

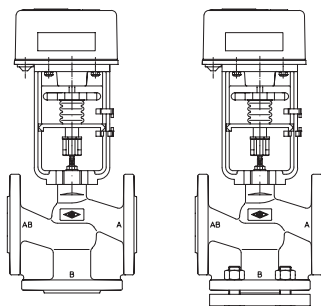
Control valve in 3-way-form for heating - Fig. 485/487

Control valve in straightway form for heating - Fig. 486/488

ARI-STEVI® H 485 / 486

Electric actuator ARI-PACO

- Motor voltage 24V/50Hz input signal 0-10 V
- Motor voltage 24/230 VAC 3-step control
- Handwheel
- Travel indicator
- Additional devices available, e.g. potentiometer



Page 2

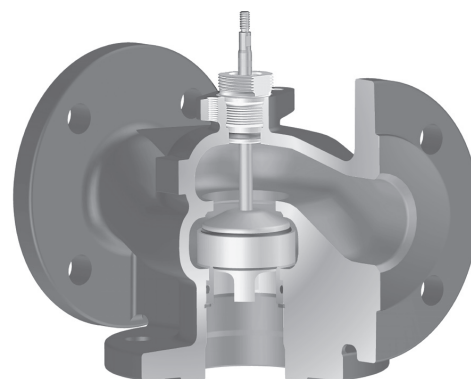
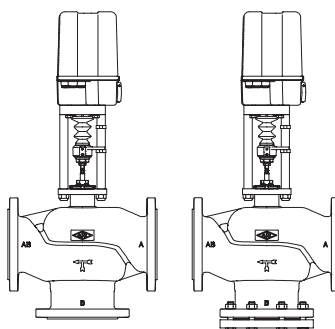


Fig. 485

ARI-STEVI® H 485 / 486

Electric actuator ARI-PREMIO

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



Page 4

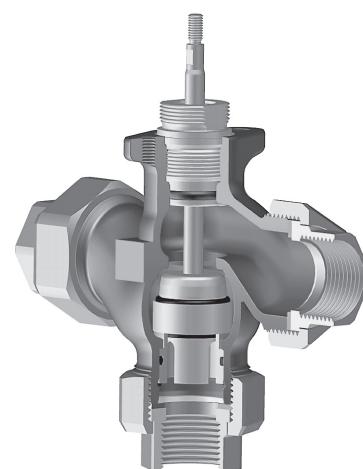
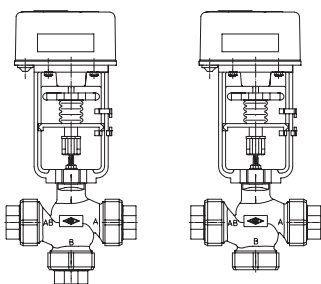


Fig. 487

ARI-STEVI® H 487 / 488

Electric actuator ARI-PACO

- Motor voltage 24V/50Hz input signal 0-10 V
- Motor voltage 24/230 VAC 3-step control
- Handwheel
- Travel indicator
- Additional devices available, e.g. potentiometer



Page 8

Features

- Compact design
- Tight seat (DN 15-100)
- Operation temperature max. 130°C
- Kvs-value 0,63 -1000 (Fig. 487/488 0,63 - 40)
- Reducible kvs-values
- Flow characteristics: equal percentage and linear
- Roller burnished stem, made of material No. 1.4571
- Low friction stem-sealing unit
- Stem sealing free of maintenance
- Nominal pressure PN6 and PN16 (Fig. 487/488 PN16)
- Nominal diameter DN 15-250 (Fig. 487/488 DN 15-50)
- Larger valve sizes available with other ARI Control valve series

