



01 - 02.4
08.18.ENG

CONTROL VALVES RV 111 COMAR line



The valves series RV 111 COMAR are control valves of a compact construction with external threaded coupling connection.

The valves excel with minimum dimensions and weight, quality control function and a high tightness in closed position. Thanks to an unique LDMspline^â, flow characteristic which has been optimized for thermodynamic processes control, the valves are ideal for applications in heating and air-conditioning. In regard of a sophisticated design of internal parts and long service life of packing, the valves fulfill every demand for a long-time service without necessary maintenance.

The valves are optionally manufactured either two-way or three-way. The part of the delivery is a screw joint enabling a quick and easy installation to an appliance.

Assembled with electromechanic actuators, the valve can be controlled with 3-point or continuous signal. The part of the delivery of valves RV 111 R is also a hand wheel which can be used for the valve control until assembling with an actuator (**LDM, Siemens** or **Sauter**).

Application

Used materials for throttling trim which consist of plug made of high-quality stainless steel and soft sealing elements, ensure a hermetic tightness in both ports and enable the valves to be used not only in common warm-water and hot-water regulation circuits in heating but also in applications with special characteristic features of process medium such as in refrigerating industry and air-conditioning.

Process media

The valves series RV 111 are suitable for applications where process medium is water or air. Further they can be used for refrigerating media and other non-aggressive liquids or gases with temperature ranging from +2 °C to +150 °C. The valves are not applicable to conditions with cavitation. Sealing surfaces of control trim are resistant to common sludge or water impurities. Yet it is recommended to pipe a strainer in front of valve to ensure a reliable function and tightness in case there are abrasive particles present.

Installation

The valves can be installed in any position except position when the actuator is under the valve body. The flow direction is indicated on the valve body - inlet ports are indicated by letters A and B, outlet port AB.

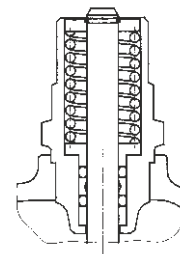
Flow characteristic selection in regard of valve stroke

To make right selection of valve flow characteristic, it is suitable to carry out checking of what stroke values will be reached in different operation states. We recommend to carry out such checking at least for minimal, nominal and maximal flow rates. The principle for flow characteristic selection is to avoid, if possible, 5 - 10% of the beginning and end of the valve stroke range.

To calculate valve stroke at different operating conditions with different types of flow characteristics is possible with the advantage of using LDM's calculation programme **VALVES**. The programme serves for complete design of valve from Kv calculation to specification of a concrete valve with its actuator.

Packing O-ring EPDM

Well proven type of packing with sealing elements made of high quality EPDM is suitable for operating with temperature of, +2 to +130°C. The packing excels with its reliability and long time tightness. Its properties ensure safe usage in no-maintenance applications. Main preferences of the packing is low frictional forces, sealing capability in both ports (even when there is underpressure in the valve) and service life exceeding 500 000 cycles.





RV 111 R

Control Valves COMAR line

DN 15 - 40
PN 16

Valves **RV 111 R** are suitable for connection with actuators **LDM** a **Siemens**

Technical data	
Series	RV 111 R
Type of valve	Two-way, reverse, control valve Three-way control valve
Nominal size range	DN 15 to 40
Nominal pressure	PN 16
Body material	Grey cast iron EN-JL 1030
Plug material	Stainless steel 1.4021
Operating temperature range	+2 to +150°C
Connection	Externally threaded coupling + screw joints Flanges with raised faces Externally threaded coupling + weld unions
Material of weld unions	DN 15 to 32 ... 1.0036 / 11 373.0 DN 40 ... 1.0308 / 11 353.0
Type of plug	Contoured or V-ported, with soft seat sealing
Flow characteristic	LDMspline®, linear Linear / linear
Kvs value	0.16 to 25 m ³ /hour 0.25 to 25 m ³ /hour
Leakage rate	Class IV. - S1 acc. to ČSN-EN 1349 (5/2001) (<0.0005 % Kvs)
Rangeability r	min 50 : 1
Packing	O - ring EPDM

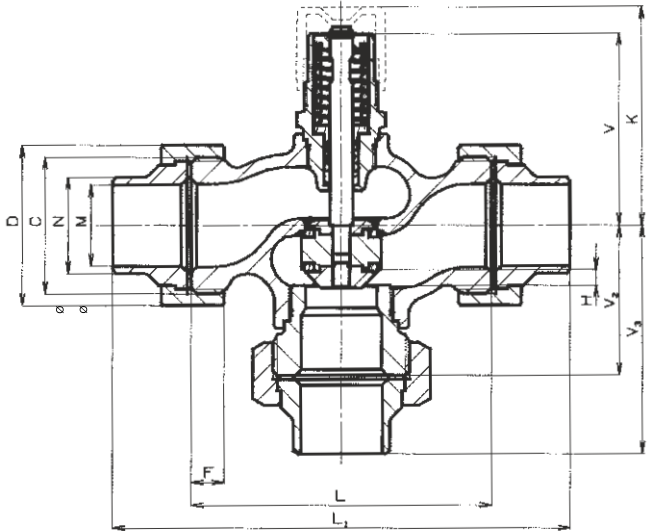
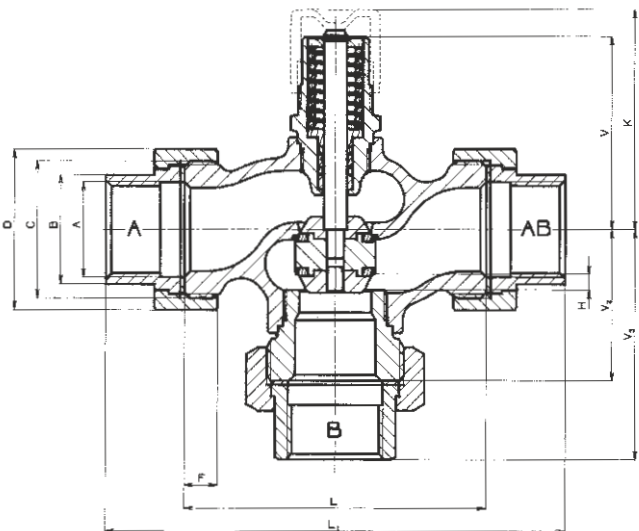
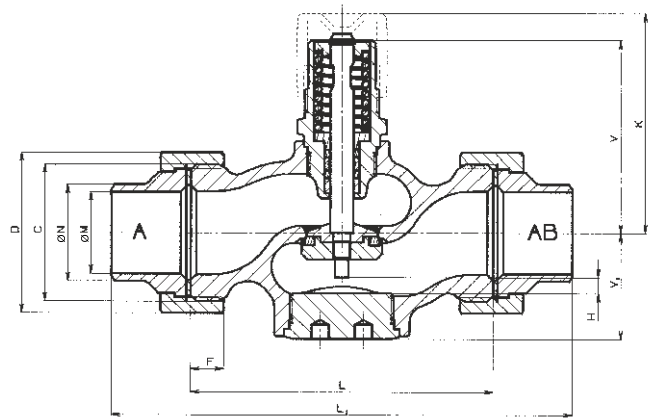
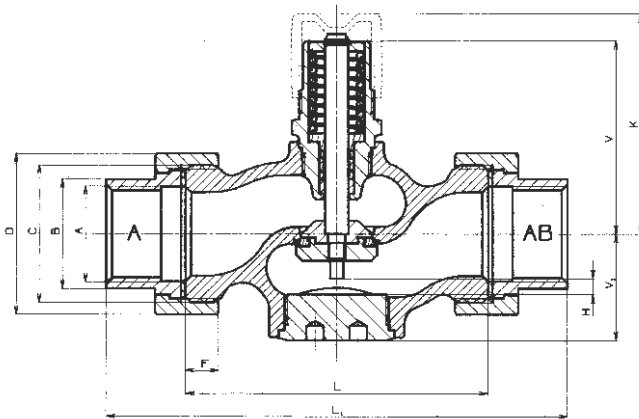
Material	Maximal permissible operating pressures [Mpa]	
	PN	Temperature [°C]
Grey cast iron EN-JL 1030 (EN-GJL-200)	16	120 150
		1,60 1,44

