port plug			
Shut off class (seat / plug leakage classes)			
• Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4			
• Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4			
Closing pressures refer to page 12.			
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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.
 (other flow media on request)

Dimensions and weights

DN				15	20	25	32	40	50	65	80	100
L				(mm)	130	150	160	180	200	230	290	350
Fig. 440	H	FR 1.2	(mm)	502	502	510	510	515	523	536	551	570
	FR 1.2	PN16	(kg)	9,3	10	10,9	12,5	14,4	17,3	22,4	28,1	38
		PN25-40	(kg)	10,1	10,9	12,2	14	16,5	19,2	26,4	32,6	45
	with pressure balanced plug FR 1.2	PN16	(kg)	--	--	--	--	15,4	19,3	25,4	32,1	43
		PN25-40	(kg)	--	--	--	--	17,5	21,2	29,4	36,6	50

Standard-flange dimensions refer to page 35.

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 55.440 Fig. 55.441
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
7	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
12	V-ring unit *	PTFE			
14	Washer *	X5CrNi18-10, 1.4301			
15	Spring *	X10CrNi18-8, 1.4310			
16	Bushing *	PTFE (reinforced)			
17	Sealing ring *	Cu / Soft iron			
18	Scraper *	PTFE (reinforced)			
19	Screw joint *	X8CrNiS18-9, 1.4305			
46	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049			
47	Hexagon screws	5.6			
48	Hexagon nuts	8-A2B			
49	Stem adapter	X20Cr13+QT, 1.4021+QT			
* Spare parts					

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL 1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

Fig. 440 with parabolic plug / V-port plug										
DN		15	20	25	32	40	50	65	80	100
Seat- σ (mm)		21	21	27	31	41	51	66	81	101
Kvs-values	Standard	4	6,3	10	16	25	40	63	100	160
	Reduced ³⁾	2,5	4; 2,5	6,3	10	16	25	40	63	100
Travel (mm)		20						30		
Max. differential pressure drop (bar)	Parabolic plug	40	40	40	40	30	20	8	4	1,5
	V-port plug							30	25	25
Actuator ¹⁾ FR 1.2 2 kN	Closing pressure (bar)	I.	40	40	27,5	20,6	11,3	7	3,8	2,3
	Operating time ²⁾ (s)		40						60	
	Operating time on voltage failure (s)		28						35	

Fig. 440 with parabolic pressure balanced plug (Design refer to page 36)										
DN		15	20	25	32	40	50	65	80	100
Seat- σ (mm)						41	51	66	81	101
Kvs-values	Standard					25	40	63	100	160
	Reduced ³⁾					16	25	40	63	100
Travel (mm)						20		30		
Max. differential pressure drop (bar)	parabolic pressure balanced plug					30	20	8	4	1,5
Actuator ¹⁾ FR 1.2 2 kN	Closing pressure (bar)	I.				40	40	40	40	25
	Operating time ²⁾ (s)					40		60		
	Operating time on voltage failure (s)					28		35		

I. Fig. 440: PTFE-V-ring unit (Medium temperature restricted to 200°C)

1) Motor voltage: 24V 50/60Hz 1~, 24VDC, 230V 50/60Hz 1~
Technical data for actuator refer to data sheet FR1.2

2) Indicated operating times with factory setting.

3) Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator FR 2.1 / FR 2.2 with safety reset

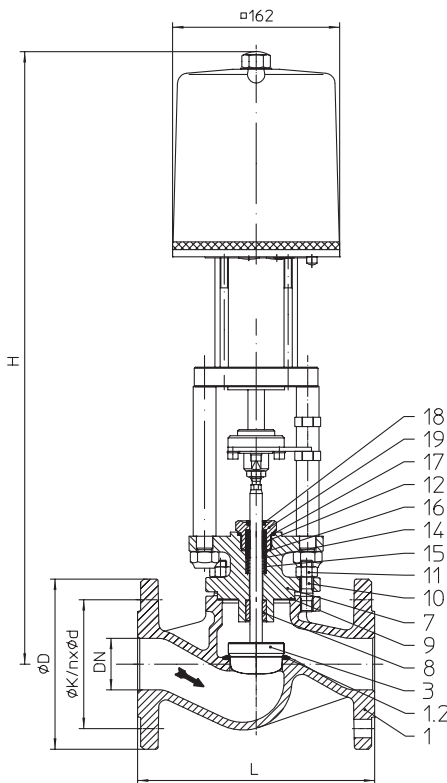


Fig. 440

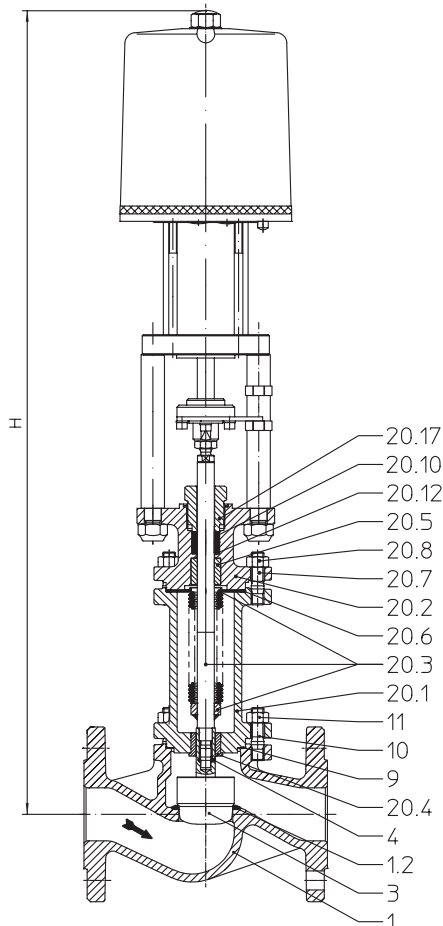


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN15-100
22.440 / 22.441	PN16	EN-JS1049	DN15-100
23.440 / 23.441	PN25	EN-JS1049	DN15-100
34.440 / 34.441	PN25	1.0619+N	DN15-100
35.440 / 35.441	PN40	1.0619+N	DN15-100
55.440 / 55.441	PN40	1.4408	DN15-100

Other materials and versions on request.

U Control valve Type 440 - FR 2.1 acc. to DIN 32730 (EN-JL1040, EN-JS1049, 1.0619+N)

Stem sealing

Fig. 440: • PTFE-V-ring unit -10°C up to +220°C

• PTFE-packing -10°C up to +250°C

• Pure graphite-packing -10°C up to +450°C

Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard: • Parabolic plug, metal seat

optional:

• Parabolic plug with PTFE soft seat (max. 200°C)

• V-port plug, metal seat

• Parabolic pressure balanced plug, metal seat,

Material of piston seal:
PTFE with stainless steel spring (max. 200°C)

Guiding

• Parabolic plug: Stem guiding

• V-port plug: Stem and port guiding

Flow characteristic

• Equal percentage or linear
(from Kvs 100 modified equal percentage)

Rangeability

• 50 : 1 on parabolic plug

• 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)

• Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4

• Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 16.

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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.

(other flow media on request)

Dimensions and weights

DN				15	20	25	32	40	50	65	80	100
L				(mm)	130	150	160	180	200	230	290	350
Fig. 440	H	FR 2.1	(mm)	573	573	581	581	588	594	607	622	641
		FR 2.2	(mm)	591	591	599	599	606	612	625	640	659
	FR 2.1 / 2.2	PN16	(kg)	12,3	13	13,9	15,5	17,4	20,3	25,4	31,1	41
		PN25-40	(kg)	13,1	13,9	15,2	17	19,5	22,2	29,4	35,6	48
	with pressure balanced plug FR 2.1 / 2.2	PN16	(kg)	--	--	--	--	18,4	22,3	28,4	35,1	46
		PN25-40	(kg)	--	--	--	--	20,5	24,2	32,4	39,6	53
Fig. 441	H	FR 2.1	(mm)	758	758	766	766	757	759	843	855	871
		FR 2.2	(mm)	776	776	784	784	775	777	861	873	889
	FR 2.1 / 2.2	PN16	(kg)	16,7	16,7	17,7	20,2	22,7	25,2	28,2	39,2	55
		PN25-40	(kg)	18,7	20,2	22,7	25,7	31,7	34,2	41,2	51,2	68
	with pressure balanced plug FR 2.1 / 2.2	PN16	(kg)	--	--	--	--	23,7	27,2	31,2	43,2	60
		PN25-40	(kg)	--	--	--	--	32,7	36,2	44,2	55,2	73

Standard-flange dimensions refer to page 35.