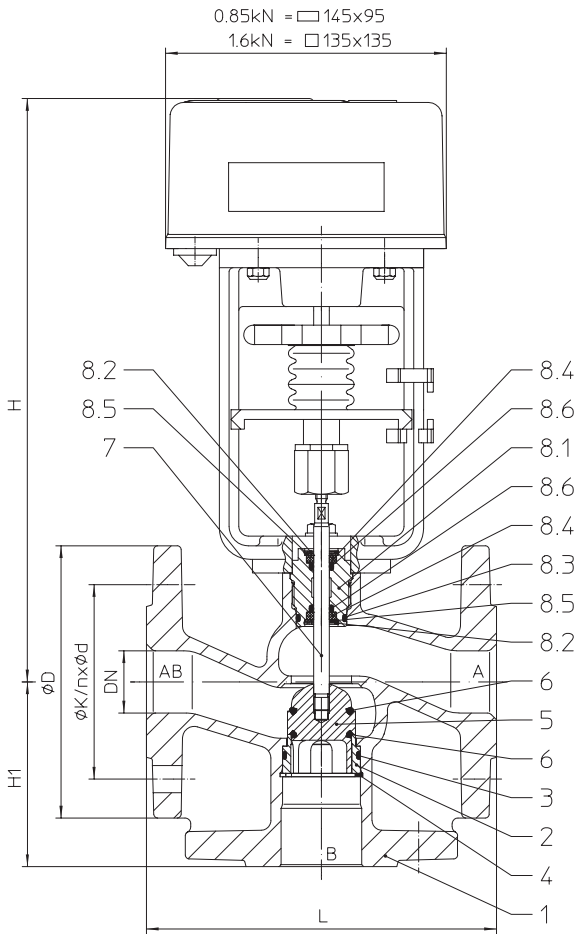
Control valve for heating, ventilation and air-conditioning - 3-way with flanges - Fig. 485


Figure	Nominal pressure	Material	Nominal diameter
10.485	PN6	EN-JL1040	DN15-100
12.485	PN16	EN-JL1040	DN15-100
10.486	PN6	EN-JL1040	DN15-100
12.486	PN16	EN-JL1040	DN15-100

Other materials and versions on request.

Operating temperature

- 0°C to +130°C; with stem heating to -10°C

Stem sealing

- O-rings

Plug design

- Parabolic plug / V-plug

Guiding

- Stem and port guiding

Flow characteristic

- A equal percentage / B linear

Rangeability

- 30 : 1

Shut off class (Seat / Plug-Leakage rate)

- Soft seat - Leakage class 1 DIN 3230 T3 BN by given closing pressure

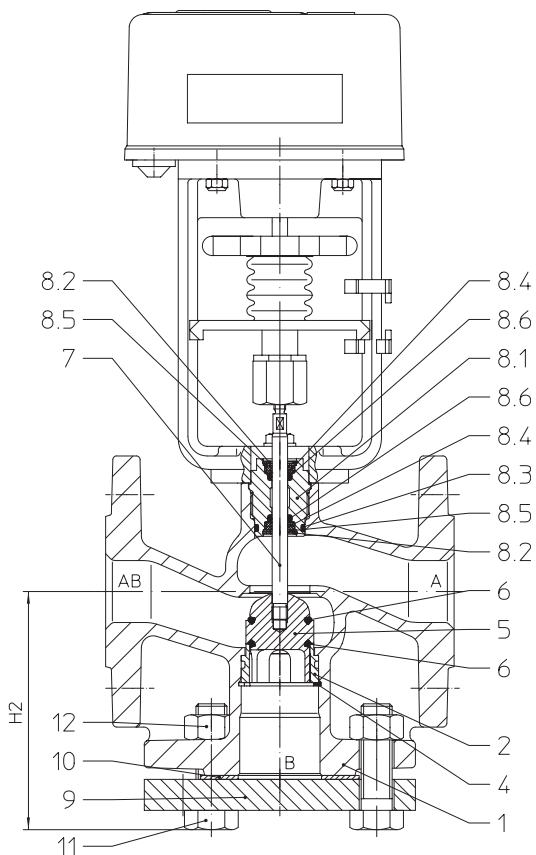
Technical data for actuator refer to data sheet.

