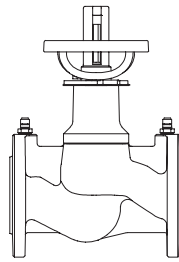


ARI-ASTRA® - Free of maintenance combinend flow regulating valve - soft sealed (to 120°C)

ARI-ASTRA®Plus - Free of maintenance combinend flow regulating valve (to 175°C resp. 350°C)

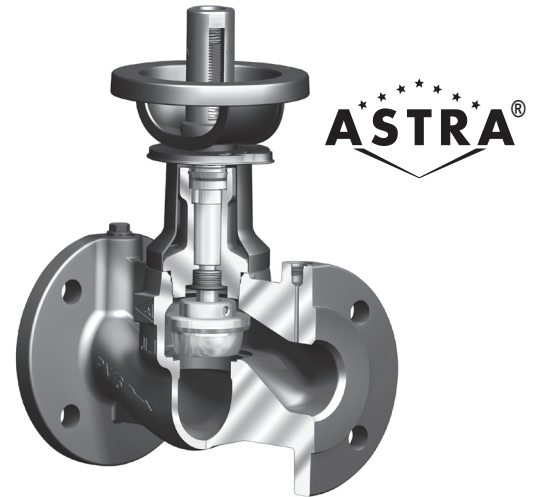
**ARI-ASTRA® -**  
**Straight through with flanges**  
**with EDD- Special stem seal**

- Maintenance-free
- Soft sealing
- EDD- Special stem seal
- Insulating cap with integrated dew point barrier
- Double sealing mechanism
- Digital display



Grey cast iron  
**Fig. 020**  
 (DN15-200)

Page 2



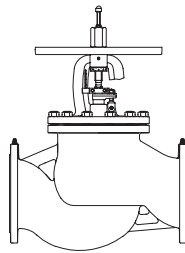
**Fig. 020 - ARI-ASTRA®**



Digital display

**ARI-ASTRA® -**  
**Straight through with flanges**  
**with gland packing**

- Maintenance-free
- Soft sealing
- Gland packing
- Insulating cap with integrated dew point barrier
- Double sealing mechanism
- Travel indicator (scale)

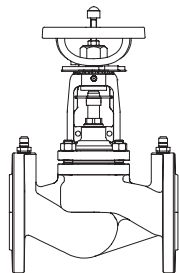


Grey cast iron  
**Fig. 042**  
 (DN250-400)

Page 3

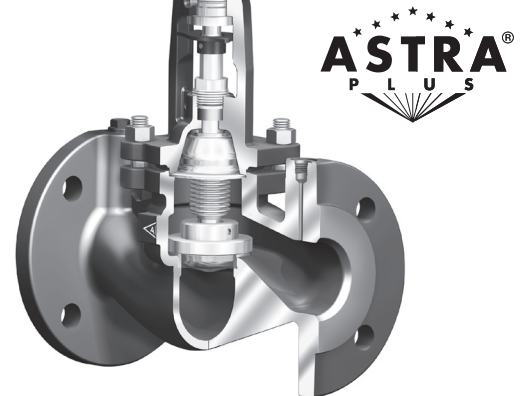
**ARI-ASTRA®Plus -**  
**Straight through with flanges**  
**with bellows seal**

- German TA - Luft TÜV-Test-No. 088-945053
- Maintenance-free
- Metal sealed
- Flat lubricating nipple
- Bellows seal
- Digital display



SG iron  
**Fig. 042**  
 (DN15-200)

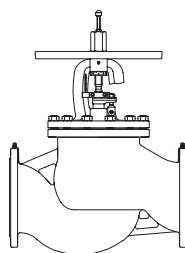
Page 4



**Fig. 042 - ARI-ASTRA®Plus**

**ARI-ASTRA®Plus -**  
**Straight through with flanges**  
**with gland packing**

- Metal sealed
- Gland packing
- Travel indicator (scale)



SG iron  
**Fig. 042**  
 (DN250-400)

Page 5

**Features:**

- Position indicator as standard
- Travel limiter
- Non-rising handwheel
- Non-rotation lock for all nominal diameters
- External stem thread
- Free of FCKW and PCB
- Complete insulation possible according to the german „Energy saving order - EnEV“
- Integrated pressure gauge studs as standard