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 55.440 Fig. 55.441
1	Body	EN-GJL-250, EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
7	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
12	V-ring unit *	PTFE			
14	Washer *	X5CrNi18-10, 1.4301			
15	Spring *	X10CrNi18-8, 1.4310			
16	Bushing *	PTFE (reinforced)			
17	Sealing ring *	Cu / Soft iron			
18	Scraper *	PTFE (reinforced)			
19	Screw joint *	X8CrNiS18-9, 1.4305			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.2	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			X6CrNiMoTi17-12-2, 1.4571
20.4	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			
20.7	Studs	25CrMo4, 1.7218			A4 - 70
20.8	Hexagon nuts	C35E, 1.1181			A4
20.10	Packing ring *	Pure graphite			
20.12	Washer *	X5CrNi18-10, 1.4301			
20.17	Screw joint *	X8CrNiS18-9, 1.4305			

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

Fig. 440 / 441 with parabolic plug / V-port plug											
DN		15	20	25	32	40	50	65	80	100	
Seat-ø (mm)		21	21	27	31	41	51	66	81	101	
Kvs-values	Standard	4	6,3	10	16	25	40	63	100	160	
	Reduced ³⁾	2,5	4; 2,5	6,3	10	16	25	40	63	100	
Travel (mm)		20						30			
Max. differential pressure drop (bar)	Parabolic plug	40	40	40	40	30	20	8	4	1,5	
	V-port plug							30	25	25	
Actuator ¹⁾ FR 2.1 1 kN	Closing pressure (bar)	I. 	18	18	10,3	7,4	3,6	2			
		II.	16	16	9	6,5	3,2	1,7			
		III.	9	9	7,4	5,2	1,9	0,9			
	Operating time ²⁾ (s) (Op. speed 0,29 mm/s)		69								
	Operating time on voltage failure (s)		5,5								
Actuator ¹⁾ FR 2.2 2,2 kN	Closing pressure (bar)	I.	40	40	30,8	23,1	12,8	8	4,3	2,7	1,5
		II.	40	40	28,8	21,6	11,9	7,4	3,9	2,3	1,3
		III.	30,7	30,7	27,1	20,4	10,6	6,5	3,6	2,2	1,2
	Operating time ²⁾ (s) (Op. speed 0,29 mm/s)		69						103		
	Operating time on voltage failure (s)		5,5						8,5		
I. Fig. 440: PTFE-V-ring unit;			II. Fig. 440: PTFE- / pure graphite-packing;					III. Fig. 441: Bellows seal			

Fig. 440 / 441 with parabolic pressure balanced plug (Design refer to page 36)											
DN				25	32	40	50	65	80	100	
Seat-ø (mm)				27	31	41	51	66	81	101	
Kvs-values	Standard			10	16	25	40	63	100	160	
	Reduced ³⁾			6,3	10	16	25	40	63	100	
Travel (mm)				20				30			
Max. differential pressure drop (bar)	Parabolic pressure balanced plug			40	40	30	20	8	4	1,5	
Actuator ¹⁾ FR 2.1 1 kN	Closing pressure (bar)	I. 		20	20	20	16	16	16	12	
		II.				20	16	16			
		III.				16	15	2			
	Operating time ²⁾ (s) (Op. speed 0,29 mm/s)				69				103		
	Operating time on voltage failure (s)				5,5				8,5		
Actuator ¹⁾ FR 2.2 2,2 kN	Closing pressure (bar)	I.				40	40	40	40		
		II.				40	40	40	40		
		III.				40	40	40	40	40	
	Operating time ²⁾ (s) (Op. speed 0,29 mm/s)						69		103		
	Operating time on voltage failure (s)						5,5		8,5		
I. Fig. 440: PTFE-V-ring unit;				II. Fig. 440: PTFE- / pure graphite-packing;				III. Fig. 441: Bellows seal			



Control valve Type 440 - FR 2.1 acc. to DIN 32730 (EN-JL1040, EN-JS1049, 1.0619+N)

1) Motor voltage: 230V 50Hz
Special voltages: 24V 50/60Hz; 230V 60Hz
Technical data for actuator refer to data sheet FR

2) Indicated operating times with 50Hz.

3) Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator AUMA

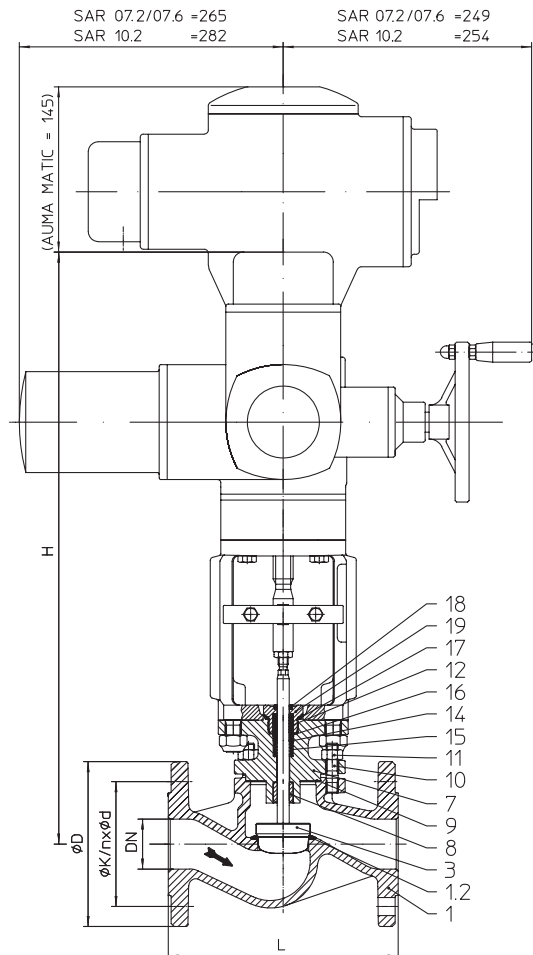


Fig. 440

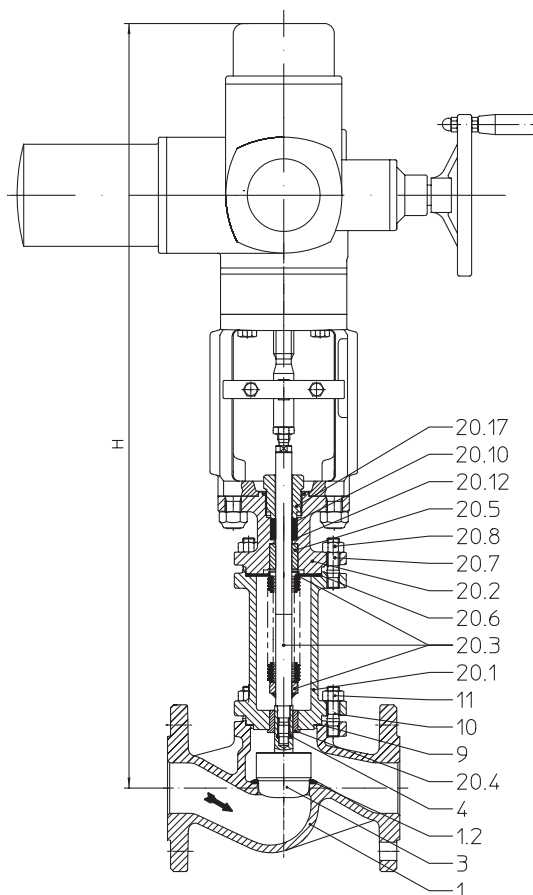


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN40-150
22.440 / 22.441	PN16	EN-JS1049	DN40-150
23.440 / 23.441	PN25	EN-JS1049	DN40-150
34.440 / 34.441	PN25	1.0619+N	DN40-150
35.440 / 35.441	PN40	1.0619+N	DN40-150
55.440 / 55.441	PN40	1.4408	DN40-150

Other materials and versions on request.

Stem sealing

- Fig. 440:
- PTFE-V-ring unit -10°C up to +220°C
 - PTFE-packing -10°C up to +250°C
 - Pure graphite-packing -10°C up to +450°C

- Fig. 441:
- Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard:

- Parabolic plug, metal seat

optional:

- Parabolic plug with PTFE soft seat (max. 200°C)
- V-port plug, metal seat
- Parabolic pressure balanced plug, metal seat,
Material of piston seal:
PTFE with stainless steel spring (max. 200°C)

Guiding

- Parabolic plug: Stem guiding
- V-port plug: Stem and port guiding

Flow characteristic

- Equal percentage or linear
(from Kvs 100 modified equal percentage)

Rangeability

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

Shut off class (seat / plug leakage classes)

- Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
- Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 20.

