



Valves and actuators.
SAUTER control units – for all of your requirements.

 **SAUTER**
Creating Sustainable Environments.

Passionately **innovative**, responsibly **energy-efficient**: SAUTER sets the technology standard for control units.

Our experience is evident in every detail, every product and every solution.

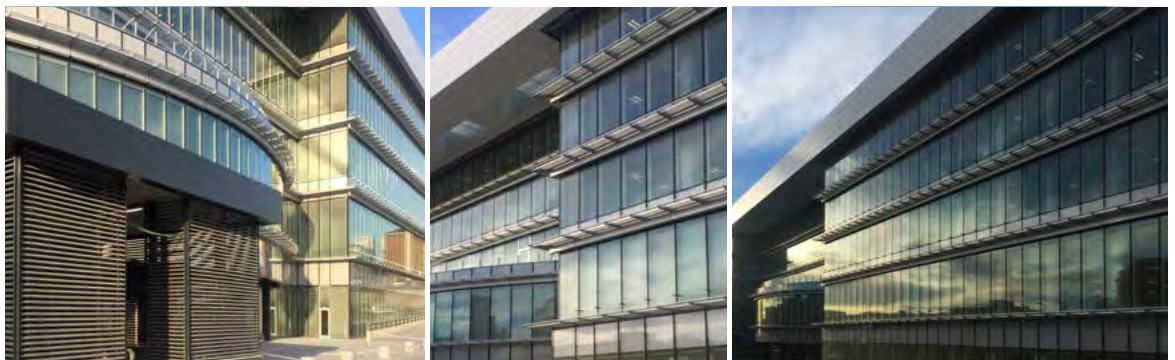
SAUTER is an experienced manufacturer and supplier of energy-efficient solutions for state-of-the-art building automation. Intelligent control, measuring and regulating technology reflects our core expertise and our success from more than 100 years of research, development and production. SAUTER products fulfil the highest demands from the automation level to the field level, and ensure optimum conditions in all living environments, as individual components and within systems.

Highly flexible for optimum results.

Our components are in demand throughout the world as modules in the heating, ventilation and air-conditioning industries. This applies equally to installers, end customers, wholesale dealers and production industry. They all highly value the precise control quality and efficient fitting of SAUTER products. Our current range of valves and actuators, with their in-built intelligence, covers all the requirements for reliable and long-lasting control units with just a few basic types. This makes the selection process logical and easy.

Getting the combination you want fast and easily.

The highest control quality results when valve and actuator encompass the same high level of technology and operational reliability. Simply select the basic valve type in this catalogue and use the precise data to define your specific combination of valve and actuator.



6-way ball valve

with electric rotary actuators



04 – 05

Unit valves

with thermal or motorised actuators



06 – 09

Dynamic regulating valves

with thermal or motorised actuators



10 – 13

Dynamic flow control system

with ultrasound flow measurement



14 – 15

Ball valves

with electric rotary actuators



16 – 21

Male thread and flanged valves

with electric linear actuators



22 – 31

Butterfly valves

with electric rotary actuators



32 – 33

Control valves

with electric rotary actuators



34 – 35

Retrofit

of electric actuators



36 – 41

Air damper actuators and VAV controllers



42 – 45

Technical appendix

valve specification



46 – 49

6-way ball valve with electric rotary actuator

Compact, reliable and easy to install: the SAUTER 6-way ball valve.

Heating and cooling with just one regulating ball valve.

The 6-way ball valve from SAUTER provides a compact, precise alternative for controlling heated and chilled ceilings and fan coils in 4-pipe systems. It doubles as a regulating valve or changeover ball valve. Conventional solutions may need as many as four 2-way valves, four actuators and two controllers. The SAUTER solution has just one 6-way ball valve and an actuator. The SAUTER solution has just one 6-way ball valve and an actuator. Thanks to its compact design, it can be installed in any suspended ceiling.

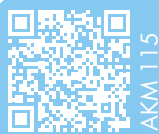
Precise selection of the flow rate.

The 6-way ball valve, with a nominal diameter of DN 15 or DN 20, consists of two mechanically connected ball valves. The bores of the two balls are set at right angles, ensuring that the heating and cooling systems do not leak into each other. Varying apertures enable the maximum flow rate (Kvs) to be specified precisely. It is possible to select different Kvs values in a regulating ball valve for cooling and heating and flexibly adapt them to operating conditions. The result is more accurate and reliable control.

For more precise regulation, the 6-way ball valve from SAUTER can be combined with the SAUTER Valveco Compact (VDL) dynamic regulating valve. This is the ideal solution for hydronic balancing and provides more planning reliability, easier installation and increased energy efficiency.



AKM 115S



AKM 115




B2KL

6-way ball valve in brass with electric rotary actuators



Model series		AKM			
		115			
		F120	F122	SF132	SF152
Type					
Version					
Voltage	230 V AC	•			
	24 V AC		•	•	•
	24 V DC			•	•
Positioning signal	2-point	•	•	•	•
	3-point	•	•	•	•
	0...10 V			•	•
Feedback	4...20 mA				•
	0...10 V			•	•
Running time [s]		120	120	35 60 120	6

6-way ball valve with male thread made of cast brass (F400) and DZR cast brass (F4x1) PN16

Type	DN	Connection	Kvs ⁽¹⁾	Orifice plate	Δp _{max} [bar]	
6-way +5 °C...90 °C 	B2KL015F400 B2KL015F401	15	G 3/4"	0.25	supplied	2
				0.4		
				0.65		
	B2KL015F411	20	G 3/4"	1	no	2
				1.25		
				0.7		
			1	supplied	2	
			1.6			
			2.1			
			2.8	no		

¹⁾ Different apertures can be built into the same ball valve.

Important accessories for the 6-way ball valve

Type	Description
0378133 015	1 screw fitting, flat-sealing, G 3/4" - R 1/2", for B2KL015 and B2KL020F411
0378134 015	1 screw fitting, flat-sealing, G 3/4" - solder nipple, for B2KL015 and B2KL020F411
0361951 015	1 screw fitting, flat-sealing, G 1" - G 3/4", for B2KL020F400
0580240 002	Insulation shell for B2KL015
0580240 003	Insulation shell for B2KL020F411
0580090 001	Pliers for changing orifice plate on B2KL015 and B2KL020F411
0580240 001	Fitting bracket for B2KL015 and B2KL020F411
0560332 015	Strainer in gunmetal; PN16, -10...150 °C, DN 15
0560332 020	Strainer in gunmetal; PN16, -10...150 °C, DN 20
0560332 025	Strainer in gunmetal; PN16, -10...150 °C, DN 25

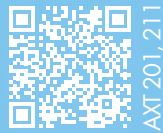
Compact design for energy-efficient control.

Actuator for unit valves with SAUTER quality.

The SAUTER AXT is the next consistent development in thermal actuator technology. It has pulse-pause control and is absolutely reliable, even with a small pulse ratio in the order of seconds. Together with valves with an equal-percentage characteristic, it can provide quasi-continuous control. It is used for controlling and regulating unit valves and underfloor distributors within room automation.

Installed in a flash.

The SAUTER AXT also provides automatic valve adjustment for 100% tightness, electrically protected inner workings and automatic stroke adjustment. Additionally, it has Low-Force-Locking, making it easy and quick to install. The SAUTER AXT is compatible with most valves of previous generations and those of third parties. This actuator for unit valves combines product intelligence which, with its wide range of accessories, enables it to be equipped for specific applications.