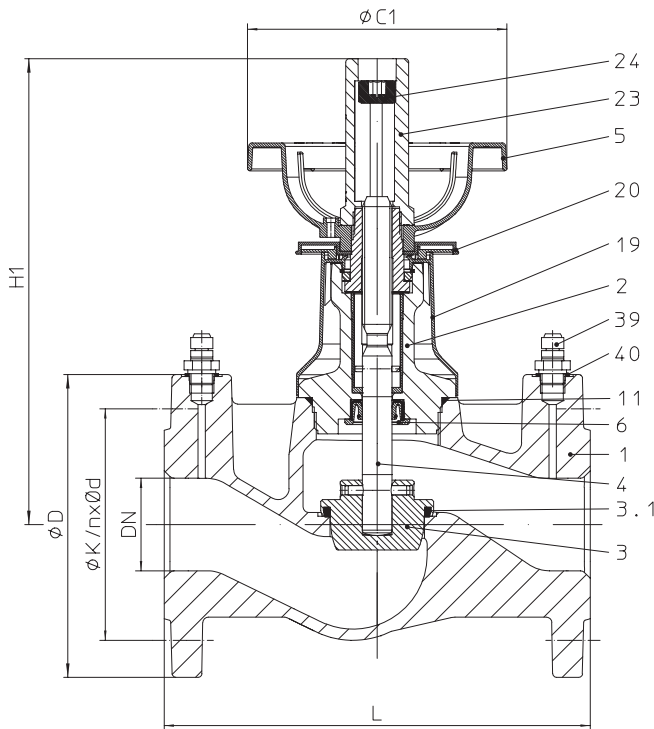
**Combined flow regulating valve - straight through with flanges and special spindle seal (Grey cast iron)**


Figure	Nominal pressure	Material	Nominal diameter
12.020	PN 16	EN-JL1040	DN15-200

**Observe restrictions at high differential pressures!** (see below)  
(max. perm.  $\Delta P$  refer to annex: flow diagram)

**Operating temperature: -10°C to +120°C (for a short time up to +130°C)**  
With digital display made of ABS plastic

**Selection of possible applications**

Heating facilities, AIR conditioning facilities  
(other applications on request)

**Selection of possible flow media**

Water, water with cold-protection, etc.  
(other flow media on request)

**Parts**

Pos.	Description	Fig. 12.020 DN15-80	Fig. 12.020 DN100-200
1	Body	EN-JL1040, EN-GJL-250	
2	Bonnet	EN-JL1040, EN-GJL-250	
3	Plug *	11SMnPb30+C (Zinc lamella coating)	≤ DN150: 11SMnPb30+C (Zinc lamella coating) DN200: C45E, 1.1191 (Zinc lamella coating)
3.1	Soft seal	PTFE +25% C	
4	Stem	X20Cr13+QT, 1.4021+QT (burnished)	
5	Handwheel	≤ DN50: PA 6 > DN50: DC01, 1.0330 (coated)	DC01, 1.0330 (coated)
6	Sealing ring	EPDM70 (EDD- Special stem seal)	
11	O-ring *	EPDM	
11	Gasket *	--	Pure graphite (CrNi laminated with graphite)
19	Insulating cap	PA 6.6	
20	Display (digital) *	ABS	
23	Cap *	PA 6.6	
39	Pressure gauge stud (G1/4")	Ms	
40	Gasket	Aramide fibre	

\* Spare part

Information / restriction of technical rules need to be observed!

Operating instructions can be ordered by phone +49 (0)5207 / 994-0 or fax +49 (0)5207 / 994-158 or -159.

ARI-Valves of EN-JL1040 are not allowed to be operated in systems acc. to TRD 110.