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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.
(other flow media on request)

Dimensions and weights

DN			40	50	65	80	100	125	150	
L			(mm)	200	230	290	310	350	400	480
Fig. 440	H		(mm)	611	617	630	645	664	703	763
	AUMA SAR 07.1	PN16	(kg)	35	37,9	44,5	50,2	60	79	102
	AUMA SAR 07.6	PN25/40	(kg)	37,1	39,8	48,5	54,7	68	85	105
	H		(mm)	--	--	642	657	676	715	775
	AUMA SAR 10.2	PN16	(kg)	--	--	49	54,7	65	84	106
		PN25/40	(kg)	--	--	53	59,2	72	89	109
Fig. 441	H		(mm)	780	782	866	878	894	1058	1089
	AUMA SAR 07.1	PN16	(kg)	40,3	44,3	47,3	58,3	74	96	116
	AUMA SAR 07.6	PN25/40	(kg)	49,3	53,3	60,3	70,3	87	103	124
	H		(mm)	--	--	--	--	--	1070	1101
	AUMA SAR 10.2	PN16	(kg)	--	--	--	--	--	100	121
		PN25/40	(kg)	--	--	--	--	--	108	129

Standard-flange dimensions refer to page 35.

(For version with AUMA SAR Ex other heights.)

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 55.440 Fig. 55.441
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
5	Stem	X20Cr13+QT, 1.4021+QT (DN125-150)			X6CrNiMoTi17-12-2, 1.4571
7	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
12	V-ring unit *	PTFE			
14	Washer *	X5CrNi18-10, 1.4301			
15	Spring *	X10CrNi18-8, 1.4310			
16	Bushing *	PTFE (reinforced)			
17	Sealing ring *	Cu / Soft iron			
18	Scraper *	PTFE (reinforced)			
19	Screw joint *	X8CrNiS18-9, 1.4305			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.2	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			X6CrNiMoTi17-12-2, 1.4571
20.4	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			
20.7	Studs	25CrMo4, 1.7218			A4 - 70
20.8	Hexagon nuts	C35E, 1.1181			A4
20.10	Packing ring *	Pure graphite			
20.12	Washer *	X5CrNi18-10, 1.4301			
20.17	Screw joint *	X8CrNiS18-9, 1.4305			

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

Fig. 440											
DN			40	50	65	80	100	125	150		
Seat-ø (mm)			41	51	66	81	101	126	151		
Kvs-values	Standard		25	40	63	100	160	250	400		
	Reduced ⁴⁾		16	25	40	63	100	160	250		
Travel (mm)			20		30			50			
Max. differential pressure drop (bar)			Parabolic plug		30	20	8	4	1,5	1	1
			V-port plug				30	25	25	10	10
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	I./II.	shut off		40	40	40	29,7	19	12,1	8,3
			controlling ³⁾		40	36,5	21,4	14	8,8	5,5	3,7
	Torque (Nm)		15	20	30	30	30	30	30	30	
	Operating time ²⁾ (s)		54			56			94		
	Output drive (rpm)		5,6			8			8		
	Actuator ¹⁾ AUMA SAR 07.6 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	I./II.	shut off			40	40	26,9	17,2	11,9
controlling ³⁾					40	30,5	20	12,8	8	5,5	
Torque (Nm)			30	40	60	60	60	60	60		
Operating time ²⁾ (s)			43		64			55			
Output drive (rpm)			5,6		5,6			11			
Actuator ¹⁾ AUMA SAR 10.2 Output drive Form A TR 26 x 5 - LH		Closing pressure (bar)	I./II.	shut off			40	40	31,6	29,3	20,3
	controlling ³⁾				40	40	26,9	17,2	11,9		
	Torque (Nm)				60	60	70	100	100		
	Operating time ²⁾ (s)					64			55		
	Output drive (rpm)					5,6			11		
	I. Fig. 440: PTFE-V-ring unit; II. Fig. 440: PTFE- / pure graphite-packing										

Fig. 441											
DN			40	50	65	80	100	125	150		
Seat-ø (mm)			41	51	66	81	101	126	151		
Kvs-values	Standard		25	40	63	100	160	250	400		
	Reduced ⁴⁾		16	25	40	63	100	160	250		
Travel (mm)			20		30			50			
Max. differential pressure drop (bar)			Parabolic plug		30	20	8	4	1,5	1	1
			V-port plug				30	25	25	10	10
Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 - LH	Closing pressure (bar)	III.	shut off		40	40	40	29,5	18,9	11,9	8,2
			controlling ³⁾		40	35,7	21,1	13,8	8,7	5,6	3,6
	Torque (Nm)		15	20	30	30	30	30	30	30	
	Operating time ²⁾ (s)		54		56			94			
	Output drive (rpm)		5,6		8			8			
Actuator ¹⁾ AUMA SAR 07.6 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	III.	shut off			40	40	30,8	19,7	17	11,7
			controlling ³⁾			40	30,2	19,8	12,6	7,9	5,4
	Torque (Nm)			30	40	45	45	60	60		
	Operating time ²⁾ (s)			43		64		55			
	Output drive (rpm)			5,6		5,6		11			
Actuator ¹⁾ AUMA SAR 10.2 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	III.	shut off						26,1	18,1	
			controlling ³⁾						17	11,7	
	Torque (Nm)							90	90		
	Operating time ²⁾ (s)							55			
	Output drive (rpm)							11			
III. Fig. 441: Bellows seal											

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⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator AUMA

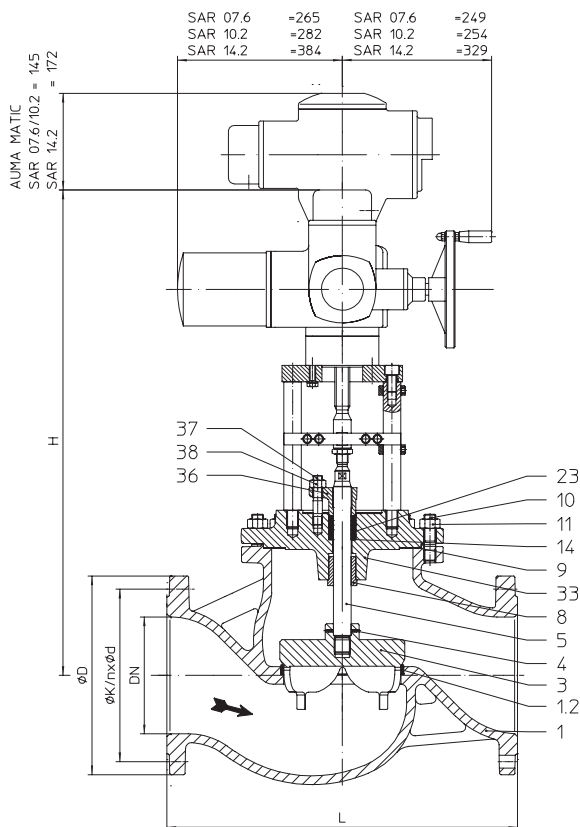


Fig. 440

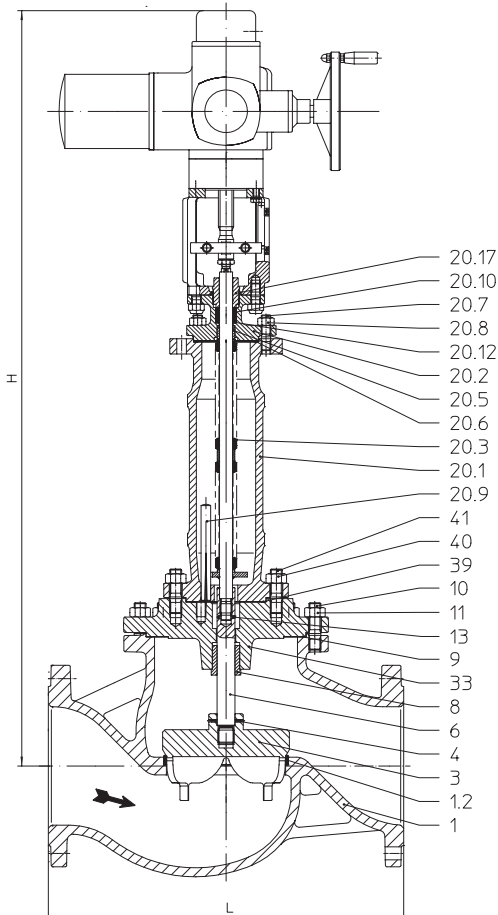


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN200-250
22.440 / 22.441	PN16	EN-JS1049	DN200-250
34.440 / 34.441	PN25	1.0619+N	DN200-250
35.440 / 35.441	PN40	1.0619+N	DN200-250
54.440	PN25	1.4408	DN200-250

Other materials and versions on request.