AXT 201, 211



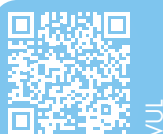
AXS 215S



AXM 217S



AXM 217



VUI



BUI



VUT



BUT

VUL/BUL unit valves in cast brass with AXT, AXS, AXM thermal or motorised actuators






Model series		AXT				AXS				AXM							
Type		211				211				215							
Version		F110 ¹⁾	F210	F112 ¹⁾	F212	HF110	HF210	HF112	HF212	F110M	F112M	SF122 ¹⁾	SF222 ¹⁾	F200	F202	SF402	SF404
Voltage	230 V AC	•	•			•	•			•				•			
	24 V AC			•	•			•	•			•	•		•	•	•
	24 V DC			•	•			•	•			•	•		•	•	•
Positioning signal	2-point	•	•	•	•	•	•	•	•	•	•			•	•	•	•
	3-point													•	•		
	0...10 V											•	•			•	•
	4...20 mA											•	•			•	•
Pushing force/N ²⁾		115	110	115	110	115	110	115	110	115	115	110		120		120	160
Characteristic	equal-percentage															•	•
Comb. V&A	linear													•	•	•	•
Direction of operation	normally closed	•		•		•		•		•	•	•					
	normally open max. 110 N		•		•		•		•			•					
Auxiliary contacts						•	•	•	•								
Mech. adjustment										•	•						

¹⁾ Also available in black

²⁾ Pushing force max. 125 N for AXT 211/AXS 215 and closing dimension 13.5 mm

Unit valves in cast brass PN16 with equal percentage characteristic

		Type	DN	Connection	Kvs (m ³ /h)	Δp_{max} (bar)				
 2-way 2 °C...120 °C	VUL 010 F340	10	G ½B	0.16	4	4	4	4	4	
	VUL 010 F330	10	G ½B	0.4	4	4	4	4	4	
	VUL 010 F320	10	G ½B	0.63	4	4	4	4	4	
	VUL 010 F310	10	G ½B	1	4	4	4	4	3.8	
	VUL 010 F300	10	G ½B	1.6	4	4	4	4	3.8	
	VUL 015 F310	15	G ¾B	2.5	1.1	1.1	1.1	1.1	1.1	
	VUL 015 F300	15	G ¾B	3.5	1.1	1.1	1.1	1.1	1.1	
	VUL 020 F300	20	G 1B	4.5	1.1	1.1	1.1	1.1	1.1	
 3-way 2 °C...120 °C	BUL 010 F330	10	G ½B	0.4	1.7	1.7	1.7	1.7	1.7	
	BUL 010 F320	10	G ½B	0.63	1.7	1.7	1.7	1.7	1.7	
	BUL 010 F310	10	G ½B	1.0	1.7	1.7	1.7	1.7	1.7	
	BUL 010 F300	10	G ½B	1.6	1.7	1.7	1.7	1.7	1.7	
	BUL 015 F310	15	G ¾B	2.5	1.4	1.4	1.4	1.4	1.4	
	BUL 015 F300	15	G ¾B	4	1.2	1.2	1.2	1.2	1.2	
	BUL 020 F300	20	G 1B	5	1	1	1	1	1	
 3-way with T by-pass 2 °C...120 °C	BUL 010 F430	10	G ½B	0.4	1.7	1.7	1.7	1.7	1.7	
	BUL 010 F420	10	G ½B	0.63	1.7	1.7	1.7	1.7	1.7	
	BUL 010 F410	10	G ½B	1	1.7	1.7	1.7	1.7	1.7	
	BUL 010 F400	10	G ½B	1.6	1.7	1.7	1.7	1.7	1.7	
	BUL 015 F410	15	G ¾B	2.5	1.4	1.4	1.4	1.4	1.4	
	BUL 015 F400	15	G ¾B	4	1.2	1.2	1.2	1.2	1.2	
	BUL 020 F400	20	G 1B	5	1	1	1	1	1	

VUT/BUT unit valves in cast brass with AXT, AXS, AXM thermal or motorised actuators






Model series		AXT				AXT				AXS		AXM					
Type		211				211				215		217					
Version		F110 ¹⁾	F210	F112 ¹⁾	F212	HF110	HF210	HF112	HF212	F110M	F112M	SF122 ¹⁾	SF222 ¹⁾	F200	F202	SF402	SF404
Voltage	230 V AC	•	•			•	•			•				•			
	24 V AC			•	•			•	•			•	•				
	24 V DC			•	•			•	•								
Positioning signal	2-point	•	•	•	•	•	•	•	•	•	•			•	•		
	3-point													•	•		
	0...10 V											•	•			•	•
	4...20 mA																
Pushing force/N ²⁾		115	110	115	110	115	110	115	110	115		115	110	120	120	120	160
Characteristic	equal-percentage																
Comb. V&A	linear																
Direction of operation	normally closed	•		•		•		•		•		•					
	normally open max. 110 N		•		•		•		•			•					
Auxiliary contact						•	•	•	•								
Mech. adjustment										•	•						

¹⁾ Also available in black

²⁾ Pushing force max. 125 N for AXT 211/AXS 215 and closing dimension 13.5 mm

Unit valves made of cast brass PN16 with linear characteristic and VUT with adjustable Kvs value

		Type	DN	Connection	Kvs [m ³ /h]	Δp_{max} [bar]				
2-way 2 °C...120 °C		VUT010F220	10	G ½B	0.2...0.63	2.5	2.5	2.5	2.5	2.5
		VUT010F210	10	G ½B	0.2...1	2.5	2.5	2.5	2.5	2.5
		VUT010F200	15	G ½B	0.2...1.6	2.5	2.5	2.5	2.5	2.5
		VUT015F210	15	G ¾B	0.3...2.5	1.8	1.8	1.8	1.8	1.8
		VUT015F200	15	G ¾B	1...3.5	1.8	1.8	1.8	1.8	1.8
		VUT020F200	20	G 1B	1...4.5	1	1	1	1	1
3-way 2 °C...120 °C		BUT010F200	10	G ½B	1	1.7	1.7	1.7	1.7	1.7
		BUT015F210	15	G ¾B	2.5	1.4	1.4	1.4	1.4	1.4
		BUT020F200	20	G 1B	4.5	1	1	1	1	1
3-way with T bypass 2 °C...120 °C		BUT010F420	10	G ½B	0.63	1.7	1.7	1.7	1.7	1.7
		BUT010F410	10	G ½B	1	1.7	1.7	1.7	1.7	1.7
		BUT010F400	10	G ½B	1.6	1.7	1.7	1.7	1.7	1.7
		BUT015F410	15	G ¾B	2.5	1.4	1.4	1.4	1.4	1.4
		BUT015F400	15	G ¾B	3.5	1.2	1.2	1.2	1.2	1.2
		BUT020F400	20	G 1B	4.5	1	1	1	1	1

Important accessories for unit valves

Strainer in gunmetal, PN16, -10...150 °C



Type	Description
0560332 015	ISO 228/1 - G 1/2, mesh aperture 0.5 mm
0560332 020	ISO 228/1 - G 3/4, mesh aperture 0.8 mm

Accessories for VUL and BUL unit valves



Type	Description
0378133 010	1 threaded sleeve, R 3/8, flat-sealing, with cap nut and flat seal, G1/2 - R3/8
0378133 015	1 threaded sleeve, R 1/2, flat-sealing, with cap nut and flat seal, G3/4 - R1/2
0378133 020	1 threaded sleeve, R 3/4, flat-sealing, with cap nut and flat seal, G1 - R3/4
0378134 010	1 solder nipple, Ø 12 mm, flat-sealing, with cap nut and flat seal, G1/2
0378134 015	1 solder nipple, Ø 15 mm, flat-sealing, with cap nut and flat seal, G3/4
0378134 020	1 solder nipple, Ø 22 mm, flat-sealing, with cap nut and flat seal, G1
0378135 010	1 clamping-ring screw fitting for pipe Ø 15 mm, DN 10, flat-sealing, G1/2 B
0378145 015	1 clamping-ring screw fitting for pipe Ø 15 mm, DN 15, flat-sealing, G3/4 B
0378145 020	1 clamping-ring screw fitting for pipe Ø 22 mm, DN 20, flat-sealing, G 1 B

Accessories for AXT 211 actuators

Type	Description
0550240 001	Removal-protection device for AXT/AXS 211 (prevents the unauthorised removal of the plug and actuator)
0550602 021	Plug with cable, white, 2 m, PVC H03VV, 2 x 0.50 mm ²
0550602 052	Plug with cable, white, 5 m, PVC H05VV, 2 x 0.75 mm ²
0550602 102	Plug with cable, white, 10 m, PVC H05VV, 2 x 0.75 mm ²
0550602 152	Plug with cable, white, 15 m, PVC H05VV, 2 x 0.75 mm ²
0550602 021B	Plug with cable, black, 2 m, PVC H03VV, 2 x 0.50 mm ²
0550602 052B	Plug with cable, black, 5 m, PVC H05VV, 2 x 0.75 mm ²
0550602 102B	Plug with cable, black, 10 m, PVC H05VV, 2 x 0.75 mm ²
0550602 013	Plug with cable, halogen-free, white, 1 m, Hal F H05Z1Z1, 2 x 0.50 mm ²
0550602 023	Plug with cable, halogen-free, white, 2 m, Hal F H05Z1Z1, 2 x 0.75 mm ²
0550602 053	Plug with cable, halogen-free, white, 5 m, Hal F H05Z1Z1, 2 x 0.75 mm ²
0550602 103	Plug with cable, halogen-free, white, 10 m, Hal F H05Z1Z1, 2 x 0.75 mm ²
0550120 022	White plug with integrated LED, 24 V, lights up in blue, cable 2 m, PVC H03VV, 2 x 0.50 mm ²
0550120 052	White plug with integrated LED, 24 V, lights up in blue, cable 5 m, PVC H03VV, 2 x 0.75 mm ²