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

**Dimensions**

Nominal diameter	(mm)	15	20	25	32	40	50	65	80	100	125	150	200
L	(mm)	130	150	160	180	200	230	290	310	350	400	480	600
H1	(mm)	215	215	215	215	255	255	315	335	370	400	450	540
ØA	(mm)	60	60	60	60	60	60	60	87	87	87	87	87
ØC1	(mm)	110	110	110	110	140	140	180	180	180	180	180	210
Travel	(mm)	20	20	20	20	30	30	40	48	48	54	70	90
Limitation $\Delta P$	(bar)	16	16	16	16	16	16	16	16	16	16	16	14
Kvs-value	(m <sup>3</sup> /h)	4,5	6,6	9,8	15,1	24,9	48,5	74,4	111	165	242	372	704
Zeta-value	--	4	5,9	6,5	7,3	6,6	4,2	5,1	5,3	5,9	6,7	5,8	5,2
Z-Value acc. to VDMA 24423		0,44	0,63	0,54	0,52	0,47	0,36	0,30	0,37	0,27	0,23	0,23	0,23

Zeta-value ... range of tolerance for Kvs-values acc. to VDI/VDE 2173

Handwheel-diameter ≥ DN100 at  $\Delta p \geq 10$  bar, look at ARI-TL 0060000065

Standard-flange dimensions refer to page 7

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

**Weights**

Nominal diameter	(mm)	15	20	25	32	40	50	65	80	100	125	150	200
12.020	(kg)	3,5	4,1	4,8	6,6	9	11,5	18,5	24,5	40	79	91	170

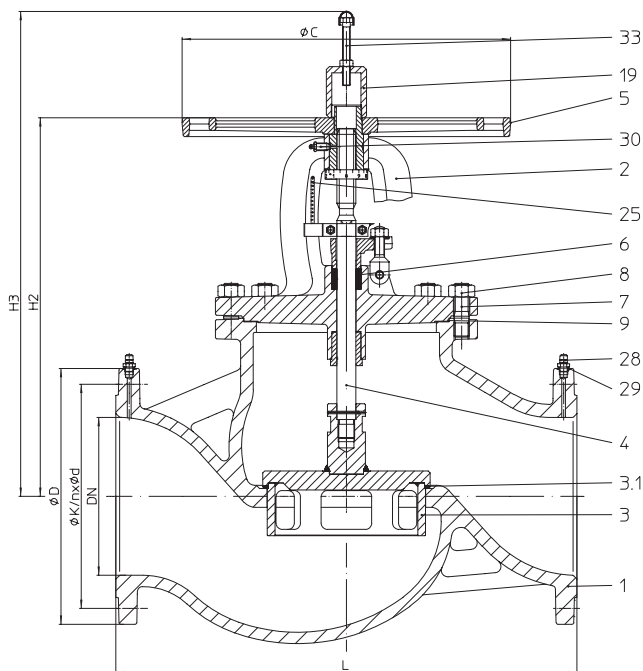
**Combined flow regulating valve - straight through with flanges and gland seal (Grey cast iron)**


Figure	Nominal pressure	Material	Nominal diameter
12.042	PN 16	EN-JL1040	DN250-400

Observe restrictions at high differential pressures! (see below)  
(max. perm. ΔP refer to annex: flow diagram)

**Operating temperature: -10°C to +200°C**  
With travel indicator (scale)

**Selection of possible applications**

Heating facilities, AIR conditioning facilities  
(other applications on request)

**Selection of possible flow media**

Water, water with cold-protection, etc.  
(other flow media on request)

**Parts**

Pos.	Description	Fig. 12.020 DN250-400
1	Body	EN-JL1040, EN-GJL-250
2	Bonnet	EN-JL1040, EN-GJL-250
3	Plug *	P265 GH, 1.0425 / G19 9 Nb Si, 1.4551
3.1	Soft seal	PTFE +25% C
4	Stem *	X20Cr13+QT, 1.4021+QT (burnished)
5	Handwheel	EN-JL1040, EN-GJL-250 (coated)
6	Packing ring *	Pure graphite
7	Stud	25CrMo4, 1.7218
8	Hexagon nut	C35E, 1.1181
9	Gasket *	Pure graphite (CrNi laminated with graphite)
19	Guard cap	11SMnPb30+C (coated)
25	Indicator (Travel indicator (scale))	Al
28	Pressure gauge stud (G1/4")	Ms
29	Gasket	Aramide fibre
30	Locking device	St - A3G
33	Travel limiter	4.6 - A2T

\* Spare part

Information / restriction of technical rules need to be observed!