Dimensions and weights of RV 111 R/T with threaded connection and RV 111 R/W with weld unions

DN	L	L ₁	V	V ₁	V ₂	V ₃	K	A	B	C	D	ØM	ØN	F	H	m	m
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]		[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]
15	100	146	67	36.5	50	73	77	Rp 1/2	25	G 1	41	16.1	21.3	9	5,5	1.15	1.35
20	100	149	67	36.5	50	74.5	77	Rp 3/4	32	G 1 1/4	51	21.7	26.9	10	5,5	1.45	1.75
25	105	160	67	37	52.5	80	77	Rp 1	38	G 1 1/2	56	29.5	33.7	11	5,5	1.7	2.15
32	130	193	78	49	65	96.5	88	Rp 1 1/4	47	G 2	71	37.2	42.4	12	5,5	3.0	3.8
40	140	207	78	49	70	103.5	88	Rp 1 1/2	53	G 2 1/4	76	43.1	48.3	14	5,5	3.5	4.4

Valves RV 111 R/T with threaded connection

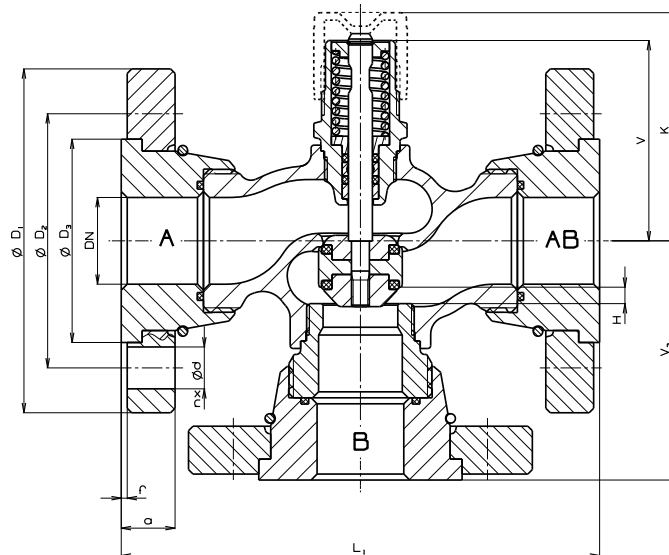
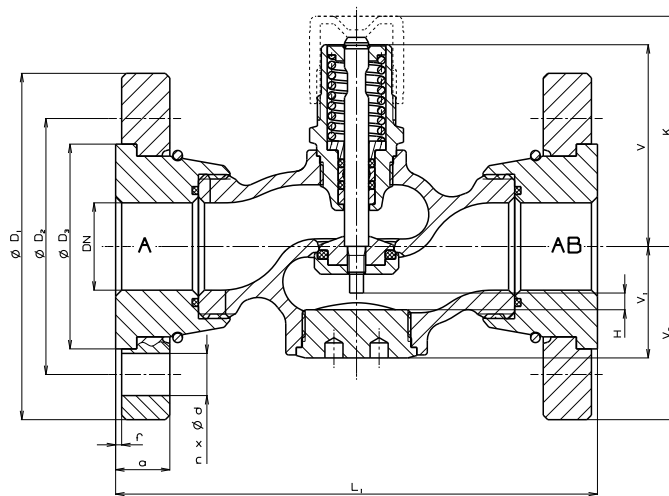
Valves RV 111 R/W with weld unions



Dimensions and weights of RV 111 R/F with flanges

DN	L ₁	V	V ₁	V ₂	V ₃	ØD ₁	ØD ₂	ØD ₃	a	f	n	Ød	K	H	m	m
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[kg]	[kg]
15	130	67	36.5	42.5	65	95	65	45	16	2	4	14	77	5,5	2.3	3.1
20	150	67	36.5	52.5	75	105	75	58	16	2	4	14	77	5,5	3.2	4.4
25	160	67	37	57.5	80	115	85	68	18	2	4	14	77	5,5	3.8	5.3
32	180	78	49	70	90	140	100	78	18	2	4	18	88	5,5	5.9	8.1
40	200	78	49	75	100	150	110	88	19	3	4	18	88	5,5	6.9	9.5

Valves RV 111 R/F with raised-faced flanges



Kvs and differential pressure values

DN	Kvs [m ³ / hour]								Dp _{max} kPa
	1	2	3	4	5	6	7	8	
15	4.0	2.5	1.6	1.0	0.63	0.4	0.25	0.16 ¹⁾	400
20	6.3	---	---	---	---	---	---	---	350
25	10.0	---	---	---	---	---	---	---	200
32	16.0	---	---	---	---	---	---	---	110
40	25.0	---	---	---	---	---	---	---	60

Two-way execution DN 15 to 25 - flow characteristic LDMspline[®], DN 32 and 40 - flow characteristic linear.

Three-way execution - linear characteristic in both ports.
¹⁾ applies to two-way execution only

Valve complete specification No. for ordering RV 111 R

		XX	XXX	X	XX	XX	XX	XX	XXX	-	XX	/	X
1. Valve	Control valve	RV											
2. Series	Valve with external thread		111										
3. Type of actuating	Hand wheel with possibility of using electric actuator			R									
4. Execution	Two-way				2								
	Three-way				3								
5. Body material	Grey cast iron				3								
6. Flow characteristic	Linear (2-way execution DN 32, 40 and 3-way execution) LDMspline [®] (two-way execution DN 15 to 25)					1							
						3							
7. Kvs	Column No. acc. to Kvs values table						X						
8. Nominal pressure	PN 16							16					
9. Max. temperature °C	150 °C								150				
10. Nominal size	DN 15 to 40										XX		
11. Connection	Threaded connection												T
	Raised-faced flanges												F
	Weld unions												W

Ordering example: **RV 111 R 2331 16/150-25/T**
Actuator must be specified separately

Available actuators

LDM	Electric actuator ANT3-5.10	AC 24 V, 3-position control	
	Electric actuator ANT3-5.11	AC/DC 24 V, control 0(2) - 10V, (0)4 - 20 mA	
	Electric actuator ANT3-5.10SC	AC/DC 24 V, 3-position control, fail-safe function	
	Electric actuator ANT3-5.11SC	AC/DC 24 V, control 0(2) - 10V, (0)4 - 20 mA fail-safe function	
	Electric actuator ANT3-5.20, ANT3-5.22	AC 230 V, 3-position control	
	Electric actuator ANT3-5.21	AC 230 V, control 0(2) - 10V, (0)4 - 20 mA	
	Electric actuator ANT3-5.20SC	AC 230 V, 3-position control, fail-safe function	
	Electric actuator ANT3-5.21SC	AC 230 V, control 0(2) - 10V, (0)4 - 20 mA fail-safe function	
	Siemens	Electric actuator SSC31	AC 230 V, 3-position control
		Electric actuator SSC61	AC 24 V, control DC 0...10V
Electric actuator SSC61.5		AC 24 V, control DC 0...10V, fail-safe function	
Electric actuator SSC81		AC 24 V, 3-position control	
Electric actuator SAS 31.00; 31.03		AC 230 V, 3-position control	
Electric actuator SAS 31.50; 31.53		AC 230 V, 3-position control, fail-safe function	
Electric actuator SAS 61.03		AC/DC 24 V, proportional control	
Electric actuator SAS 61.33; 61.53		AC/DC 24 V, proportional, fail-safe function	
Electric actuator SAS 81.00; 81.03		AC/DC 24 V, 3-position control	
Electric actuator SAS 81.33		AC/DC 24 V, 3-position control, fail-safe function	

Note: Actuators SSC respectively SAS are suitable for maximal medium temperature 110°C respectively 130°C