Accessories for AXS 215 actuators

Type	Description
0550240 001	Removal-protection device for AXT/AXS 2 (prevents the unauthorised removal of the plug and actuator)
0550423 121	Continuous control NC, cable white, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 221	Continuous control NO, cable white, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 151	Continuous control NC, cable white, 5 m, PVC H03, 3 x 0.22 mm ²
0550423 251	Continuous control NO, cable white, 5 m, PVC H03, 3 x 0.22 mm ²
0550423 121B	Continuous control NC, cable black, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 221B	Continuous control NO, cable black, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 151B	Continuous control NC, cable black, 5 m, PVC H03, 3 x 0.22 mm ²
0550423 123	Continuous control NC, cable halogen-free, white, 2 m, H03, 3 x 0.22 mm ²
0550423 153	Continuous control NC, cable halogen-free, white, 5 m, H03, 3 x 0.22 mm ²

Accessories for AXM 217 actuators

Type	Description
0550603 001	Cable 24 V, PVC, plug-in, 3 m long
0550603 002	Cable 24 V, PVC, plug-in, 7 m long
0550603 003	Cable 230 V, PVC, plug-in, 3 m long
0550603 004	Cable 230 V, PVC, plug-in, 7 m long
0550603 005	Cable 24 V, halogen-free, plug-in, 3 m long
0550603 006	Cable 24 V, halogen-free, plug-in, 7 m long
0550603 007	Cable 230 V, halogen-free, plug-in, 3 m long
0550603 008	Cable 230 V, halogen-free, plug-in, 7 m long

Accessories for AXM 217S actuators

Type	Description
0550603 009	Cable 24 V, PVC, plug-in, 3 m long
0550603 010	Cable 24 V, PVC, plug-in, 7 m long
0550603 011	Cable 24 V, halogen-free, plug-in, 3 m long
0550603 012	Cable 24 V, halogen-free, plug-in, 7 m long

Dynamic regulating valves with thermal or motorised actuators

SAUTER Valveco compact: **The all-rounder valve.**

Compensate pressure fluctuations. Adjust hydraulic relationships.

SAUTER Valveco compact valves are indispensable when it comes to ensuring a hydraulically balanced installation. These regulating valves are genuine all-rounders, combining three functions in a single compact valve, whether the requirement is to simply block a volume flow or continuously keep a defined flow rate constant. SAUTER Valveco compact reliably compensates pressure fluctuations and, acting as a variable resistance, maintains hydraulically adjusted conditions in your installation. Together with the AXT/AXS/AXM thermal or motorised actuators, this is the future-oriented valve for a wide range of heating and cooling applications.

Little installation and maintenance work required.

Thanks to the 3-in-1 design, you reduce the total number of valves needed and thus the labour time for installation and maintenance. The automatic hydronic balancing means that no manual recalibration is necessary. To make it easier to check and set the optimal differential pressure on site, SAUTER Valveco compact is available with pressure measurement nipples.

Our multi-function valves ensure exact temperature control and a precise control characteristic. This guarantees that there is no excess supply and increases the energy efficiency of your installation.



AXT 201, 211



AXS 215S



AXM 217S



AXM 217



VDL 010..050

SAUTER Valveco compact VDL dynamic regulating valves with AXT, AXS, AXM thermal or motorised valve actuators





Model series		AXT		AXT		AXT		AXS	AXM			
Type		211		211		211		215	217			
Version		F110 ¹⁾	F112 ¹⁾	HF110	HF112	F110M	F112M	SF122 ¹⁾	F200	F202	SF402	SF404
Voltage	230 V AC	•		•		•			•			
	24 V AC		•	•	•		•	•		•	•	•
	24 V DC		•	•	•		•			•	•	•
Positioning signal	2-point	•	•			•	•		•	•		
	3-point								•	•		
	0...10 V							•			•	•
	4...20 mA										•	•
Pushing force/N ²⁾		115	115	115	115	115	115	115	120	120	160	160
Characteristic	equal-percentage											
Comb. V&A	linear							•	•	•	•	•
Direction of operation	normally closed	•	•	•	•	•	•	•				
	normally open max. 110 N											
Auxiliary contact				•	•							
Mech. adjustment						•	•					

¹⁾ Also available in black

²⁾ Pushing force max. 125 N for AXT 211/AXS 215 and closing dimension 13.5 mm

Dynamic regulating valve in dezincification resistant cast brass PN25 with linear characteristic

	Type	DN	Connection	Range (l/h)	Δp_{min} [bar]	Δp_{max} [bar]					
						8	8	8	8	8	
2-way 0 °C...120 °C 	VDL010F210	10	G ½B	30...200	0.14	8	8	8	8	8	
	VDL010F200	10	G ½B	65...370	0.14	8	8	8	8	8	
	VDL015F200	15	G ¾B	100...575	0.14	8	8	8	8	8	
	VDL015F200H	15	G ¾B	220...1330	0.08	8	8	8	8	8	
	VDL015F220	15	G ¾B	30...200	0.14	8	8	8	8	8	
	VDL015F210	15	G ¾B	65...370	0.14	8	8	8	8	8	
	VDL020F220	20	G 1B	100...575	0.14	8	8	8	8	8	
	VDL020F210	20	G 1B	160...990	0.15	8	8	8	8	8	
	VDL020F200	20	G 1B	220...1330	0.15	8	8	8	8	8	
	VDL020F210H	20	G 1B	300...1800	0.08	8	8	8	8	8	
	VDL025F210	25	G 1¼B	280...1800	0.08	8	8	8	8	8	
	VDL025F200	25	G 1¼B	600...3609	0.08	8	8	8	8	8	
	VDL032F200	32	G 1½B	550...4001	0.08	8	8	8	8	8	
		VDL010F211	10	G ½B	30...200	0.14	8	8	8	8	8
		VDL010F201	10	G ½B	65...370	0.14	8	8	8	8	8
		VDL015F201	15	G ¾B	100...575	0.14	8	8	8	8	8
VDL015F201H		15	G ¾B	220...1330	0.08	8	8	8	8	8	
VDL015F221		15	G ¾B	30...200	0.14	8	8	8	8	8	
VDL015F211		15	G ¾B	65...370	0.14	8	8	8	8	8	
VDL020F221		20	G 1B	100...575	0.14	8	8	8	8	8	
VDL020F211		20	G 1B	160...990	0.15	8	8	8	8	8	
VDL020F201		20	G 1B	220...1330	0.15	8	8	8	8	8	
VDL020F211H		20	G 1B	300...1800	0.08	8	8	8	8	8	
VDL025F211		25	G 1¼B	280...1800	0.08	8	8	8	8	8	
VDL025F201		25	G 1¼B	600...3609	0.08	8	8	8	8	8	
VDL032F201		32	G 1½B	550...4001	0.08	8	8	8	8	8	

SAUTER Valveco compact VDL dynamic regulating valves with electrical linear actuators



Model series		AVM ¹⁾	
		215	
Type		F120R	SF132R
Version		•	•
Voltage	230 V AC	•	•
	24 V AC		•
	24 V DC		•
Positioning signal	2-point	•	•
	3-point	•	•
	0...10 V		•
Feedback	0...10 V		•
			•
Running time [s]		7.5	7.5 15
Pushing force [N]		400	500
Characteristic	equal-percentage		•
Combination	linear	•	•

¹⁾ 0510390029 - Montageset zu SAUTER Valveco compact DN 40 DN 50


Dynamic regulating valve made of ductile cast iron PN25 with linear characteristic

	Type	DN	Connection	Range (l/h)	Δp_{min} [bar]	Δp_{max} [bar]
2-way 0 °C...120 °C	VDL 040 F201	40	G 1½B	1370...9500	0.08	8
	VDL 050 F201	50	G 2B	1400...11500	0.08	8





Important accessories for Valveco compact

Strainer in gunmetal, PN16, -10...150 °C

Type	Description
 0560332 015	ISO 228/1 - G 1/2, mesh aperture 0.5 mm
0560332 020	ISO 228/1 - G 3/4, mesh aperture 0.8 mm
0560332 025	ISO 228/1 - G 1, mesh aperture 0.8 mm
0560332 032	ISO 228/1 - G 1 1/4, mesh aperture 0.8 mm
0560332 040	ISO 228/1 - G 1 1/2, mesh aperture 0.8 mm
0560332 050	ISO 228/1 - G 2, mesh aperture 0.8 mm