Operating instructions can be ordered by phone +49 (0)5207 / 994-0 or fax +49 (0)5207 / 994-158 or -159.

ARI-Valves of EN-JL1040 are not allowed to be operated in systems acc. to TRD 110.

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

**Dimensions**

Nominal diameter	(mm)	250	300	350	400
L	(mm)	730	850	980	1100
H2	(mm)	600	685	775	790
H3	(mm)	785	890	1035	1050
ØC2	(mm)	520	520	640	640
Travel	(mm)	66	84	84	91
Limitation ΔP	(bar)	9	6	4,5	3,5
Kvs-value	(m³/h)	812	1380	1651	2383
Zeta-value	--	9,5	6,8	8,8	7,2

Zeta-value ... range of tolerance for Kvs-values acc. to VDI/VDE 2173

Standard-flange dimensions refer to page 7

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

**Weights**

Nominal diameter	(mm)	250	300	350	400
12.042	(kg)	265	360	535	765

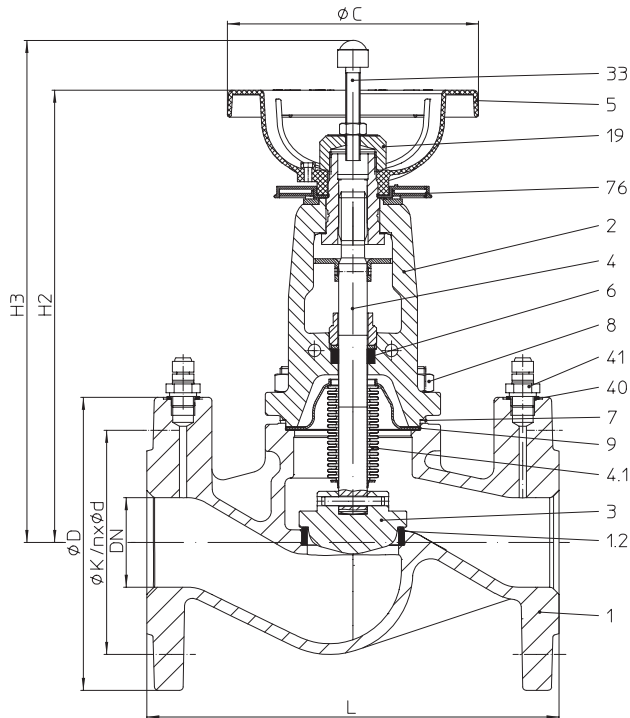
**Combined flow regulating valve - straight through with flanges and bellows seal (SG iron)**


Figure	Nominal pressure	Material	Nominal diameter
22.042	PN 16	EN-JS1049	DN15-200

**Observe restrictions at high differential pressures!** (see below)  
(max. perm.  $\Delta P$  refer to annex: flow diagram)

**Operating temperature: -10°C to +175°C**  
With digital display made of ABS plastic (DN15-150)

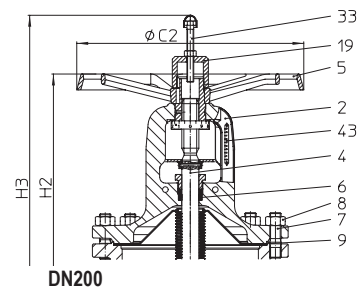
**Operating temperature: -10°C to +350°C**  
With travel indicator (scale) (DN200)  
(With travel indicator (scale) DN 15-150 optional)

**Selection of possible applications**

Heating facilities, AIR conditioning facilities  
(other applications on request)

**Selection of possible flow media**

Water, water with cold-protection, etc.  
(other flow media on request)