Selection of possible applications

Heating-, Ventilation- and Air-Conditioning- Systems, etc.
(other applications on request)

Selection of possible flow media

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

Control valve for heating, ventilation and air-conditioning - straight through with flanges - Fig. 486


Dimensions and weights

		DN	15	20	25	32	40	50	65	80	100	
L		(mm)	130	150	160	180	200	230	290	310	350	
Fig. 485	H	(mm)	283	283	289	293	301	301	--	--	--	
	H1	(mm)	65	70	75	95	100	100	--	--	--	
	ARI-PACO 0,85 kN	PN6/16	(kg)	3,3/4,1	4,3/5	5/6	6,8/8,5	8,8/11	10/14	--	--	--
	H	(mm)	--	--	--	--	--	--	490	500	515	
	H1	(mm)	--	--	--	--	--	--	120	130	150	
	ARI-PACO 1,6 kN	PN6/16	(kg)	--	--	--	--	--	--	18/23	25/28	35/38
Fig. 486	H	(mm)	283	283	289	293	301	301	--	--	--	
	H2	PN6	(mm)	86	93	98	119	124	124	--	--	--
		PN16	(mm)	89	96	101	123	128	130	--	--	--
	ARI-PACO 0,85 kN	PN6/16	(kg)	3,9/6,1	5,2/6,3	6,1/7,6	8,3/11	11/13	12/17	--	--	--
	H	(mm)	--	--	--	--	--	--	490	500	515	
	H2	PN6	(mm)	--	--	--	--	--	--	144	158	178
		PN16	(mm)	--	--	--	--	--	--	150	162	182
	ARI-PACO 1,6 kN	PN6/16	(kg)	--	--	--	--	--	--	22/27	29/34	41/45

Standard-flange dimensions refer to page 10.

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

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

Observe restrictions by Pressure-temperature-ratings, refer to page 10.

		Fig. 485 Mixing function					Fig. 486 Straight through function				
DN		15	20	25	32	40	50	65	80	100	
Seat-Ø (mm)		18	21	27	31	41	51	66	81	101	
Standard Kvs-values		4	6,3	10	16	25	40	63	100	160	
Reduced Kvs-values		2,5 / 1,6 / 1,0 / 0,63	4	6,3	10	16	25	40	63	100	
Travel (mm)		14						30			
Max. differential pressure drop (bar)		2			1,5			1	0,8	0,6	
Actuator ARI-PACO 0,85 kN	Closing pressure (bar)	16	16	11,3	8,3	4,4	2,6	--	--	--	
	Operating time (s) (Operating speed 0,11 mm/s)	127						--			
Actuator ARI-PACO 1,6 kN	Closing pressure (bar)	--	--	--	--	--	--	3,2	2	1,2	
	Operating time (s) (Operating speed 0,15 mm/s)	--						200			

Parts

Pos.	Description	Fig. 10.485 / 12.485	Fig. 10.486 / 12.486
1	Body	EN-GJL-250 , EN-JL1040	
2	Seat ring *	X20Cr13+QT, 1.4021+QT	
3	O-ring *	EPDM	
4	Retaining ring *	FSt	
5	Plug *	CuZn39Pb3, CW614N	
6	O-ring *	EPDM	
7	Stem *	X6CrNiMoTi17-12-2, 1.4571	
8.1	Screw joint *	CuZn39Pb3, CW614N	
8.2	Retaining ring *	CuSn8, CW453K	
8.3	O-ring *	EPDM	
8.4	Bushing *	PTFE	
8.5	Washer *	CuZn37, CW508L	
8.6	O-ring *	EPDM	
9	Flange	--	S235JR, 1.0037
10	Gasket *	--	Centellen
11	Hexagon screws	--	5.6 - A2B
12	Hexagon nut	--	C35E - A2B

* Spare parts (Pos. 8.1 - 8.6 will be supplied as unit)

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 (acc. to TRB 801 No. 45 EN-JL1040 is not allowed.)