RV 111 S

Control Valves
COMAR line

DN 15 - 40
PN 16

Valves **RV 111 S** are suitable for connection with actuators **Sauter**

Technical data	
Series	RV 111 R
Type of valve	Two-way, reverse, control valve Three-way control valve
Nominal size range	DN 15 to 40
Nominal pressure	PN 16
Body material	Grey cast iron EN-JL 1030
Plug material	Stainless steel 1.4021
Operating temperature range	+2 to +150°C
Connection	Externally threaded coupling + screw joints Flanges with raised faces Externally threaded coupling + weld unions
Material of weld unions	DN 15 to 32 ... 1.0036 / 11 373.0 DN 40 ... 1.0308 / 11 353.0
Type of plug	Contoured or V-ported, with soft seat sealing
Flow characteristic	LDMspline®, linear Linear / linear
Kvs value	0.16 to 25 m ³ /hour 0.25 to 25 m ³ /hour
Leakage rate	Class IV. - S1 acc. to ČSN-EN 1349 (5/2001) (<0.0005 % Kvs)
Rangeability r	min 50 : 1
Packing	O - ring EPDM

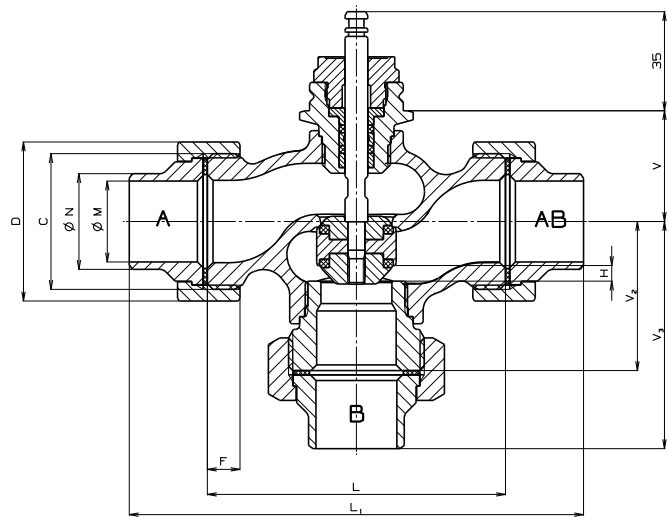
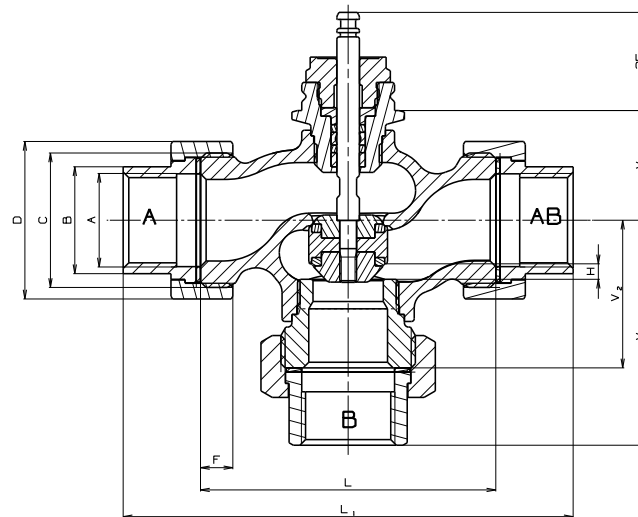
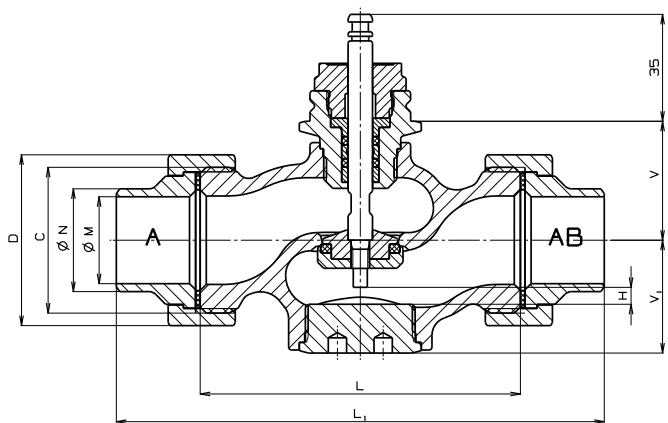
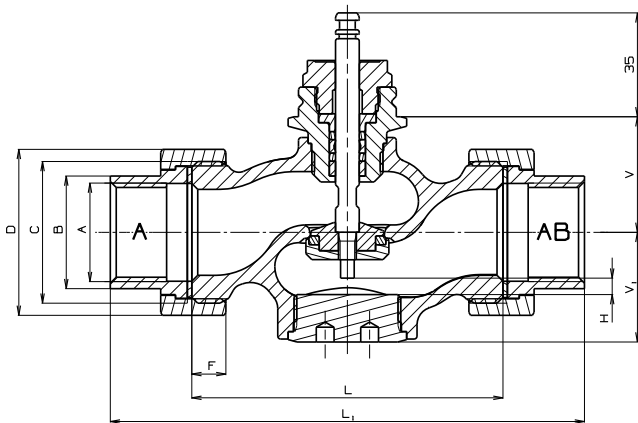
Maximal permissible operating pressures [Mpa]			
Material	PN	Temperature [°C]	
		120	150
Grey cast iron EN-JL 1030 (EN-GJL-200)	16	1,60	1,44

Dimensions and weights of RV 111 S/T with threaded connection and RV 111 S/W with weld unions

DN	L	L ₁	V	V ₁	V ₂	V ₃	K	A	B	C	D	ØM	ØN	F	H	m	m
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]		[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]
15	100	146	39	36.5	50	73	77	Rp 1/2	25	G 1	41	16.1	21.3	9	5,5	1.15	1.35
20	100	149	39	36.5	50	74.5	77	Rp 3/4	32	G 1 1/4	51	21.7	26.9	10	5,5	1.45	1.75
25	105	160	39	37	52.5	80	77	Rp 1	38	G 1 1/2	56	29.5	33.7	11	5,5	1.7	2.15
32	130	193	50	49	65	96.5	88	Rp 1 1/4	47	G 2	71	37.2	42.4	12	5,5	3.0	3.8
40	140	207	50	49	70	103.5	88	Rp 1 1/2	53	G 2 1/4	76	43.1	48.3	14	5,5	3.5	4.4

Valves RV 111 S/T with threaded connection

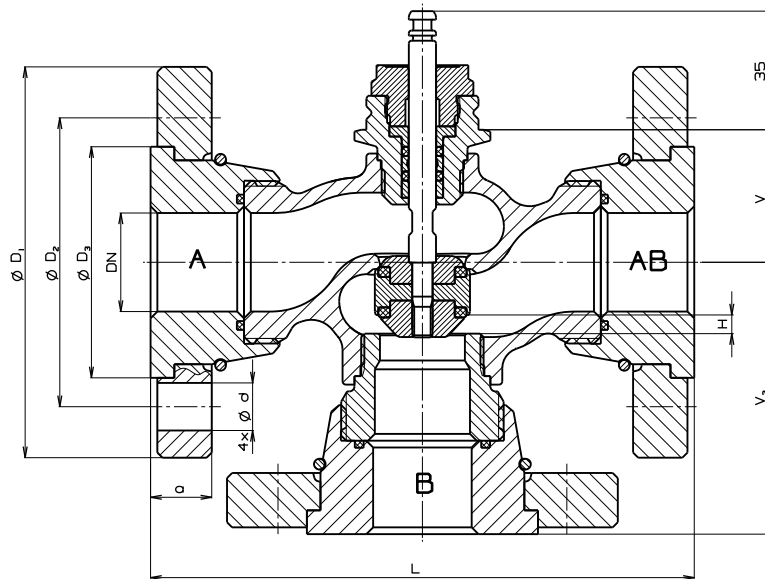
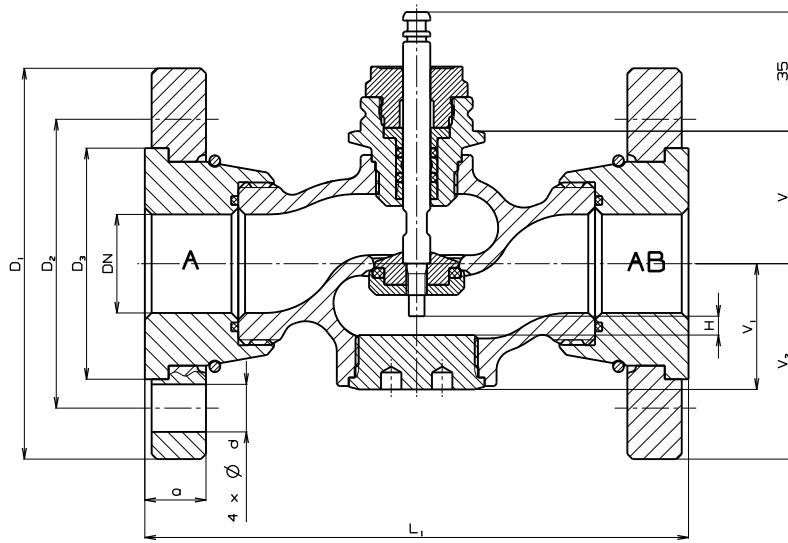
Valves RV 111 S/W with weld unions