**Parts**

Pos.	Description	Fig. 22.042 (DN15-150)	Fig. 22.042 (DN200)
1	Body	EN-JS1049 , EN-GJS-400-18U-LT	
1.2	Seat ring	X20Cr13+QT, 1.4021+QT	
2	Bonnet	EN-JS1049 , EN-GJS-400-18U-LT	
3	Plug *	X20Cr13+QT, 1.4021+QT	
4	Stem *	X20Cr13+QT, 1.4021+QT (burnished)	
4.1	Bellows seal	X6CrNiMoTi17-12-2, 1.4571	
5	Handwheel	≤ DN80: PA 6 > DN80: DC01, 1.0330 (coated)	EN-JL1040, EN-GJL-250 (coated)
6	Packing ring *	Pure graphite	
7	Stud	25CrMo4, 1.7218	
8	Hexagon nut	C35E, 1.1181	
9	Gasket	Pure graphite (CrNi laminated with graphite)	
19	Guard cap	11SMnPb30+C, 1.0718+C (coated)	
33	Travel limiter	4.6 - A2T / 8 - A2T	
40	Gasket	Aramide fibre	
41	Pressure gauge stud (G1/4")	Ms	
25	Indicator (Travel indicator (scale))	-- (optional)	Al
76	Digitale Indicator *	ABS	--

\* Spare part

Information / restriction of technical rules need to be observed!

Operating instructions can be ordered by phone +49 (0)5207 / 994-0 or fax +49 (0)5207 / 994-158 or -159.

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

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

**Dimensions**

Nominal diameter	(mm)	15	20	25	32	40	50	65	80	100	125	150	200
L	(mm)	130	150	160	180	200	230	290	310	350	400	480	600
H2	(mm)	225	225	235	235	255	255	270	290	380	405	435	520
H3	(mm)	240	240	245	245	275	275	295	315	425	465	495	625
ØC	(mm)	140	140	140	140	140	140	140	140	210	210	210	400
Travel	(mm)	6	6	8	8	13	13	16	20	25	32	40	50
Limitation $\Delta P$	(bar)	16	16	16	16	16	16	16	16	16	16	16	14
Kvs-value	(m <sup>3</sup> /h)	5,04	6,06	8,72	14	27	33,2	55,4	89,5	125	224	330	570
Zeta-value	--	3,2	7	8,2	8,5	5,6	9,1	9,3	8,2	10,2	7,8	7,4	7,9

Zeta-value ... range of tolerance for Kvs-values acc. to VDI/VDE 2173

Standard-flange dimensions refer to page 7

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

**Weights**

Nominal diameter	(mm)	15	20	25	32	40	50	65	80	100	125	150	200
22.042	(kg)	4	5	6,1	7,2	8,7	10,8	14,9	20,7	32,4	51,6	74	147

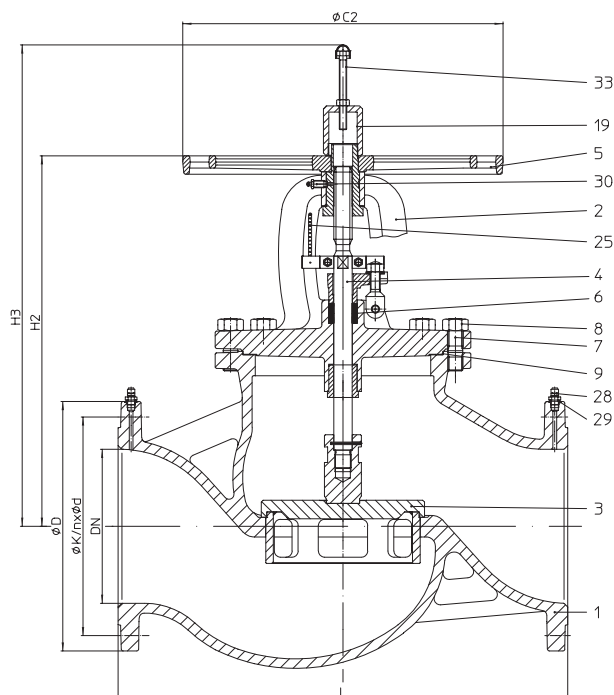
**Combined flow regulating valve - straight through with flanges and gland seal (SG iron)**


Figure	Nominal pressure	Material	Nominal diameter
22.042	PN 16	EN-JS1049	DN250-400

Observe restrictions at high differential pressures! (see below)  
(max. perm.  $\Delta P$  refer to annex: flow diagram)

**Operating temperature: -10°C to +350°C**  
With travel indicator (scale)

**Selection of possible applications**

Heating facilities, AIR conditioning facilities  
(other applications on request)