Stem sealing

Fig. 440: • PTFE-packing -10°C up to +250°C

• Pure graphite-packing -10°C up to +450°C

Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard: • V-port plug, metal seat

optional:

• V-port pressure balanced plug, metal seat,

Material of piston seal:

PTFE with stainless steel spring (max. 200°C)

Guiding

• V-port plug: Stem and port guiding

Flow characteristic

• Modified equal percentage or linear or linear

Rangeability

• 30 : 1

Shut off class (seat / plug leakage classes)

• Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 24.

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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.

(other flow media on request)

Dimensions and weights

Dimensions and weights

DN			200	250	
L			(mm)	600	730
Fig. 440	H		(mm)	776	836
	AUMA SAR 07.6	PN16	(kg)	177	282
		PN25/40	(kg)	215	318
	H		(mm)	956	916
	AUMA SAR 10.2	PN16	(kg)	181	286
		PN25/40	(kg)	219	322
	H		(mm)	931	991
	AUMA SAR 14.2	PN16	(kg)	211	316
PN25/40		(kg)	249	352	
Fig. 441	H		(mm)	1289	1349
	AUMA SAR 07.6	PN16	(kg)	199	304
		PN25/40	(kg)	234	341
	H		(mm)	1301	1361
	AUMA SAR 10.2	PN16	(kg)	204	309
		PN25/40	(kg)	239	345

Standard-flange dimensions refer to page 35.

(For version with AUMA SAR Ex other heights.)

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 Fig. 22.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 54.440
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
5	Stem *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
6	Stem extension *	X20Cr13+QT, 1.4021+QT			--
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
13	Spannstift *	X10CrNi18-8, 1.4310			--
14	Washer *	X5CrNi18-10, 1.4301			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	--
20.2	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	--
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			--
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			--
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			--
20.7	Studs	25CrMo4, 1.7218			--
20.8	Hexagon nuts	C35E, 1.1181			--
20.9	Straight pin	X20Cr13+QT, 1.4021+QT (hardened)			--
20.10	Packing ring *	Pure graphite			--
20.12	Washer *	X5CrNi18-10, 1.4301			--
20.17	Screw joint *	X8CrNiS18-9, 1.4305			--
23	Packing ring *	PTFE			
33	Stuffing box housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	X6CrNiMoTi17-12-2, 1.4571
36	Packing box flange	EN-GJS-400-15, EN-JS1030			X6CrNiMoTi17-12-2, 1.4571
37	Studs	25CrMo4, 1.7218			A4 - 70
38	Hexagon nuts	C35E, 1.1181			A4
39	Gasket *	Pure graphite (CrNi laminated with graphite)			--
40	Studs	25CrMo4, 1.7218			--
41	Hexagon nuts	C35E, 1.1181			--

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

Fig. 440					
DN				200	250
Seat-ø (mm)				201	251
Kvs-values		Standard		630	1000
		Reduced ⁴⁾		400	630
Travel (mm)				65	
Max. differential pressure drop (bar)		V-port plug		5	5
Actuator ¹⁾ AUMA SAR 07.6 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	II.	shut off	6,5	4,1
			controlling ³⁾	2,9	1,8
	Torque (Nm)			60	60
	Operating time ²⁾ (s)			71	
	Output drive (rpm)			11	
Actuator ¹⁾ AUMA SAR 10.2 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	II.	shut off	13,7	8,7
			controlling ³⁾	6,5	4,1
	Torque (Nm)			120	120
	Operating time ²⁾ (s)			71	
	Output drive (rpm)			11	
Actuator ¹⁾ AUMA SAR 14.2 Output drive Form A TR 30 x 6 - LH	Closing pressure (bar)	II.	shut off	23,7	15,1
			controlling ³⁾	11	7
	Torque (Nm)			250	250
	Operating time ²⁾ (s)			59	
	Output drive (rpm)			11	
II. Fig. 440: PTFE- / pure graphite-packing					

II. Fig. 440: PTFE- / pure graphite-packing

Fig. 441						
DN				200		250
Seat-ø (mm)				201		251
Kvs-values		Standard		630		1000
		Reduced ⁴⁾		400		630
Travel (mm)				65		
Max. differential pressure drop (bar)		V-port plug		5		5
Actuator ¹⁾ AUMA SAR 07.6 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	III.	shut off	6,5		4,1
			controlling ³⁾	2,9		1,8
	Torque (Nm)			60		60
	Operating time ²⁾ (s)			71		
	Output drive (rpm)			11		
	Actuator ¹⁾ AUMA SAR 10.2 Output drive Form A TR 26 x 5 - LH	Closing pressure (bar)	III.	shut off	10,1	
controlling ³⁾				6,5		4,1
Torque (Nm)			90		90	
Operating time ²⁾ (s)			71			
Output drive (rpm)			11			

III. Fig. 441: Bellows seal

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⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with pneumatic actuator ARI-DP

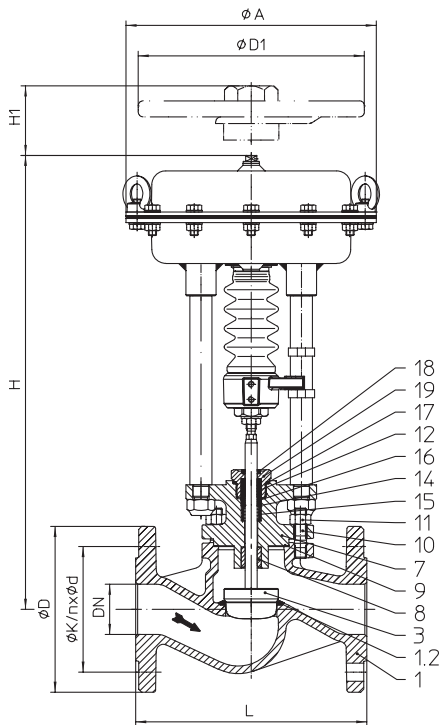


Fig. 440

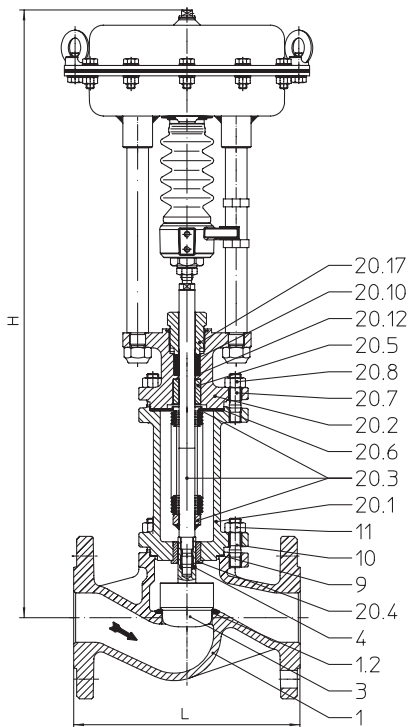


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN15-150
22.440 / 22.441	PN16	EN-JS1049	DN15-150
23.440 / 23.441	PN25	EN-JS1049	DN15-150
34.440 / 34.441	PN25	1.0619+N	DN15-150
35.440 / 35.441	PN40	1.0619+N	DN15-150
55.440 / 55.441	PN40	1.4408	DN15-150

Other materials and versions on request.

Stem sealing

Fig. 440: • PTFE-V-ring unit -10°C up to +220°C

• PTFE-packing -10°C up to +250°C

• Pure graphite-packing -10°C up to +450°C

Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard: • Parabolic plug, metal seat

optional:

• Parabolic plug with PTFE soft seat (max. 200°C)

• V-port plug, metal seat

• Parabolic pressure balanced plug, metal seat,

Material of piston seal:

PTFE with stainless steel spring (max. 200°C)

Guiding

• Parabolic plug: Stem guiding

• V-port plug: Stem and port guiding

Flow characteristic

• Equal percentage or linear
(from Kvs 100 modified equal percentage)

Rangeability

• 50 : 1 on parabolic plug

• 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)

• Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4

• Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 28.