Dimensions and weights of RV 111 S/F with flanges

DN	L ₁	V	V ₁	V ₂	V ₃	ØD ₁	ØD ₂	ØD ₃	a	f	n	Ød	K	H	m	m
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[kg]	[kg]
15	130	39	36.5	42.5	65	95	65	45	16	2	4	14	77	5,5	2.3	3.1
20	150	39	36.5	52.5	75	105	75	58	16	2	4	14	77	5,5	3.2	4.4
25	160	39	37	57.5	80	115	85	68	18	2	4	14	77	5,5	3.8	5.3
32	180	50	49	70	90	140	100	78	18	2	4	18	88	5,5	5.9	8.1
40	200	50	49	75	100	150	110	88	19	3	4	18	88	5,5	6.9	9.5

Valves RV 111 S/F with raised-faced flanges



Kvs and differential pressure values

DN	Kvs [m ³ / hour]								Dp _{max}	
	1	2	3	4	5	6	7	8	250 N	500 N
15	4.0	2.5	1.6	1.0	0.63	0.4	0.25	0.16 ¹⁾	400	400
20	6.3	---	---	---	---	---	---	---	400	400
25	10.0	---	---	---	---	---	---	---	350	400
32	16.0	---	---	---	---	---	---	---	220	400
40	25.0	---	---	---	---	---	---	---	130	300

Two-way execution DN 15 to 25 - flow characteristic LDMspline[®],
DN 32 and 40 - flow characteristic linear.

Three-way execution - linear characteristic in both ports.
¹⁾ applies to two-way execution only

Valve complete specification No. for ordering RV 111 S

		XX	XXX	X	XX	XX	XX	XX	XXX	-	XX	/	X
1. Valve	Control valve	RV											
2. Series	Valve with external thread		111										
3. Type of actuating	Hand wheel with possibility of using electric actuator			S									
4. Execution	Two-way				2								
	Three-way				3								
5. Body material	Grey cast iron				3								
6. Flow characteristic	Linear (2-way execution DN 32, 40 and 3-way execution) LDMspline [®] (two-way execution DN 15 to 25)					1							
						3							
7. Kvs	Column No. acc. to Kvs values table						X						
8. Nominal pressure	PN 16							16					
9. Max. temperature °C	150 °C								150				
10. Nominal size	DN 15 to 40										XX		
11. Connection	Threaded connection												T
	Raised-faced flanges												F
	Weld unions												W

Ordering example: **RV111 S 2331 16/150-25/T**
Actuator must be specified separately

Available actuators

Sauter	Electric actuator AVM 105	AC 24 V or 230 V, 3-position control 250 N
	Electric actuator AVM 115	AC 24 V or 230 V, 3-position control, 500N
	Electric actuator AVM 105S	AC 24 V, SUT control technology 0-10V, 250N
	Electric actuator AVM 115S	AC 24 V, SUT control technology 0-10V, 500N



Electric actuators

LDM**ANT3-5.1x(SC)****ANT3-5.2x(SC)**

Electromechanical actuators ANT3-5 are designed to control the regulating valves LDM series RV 111 COMAR line. Its connection to the valve ensures a zero clearance between stem of the actuator and the valve so the precise regulating ability is ensured even for minimal position changes. The actuators are self-adaptive. The end positions are limited by the valve stroke. To communicate with a control system, the actuators are equipped with either standard 3-position control or proportional control (options: 0..10 V, 2..10 V, 0..20 mA or 4..20 mA). The version marked "SC" contains electronically controlled fail-safe function activated by power supply failure, by valves with proportional control by failure of voltage at NF terminal as well. In setting mode for the actuators with proportional control it is possible to define a final position in percentage of the stroke value. The actuator automatically runs into that position when the fail-safe function is induced. Standard setting is position "closed". As a source of energy for the fail-safe function, there are block of capacitors which are continuously charged when the actuator is in operation. Service life of capacitors is 10 years what corresponds with service life of the actuator under standard conditions. All the types of ANT actuator are equipped with hand wheel for manual operating.

Properties

- Easy assembly to the valve without the necessity of any adjusting. No tools required
- Self-adaptive function precisely sets the stroke range according to the limit positions of the valve stroke
- Hand wheel for operating in case of emergency
- Stroke indicator for information on actual open position of the valve
- Option of equipping with resistance feedback or adjustable position switch (for actuators with 3-position control without safety function)
- Intelligent microprocessor control (for actuators with a fail-safe function and proportional control)
- Automatic recognition of presence of impurities between the seat and plug of the valve including an algorithm for self-cleaning function (for actuators with proportional control)
- Option of control signal 0..10V, 2..10V, 0..20 mA, 4..20 mA (for actuators with proportional control)
- Option of adjusting a final position for actuators with fail-safe function in range of 0..100% of the stroke
- Possibility to read history and detection of failures (for actuators with microprocessor)
- Long service life and reliability with a sophisticated and patented design due to a selection of high quality materials
- Feedback 0(2)-10V or 0(4)-20mA for actuators with microprocessor control
- Possibility of digital control (protocol MODBUS)
- Adjustable user setting of deadband and suppression of control signal zero
- The possibility of control signal direction available

Application

The actuators in combination with LDM valves are designed especially for applications in heating, air-conditioning and refrigerating. There they can take advantage of combination of control flow characteristic LDM spline optimized for heat transfer processes and precision and reliability provided by simple mechanic design. In some applications, it is possible to make use of its fail-safe function which is induced by voltage failure at given terminal and puts the valve to previously defined position.

Technical data of actuators ANT3-5

Type ANT3-...	5.10	5.11	5.10SC	5.11SC	5.20	5.22	5.21	5.20SC	5.21SC
Voltage ($\pm 10\%$)	24 V AC	24 V AC/DC			230 V AC				
Frequency	50 Hz								
Control	3-position	0..10V, 4..20mA ²	3-position	0..10V, 4..20mA ²	3-position	0..10V, 4..20mA ²	3-position	0..10V, 4..20mA ²	3-position
Power consumption	1,5 VA	14 VA			3 VA		10 VA		
Nominal force	300 N + 30%								
Nominal stroke	ANT3-5.xx ... 5,5 mm								
Open-close run time 50 Hz	66 s	8 s	33 s	8 s	66 s	33 s	8 s	33 s	8 s
Fail-safe function	---	---	8 s	8 s	---	---	---	8 s	8 s
Feedback	100 Ω , 1k Ω ¹	0(2) - 10 V; 0(4) - 20 mA ²			100 Ω , 1 k Ω ¹		0(2) - 10 V; 0(4) - 20 mA ²		
Adjustable position switch	PS1 ¹	---			PS1 ¹		---		
Impedance of input control signal	---	≥ 10 k Ω (V) 250 Ω (mA)	---	≥ 10 k Ω (V) 250 Ω (mA)	---	---	≥ 10 k Ω (V) 250 Ω (mA)	---	≥ 10 k Ω (V) 250 Ω (mA)
Enclosure	IP 54 (IEC 60529)								
Medium max. temp.	150 $^{\circ}$ C								
Ambient temp. range	-5 to +55 $^{\circ}$ C								
Ambient humidity range	5 .. 95 % relative humidity								
Storage conditions	-15 to +55 $^{\circ}$ C, 5 .. 95 % relative humidity								
Weight	0,7 kg		0,8 kg		0,7 kg			0,8 kg	

¹ Optional accessories. One piece of accessory can be used only. Must be specified in order.