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

Control valve for heating, ventilation and air-conditioning - 3-way with flanges - Fig. 485

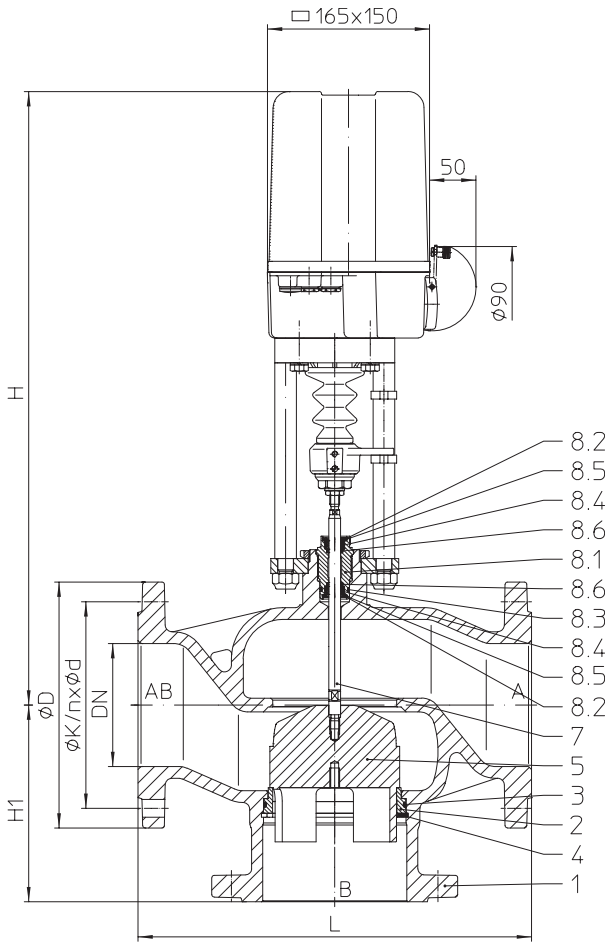


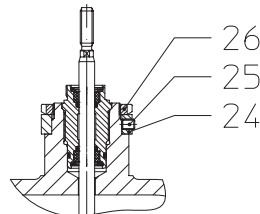
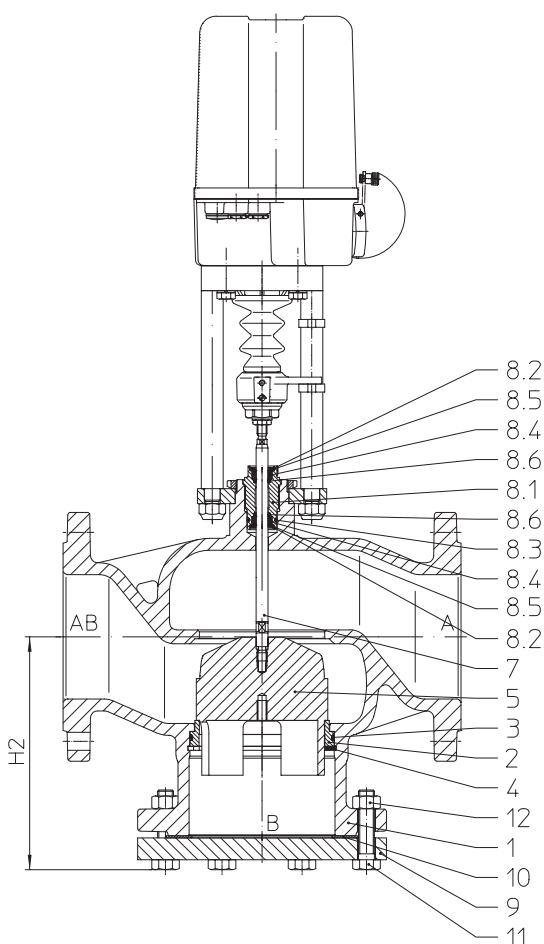
Figure	Nominal pressure	Material	Nominal diameter
12.485	PN16	EN-JL1040	DN125-150
12.486	PN16	EN-JL1040	DN125-150

Other materials and versions on request.			
Operating temperature			
• 0°C to +130°C; with stem heating to -10°C			
Stem sealing			
• O-rings			
Plug design			
• Parabolic plug / V-plug			
Guiding			
• Stem and port guiding			
Flow characteristic			
• A equal percentage / B linear			
Rangeability			
• 30 : 1			
Shut off class (Seat / Plug-Leakage rate)			
• 0,05% of Kvs			
Technical data for actuator refer to data sheet.			