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. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: 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	(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	20	25	32	40	50	65	80	100	125	150	
L			(mm)	130	150	160	180	200	230	290	310	350	400	480
DP32	Ø A		(mm)	250									--	--
	Fig. 440	H	(mm)	442	442	450	450	457	463	476	491	510	--	--
		PN16	(kg)	12,6	13,3	14,2	15,8	17,7	20,6	25,7	31,4	42	--	--
		PN25/40	(kg)	13,4	14,2	15,5	17,3	19,8	22,5	29,7	35,9	49	--	--
	Fig. 441	H	(mm)	627	627	635	635	626	628	712	724	740	--	--
		PN16	(kg)	17	17	18	20,5	23	25,5	28,5	39,5	55	--	--
		PN25/40	(kg)	19	20,5	23	26	32	34,5	41,5	51,5	68	--	--
DP33	Ø A		(mm)	300									--	--
	Fig. 440	H	(mm)	497	497	505	505	512	518	531	546	565	--	--
		PN16	(kg)	18,6	19,3	20,2	21,8	23,7	26,6	31,7	37,4	48	--	--
		PN25/40	(kg)	19,4	20,2	21,5	23,3	25,8	28,5	35,7	41,9	55	--	--
	Fig. 441	H	(mm)	682	682	690	690	681	683	767	779	795	--	--
		PN16	(kg)	23	23	24	26,5	29	31,5	34,5	45,5	61	--	--
		PN25/40	(kg)	25	26,5	29	32	38	40,5	47,5	57,5	74	--	--
DP34	Ø A		(mm)	--	--	--	--	--	--	405				
	Fig. 440	H	(mm)	--	--	--	--	--	--	666	681	700	739	779
		PN16	(kg)	--	--	--	--	--	--	61,7	67,4	78	104	126
		PN25/40	(kg)	--	--	--	--	--	--	65,7	71,9	85	116	148
	Fig. 441	H	(mm)	--	--	--	--	--	--	902	914	930	1074	1105
		PN16	(kg)	--	--	--	--	--	--	64,5	75,5	91	110	143
		PN25/40	(kg)	--	--	--	--	--	--	77,5	87,5	104	123	168

Standard flange dimensions refer to page 35

Standard-flange dimensions refer to page 35.

Face-to-face dimension FTF series 1 according to DIN EN 558

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 55.440 Fig. 55.441
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
5	Stem	X20Cr13+QT, 1.4021+QT (DN125-150)			X6CrNiMoTi17-12-2, 1.4571
7	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
12	V-ring unit *	PTFE			
14	Washer *	X5CrNi18-10, 1.4301			
15	Spring *	X10CrNi18-8, 1.4310			
16	Bushing *	PTFE (reinforced)			
17	Sealing ring *	Cu / Soft iron			
18	Scraper *	PTFE (reinforced)			
19	Screw joint *	X8CrNiS18-9, 1.4305			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.2	Mounting bonnet	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			X6CrNiMoTi17-12-2, 1.4571
20.4	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			
20.7	Studs	25CrMo4, 1.7218			A4 - 70
20.8	Hexagon nuts	C35E, 1.1181			A4
20.10	Packing ring *	Pure graphite			
20.12	Washer *	X5CrNi18-10, 1.4301			
20.17	Screw joint *	X8CrNiS18-9, 1.4305			

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

Spring closes on air failure

DN					15	20	25	32	40	50	65	80	100	125	150	
Seat-ø (mm)					21	21	27	31	41	51	66	81	101	126	151	
Kvs-values			Standard		4	6,3	10	16	25	40	63	100	160	250	400	
			Reduced ¹⁾		2,5	4; 2,5	6,3	10	16	25	40	63	100	160	250	
Travel (mm)					20						30			50		
Max. differential pressure drop (bar)			Parabolic plug		40	40	40	40	30	20	8	4	1,5	1	1	
			V-port plug								30	25	25	10	10	
Actuator DP32	Spring range (bar)	0,2-1,0	Air supply pressure min. (bar)	1,2	I.	5,5	5,5	2,6	1,6							
					II.	2,3	2,3									
					III.											
		0,4-1,2		1,4	I.	18,6	18,6	10,7	7,8	3,9	2,2					
					II.	15,4	15,4	8,7	6,2	3	1,6					
					III.	8,6	8,6	7,1	5	1,7						
		0,8-2,4		2,7	I.	40	40	26,8	20,1	11	6,8	3,7	2,2	1,2		
					II.	40	40	24,8	18,6	10,2	6,3	3,2	1,9	1		
					III.	26,4	26,4	23,2	17,3	8,9	5,4	2,9	1,7			
		1,5-2,5	2,8	I.			40	40	23,5	15						
				II.			40	40	22,7	14,4						
				III.	40	40	40	38,9	21,4	13,6						
		2,0-3,3	3,6	I.					32,5	20,8						
				II.					31,6	20,2						
				III.				40	30,3	19,4						
Actuator DP33	Spring range (bar)	Air supply pressure min. (bar)	0,2-1,0	1,2	I.	13,3 c)	13,3 c)	7,4c)	5,2 c)	2,4 c)	1,2 c)					
					II.	10,1 c)	10,1 c)	5,4 c)	3,7 c)	1,5 c)						
					III.	5 a)	5 a)	3,8 a)	2,5 a)							
			0,4-1,2	1,4	I.	34,2 c)	34,2 c)	20,2 c)	15,1 c)	8,1 c)	4,9 c)	2,5	1,4			
					II.	31 c)	31 c)	18,3 c)	13,6 c)	7,3 c)	4,4 c)	2,1	1,1			
					III.	19,1 a)	19,1 a)	16,6 a)	12,3 a)	5,9 a)	3,5 a)	1,8 a)				
			0,8-2,4	2,7	I.	40 a)	40 a)	40 a)	34,7 a)	19,5 a)	12,3 a)	7	4,4	2,6		
					II.	40 a)	40 a)	40 a)	33,2 a)	18,6 a)	11,8 a)	6,5	4,1	2,4		
					III.	40	40	40	31,9	17,3	10,9	6,2	3,9	2,3		
			1,5-3,0	3,3	I.							14,8	9,6	6		
					II.							14,3	9,3	5,8		
					III.							14	9,1	5,7		
			1,7-2,7	3,1	I.				40 a)	40 a)	29 a)					
					II.				40 a)	40 a)	28,4 a)					
					III.				40	40	27,6					
			2,0-4,0	4,5	I.							20,3	13,3	8,4		
					II.							19,9	12,9	8,2		
					III.							19,6	12,8	8,1		
			2,3-3,7	4,5	I.					40						
					II.					39,5						
					III.					38,6						
Actuator DP34	Spring range (bar)	Air supply pressure min. (bar)	0,2-1,0	1,2	I.						2,5 b)	1,5 b)				
					II.						2,1 b)	1,2 b)				
					III.						1,8 e)	1 e)				
			0,4-1,2	1,4	I.						7 b)	4,4 b)	2,7 b)	1,6	1	
					II.						6,6 b)	4,1 b)	2,5 b)	1,4		
					III.						6,3 d)	3,9 d)	2,3 d)	1,2 a)		
			0,8-2,4	2,7	I.						16	10,4	6,5	4	2,7	
					II.						15,5	10,1	6,3	3,9	2,6	
					III.						15,2 b)	9,9 b)	6,2 b)	3,7	2,5	
			1,5-3,0	3,3	I.									8,4	5,7	
					II.									8,2	5,6	
					III.									8,1	5,5	
			2,0-4,0	4,5	I.									11,5	7,9	
					II.									11,3	7,8	
					III.									11,2	7,7	
			2,1-3,0	3,3	I.						40	29,7	19			
					II.						40	29,4	18,8			
					III.						40 a)	29,2 a)	18,7 a)			
2,4-3,6	4,5	I.							34,2	21,9						
		II.							33,9	21,7						
		III.														

¹⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
 For max. permissible closing pressures refer to corresponding data sheet.

max. permissible
 max. permissible
 Air supply pressure max. of pneumatic actuators DP:
 Air supply pressure max. limit of control valve:

I. Fig. 440: PTFE-V-ring unit;

II. Fig. 440: PTFE- / pure graphite-packing;

III. Fig. 441: Bellows seal

max. permissible closing pressures on flow-to-open P2 = 0
 Observe restrictions by Pressure-temperature-ratings, refer to page 35.