Accessories for Valveco compact

Type	Description
 0378133 010	1 threaded sleeve, R 3/8, flat-sealing, with cap nut and flat seal, G1/2 - R3/8
0378133 015	1 threaded sleeve, R 1/2, flat-sealing, with cap nut and flat seal, G3/4 - R1/2
0378133 020	1 threaded sleeve, R 3/4, flat-sealing, with cap nut and flat seal, G1 - R3/4
0378133 025	1 threaded sleeve, R 1, flat-sealing, with cap nut and flat seal, G1 1/4 - R1
 0378134 010	1 solder nipple, Ø 12 mm, flat-sealing, with cap nut and flat seal, G1/2
0378134 015	1 solder nipple, Ø 15 mm, flat-sealing, with cap nut and flat seal, G3/4
0378134 020	1 solder nipple, Ø 22 mm, flat-sealing, with cap nut and flat seal, G1
0361951 015	1 screw fitting for male thread with flat seal, G1 - Rp1/2
0361951 020	1 screw fitting for male thread with flat seal, G1 1/4 - Rp3/4
0361951 025	1 screw fitting for male thread with flat seal, G1 1/2 - Rp1
0361951 040	1 screw fitting for female thread, Rp1 1/2 - G1 1/2
0361951 050	1 screw fitting for female thread, Rp2 - G2

Accessories for AXT 211 actuators

Type	Description
0550240 001	Removal-protection device for AXT/AXS 2 (prevents the unauthorised removal of the plug and actuator)
0550602 021	Plug with cable, white, 2 m, PVC H03VV, 2 x 0.50 mm ²
0550602 052	Plug with cable, white, 5 m, PVC H05VV, 2 x 0.75 mm ²
0550602 102	Plug with cable, white, 10 m, PVC H05VV, 2 x 0.75 mm ²
0550602 152	Plug with cable, white, 15 m, PVC H05VV, 2 x 0.75 mm ²
0550602 021B	Plug with cable, black, 2 m, PVC H03VV, 2 x 0.50 mm ²
0550602 052B	Plug with cable, black, 5 m, PVC H05VV, 2 x 0.75 mm ²
0550602 102B	Plug with cable, black, 10 m, PVC H05VV, 2 x 0.75 mm ²
0550602 013	Plug with cable, halogen-free, white, 1 m, Hal F H05Z1Z1, 2 x 0.50 mm ²
0550602 023	Plug with cable, halogen-free, white, 2 m, Hal F H05Z1Z1, 2 x 0.75 mm ²
0550602 053	Plug with cable, halogen-free, white, 5 m, Hal F H05Z1Z1, 2 x 0.75 mm ²
0550602 103	Plug with cable, halogen-free, white, 10 m, Hal F H05Z1Z1, 2 x 0.75 mm ²
0550120 022	White plug with integrated LED, 24 V, lights up in blue, cable 2 m, PVC H03VV, 2 x 0.50 mm ²
0550120 052	White plug with integrated LED, 24 V, lights up in blue, cable 5 m, PVC H03VV, 2 x 0.75 mm ²

Accessories for AXS 215S actuators

Type	Description
0550240 001	Removal-protection device for AXT/AXS 2 (prevents the unauthorised removal of the plug and actuator)
0550423 121	Continuous control NC, cable white, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 221	Continuous control NO, cable white, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 151	Continuous control NC, cable white, 5 m, PVC H03, 3 x 0.22 mm ²
0550423 251	Continuous control NO, cable white, 5 m, PVC H03, 3 x 0.22 mm ²
0550423 121B	Continuous control NC, cable black, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 221B	Continuous control NO, cable black, 2 m, PVC H03, 3 x 0.22 mm ²
0550423 151B	Continuous control NC, cable black, 5 m, PVC H03, 3 x 0.22 mm ²
0550423 123	Continuous control NC, cable halogen-free, white, 2 m, H03, 3 x 0.22 mm ²
0550423 153	Continuous control NC, cable halogen-free, white, 5 m, H03, 3 x 0.22 mm ²

Accessories for AXM 217 actuators

Type	Description
0550603 001	Cable 24 V, PVC, plug-in, 3 m long
0550603 002	Cable 24 V, PVC, plug-in, 7 m long
0550603 003	Cable 230 V, PVC, plug-in, 3 m long
0550603 004	Cable 230 V, PVC, plug-in, 7 m long
0550603 005	Cable 24 V, halogen-free, plug-in, 3 m long
0550603 006	Cable 24 V, halogen-free, plug-in, 7 m long
0550603 007	Cable 230 V, halogen-free, plug-in, 3 m long
0550603 008	Cable 230 V, halogen-free, plug-in, 7 m long

Accessories for AXM 217S actuators

Type	Description
0550603 009	Cable 24 V, PVC, plug-in, 3 m long
0550603 010	Cable 24 V, PVC, plug-in, 7 m long
0550603 011	Cable 24 V, halogen-free, plug-in, 3 m long
0550603 012	Cable 24 V, halogen-free, plug-in, 7 m long

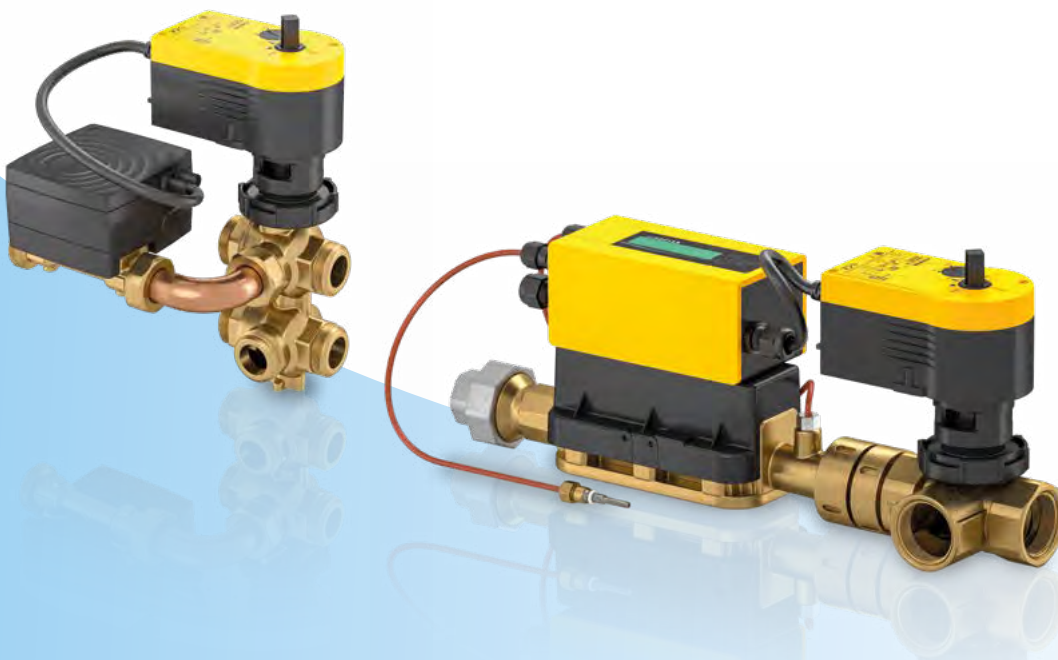
SAUTER eValveco: **Maximum comfort with minimal energy costs.**

Dynamics of hydraulic systems under control – SAUTER eValveco

Increasing energy efficiency in heating and cooling systems through constant volume flows and thus providing the required amount of energy is often difficult due to widely branched networks. The SAUTER eValveco flow control system is the solution for this task.

The combination of a 2-way, 3-way or 6-way ball valve and a precise real-time ultrasonic flowmet can be easily integrated into the building automation system via Modbus. Parameters are set via the central building management system. On a computer, tablet or mobile phone, overviews of the actual energy consumption per room can be called up in real time. Online access to all relevant system data simplifies troubleshooting, among other things.

SAUTER eValveco offers major benefits for all user groups. The highly transparent status of the system and its low energy consumption fulfils all the requirements of state-of-the-art energy management. From the construction of a building and through its entire life cycle, SAUTER eValveco cuts costs and energy consumption and is therefore a future-oriented investment.