Selection of possible applications
Heating-, Ventilation- and Air-Conditioning- Systems, etc.
(other applications on request)

Selection of possible flow media
Water, Water with cold-protection, etc.
(other flow media on request)

Control valve for heating, ventilation and air-conditioning - straight through with flanges - Fig. 486



Dimensions and weights

			DN	125	150
L			(mm)	400	480
Fig. 485	H		(mm)	629	653
	H1		(mm)	200	210
	ARI-PREMIO 2,2 kN	PN16	(kg)	58	82
	H		(mm)	629	653
	H1		(mm)	200	210
	ARI-PREMIO 5 kN	PN16	(kg)	58,5	82,5
Fig. 486	H		(mm)	629	653
	H2		(mm)	234	247
	ARI-PREMIO 2,2 kN	PN16	(kg)	67,5	94,5
	H		(mm)	629	653
	H2		(mm)	234	247
	ARI-PREMIO 5 kN	PN16	(kg)	68	95

Standard-flange dimensions open Page 8.

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

max. permissible closing pressures on flow-to-open P2 = 0.
 Observe restrictions by Pressure-temperature-ratings, refer to page 10.

		AB ← A	AB ← A
		Fig. 485 Mixing function	Fig. 486 Straight through function
DN		125	150
Seat-Ø (mm)		126	151
Standard Kvs-values		220	320
Reduced Kvs-values		--	--
Travel (mm)			40
Max. differential pressure drop (bar)			0,6
Actuator ARI-PREMIO 2,2 kN	Closing pressure (bar)	1,1	0,7
	Operating time (s) (Operating speed 0,38 mm/s)		105
Actuator ARI-PREMIO 5 kN	Closing pressure (bar)	3,3	2,2
	Operating time (s) (Operating speed 0,38 mm/s)		105

Parts

Pos.	Description	Fig. 12.485	Fig. 12.486
1	Body	EN-GJL-250 , EN-JL1040	
2	Seat ring *	X20Cr13+QT, 1.4021+QT	
3	O-ring *	EPDM	
4	Retaining ring *	FSt	
5	Plug *	X20Cr13+QT, 1.4021+QT	
6	O-ring *	EPDM	
7	Stem *	X6CrNiMoTi17-12-2, 1.4571	
8.1	Screw joint *	CuZn39Pb3, CW614N	
8.2	Retaining ring *	CuSn8, CW453K	
8.3	O-ring *	EPDM	
8.4	Bushing *	PTFE	
8.5	Washer *	CuZn37, CW508L	
8.6	O-ring *	EPDM	
9	Flange *	--	S235JR, 1.0037
10	Gasket *	--	Centellen
11	Hexagon screws	--	5.6 - A2B
12	Hexagon nut	--	C35E - A2B
24	Traverse	S235JR, 1.0037	
25	Grub screw	St-A2G	
26	Slotted nut	St-A4G	

* Spare parts (Pos. 8.1 - 8.6 will be supplied as unit)

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 (acc. to TRB 801 No. 45 EN-JL1040 is not allowed.)

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

Control valve for heating, ventilation and air-conditioning - 3-way with flanges - Fig. 485