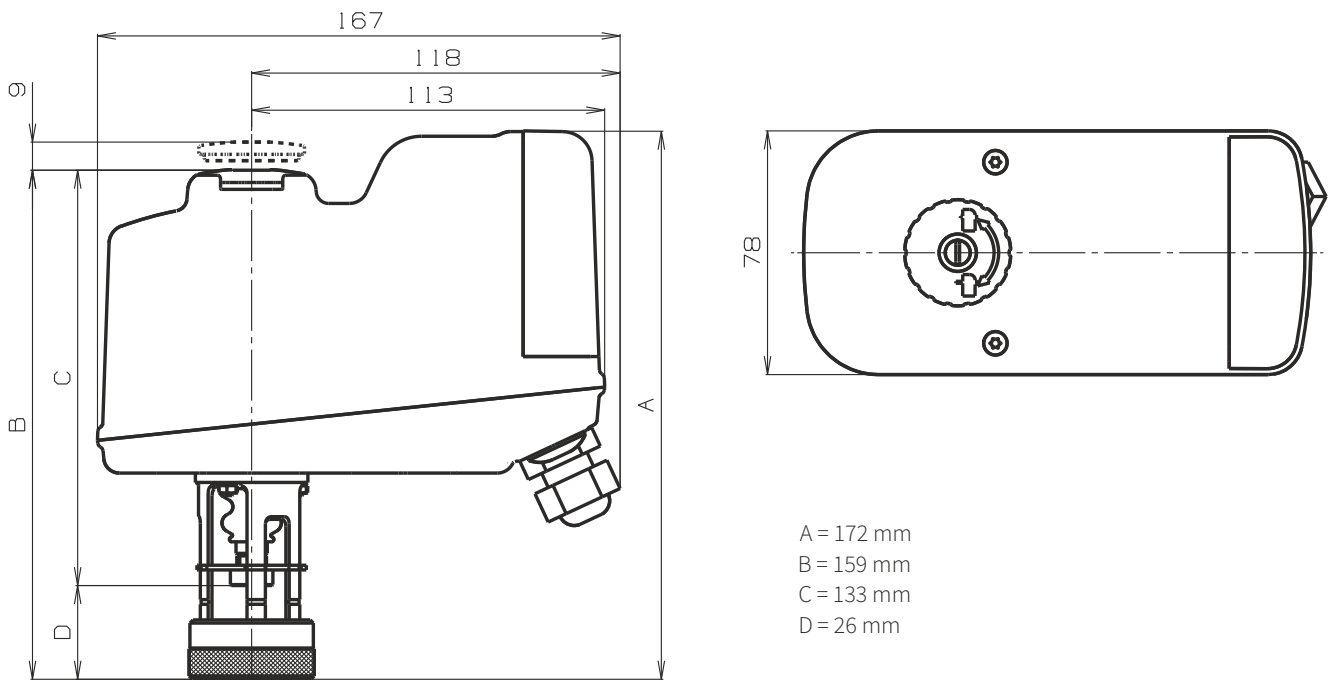
² Standard equipment. It shall be clearly specified in the order (type and range of feedback signal, basic execution 0-10V)

Optional accessories

Resistance position transmitter 0..100 Ω nebo 0..1000 Ω / (for 3-position control actuators only without safety function)

Adjustable position switch PS1 (for 3-position control actuators only without safety function)

Wiring diagrams of actuators

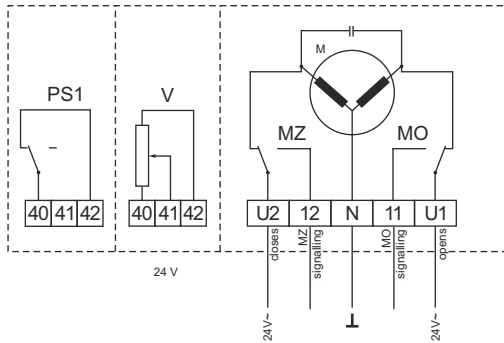


Wiring diagrams of actuators

Note: ANT3-5 ... closes the valve by retracting its stem: 

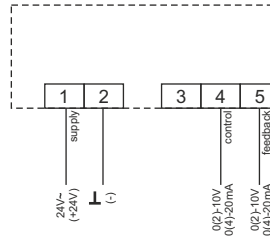
ANT3-5.10

3-position control, 24 V AC



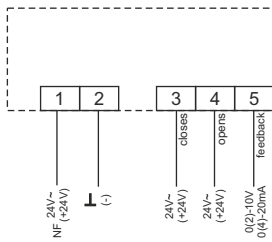
ANT3-5.11

Proportional control, 24 V AC/DC



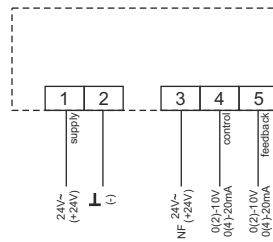
ANT3-5.10SC

3-position control, 24 V AC/DC, fail-safe function



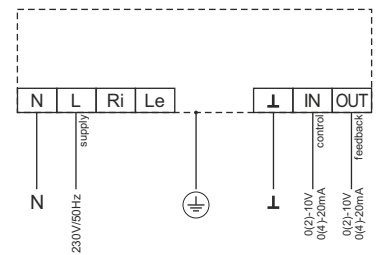
ANT3-5.11SC

Proportional control, 24 V AC/DC, fail-safe function



ANT3-5.21

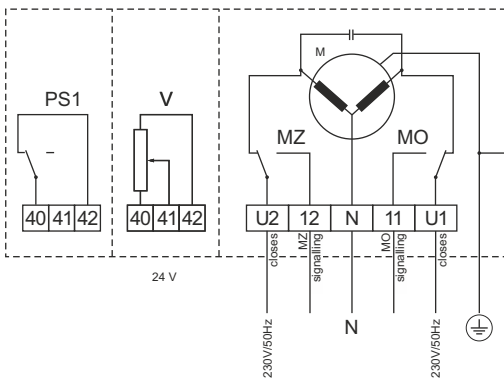
Proportional control, 230 V AC



ANT3-5.20

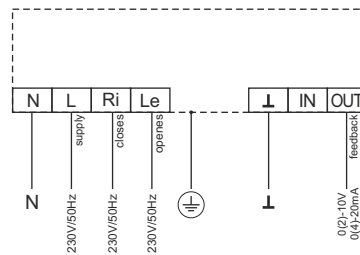
ANT3-5.22

3-position control, 230 V AC



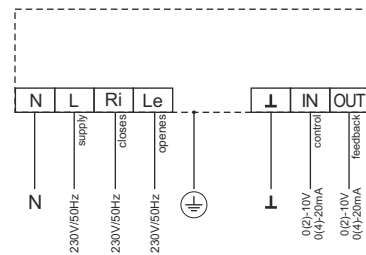
ANT3-5.20SC

3-position control, 230 V AC, fail-safe function



ANT3-5.21SC

Proportional control, 230 V AC, fail-safe function



- MO** power switch for "Open" position
- MZ** power switch for "Closed" position
- M** motor
- V** feedback 100W or 1000W
- Ps1** adjustable position switch (max. zatížitelnost 0,5 A)
- NF** terminal fail-safe function
- 11, 12** terminals signalling of end positions (max. 0,5 A)

The range and the type of input and output control signal can be adjusted by wiring



Electric actuators

Siemens

SSC31
SSC61...
SSC81

Technical data				
Type	SSC31	SSC61	SSC61.5	SSC81
Voltage	AC 230 V	DC 24 V nebo AC 24 V		AC 24 V
Frequency	50 / 60 Hz			
Motor power	6 VA	2 VA	2 VA (3VA) <small>when condensator fully charged</small>	0,8 VA
Control	3 - bodové	DC 0 - 10 V		3 - bodové
Open-close running time	150 s	30 s		150 s
Fail-safe function	---	---	30 s	---
Nominal force	300 N			
Stroke	5,5 mm			
Enclosure	IP 40			
Proces medium max. t.	2 to 110°C			
Ambient temp. range	5 to 50°C			
Ambient humidity range	0 ... 95 % without condensation			
Weight	0,26 kg	0,25 kg	0,27 kg	0,25 kg