UVC 102_103



UVC 106

SAUTER eValveco Dynamic flow control system with 2-, 3- or 6-way valve and energy data acquisition

Dynamic flow control system made of dezincification-resistant cast brass PN 16

	Type	DN	Connection, Sensor	Connection, ball valve	min (m ³ /h) ¹⁾	max (m ³ /h) ²⁾	Kvs (m ³ /h) ³⁾	Δp _{max} [bar]
 <p>2-way 5 °C...90 °C</p>	UVC 102 MF015	15	Rp 1/2	Rp 1/2	0.017	3.3	4	2.4
	UVC 102 MF020	20	Rp 3/4	Rp 3/4	0.024	5.7	6.3	2.4
	UVC 102 MF025	25	Rp 3/4	Rp 1	0.024	7	10	2.4
	UVC 102 MF032	32	Rp 3/4	Rp 1 1/4	0.042	10.5	16	2.4
	UVC 102 MF040	40	Rp 1 1/4	Rp 1 1/2	0.07	15	25	2.4
	UVC 102 MF050	50	Rp 1 1/4	Rp 2	0.07	20	40	2.4
 <p>3-way 5 °C...90 °C</p>	UVC 103 MF015	15	Rp 1/2	Rp 1/2	0.017	3.3	4	2.4
	UVC 103 MF020	20	Rp 3/4	Rp 3/4	0.024	5.7	6.3	2.4
	UVC 103 MF025	25	Rp 3/4	Rp 1	0.024	7	10	2.4
	UVC 103 MF032	32	Rp 3/4	Rp 1 1/4	0.042	10.5	16	2.4
	UVC 103 MF040	40	Rp 1 1/4	Rp 1 1/2	0.07	15	25	2.4
	UVC 103 MF050	50	Rp 1 1/4	Rp 2	0.07	20	40	2.4
 <p>6-way 5 °C...90 °C</p>	UVC 106 MF015	15	G 3/4	G 1/2	0.003	1.4	1.4	2
	UVC 106 MF020	20	G 1	G 1	0.003	2.5	2.5	2

¹⁾ Minimum flow rate that can still be controlled.

²⁾ Maximum flow rate is achieved at a differential pressure of 1 bar (100 kPa).

³⁾ Kvs values of the ball valve

Important accessories for eValveco

Strainer in gunmetal, PN16, -10...150 °C

Type	Description
0560332 015	ISO 228/1 – G 1/2, mesh aperture 0.5 mm
0560332 020	ISO 228/1 – G 3/4, mesh aperture 0.8 mm
0560332 025	ISO 228/1 – G 1, mesh aperture 0.8 mm
0560332 032	ISO 228/1 – G 1 1/4, mesh aperture 0.8 mm
0560332 040	ISO 228/1 – G 1 1/2, mesh aperture 0.8 mm
0560332 050	ISO 228/1 – G 2, mesh aperture 0.8 mm



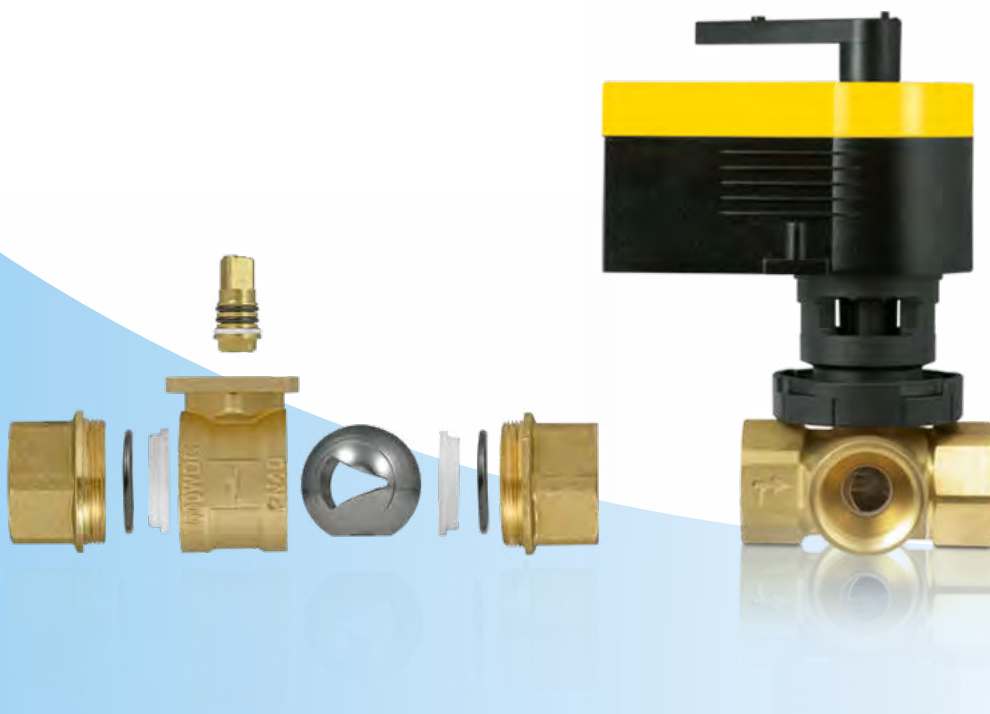
Precise control and high flow rate: **2-way and 3-way ball valves** from SAUTER.

The perfection of a tried and tested principle.

The body of these ball valves from SAUTER is made of top-quality DZR brass. This enables them to be used in a wide range of applications. Due to the outstanding physical properties of the dezincification-resistant, chrome-plated brass ball with its polished surface, these valves enable the highest control accuracy and a modular, flexible concept.

Versatile and functions in a wide operating range:

- Combination with or without spring return
- Easy assembly without tools
- Plug the actuator onto the ball valve, turn the bayonet ring until it locks – that's it!
- The running time can be changed and the characteristic adjusted
- Detection of 2-point, 3-point or continuous actuators
- Anti-blocking function available
- Actuators with spring return fitted as "normally closed" or "normally open"



Actuators





Ball valves

VKR/BKR regulating ball valve with female thread in DZR brass with electric rotary actuators



Model series		AKM				AKM				AKF			
Type		105				115				112		113	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	F120	F122	F122	SF122
Voltage	230 V AC	•	•			•				•			
	24 V AC			•	•		•	•	•		•	•	•
	24 V DC				•			•	•		•	•	•
Positioning signal	2-point	•	•	•		•	•	•	•	•	•		
	3-point	•	•	•	•	•	•	•	•			•	
	0...10 V				•			•	•				•
	4...20 mA								•				
Feedback	0...10 V				•			•	•				•
Running time [s]		30	120	120	60	120	120	60	6	90	90	90	90
Return time [s]					35			35		15	15	15	15
Return time [s]					120			120					
Characteristic of the combination can be changed	linear/quadratic				•			•	•				
Spring return	without power, closes the ball valve without power, opens the ball valve									•	•	•	•

Ball valve with ISO female thread in DZR cast brass PN40 and equal percentage characteristic

	Type	DN	Connection	Kvs (m³/h)		Δp _{max} [bar]	
 2-way ball valve -10 °C...130 °C	VKR 015 F350-FF	15	Rp ½	1	1.8	3.5	3.5
	VKR 015 F340-FF	15	Rp ½	1.6	1.8	3.5	3.5
	VKR 015 F330-FF	15	Rp ½	2.5	1.8	3.5	3.5
	VKR 015 F320-FF	15	Rp ½	4	1.8	3.5	3.5
	VKR 015 F310-FF	15	Rp ½	6.3	1.8	3.5	3.5
	VKR 015 F300-FF	15	Rp ½	10	1.8	3.5	3.5
	VKR 020 F320-FF	20	Rp ¾	4	1.8	3.5	3.5
	VKR 020 F310-FF	20	Rp ¾	6.3	1.8	3.5	3.5
	VKR 020 F300-FF	20	Rp ¾	10	1.8	3.5	3.5
	VKR 025 F320-FF	25	Rp 1	6.3	1.8	3.5	3.5
	VKR 025 F310-FF	25	Rp 1	10	1.8	3.5	3.5
	VKR 025 F300-FF	25	Rp 1	16	1.8	3.5	3.5
	VKR 032 F320-FF	32	Rp 1¼	10	1.2	2.4	2.4
	VKR 032 F310-FF	32	Rp 1¼	16	1.2	2.4	2.4
	VKR 032 F300-FF	32	Rp 1¼	25	1.2	2.4	2.4
	VKR 040 F320-FF	40	Rp 1½	16	1.2	2.4	2.4
	VKR 040 F310-FF	40	Rp 1½	25	1.2	2.4	2.4
	VKR 040 F300-FF	40	Rp 1½	40	1.2	2.4	2.4
	VKR 050 F320-FF	50	Rp 2	25	1.2	2.4	2.4
	VKR 050 F310-FF	50	Rp 2	40	1.2	2.4	2.4
VKR 050 F300-FF	50	Rp 2	63	1.2	2.4	2.4	
 3-way ball valve -10 °C...130 °C	BKR 015 F340-FF	15	Rp ½	1.6	1.8	2	2
	BKR 015 F330-FF	15	Rp ½	2.5	1.8	2	2
	BKR 015 F320-FF	15	Rp ½	4	1.8	2	2
	BKR 015 F310-FF	15	Rp ½	6.3	1.2	2	2
	BKR 020 F320-FF	20	Rp ¾	4	1.8	2	2
	BKR 020 F310-FF	20	Rp ¾	6.3	1.8	2	2
	BKR 025 F310-FF	25	Rp 1	10	1.8	2	2
	BKR 032 F310-FF	32	Rp 1¼	16	1.2	2	2
	BKR 040 F310-FF	40	Rp 1½	25	1.2	2	2
	BKR 050 F310-FF	50	Rp 2	40	1.2	2	2