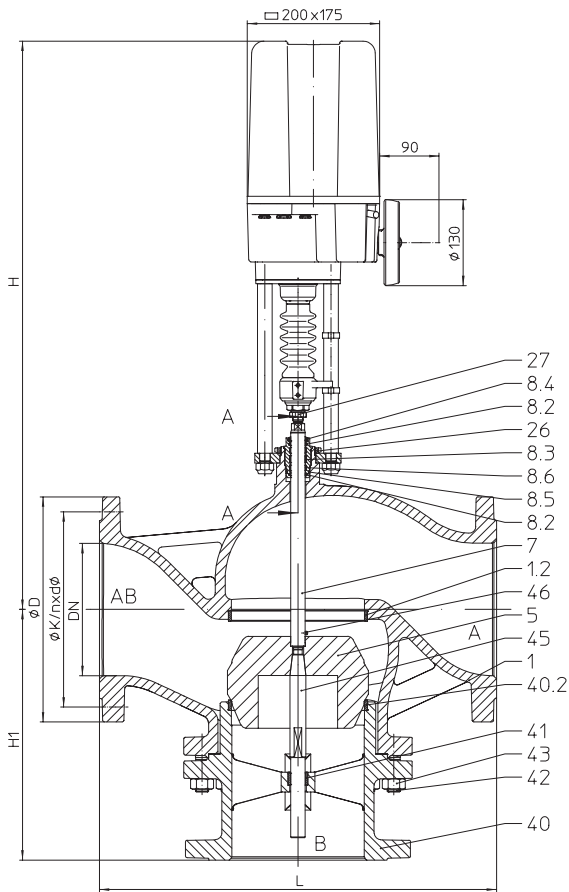


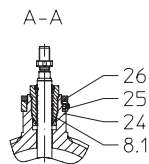
Figure	Nominal pressure	Material	Nominal diameter
12.485	PN16	EN-JL1040	DN200-250
Other materials and versions on request.			
Operating temperature			
• 0°C to +130°C; with stem heating to -10°C			
Stem sealing			
• O-rings			
Plug design			
• Parabolic plug			
Guiding			
• double plug guiding			
Flow characteristic			
• A linear / B linear			
Rangeability			
• 30 : 1			
Shut off class (Seat / Plug-Leakage rate)			
• 0,05% of Kvs			
Technical data for actuator refer to data sheet.			

Selection of possible applications

Heating-, Ventilation- and Air-Conditioning- Systems, etc.
(other applications on request)

Selection of possible flow media

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



Dimensions and weights

		DN	200	250
L		(mm)	600	730
Fig. 485	H	(mm)	874	920
	H1	(mm)	379	439
ARI-PREMIO 12/15 kN PN16		(kg)	173	283

Standard-flange dimensions open Page 8.

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

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

Observe restrictions by Pressure-temperature-ratings, refer to page 10.

Fig. 485 Mixing function		DN	200	250
Seat-Ø (mm)			201	251
Standard Kvs-values			630	1000
Reduced Kvs-values			--	--
Travel (mm)				65
Max. differential pressure drop (bar)				0,6
Actuator ARI-PREMIO 12 kN	Closing pressure (bar)		3,3	2,1
	Operating time (s) (Operating speed 0,38 mm/s)			171
Actuator ARI-PREMIO 15 kN	Closing pressure (bar)		4,2	2,7
	Operating time (s) (Operating speed 0,38 mm/s)			171

Parts

Pos.	Description	Fig. 12.485
1	Body	EN-GJL-250 , EN-JL1040
1.2	Seat ring *	X20Cr13+QT, 1.4021+QT
3	O-ring *	EPDM
4	Retaining ring *	FSt
5	Plug *	X20Cr13+QT, 1.4021+QT
6	O-ring *	EPDM
7	Stem *	X6CrNiMoTi17-12-2, 1.4571
8.1	Screw joint *	CuZn39Pb3, CW614N
8.2	O-ring *	EPDM
8.3	Guiding band *	PTFE
8.4	Scraper *	Polyurethan
8.5	O-ring *	EPDM
8.6	Lubricant *	
24	Traverse	S235JR, 1.0037
25	Grub screw	St-A2G
26	Slotted nut	St-A4G
40	Bottom flange	EN-GJS-400-18U-LT, EN-JS1049
40.1	Seat ring	X20Cr13+QT, 1.4021+QT
41	Guide bushing	X20Cr13+QT, 1.4021+QT
42	Stud	25CrMo4, 1.7218
43	Hexagon nut	C35E, 1.1181
44	Gasket	Graphite
45	Plug shaft	X20Cr13+QT, 1.4021+QT
46	Grub screw	A2

* Spare parts (Pos. 8.1 - 8.5 will be supplied as unit)

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.