**Selection of possible flow media**

Water, water with cold-protection, etc.  
(other flow media on request)

**Parts**

Pos.	Description	Fig. 22.042 (DN250-400)
1	Body	EN-JS1049 , EN-GJS-400-18U-LT
1.2	Seat ring	X20Cr13+QT, 1.4021+QT
2	Bonnet	EN-JS1049 , EN-GJS-400-18U-LT
3	Plug *	P265 GH, 1.0425 / G19 9 Nb Si, 1.4551
4	Stem *	X20Cr13+QT, 1.4021+QT (burnished)
5	Handwheel	EN-JL1040, EN-GJL-250 (coated)
6	Packing ring *	Pure graphite
7	Stud	25CrMo4, 1.7218
8	Hexagon nut	C35E, 1.1181
9	Gasket *	Pure graphite (CrNi laminated with graphite)
19	Guard cap	11SMnPb30+C, 1.0718+C (coated)
25	Indicator (Travel indicator (scale))	Al
28	Pressure gauge stud (G1/4")	Ms
29	Gasket	Aramide fibre
30	Locking device	St - A3G
33	Travel limiter	4.6 - A2T / 5 - A2T

\* Spare part

Information / restriction of technical rules need to be observed!

Operating instructions can be ordered by phone +49 (0)5207 / 994-0 or fax +49 (0)5207 / 994-158 or -159.

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

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

**Dimensions**

Nominal diameter	(mm)	250	300	350	400
L	(mm)	730	850	980	1100
H2	(mm)	600	685	775	790
H3	(mm)	785	890	1035	1050
ØC2	(mm)	520	520	640	640
Travel	(mm)	66	84	84	91
Limitation $\Delta P$	(bar)	9	6	4,5	3,5
Kvs-value	(m <sup>3</sup> /h)	812	1380	1651	2383
Zeta-value	--	9,5	6,8	8,8	7,2

Zeta-value ... range of tolerance for Kvs-values acc. to VDI/VDE 2173

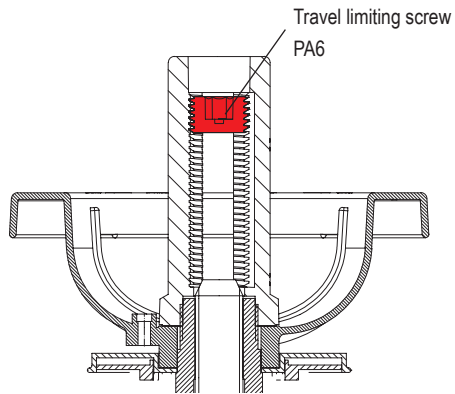
Standard-flange dimensions refer to page 7