→ See original producer's catalogue sheets for further detailed information about actuators

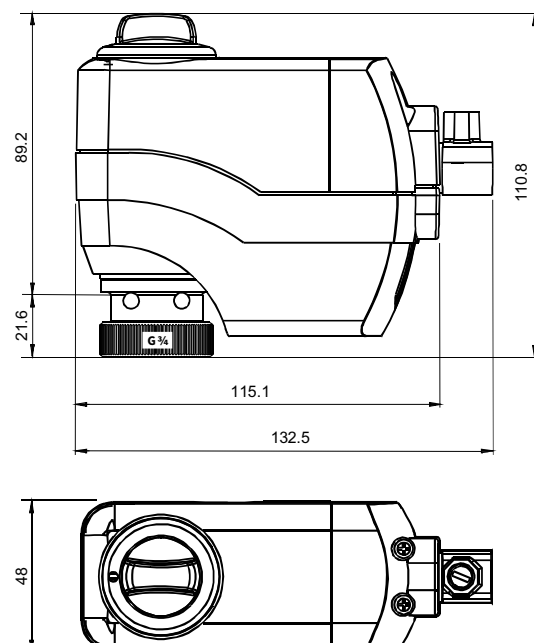
Wiring diagram

Terminal board

SSC31	Y2 4895Z06	Control signal CLOSE (AC 230 V)
	Y1	Control signal OPEN (AC 230 V)
	N	Zero
SSC61 SSC61.5	Y 4895Z21	Control signal DC 0...10 V
	G	Phase AC 24 V (+ with DC 24 V)
	G0	System neutral (- with DC 24 V)
SSC81	Y2 4894Z15	Control signal CLOSE (AC 24 V)
	Y1	Control signal OPEN (AC 24 V)
	G	Phase AC 24 V

Dimensions of actuator

All dimensions in mm





Electric actuators

Siemens

SAS

Technical data										
Type	31.00	31.03	31.50	31.53	61.03	61.33	61.53	81.00	81.03	81.33
Voltage	230 V AC				24 V AC/DC					
Frequency	50 Hz									
Motor power	2,8 VA	3,5 VA		5,5 VA	5,3 VA	5,9 VA	5,8 VA	2,2 VA	2,5 VA	3,4 VA
Control	3 - position				0 - 10 V; 4 - 20 mA; 1000 Ohm			3 - position		
Open-close running time	120 s	30 s	120 s	30 s	30 s			120 s	30 s	
Fail-safe function	---		28 s	14 s	---		14 s	---		14 s
Nominal force	400 N									
Stroke	5,5 mm									
Enclosure	IP 54 (in vertical mounting position)									
Proces medium max. t.	130 °C									
Ambient temp. range	-5 to 50 °C									
Ambient humidity range	5 to 95 % without condensation									
Hand control	YES		NO		YES		NO		YES	
Weight	0,4 kg		0,68 kg		0,4 kg		0,68 kg		0,4 kg	

→ See original producer's catalogue sheets for further detailed information about actuators

Accesories

ASC 9.6	Auxiliary switch
ASK 39.2	Weather resistance cover

Function

Calibration

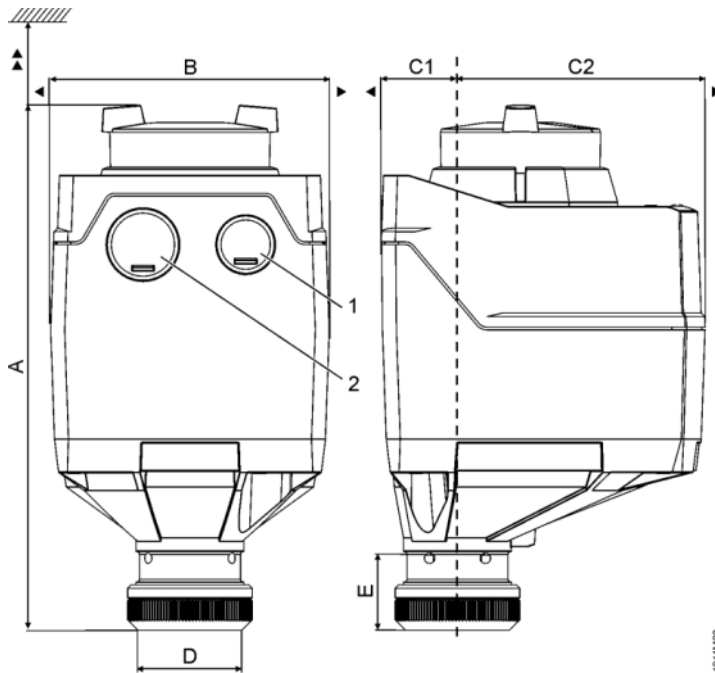
Conduct during initial commissioning.

The actuator deploys to the top and bottom end position; measured values are saved.

Foreign body protection

After detection of clogging, 3 attempts are made to overcome clogging. If the attempts made are unsuccessful, the actuator continues to follow the positioning signal within the restricted range only (LED continues to blink red).

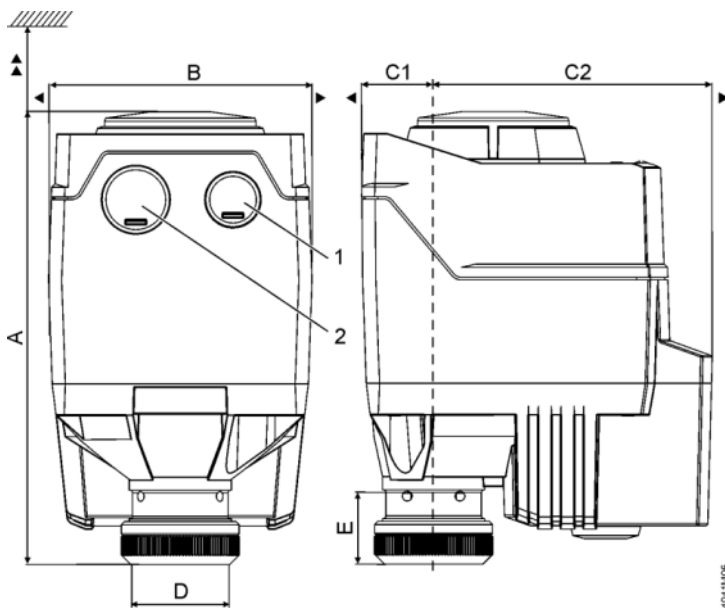
Actuators SAS with hand control



Product no.	A [mm]	B [mm]	C [mm]	C1 [mm]	C2 [mm]	D [mm]	E [mm]	▶ [mm]	▶▶ [mm]	Weight [kg]	1	2
SAS..	151	80	93	21,9	71,1	29,9	21,8	100	200	0,4	M16 ¹⁾	M20 ¹⁾
S ASK39.2	155	126	248	99	149	29,9	21,8	100	200	0,5	M16 ¹⁾	M20 ¹⁾

¹⁾ SAS..U: 1/2" (Ø 21,5 mm)

Actuators SAS without hand control



Product no.	A [mm]	B [mm]	C [mm]	C1 [mm]	C2 [mm]	D [mm]	E [mm]	▶ [mm]	▶▶ [mm]	Weight [kg]	1	2
SAS..	137.6 ¹⁾ / 151 ²⁾	80	93	21,9	71,1	29,9	21,8	100	200	0,4	M16 ¹⁾	M20 ¹⁾
S ASK39.2	155	126	248	99	149	29,9	21,8	100	200	0,5	M16 ¹⁾	M20 ¹⁾

¹⁾ black cover ²⁾ blue manual adjuster



Elektrické pohony

Sauter

AVM 105
AVM 115

Technical data					
Type	AVM 105 F100	AVM 105 F120	AVM 105 F122	AVM 115 F120	AVM 115 F122
Voltage	230 V AC	230 V AC	24 V AC	230 V AC	24 V AC
Frequency	50 / 60 Hz				
Motor power	4,5 VA	4,0 VA	1,7 VA	4,0 VA	1,7 VA
Control	3-position; 2-position				
Open-close running time	30 s	120 s			
Nominal force	250 N			500 N	
Stroke	max. 8 mm				
Enclosure	IP 54				
Process medium max. temp.	100°C, with cooling intermediate piece 130°C or 150°C				
Ambient temperature range	-10 to 55°C				
Ambient humidity limit	< 95% relative humidity without condensation				
Hand control	Little handle - additional accessories				
Weight	0,7 kg				