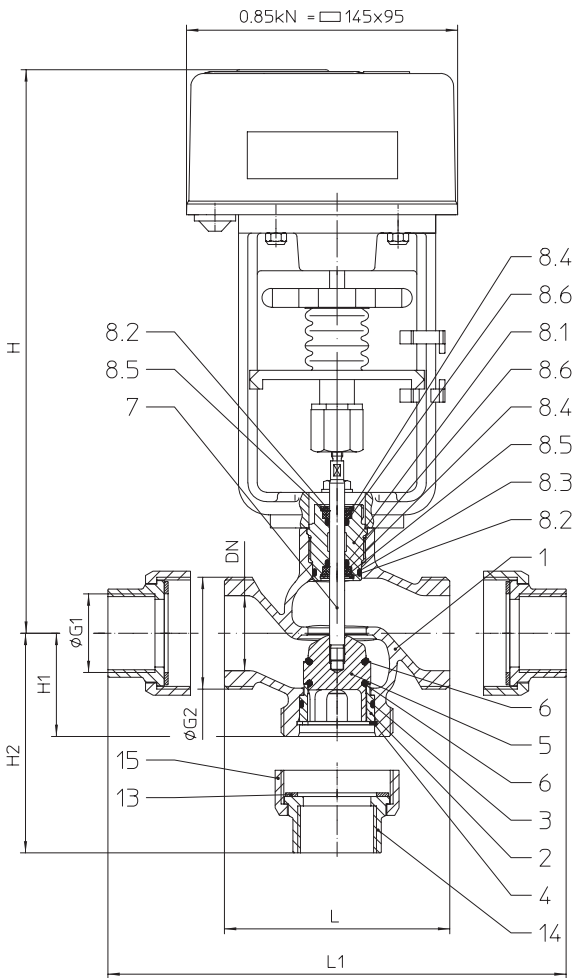
Control valve for heating, ventilation and air-conditioning - 3-way with threaded joint - Fig. 487


Figure	Nominal pressure	Material	Nominal diameter
72.487	PN16	CC491K	DN15-50
72.488	PN16	CC491K	DN15-50

Other materials and versions on request.

Operating temperature

- 0°C to +130°C; with stem heating to -10°C

Stem sealing

- O-rings

Plug design

- Parabolic plug / V-plug

Guiding

- Stem and port guiding

Flow characteristic

- A equal percentage / B linear

Rangeability

- 30 : 1

Shut off class (Seat / Plug-Leakage rate)

- Soft seat - Leakage class 1 DIN 3230 T3 BN by given closing pressure

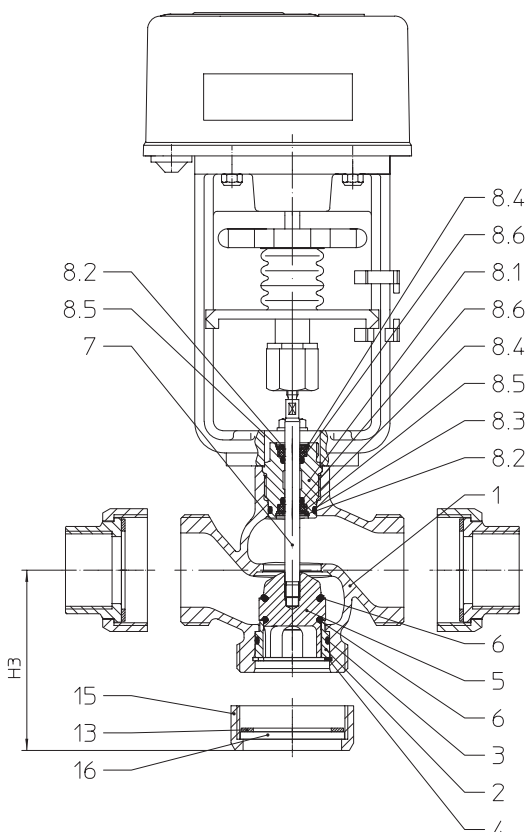
Technical data for actuator refer to data sheet.