Cut-off / changeover ball valve with female thread in DZR brass with electric rotary actuators



Model series		AKM				AKM				AKF		ASF ¹⁾	
Type		105				115				112		112	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	F120	F122	F220	F222
Voltage	230 V AC	•	•			•				•		•	
	24 V AC			•	•		•	•	•		•		•
	24 V DC				•						•		•
Positioning signal	2-point	•	•	•		•	•	•	•	•	•	•	•
	3-point	•	•	•	•	•	•	•	•			•	•
	0...10 V				•			•	•				
	4...20 mA								•				
Feedback	0...10 V								•				
					•								
Running time [s]		30	120	60	35	120	120	60	6	90	90	90	90
Return time [s]				120	120			120					
Spring return	without power, closes the ball valve									•	•	•	•
	without power, opens the ball valve									•	•	•	•
Double contacts integrated												•	•

¹⁾ Mounting kit 0510240001 required

Cut-off / changeover ball valve with ISO female thread in DZR cast brass PN40

	Type	DN	Connection	Kvs (m ³ /h)	Δp _{max} [bar]			
Cut-off ball valve -10 °C...130 °C	VKAI 015 F300	15	R _p ½	15	1.8	3.5	3.5	3.5
	VKAI 020 F300	20	R _p ¾	22	1.8	3.5	3.5	3.5
	VKAI 025 F300	25	R _p 1	22	1.8	3.5	3.5	3.5
	VKAI 032 F300	32	R _p 1¼	25	1.2	2.4	2.4	2.4
	VKAI 040 F300	40	R _p 1½	68	1.2	2.4	2.4	2.4
	VKAI 050 F300	50	R _p 2	96	1.2	2.4	2.4	2.4
Changeover ball valve Lbore -10 °C...130 °C	BKLI 015 F300	15	R _p ½	15	1.8	2	2	2
	BKLI 020 F300	20	R _p ¾	22	1.8	2	2	2
	BKLI 025 F300	25	R _p 1	22	1.8	2	2	2
	BKLI 032 F300	32	R _p 1¼	25	1.2	2	2	2
	BKLI 040 F300	40	R _p 1½	68	1.2	2	2	2
	BKLI 050 F300	50	R _p 2	96	1.2	2	2	2
Changeover ball valve Tbore -10 °C...130 °C	BKTI 015 F300	15	R _p ½	15	1.8	2	2	2
	BKTI 020 F300	20	R _p ¾	22	1.8	2	2	2
	BKTI 025 F300	25	R _p 1	22	1.8	2	2	2
	BKTI 032 F300	32	R _p 1¼	25	1.2	2	2	2
	BKTI 040 F300	40	R _p 1½	68	1.2	2	2	2
	BKTI 050 F300	50	R _p 2	96	1.2	2	2	2

VKRA/BKRA regulating ball valve with male thread in DZR brass with electric rotary actuators



Model series		AKM				AKM				AKF			
Type		105				115				112		113	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	F120	F122	F122	SF122
Voltage	230 V AC	•	•			•				•			
	24 V AC			•	•		•	•	•		•	•	•
	24 V DC				•			•	•		•	•	•
Positioning signal	2-point	•	•	•		•	•	•	•	•	•		
	3-point	•	•	•	•	•	•	•	•			•	
	0...10 V				•			•	•				•
Feedback	4...20 mA								•				
	0...10 V				•			•	•				•
Running time [s]		30	120	60	35	120	120	60	6	90	90	90	90
Return time [s]				120	120			120		15	15	15	15
Characteristic of the combination can be changed	linear/quadratic				•			•	•				
Spring return	without power, closes the ball valve									•	•	•	•
	without power, opens the ball valve									•	•	•	•

Ball valve with male thread in DZR cast brass PN40 and equal percentage characteristic

	Type	DN	Connection	Kvs (m³/h)		ΔP _{max} [bar]	
2-way ball valve -10 °C...130 °C	VKRA 015 F350	15	G 1"	1	1.8	3.5	3.5
	VKRA 015 F340	15	G 1"	1.6	1.8	3.5	3.5
	VKRA 015 F330	15	G 1"	2.5	1.8	3.5	3.5
	VKRA 015 F320	15	G 1"	4	1.8	3.5	3.5
	VKRA 015 F310	15	G 1"	6.3	1.8	3.5	3.5
	VKRA 020 F320	20	G 1¼"	4	1.8	3.5	3.5
	VKRA 020 F310	20	G 1¼"	6.3	1.8	3.5	3.5
	VKRA 020 F300	20	G 1¼"	10	1.8	3.5	3.5
	VKRA 025 F320	25	G 1½"	6.3	1.8	3.5	3.5
	VKRA 025 F310	25	G 1½"	10	1.8	3.5	3.5
	VKRA 025 F300	25	G 1½"	16	1.8	3.5	3.5
	VKRA 032 F320	32	G 2"	10	1.2	2.4	2.4
	VKRA 032 F310	32	G 2"	16	1.2	2.4	2.4
	VKRA 032 F300	32	G 2"	25	1.2	2.4	2.4
	VKRA 040 F320	40	G 2¼"	16	1.2	2.4	2.4
	VKRA 040 F310	40	G 2¼"	25	1.2	2.4	2.4
	VKRA 040 F300	40	G 2¼"	40	1.2	2.4	2.4
	VKRA 050 F320	50	G 2¾"	25	1.2	2.4	2.4
	VKRA 050 F310	50	G 2¾"	40	1.2	2.4	2.4
	VKRA 050 F300	50	G 2¾"	63	1.2	2.4	2.4
3-way ball valve -10 °C...130 °C	BKRA 015 F340	15	G 1"	1.6	1.8	2	2
	BKRA 015 F330	15	G 1"	2.5	1.8	2	2
	BKRA 015 F320	15	G 1"	4	1.8	2	2
	BKRA 015 F310	15	G 1"	6.3	1.8	2	2
	BKRA 020 F320	20	G 1¼"	4	1.8	2	2
	BKRA 020 F310	20	G 1¼"	6.3	1.8	2	2
	BKRA 025 F310	25	G 1½"	10	1.8	2	2
	BKRA 032 F310	32	G 2"	16	1.2	2	2
	BKRA 040 F310	40	G 2¼"	25	1.2	2	2
	BKRA 050 F310	50	G 2¾"	40	1.2	2	2



Cut-off / changeover ball valve in DZR brass with electric rotary actuators



Model series		AKM				AKM				AKF		ASF ¹⁾	
Type		105				115				112		112	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	F120	F122	F220	F222
Voltage	230 V AC	•	•			•				•		•	
	24 V AC			•	•		•	•	•		•		•
	24 V DC				•						•		•
Positioning signal	2-point	•	•	•		•	•	•	•	•	•	•	•
	3-point	•	•	•	•	•	•	•	•				
	0...10 V				•								
Feedback	4...20 mA								•				
	0...10 V				•				•				
Running time [s]		30	120	60	35	120	120	60	6	90	90	90	90
Return time [s]				120	120			120					
Spring return	without power, closes the ball valve									•	•	•	•
	without power, opens the ball valve									•	•	•	•
Double contacts integrated												•	•


¹⁾ Mounting kit 0510240001 required

Cut-off / changeover ball valve with ISO male thread in DZR cast brass PN40


	Type	DN	Connection	Kvs (m ³ /h)		Δp _{max} [bar]		
Cut-off ball valve -10 °C...130 °C 	VKAA 015 F300	15	G 1"	9	1.8	3.5	3.5	3.5
	VKAA 020 F300	20	G 1½"	17	1.8	3.5	3.5	3.5
	VKAA 025 F300	25	G 1½"	22	1.8	3.5	3.5	3.5
	VKAA 032 F300	32	G 2"	35	1.2	2.4	2.4	2.4
	VKAA 040 F300	40	G 2¼"	68	1.2	2.4	2.4	2.4
	VKAA 050 F300	50	G 2¾"	96	1.2	2.4	2.4	2.4
Changeover ball valve T _{bore} -10 °C...130 °C 	BKTA 015 F300	15	G 1"	8	1.8	2	2	2
	BKTA 020 F300	20	G 1½"	13	1.8	2	2	2
	BKTA 025 F300	25	G 1½"	13	1.8	2	2	2
	BKTA 032 F300	32	G 2"	25	1.2	2	2	2
	BKTA 040 F300	40	G 2¼"	49	1.2	2	2	2
	BKTA 050 F300	50	G 2¾"	73	1.2	2	2	2