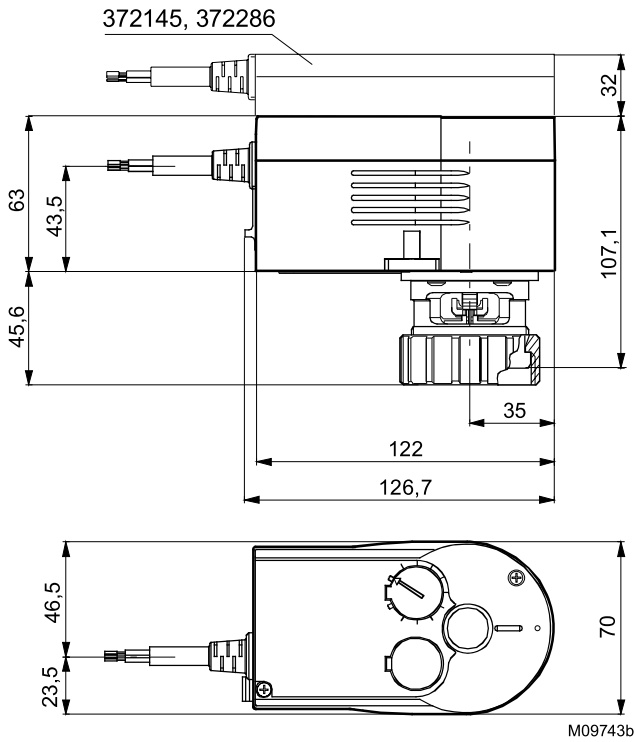
→ See original producer's catalogue sheets for further detailed information about actuators

Accessories

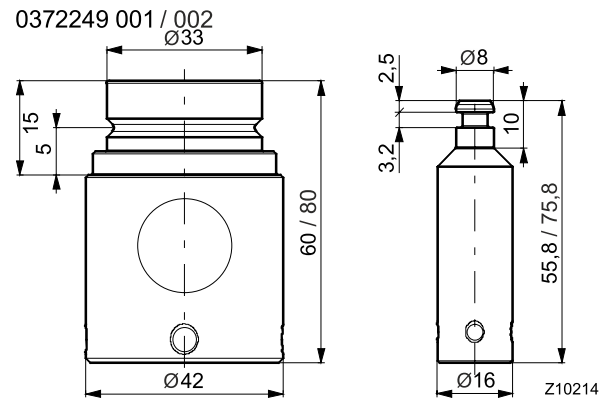
0372145 001*)	Single auxiliary change-over contacts. MV 505795
0372145 002*)	Double auxiliary change-over contacts. MV 505795
0372249 001	Intermediate piece required for media temperature >100 °C (recommended for temperature < 10 °C); MV 505932
0372249 002	Intermediate piece required for media temperature up to 150°C; MV 505932
0372286 001*)	Potentiometer 130 W; MV 505795
0372286 002*)	Potentiometer 1000 W; MV 505795
0372286 003*)	Potentiometer 5000 W; MV 505795
0372320 001	Allen key for manual adjustment

*) Only one potentiometer or one set of auxiliary contacts can be fitted to each drive!

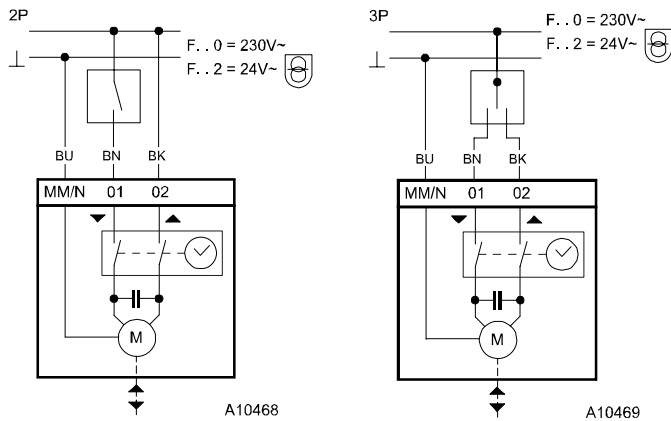
Actuator dimensions



Cooling intermediate piece

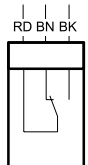


Wiring diagram



Accessories

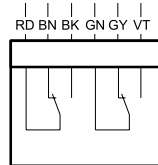
372145 001



A09782

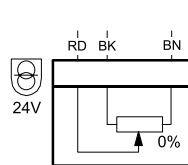
BU = blue
BN = brown
BK = black
RD = red
GY = grey
GN = green
VT = violet

372145 002



A10183

0372286



A10379



Electric actuators

Sauter

AVM 105S
AVM 115S

Technical data		
Type	AVM 105S F132	AVM 115S F132
Voltage	Electric actuator with SUT technology	
Frequency	24 V AC 230 V AC \pm 20%, 50..60 Hz / 24 V DC +20% / -10%	
Motor power	8,5 VA	8,7 VA
Control	0 - 10 V; 3-position; 2-position	
Open-close running time	Adjustable 35, 60, 120 s	Adjustable 60, 120 s
Nominal force	250 N	500 N
Stroke	max. 8 mm	
Enclosure	IP 54	
Process medium max. temp.	100°C, with cooling intermediate piece 130°C or 150°C	
Ambient temperature range	-10 to 55°C	
Ambient humidity limit	< 95% relative humidity without condensation	
Hand control	Little handle - additional accessories	
Weight	0,7 kg	

→ See original producer's catalogue sheets for further detailed information about actuators

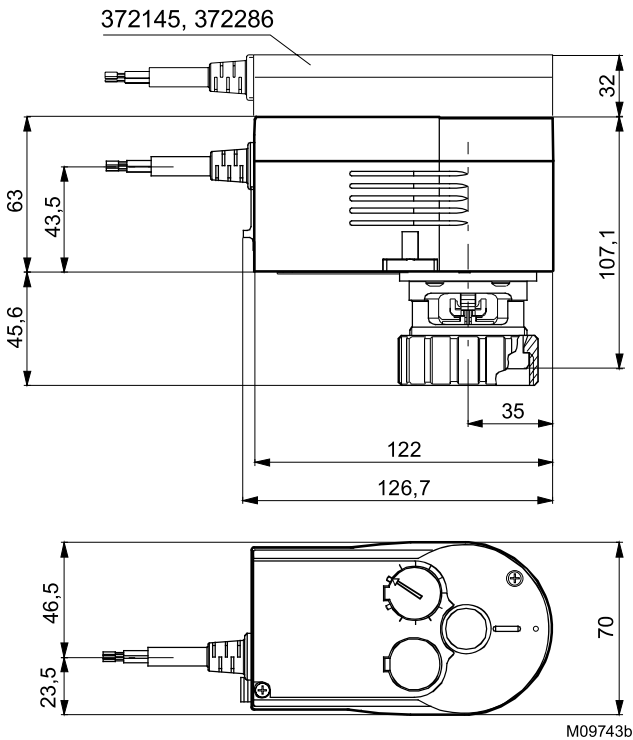
Accessories	
0313529 001	Split-range unit for setting sequences; to be fitted in separate distribution box as per MV 505671
0372145 001*)	Single auxiliary change-over contacts. MV 505795
0372145 002*)	Double auxiliary change-over contacts. MV 505795
0372249 001	Intermediate piece required for media temperature >100 °C (recommended for temperature < 10 °C); MV 505932
0372249 002	Intermediate piece required for media temperature up to 150°C; MV 505932
0372286 001*)	Potentiometer 130 W; MV 505795
0372286 002*)	Potentiometer 1000 W; MV 505795
0372286 003*)	Potentiometer 5000 W; MV 505795
0372320 001	Allen key for manual adjustment
0372462 001	CASE Drives PC Tool for configuration of actuators per computer; MV 506101

*) Only one potentiometer or one set of auxiliary contacts can be fitted to each drive!