Selection of possible applications

Heating-, Ventilation- and Air-Conditioning- Systems, etc.
(other applications on request)

Selection of possible flow media

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

Control valve for heating, ventilation and air-conditioning - straight through with threaded joint - Fig. 488


Dimensions and weights

		DN	15	20	25	32	40	50
Ø G1			G 1/2	G 3/4	G 1	G 1 1/4	G 1 1/2	G 2
Ø G2			G 1 1/8	G 1 1/4	G 1 1/2	G 2	G 2 1/4	G 2 3/4
L		(mm)	80	90	110	120	130	150
L1		(mm)	128	138	166	186	199	223
Fig. 487	H	(mm)	283	283	289	293	302	302
	H1	(mm)	55	55	55	55	60	65
	H2	(mm)	79	79	83	88	95	102
	ARI-PACO 0,85 kN	PN16	(kg)	2,9	3,1	3,7	4,6	5,2
Fig. 488	H	(mm)	283	283	289	293	302	302
	H1	(mm)	55	55	55	55	60	65
	H3	(mm)	65	65	66	67	72	77
	ARI-PACO 0,85 kN	PN6/16	(kg)	2,9	3,1	3,7	4,6	5,2

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

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

Observe restrictions by Pressure-temperature-ratings, refer to page 10.

Fig. 487 Mixing function		Fig. 488 Straight through function					
DN		15	20	25	32	40	50
Seat-Ø (mm)		18	21	27	31	41	51
Standard Kvs-values		4	6,3	10	16	25	40
Reduced Kvs-values		2,5 / 1,6 / 1,0 / 0,63	4	6,3	10	16	25
Travel (mm)		14					
Max. differential pressure drop (bar)		2	2	1,5	1,5	1,5	1,5
Actuator ARI-PACO 0,85 kN	Closing pressure (bar)	16	16	11,3	8,3	4,4	2,6
	Operating time (s) (Operating speed 0,11 mm/s)	127					

Parts

Pos.	Description	Fig. 72.487	Fig. 72.488
1	Body	CuSn5Zn5Pb5-C, CC491K	
2	Seat ring *	X20Cr13+QT, 1.4021+QT	
3	O-ring *	EPDM	
4	Retaining ring *	FSt	
5	Plug *	CuZn39Pb3, CW614N	
6	O-ring *	EPDM	
7	Stem *	X6CrNiMoTi17-12-2, 1.4571	
8.1	Screw joint *	CuZn39Pb3, CW614N	
8.2	Retaining ring *	CuSn8, CW453K	
8.3	O-ring *	EPDM	
8.4	Bushing *	PTFE	
8.5	Washer *	CuZn37, CW508L	
8.6	O-ring *	EPDM	
13	Gasket *	Centellen	
14	Sleeve	TMP / chrom.	--
15	Sleeve nut	TMP / chrom.	
16	Blind plate	--	S235JR, 1.0037

* Spare parts

Information / restriction of technical rules need to be observed!

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

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

Standard-flange dimensions

DN			15	20	25	32	40	50	65	80	100	125	150	200	250
PN6	ØD	(mm)	80	90	100	120	130	140	160	190	210	--	--	--	--
PN6	ØK	(mm)	55	65	75	90	100	110	130	150	170	--	--	--	--
PN6	n x Ød	(mm)	4 x 11	4 x 11	4 x 11	4 x 14	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	--	--	--	--
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)	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	4 x 18	8 x 18	8 x 18	8 x 18	8 x 22	12 x 22	12 x 26

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

Material			-10°C to 120°C	120°C	130°C
EN-JL1040	PN6	(bar)	6	6	5,8
EN-JL1040	PN16	(bar)	16	16	15,5

Pressure-temperature-ratings acc. to DIN EN 1092-3

Material			-10°C to 20°C	100°C	130°C
CC491K	PN16	(bar)	16	16	16

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
- Stem sealing
- Actuator

Example:

Figure 12.485; nominal diameter DN 50; nominal pressure PN16; body material EN-JL1040; mixing function; Kvs 40; actuator ARI-PACO 0,85 kN; 24V AC.

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



Technology for the Future.
GERMAN QUALITY VALVES

ARI-Armaturen Albert Richter GmbH & Co. KG, D-33756 Schloß Holte-Stukenbrock,
Tel. +49 52 07 / 994-0, Telefax +49 52 07 / 994-158 or 159 Internet: <http://www.ari-armaturen.com> E-mail: info.vertrieb@ari-armaturen.com