Important accessories for ball valves


Strainer in gunmetal, PN16, -10...150 °C

Type	DN	Description
	0560332 015	15 ISO 228/1 - G 1/2, mesh aperture 0.5 mm
	0560332 020	20 ISO 228/1 - G 3/4, mesh aperture 0.8 mm
	0560332 025	25 ISO 228/1 - G 1, mesh aperture 0.8 mm
	0560332 032	32 ISO 228/1 - G 1 1/4, mesh aperture 0.8 mm
	0560332 040	40 ISO 228/1 - G 1 1/2, mesh aperture 0.8 mm
	0560332 050	50 ISO 228/1 - G 2, mesh aperture 0.8 mm

Accessories for VKx and BKx ball valves with female thread

Type	DN	Description
	0560284 015	15 1 screw fitting, flat-sealing
	0560284 020	20 1 screw fitting, flat-sealing
	0560284 025	25 1 screw fitting, flat-sealing
	0560284 032	32 1 screw fitting, flat-sealing
	0560284 040	40 1 screw fitting, flat-sealing
	0560284 050	50 1 screw fitting, flat-sealing

Accessories for VKx and BKx ball valves with male thread

Type	DN	Description
	0361951 015	15 1 screw fitting in brass for male thread with flat seal, G 1B / Rp 1/2
	0361951 020	20 1 screw fitting in brass for male thread with flat seal, G 1 1/4B / Rp 3/4
	0361951 025	25 1 screw fitting in brass for male thread with flat seal, G 1 1/2B / Rp 1
	0361951 032	32 1 screw fitting in brass for male thread with flat seal, G 2B / Rp 1 1/4
	0361951 040	40 1 screw fitting in brass for male thread with flat seal, G 2 1/4B / Rp 1 1/2
	0361951 050	50 1 screw fitting in brass for male thread with flat seal, G 2 3/4B / Rp 2

Accessories for AKM 105, AKM 115 (S) actuators

Type	Description
0510240 011	Temperature adapter, media temperature <5 °C
0510420 001	Adapter required when media temperature >100 °C
0510480 001	Auxiliary change-over contacts, single
0510480 002	Auxiliary change-over contacts, double

High-performance types and flexible combinations for all requirements: **Threaded and flanged valves** from SAUTER.

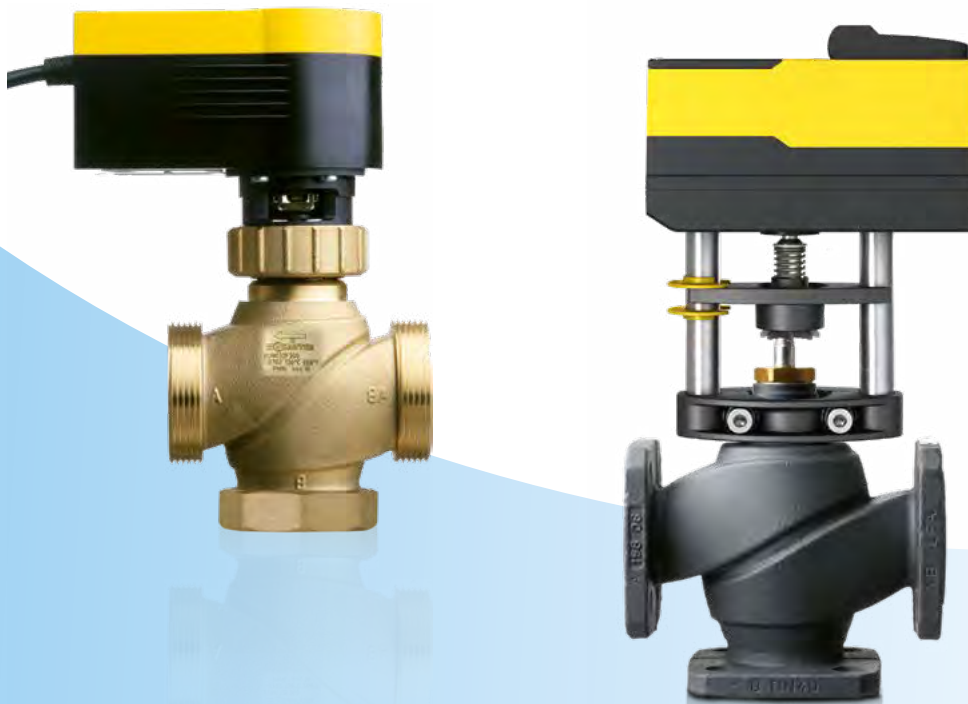
The complete product range of regulating valves.

The wide product range at SAUTER comprises threaded valves made of DZR cast brass and flanged valves in grey cast iron, ductile cast iron or cast steel. In combination with actuators with 2- or 3-point actuation or with the innovative SAUTER Universal Technology (SUT), they create compact control units.

Installation and commissioning are no problem for you as the two components are very easy to fit and adapt automatically to the stroke of the valve. All nominal diameters up to DN 50 are equipped with a high quality seal in the plug. The nominal diameters starting from DN 65 are distinguished by a very precise sealing surface of metal or stainless steel. This enables even the most stringent requirements for regulating, cutting off and safety functions to be met.

Versatile operation and flexible handling.

SAUTER valves can mostly be used as control or distribution valves with or against the pressure. They are also reliable in the long term when there are high differential pressures. And they remain flexible when you make the required settings on your SUT actuator: As well as selecting the characteristic, you can adjust the running time and specify the input signal. Therefore, SAUTER offers you a complete range of valve actuators with pushing forces in the range from 250 N to 2500 N and suitable valves for every application.



Actuators



Valves

VUN/BUN male thread valves in cast brass with electric linear actuators



Model series		AVM				AVM			AVM			AVF			
Type		105				115			321			124		125	
Version		F100	F120	F122	SF132	F120	F122	SF132	F110	F112	SF132	F130	F230	SF132	SF232
Voltage	230 V AC	•	•			•			•			•	•		
	24 V AC			•	•		•	•		•	•			•	•
	24 V DC				•					•	•				
Positioning signal	2-point	•	•	•	•	•	•	•	•	•	•				
	3-point	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	0...10 V				•						•				•
Feedback	4...20 mA										•				•
	0...10 V				•		•				•				•
	4...20 mA									• ²⁾					•
Running time [s]		30	120	120	35 60 120	120	120	60 120	96 48	96 48	48 32	60 120	60 120	60 120	60 120
Return time [s]												18			18
Pushing force [N]					250			500			1000			500	
Characteristic of the combination can be changed	linear/equal percentage				•			•			•			•	•
	quadratic							•						•	•
Spring return	without power, closes the ball valve											•		•	
	without power, opens the ball valve												•		•

¹⁾ Requires accessory 0500570 003

²⁾ Requires accessory 0500420 002

Male thread valves in cast brass, PN16, equal percentage (F3**) and linear (F2**) characteristic

Type		DN	Connection	Kvs (m³/h)	Stroke (mm)	Δp _{max} [bar]				
2-way -15 °C...150 °C	VUN 015 F350	15	G 1B	0.4	8	4	6	10	6	
	VUN 015 F340	15	G 1B	0.63	8	4	6	10	6	
	VUN 015 F330	15	G 1B	1	8	4	6	10	6	
	VUN 015 F320	15	G 1B	1.6	8	4	6	10	6	
	VUN 015 F310	15	G 1B	2.5	8	4	6	10	6	
	VUN 015 F300	15	G 1B	4	8	4	6	10	6	
	VUN 020 F300	20	G 1¼B	6.3	8	4	5	10	5	
	VUN 025 F300	25	G 1½B	10	8	4	4	10	4	
	VUN 032 F300	32	G 2B	16	8	3	3.5	10	3.5	
	VUN 040 F300	40	G 2¼B	22	8	1.9	3	6	3	
	VUN 050 F300	50	G 2¾B	28	8	1	2.4	4	2.4	
	VUN 050 F200	50	G 2¾B	40	8	1	2.4	4	2.4	
	3-way -15 °C...150 °C	BUN 015 F330	15	G 1B	1	8	4	6	10	6
		BUN 015 F320	15	G 1B	1.6	8	4	6	10	6
BUN 015 F310		15	G 1B	2.5	8	4	6	10	6	
BUN 015 F300		15	G 1B	4	8	4	6	10	6	
BUN 020 F300		20	G 1¼B	6.3	8	4	5	10	5	
BUN 025 F300		25	G 1½B	10	8	3	4	10	4	
BUN 032 F300		35	G 2B	16	8	2	3.7	10	3.7	
BUN 040 F300		40	G 2¼B	22	8	1.2	2.7	6	2.7	
BUN 050 F300		50	G 2¾B	28	8	0.8	1.8	4	1.8	
BUN 050 F200		50	G 2¾B	40	8	0.8	1.8	4	1.8	