Spring opens on air failure

DN		15	20	25	32	40	50	65	80	100	125	150
Seat-ø (mm)		21	21	27	31	41	51	66	81	101	126	151
Kvs-values	Standard	4	6,3	10	16	25	40	63	100	160	250	400
	Reduced ¹⁾	2,5	4; 2,5	6,3	10	16	25	40	63	100	160	250
Travel (mm)		20						30			50	
Max. differential pressure drop (bar)	Parabolic plug	40	40	40	40	30	20	8	4	1,5	1	1
	V-port plug							30	25	25	10	10
Actuator DP32	Air supply pressure min. (bar)	1,4	I.	18,6	18,6	10,7	7,8	3,9	2,2			
			II.	15,4	15,4	8,7	6,2	3	1,6			
			III.	8,6	8,6	7,1	5	1,7				
		2	I.	40	40	34,9	26,3	14,6	9,2	5	3,1	1,8
			II.	40	40	32,9	24,8	13,7	8,6	4,6	2,8	1,6
			III.	35,2	35,2	31,3	23,5	12,4	7,7	4,3	2,6	1,5
		3	I.			40	40	32,5	20,8	12	7,8	4,8
			II.			40	40	31,6	20,2	11,6	7,5	4,6
			III.	40	40	40	40	30,3	19,4	11,3	7,3	4,5
		4	I.				40	32,4	19	12,4	7,8	
			II.				40	31,8	18,6	12,1	7,6	
			III.				40	31	18,3	11,9	7,5	
		5	I.				40	26	17	10,8		
			II.				40	25,6	16,7	10,6		
			III.				40	25,3	16,5	10,5		
		6	I.					33	21,7	13,8		
			II.					32,6	21,4	13,6		
			III.					32,3	21,2	13,5		
Actuator DP33	Air supply pressure min. (bar)	1,4	I.	34,2 d)	34,2 d)	20,2 d)	15,1 d)	8,1 d)	4,9 d)	2,5 d)	1,4 d)	
			II.	31 d)	31 d)	18,3 d)	13,6 d)	7,3 d)	4,4 d)	2,1 d)	1,1 d)	
			III.	19,1 d)	19,1 d)	16,6 d)	12,3 d)	5,9 d)	3,5 d)	1,8 d)		
		2	I.	40 d)	40 d)	40 d)	40 d)	25,2 d)	16 d)	9,2 d)	5,9 d)	3,6 d)
			II.	40 d)	40 d)	40 d)	40 d)	24,3 d)	15,5 d)	8,7 d)	5,6 d)	3,4 d)
			III.	40 d)	40 d)	40 d)	40 d)	23 d)	14,6 d)	8,4 d)	5,4 d)	3,3 d)
		3	I.				40 d)	34,6 d)	20,3 d)	13,3 d)	8,4 d)	
			II.				40 d)	34 d)	19,9 d)	12,9 d)	8,2 d)	
			III.				40 d)	33,1 d)	19,6 d)	12,8 d)	8,1 d)	
		4	I.				40 c)	31,4	20,6	13,1		
			II.				40 c)	31	20,3	12,9		
			III.				40 a)	30,7 a)	20,1 a)	12,8 a)		
		5	I.					40	28	17,9		
			II.					40	27,7	17,7		
			III.					40 a)	27,5 a)	17,6 a)		
		6	I.						35,4	22,7		
			II.						35,1	22,5		
Actuator DP34	Air supply pressure min. (bar)	1,4	I.					7 b)	4,4 b)	2,7 b)	1,6	1
			II.					6,6 b)	4,1 b)	2,5 b)	1,4	
			III.					6,3 e)	3,9 e)	2,3 e)	1,2 a)	
		2	I.					20,5 b)	13,3 b)	8,4 b)	5,3	3,6
			II.					20 b)	13 b)	8,2 b)	5,1	3,5
			III.					19,7 e)	12,9 e)	8,1 e)	5 a)	3,4 a)
		3	I.					40 b)	28,2 b)	18 b)	11,5	7,9
			II.					40 b)	27,9 b)	17,8 b)	11,3	7,8
			III.					40 e)	27,7 e)	17,7 e)	11,2 a)	7,7 a)
		4	I.						40 b)	27,6 b)	17,7	12,2
			II.						40 b)	27,5 b)	17,5	12,1
			III.								17,4 a)	12 a)
		5	I.								23,9	16,6
			II.								23,7	16,5
			III.								23,6 a)	16,3 a)
		6	I.								30,9	20,9
			II.								29,9	20,8

I. Fig. 440: PTFE-V-ring unit;

Air supply pressure max. of pneumatic actuators DP:

Air supply pressure max. limit of control valve:

II. Fig. 440: PTFE- / pure graphite-packing;

max. permissible 6 bar

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

III. Fig. 441: Bellows seal

Control valve in straightway form with pneumatic actuator ARI-DP

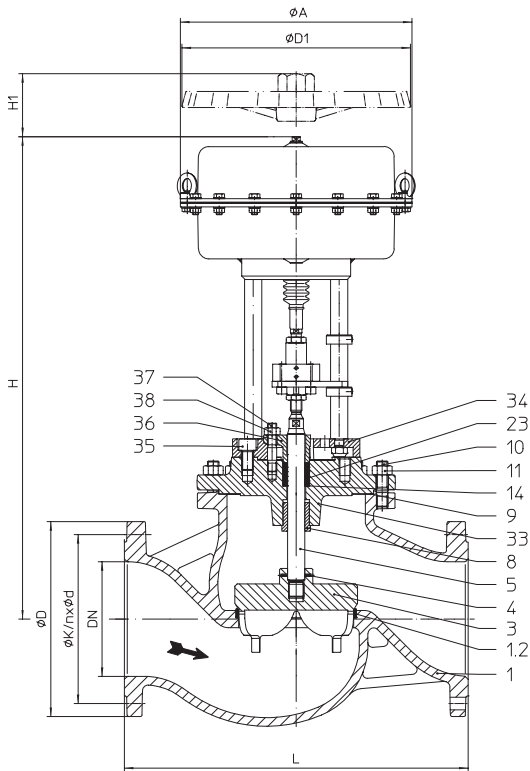


Fig. 440

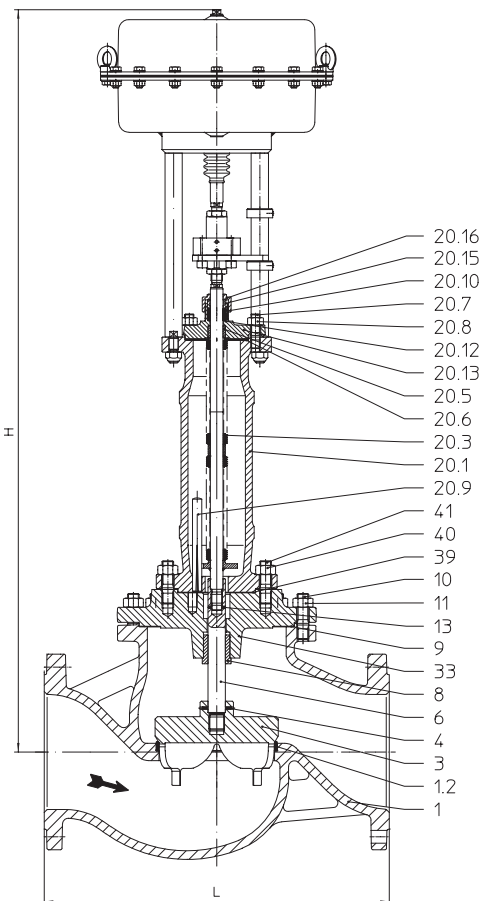


Fig. 441

Figure	Nominal pressure	Material	Nominal diameter
12.440 / 12.441	PN16	EN-JL1040	DN200-250
22.440 / 22.441	PN16	EN-JS1049	DN200-250
34.440 / 34.441	PN25	1.0619+N	DN200-250
35.440 / 35.441	PN40	1.0619+N	DN200-250
54.440	PN25	1.4408	DN200-250

Other materials and versions on request.

Stem sealing

Fig. 440: • PTFE-packing -10°C up to +250°C

• Pure graphite-packing -10°C up to +450°C

Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

standard: • V-port plug, metal seat

optional:

• V-port pressure balanced plug, metal seat,

Material of piston seal:

PTFE with stainless steel spring (max. 200°C)

Guiding

• V-port plug: Stem and port guiding

Flow characteristic

• Modified equal percentage or linear or linear

Rangeability

• 30 : 1

Shut off class (seat / plug leakage classes)

• Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 8.

Technical data for actuator refer to data sheet.