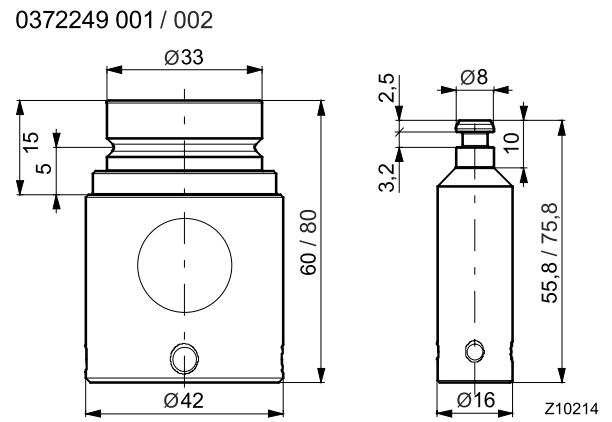
SUT - Sauter Universal Technology

- Stepping motor with SUT (SAUTER Universal Technology) electronic control unit and electronic load-dependent cut-off
- Automatic detection of control signal applied (continuous or switching)
- The type of characteristic curve (linear, quadratic or equal percentage) can be set in the actuator
- Independent adaptation to valve stroke
- Direction of travel can be set on cable
- Coding switch for selection of characteristic and running time (35, 60 or 120 s)

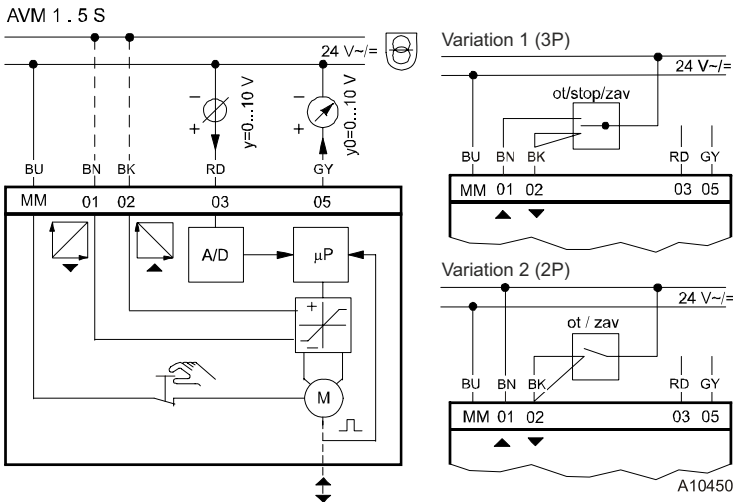
Actuator dimensions



Cooling intermediate piece

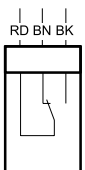


Wiring diagram



Accessories

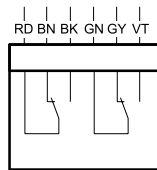
372145 001



A09782

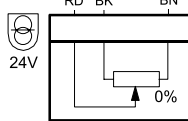
BU = blue
BN = brown
BK = black
RD = red
GY = grey
GN = green
VT = violet

372145 002



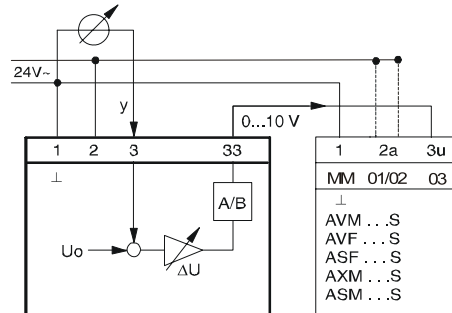
A10183

0372286



A10379

0313529



A09421c



LDM, spol. s r.o.
Litomyšlská 1378
560 02 Česká Třebová
Czech Republic

tel.: +420 465 502 511
fax: +420 465 533 101
e-mail: sale@ldm.cz

LDM, spol. s r.o.
Kancelář Praha
Podolská 50
147 01 Praha 4
Czech Republic

tel.: +420 241 087 360
fax: +420 241 087 192
e-mail: sale@ldm.cz

LDM, spol. s r.o.
Kancelář Ústí nad Labem
Ladova 2548/38
400 11 Ústí nad Labem
- Severní Terasa
Czech Republic

tel.: +420 602 708 257
e-mail: sale@ldm.cz

LDM servis, spol. s r.o.
Litomyšlská 1378
560 02 Česká Třebová
Czech Republic

tel.: +420 465 502 411-3
fax: +420 465 531 010
e-mail: servis@ldm.cz

LDM Bratislava s.r.o.
Mierová 151
821 05 Bratislava
Slovakia

tel.: +421 2 43415027-8
fax: +421 2 43415029
e-mail: ldm@ldm.sk

LDM, Polska Sp. z o.o.
ul. Bednorza 1
40 384 Katowice
Poland

tel.: +48 32 730 56 33
fax: +48 32 730 52 33
mobile: +48 601 354 999
e-mail: ldmpolska@ldm.cz

LDM Armaturen GmbH
Wupperweg 21
D-51789 Lindlar
Germany

tel.: +49 2266 440333
fax: +49 2266 440372
mobile: +49 177 2960469
e-mail: ldmmarmaturen@ldmvalves.com

OOO "LDM Promarmatura"
Jubilejnyj prospekt,
dom.6a, of. 601
141400 Khimki Moscow Region
Russian Federation

tel.: +7 4957772238
fax: +7 4956662212
mobile: +7 9032254333
e-mail: inforus@ldmvalves.com

TOO "LDM"
Shakirova 33/1
kab. 103
100012 Karaganda
Kazakhstan

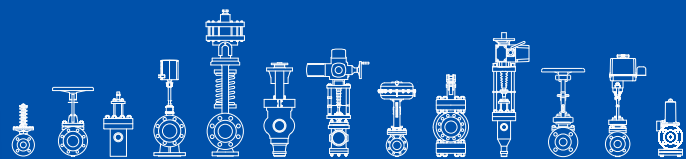
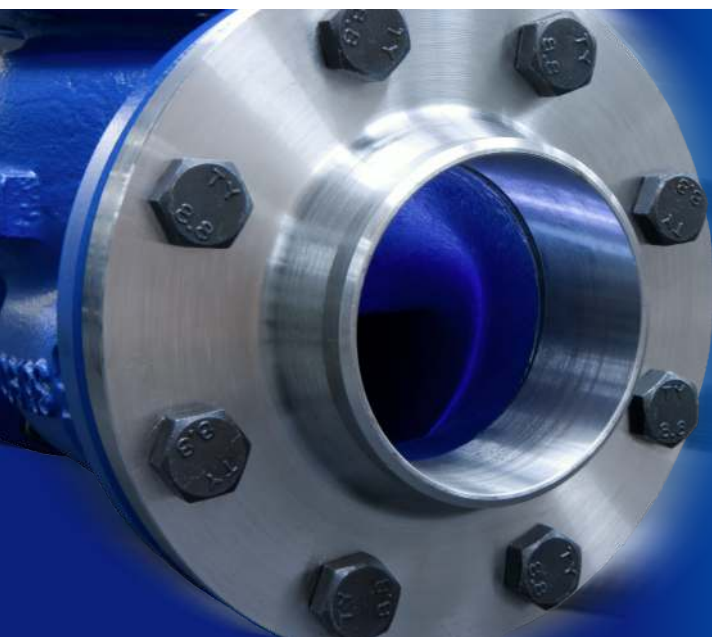
tel.: +7 7212 566 936
fax: +7 7212 566 936
mobile: +7 701 738 36 79
e-mail: sale@ldm.kz

LDM - Bulgaria - OOD
z. k. Mladost 1
bl. 42, floor 12, app. 57
1784 Sofia
Bulgaria

tel.: +359 2 9746311
fax: +359 2 9746311
mobile: +359 888 925 766
e-mail: ldm.bg@ldmvalves.com

www.ldmvalves.com

LDM, reserves the right to modify or improve the designs or specifications of such products at any time without notice



POWER THROUGH IDEAS