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

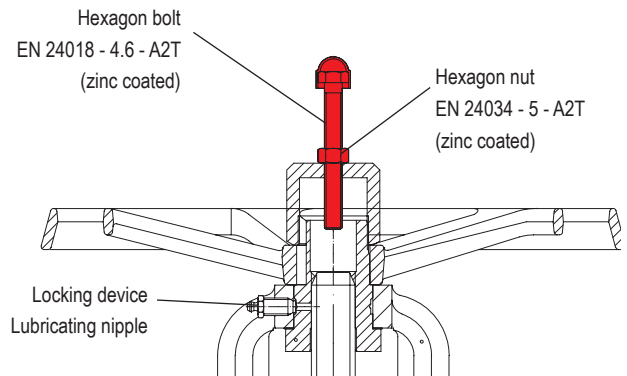
**Weights**

Nominal diameter	(mm)	250	300	350	400
22.042	(kg)	265	360	535	620

**ASTRA®**

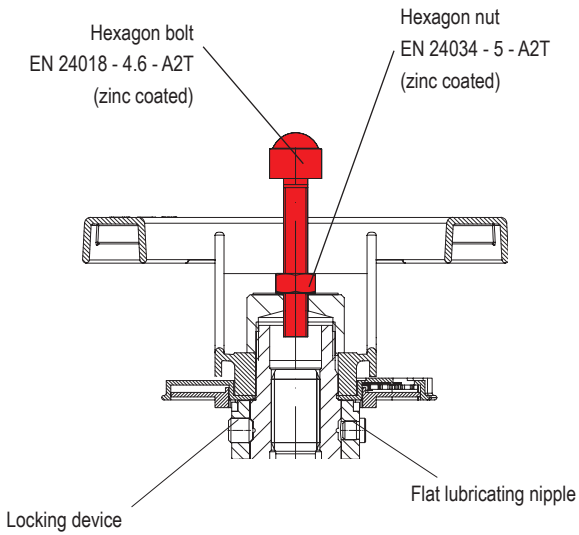


Travel limiter DN15-200

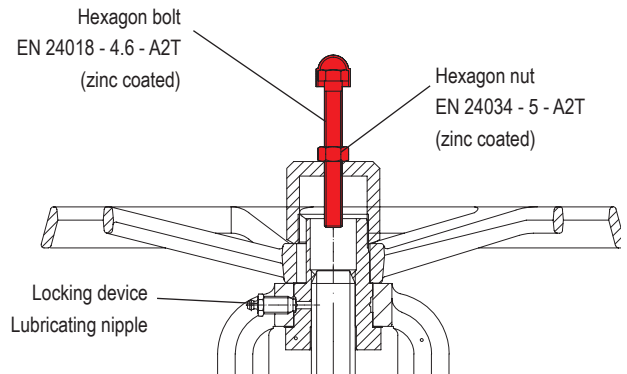


Travel limiter, Locking device DN250-400

**ASTRA®Plus**



Travel limiter, Locking device DN15-150



Travel limiter, Locking device DN200-400

**Standard-flange dimensions**

Flanges acc. to DIN EN 1092-2 (Flangeholes / -thickness tol. acc. to DIN2533)

DN			15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
PN16	ØD	(mm)	95	105	115	140	150	165	185	200	220	250	285	340	405	460	520	580
PN16	ØK	(mm)	65	75	85	100	110	125	145	160	180	210	240	295	355	410	470	525
PN16	n x Ød	(mm)	4x14	4x14	4x14	4x18	4x18	4x18	4x18	8x18	8x18	8x18	8x22	12x22	12x26	12x26	16x26	16x30

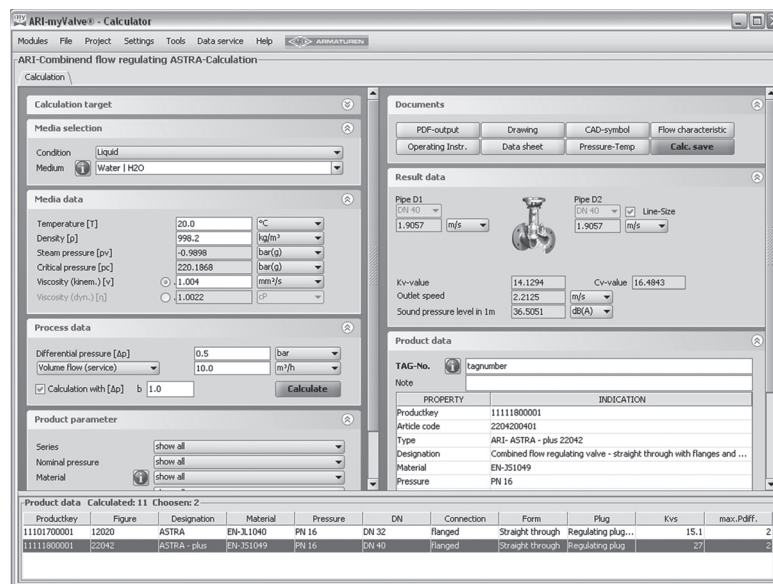
**Pressure-temperature-ratings acc. to DIN EN 1092-2**

Material	PN		-10°C to 120°C	150°C	200°C	250°C	300°C	350°C
EN-JL1040	PN16	(bar)	16	14,4	12,8	11,2	9,6	--
EN-JS1049	PN16	(bar)	16	15,5	14,7	13,9	12,8	11,2