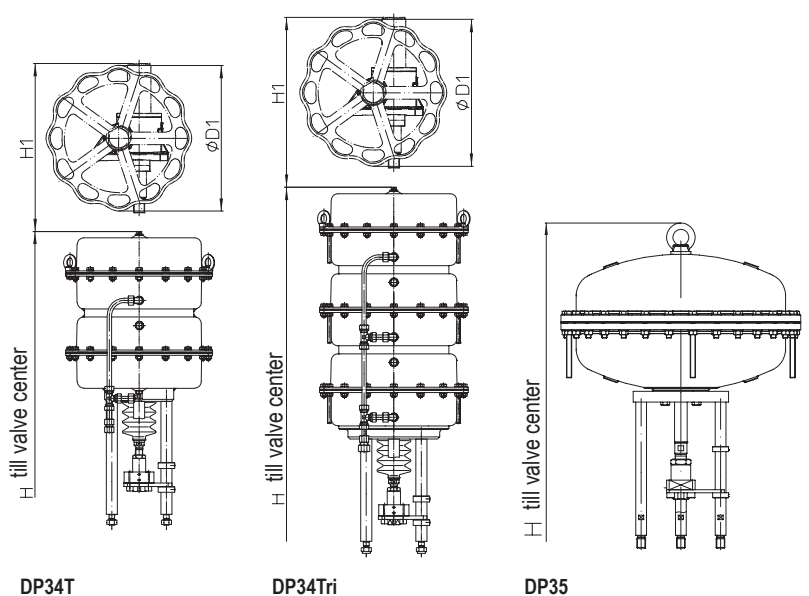
Selection of possible applications

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

Selection of possible flow media

Fig. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, cooling water, warm water, hot water, thermal oil, steam, gas, etc.
(other flow media on request)



DP34T

DP34Tri

DP35

Top mounted handwheel

Actuator	DP34	DP34T	DP34Tri
$\phi D1$	(mm) 400	400	400
H1	(mm) 470	635	635
Weight	(kg) 17	41	71

Technical data for actuator refer to data sheet DP32-35.

Dimensions and weights

DN			200	250
L		(mm)	600	730
DP34	Ø A	(mm)	405	
		H	(mm)	812
		PN16	(kg)	190
	Fig. 440	PN25/40	(kg)	228
		H	(mm)	1367
		PN16	(kg)	213
DP34T	Ø A	(mm)	405	
		H	(mm)	1062
		PN16	(kg)	261
	Fig. 440	PN25/40	(kg)	299
		H	(mm)	1541
		PN16	(kg)	284
DP34Tri	Ø A	(mm)	405	
		H	(mm)	1284
		PN16	(kg)	295
	Fig. 440	PN25/40	(kg)	333
		H	(mm)	1763
		PN16	(kg)	318
DP35	Ø A	(mm)	405	
		H	(mm)	1197
		PN16	(kg)	465
	Fig. 440	PN25/40	(kg)	492
		H	(mm)	1601
		PN16	(kg)	389

Standard-flange dimensions refer to page 35.

Face-to-face dimension FTF series 1 according to DIN EN 558

DN			200	250
L		(mm)	600	730
DP34Tri	Ø A	(mm)	405	
		H	(mm)	1284
		PN16	(kg)	295
	Fig. 440	PN25/40	(kg)	333
		H	(mm)	1763
		PN16	(kg)	318
DP35	Ø A	(mm)	405	
		H	(mm)	1197
		PN16	(kg)	465
	Fig. 440	PN25/40	(kg)	492
		H	(mm)	1601
		PN16	(kg)	389

Parts

Pos.	Description	Fig. 12.440 Fig. 12.441	Fig. 22.440 Fig. 22.441	Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441	Fig. 54.440
1	Body	EN-GJL-250 , EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
1.2	Seat ring	X20Cr13+QT, 1.4021+QT		G19 9 Nb Si, 1.4551	--
3	Plug *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
4	Straight spin *	X10CrNi18-8, 1.4310			A4 - 70
5	Stem *	X20Cr13+QT, 1.4021+QT			X6CrNiMoTi17-12-2, 1.4571
6	Stem extension *	X20Cr13+QT, 1.4021+QT			--
8	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			X6CrNiMoTi17-12-2, 1.4571
9	Gasket *	Pure graphite (CrNi laminated with graphite)			
10	Studs	25CrMo4, 1.7218			A4 - 70
11	Hexagon nuts	C35E, 1.1181			A4
13	Spannstift *	X10CrNi18-8, 1.4310			--
14	Washer *	X5CrNi18-10, 1.4301			
20.1	Bellows housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	--
20.3	Stem- / Bellows unit *	X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541			--
20.5	Guide bushing	X20Cr13+QT, 1.4021+QT (hardened)			--
20.6	Gasket *	Pure graphite (CrNi laminated with graphite)			--
20.7	Studs	25CrMo4, 1.7218			--
20.8	Hexagon nuts	C35E, 1.1181			--
20.9	Straight pin	X20Cr13+QT, 1.4021+QT (hardened)			--
20.10	Packing ring *	Pure graphite			--
20.12	Washer *	X5CrNi18-10, 1.4301			--
20.13	Stuffing box housing	EN-GJS-400-18U-LT, EN-JS1049			--
20.15	Packing follower	X20Cr13+QT, 1.4021+QT			--
20.16	Sleeve nut	X8CrNiS18-9, 1.4305			--
23	Packing ring *	PTFE			
33	Stuffing box housing	EN-GJS-400-18U-LT, EN-JS1049		GP240GH+N, 1.0619+N	X6CrNiMoTi17-12-2, 1.4571
34	Adapter flange	EN-GJS-400-18U-LT, EN-JS1049			
35	Hexagon socket head screw	8.8			A2 - 70
36	Packing box flange	EN-GJS-400-15, EN-JS1030			X6CrNiMoTi17-12-2, 1.4571
37	Studs	25CrMo4, 1.7218			A4 - 70
38	Hexagon nuts	C35E, 1.1181			A4
39	Gasket *	Pure graphite (CrNi laminated with graphite)			--
40	Studs	25CrMo4, 1.7218			--
41	Hexagon nuts	C35E, 1.1181			--

* Spare parts

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 allowance acc. to TRB 801 No. 45 exists. (EN-JL1040 ist acc. to TRB 801 No. 45 nicht zugelassen.)

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 35.

Spring closes on air failure								
DN						200		250
Seat-ø (mm)						201		251
Kvs-values			Standard			630		1000
			Reduced ¹⁾			400		630
Travel (mm)						65		
Max. differential pressure drop (bar)			V-port plug			5		5
Actuator DP34	Spring range (bar)	1,0-2,0	Air supply pressure min. (bar)	2,4	II.	1,8		1,1
					III.	1,7		1
		2,0-4,0		4,5	II.	4,2		2,6
					III.	4,2		2,6
Actuator DP34T	Spring range (bar)	0,4-1,2	Air supply pressure min. (bar)	1,7	II.	1,3 ^{b)}		
					III.	1,2 ^{d)}		
		1,0-2,0		2,5	II.	4,2 ^{a)}		2,6 ^{a)}
					III.	4,2 ^{c)}		2,6 ^{c)}
		2,0-4,0		4,5	II.	9,1		5,8
					III.	9,1		5,8
Actuator DP34Tri	Spring range (bar)	0,4-1,2	Air supply pressure min. (bar)	1,7	II.	2,3 ^{d)}		1,4 ^{d)}
					III.	2,2 ^{f)}		1,4 ^{f)}
		1,0-2,0		2,5	II.	6,7 ^{b)}		4,2 ^{b)}
					III.	6,6 ^{d)}		4,2 ^{d)}
		2,0-4,0		4,5	II.	14		8,9
Actuator DP35	Spring range (bar)	1,8 - 3,8	Air supply pressure min. (bar)	4,3	II.	23,1		14,7

II. Fig. 440: PTFE- / pure graphite-packing;

III. Fig. 441: Bellows seal

Air supply pressure max. of pneumatic actuators DP:

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

II. Fig. 440: PTFE- / pure graphite-packing;

III. Fig. 441: Bellows seal

Air supply pressure max. of pneumatic actuators DP:

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

¹⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).

For max. permissible closing pressures refer to corresponding data sheet

max. permissible closing pressures on flow-to-open P2 = 0
Observe restrictions by Pressure-temperature-ratings, refer to page 35.

Spring opens on air failure					
DN			200	250	
Seat-ø (mm)			201	251	
Kvs-values	Standard		630	1000	
	Reduced ¹⁾		400	630	
Travel (mm)			65		
Max. differential pressure drop (bar)		V-port plug	5	5	
Actuator DP34	Air supply pressure min. (bar)	2	II.	1,8	1,1
			III.	1,7 ^{a)}	1 ^{a)}
		3	II.	4,2	2,6
			III.	4,2 ^{a)}	2,6 ^{a)}
		4	II.	6,7	4,2
			III.	6,6 ^{a)}	4,2 ^{a)}
		5	II.	9,1	5,8
			III.	9,1 ^{a)}	5,8 ^{a)}
		6	II.	11,6	7,4
		Actuator DP34T	Air supply pressure min. (bar)	1,5	II.
III.	1,7 ^{e)}				1 ^{e)}
2	II.			4,2 ^{b)}	2,6 ^{b)}
	III.			4,2 ^{e)}	2,6 ^{e)}
3	II.			9,1 ^{b)}	5,8 ^{b)}
	III.			9,1 ^{e)}	5,8 ^{e)}
4	II.			14 ^{b)}	8,9 ^{b)}
4,5	II.			16,5 ^{b)}	10,5 ^{b)}

II. Fig. 440: PTFE- / pure graphite-packing;

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

III. Fig. 441: Bellows seal

¹⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Standard-flange dimensions

Flanges acc. to DIN EN 1092-1/-2 (Flange holes / -thickness tolerances acc. to DIN 2533/2544/2545)

DN			15	20	25	32	40	50	65	80	100	125	150	200	250
PN16	ØD	(mm)	95	105	115	140	150	165	185	200	220	250	285	340	405
PN16	ØK	(mm)	65	75	85	100	110	125	145	160	180	210	240	295	355
PN16	n x Ød	(mm)	4x14	4x14	4x14	4x18	4x18	4x18	4x18	8x18	8x18	8x18	8x22	12x22	12x26
PN25	ØD	(mm)	95	105	115	140	150	165	185	200	235	270	300	360	425
PN25	ØK	(mm)	65	75	85	100	110	125	145	160	190	220	250	310	370
PN25	n x Ød	(mm)	4x14	4x14	4x14	4x18	4x18	4x18	8x18	8x18	8x22	8x26	8x26	12x26	12x30
PN40	ØD	(mm)	95	105	115	140	150	165	185	200	235	270	300	375	450
PN40	ØK	(mm)	65	75	85	100	110	125	145	160	190	220	250	320	385
PN40	n x Ød	(mm)	4x14	4x14	4x14	4x18	4x18	4x18	8x18	8x18	8x22	8x26	8x26	12x30	12x33

Pressure-temperature-ratings acc. to DIN EN 1092-2

Material			-60°C to <-10°C*	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
EN-JL1040	16	(bar)	--	16	14,4	12,8	11,2	9,6	--	--	--
EN-JS1049	16	(bar)	on request	16	15,5	14,7	13,9	12,8	11,2	--	--
EN-JS1049	25	(bar)	on request	25	24,3	23	21,8	20	17,5	--	--

Pressure-temperature-ratings acc. to manufacturers standard

Material			-60°C to <-10°C*	-10°C to 120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.0619+N	25	(bar)	18,7	25	23,9	22	20	17,2	16	14,8	8,2
1.0619+N	40	(bar)	30	40	38,1	35	32	28	25,7	23,8	13,1

Pressure-temperature-ratings acc. to DIN EN 1092-1

Material			-60°C to <-10°C*	-10°C to 100°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.4408	40	(bar)	40	40	36,3	33,7	31,8	29,7	28,5	27,4	--

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

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

Please indicate when ordering:

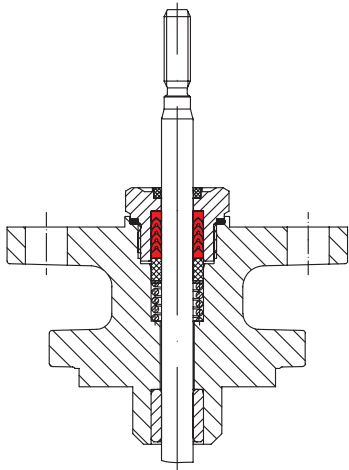
- Figure-No.
- Nominal diameter
- Nominal pressure
- Body material
- Plug design
- Kvs-value
- Flow characteristic
- Stem sealing
- Actuator
- Special design / accessories

Example:

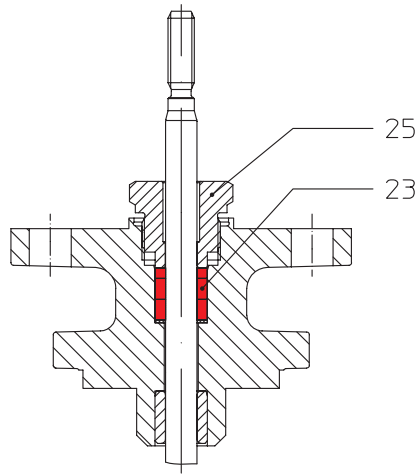
Figure 35.440; Nominal diameter DN100; Nominal pressure PN40; Body material 1.0619+N; Parabolic plug; Kvs 160; Equal percentage; Stem sealing PTFE-V-ring unit; Actuator ARI-PREMIO 5 kN.

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

Stem sealing



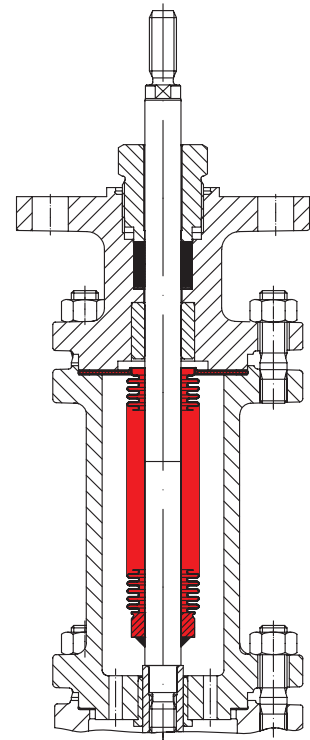
Spring loaded PTFE-V ring packing unit



PTFE-/ Pure graphite-packing

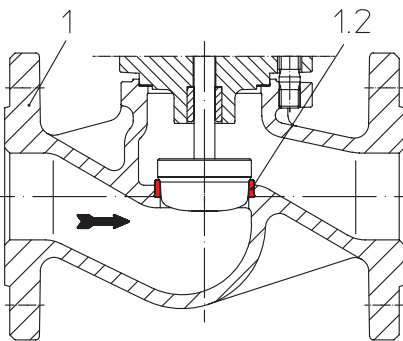
Pos.	Description	
23	Packing ring *	PTFE or Pure graphite
25	Screw joint *	X8CrNiS18-9, 1.4305

* Spare part

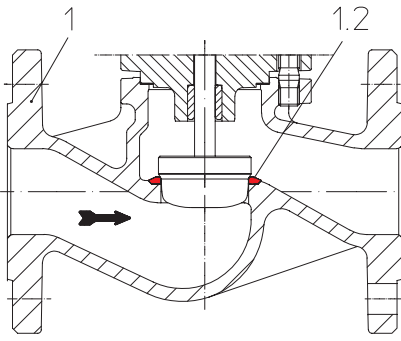


Bellows seal with safety stuffing box

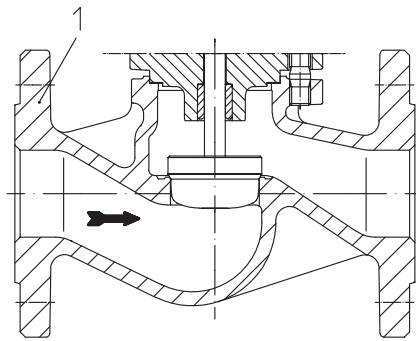
Body design



Body with pressed seat ring
(EN-JL1040, EN-JS1049)

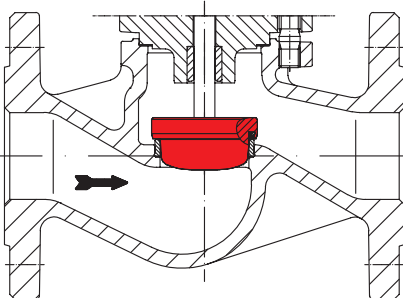


Body with welded seat (1.0619+N)

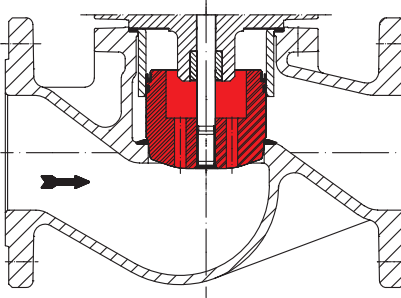


Body with machined seat (1.4408)

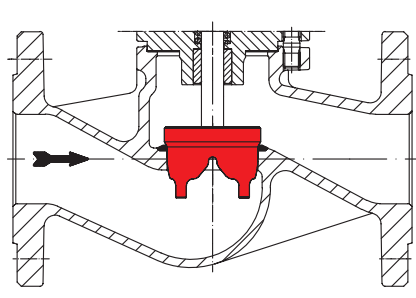
Plug design



Parabolic plug with PTFE soft seat



Parabolic pressure balanced plug



V-port plug with stem and port guiding



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