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

**Attention: Observe operating temperature!**

- 12.020** -10°C to +120°C (for a short time up to +130°C)  
With digital display made of ABS plastic (DN15-200)
- 12.042** -10°C to +200°C  
With travel indicator (scale) (DN250-400)
- 22.042** -10°C to +175°C  
With digital display made of ABS plastic (DN15-150)  
-10°C to +350°C  
With travel indicator (scale) (DN200-400)  
(With travel indicator (scale) DN15-150 optional)


**myValve® - Calculator**
**Contents:**

- Module ARI-Combined flow regulation ASTRA/ASTRA-Plus-Calcaution**
- Sizing of valve-size with given temperature, flow and operating pressure

**Media:**

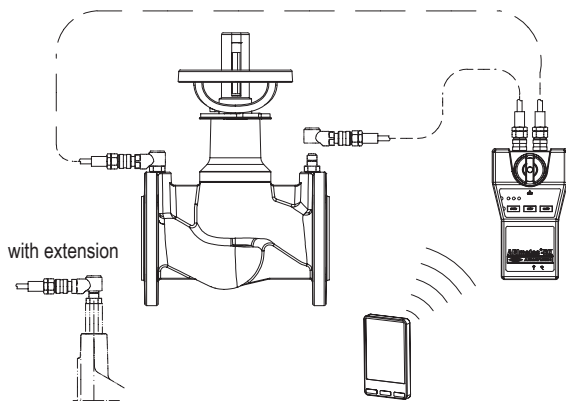
- Integrated media-databank (more than 160 media) with conditions:**
- Vapours / gases
- Steam (saturated and superheated)
- Liquids

**Special features:**

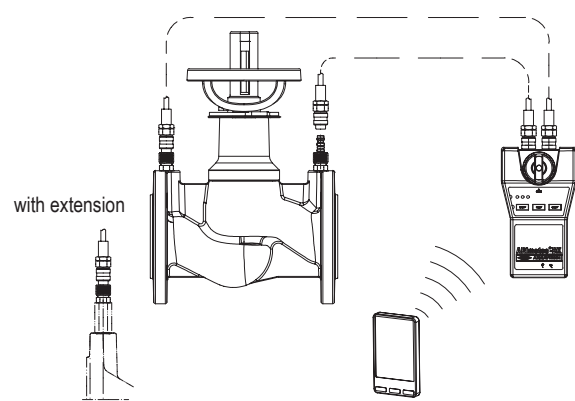
- Project administration of the calculation and product data incl. spare part drawings concerning to project and tag number
- Direct output or calculation and product data in PDF format
- Product data could be taken for a direct order
- SI- and ANSI-units with direct conversion to another databank
- Settings with over pressure or absolute pressure
- All ARI valves are integrated in a databank
- Direct access relating to the product on data sheets, operating instructions, pressure-temperature-diagram, controller characteristics, spare part drawings and CAD-symbols on the website.
- Operation in company networks possible (no complex installations on individually PC's necessary)
- Extensive catalogue extending over several product groups

**System requirements:**


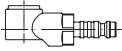
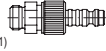



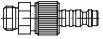

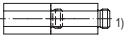
Windows operating systems, Linux, etc.

**Balancing instrument ARImetec®-DX**


Design 1



Design 2

DN			15 - 25	32 - 40	50 - 80	100 - 400
Design 1	Pressure gauge stud with sealing (standard)		•	•	•	•
	Adapter for pressure gauge stud		necessary only for measuring			
Design 2	Measuring valve with sealing				•	•
A	Extension 40 mm			•	•	•
B	Combinations for isolation acc. to the german „Energy saving order - EnEV“	  Extension A		•	•	
C		 or   2 x Extension A				•

<sup>1)</sup> Threaded end for body connection

**Operating temperature:**  
 Accessories max. +90°C  
 Measuring max. +90°C

**Please indicate when ordering**

- Figure-No.
- Nominal pressure
- Nominal diameter
- Special design / accessories

**Example:**

Figure 12.020; Nominal pressure PN16; Nominal diameter DN 100.

**Please indicate in your order, if the valves are to be installed in hazardous areas (ATEX)**

Dimensions in mm  
 Weights in kg  
 1 bar  $\triangleq$  10<sup>5</sup> Pa  $\triangleq$  0,1 MPa  
 Kvs in m<sup>3</sup>/h