Area of use for SAUTER control valves in combination with electric actuators

		Cast brass PN16		Cast brass PN40	Grey cast iron PN6				Grey cast iron PN10/16				
Valve/ball valve model series		VUN BUN DN15...50		VKR/VKRA BKR/BKRA DN15...50	VUD BUD DN15...50		VQD BQD DN65...100		VUE BUE DN15...50		VQE BQE DN65...150		DN15...
Valve actuator model series		AVM 105	AVM 321	AKM 105	AVM 105	AVM 321	AVM 322	AVM 234	AVM 105	AVM 321	AVM 322	AVM 234	AVM 105
		AVM 115		AKM 115	AVM 115			AVF 234	AVM 115			AVF 234	AVM 115
		AVF 124		AKF 112	AVF 124				AVF 124				AVF 124
		AVF 125		AKF 113	AVF 125				AVM 125				AVM 125
Medium	Temp. range												
Water with anti-freeze (glycol 20...55%)	-30...-21 °C												
	-20...-16 °C												
	-15...-11 °C	H1 K1/K2	H1 K1/K2										S K1/ S K1/ S K1/ S
	-10...-2 °C	K1/K2	K1/K2	H10	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	S K1/ S
Cold water	3...20 °C	•	•	•	•	•	•	•	•	•	•	•	S
	21...100 °C	•	•	•	•	•	•	•	•	•	•	•	•
Hot water	101...130 °C	H1	H1	H11	H1	H1	H5	•	H1	H1	H5	•	•
	131...150 °C	H2	H2		H2	H2	H5	H3	H2	H2	H5	H3	H3
Hot water	151...180 °C												H3
	181...200 °C												
	201...210 °C												
	211...220 °C												
	221...230 °C												
Water vapour	100...115 °C												
	116...130 °C												
	131...180 °C												
	181...200 °C												
	201...220 °C												
221...240 °C													

¹ PTFE stuffing box with grease containing silicone can only be used up to DN 125

• Standard model

Accessories	Type	Description
K1	0378284 100	Stuffing box heater 230 V AC, 15 W, for media below 0 °C
K2	0378284 102	Stuffing box heater 24 V AC, 15 W, for media below 0 °C
H1	0372249 001	Adapter required when media temperature >100 °C up to max. 130 °C (AVM 1**, AVM 321)
H2	0372249 002	Adapter required when media temperature >130 °C up to max. 150 °C (AVM 1**, AVM 321)
H3	0372336 180	Extension for media temperature up to 180° (AV* 234, AVN 224)
H4	0372336 240	Extension for media temperature up to 240° (AV* 234, AVN 224)
H5	0500240 001	Extension for media temperature up to 180° (AVM 322)
H6	0500240 002	Extension for media temperature up to 240° (AVM 322)
H10	0510240 011	Adapter required when media temperature <3 °C
H11	0510420 001	Adapter required when media temperature >100 °C

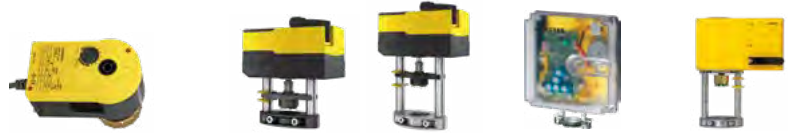
ators

Ductile cast iron PN16				Ductile cast iron PN25						Cast steel PN40					
VUG		BUG		VUG		BUG		VUP		VUS			BUS		
DN15...50	DN65...80	DN15...50	DN65...80	DN15...50	DN65...150	DN15...50	DN65...150	DN40	DN50...150	DN15...50	DN65...100	DN125...150	DN15...50	DN65...100	DN125...150
AVM 322	AVM 234	AVM 322	AVM 234	AVM 322	AVM 234	AVM 322	AVM 234	AVM 322	AVM 234	AVM 322	AVM 234		AVM 322	AVM 234	
	AVF 234		AVF 234		AVF 234		AVF 234		AVF 234		AVF 234			AVF 234	
	AVN 224		AVN 224		AVN 224		AVN 224		AVN 224						
S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	K1/K2	K1/K2	FB	FB	FB	FB	FB	FB
K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	K1/K2	FB	FB	FB	FB	FB	FB
K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	K1/K2	FB	FB	FB	FB	FB	FB
K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	S ¹	K1/K2	K1/K2	•	•	•	•	•	•
S ¹	S ¹	S ¹	S ¹	S ¹	S ¹	S ¹	S ¹	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
H3	H5	H3	H5	H3	H5	H3	H5	H3	H5	H5	H3	H3	H5	H3	H3
H3	H5	H3	H5	H3	H5	H3	H5	H3	H5	H5	H3	H3	H5	H3	H3
				H6	H4	H6	H4	H6	H4	H6	H4	H4	H6	H4	H4
										H6	H4	H4	H6	H4	H4
										H6	H4	H4	H6	H4	H4
										H6/G1	H4/G2	H4/G3	H6/G1	H4/G2	H4/G3
•					•			•	•	•	•	•			
•					•			•	•	•	•	•			
H3					H3			H5	H3	H5	H3	H3			
					H4			H6	H4	H6	H4	H4			
										H6	H4	H4			
										H6/G1	H4/G2	H4/G3			

Stuffing box variants	Type	Description
G1	0378373 001	Stuffing box with graphite seal for temperatures of 220...260 °C, DN 15...50
G2	0378373 002	Stuffing box with graphite seal for temperatures of 220...260 °C, DN 65...100
G3	0378373 003	Stuffing box with graphite seal for temperatures of 220...260 °C, DN 125...150
S	0560260 001	PTFE stuffing box with grease containing silicone
FB		with bellows on request



VUD/VQD/BUD/BQD flanged valves in grey cast iron with electric linear actuators



Model series		AVM				AVM				AVM				AVF				AVM		AVF	
Type		105				115				321				322				124	125	234	234
Version		F100	F120	F122	SF132	F120	F122	SF132	F110	F112	SF132	F120	F122	SF132	F130	F230	SF132	SF232	SF132	SF132	SF232
Voltage	230 V AC	●	●			●			●			●			●	●			● ¹⁾	● ¹⁾	● ¹⁾
	24 V AC			●	●		●	●		●	●		●	●			●	●			
	24 V DC				●			●		●	●		●	●							
Positioning signal	2-point	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	3-point	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	0...10 V			●			●			●			●			●	●			●	●
Feedback	4...20 mA									●			●			●	●			●	●
	0...10 V				●		●			●			●			●	●			●	●
	4...20 mA									● ³⁾			● ³⁾							●	●
Running time [s]		30	120	120	35 60 120	120	120	60	96	96	48	120	120	80	60	60	60	60	40/80	40/80	
									48	48	32	240	240	120	120	120	120	120	80/160	80/160	
Return time [s]															18	18			120/240	120/240	
Pushing force [N]		250				500				1000				1000				2500			
Characteristic of the combination can be changed	linear				●			●			●			●			●	●	●	●	●
	quadratic							●									●	●	●	●	●
Spring return	without power, closes the valve														●	●	●	●	●	●	●
	without power, opens the valve															●	●	●			●

¹⁾ Requires accessory 0372332 001

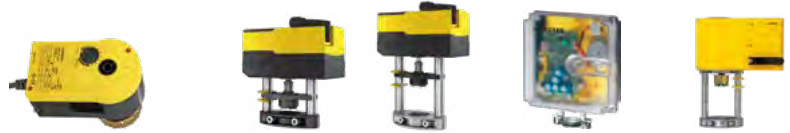
²⁾ Requires accessory 0500570 003

³⁾ Requires accessory 0500420 002

Flanged valves in grey cast iron, PN6, equal percentage (F3**) and linear (F2**) characteristic

Type	DN	Kvs (m³/h)	Stroke (mm)	ΔP _{max} [bar]										
2-way -10 °C...150 °C	VUD 015 F320	15	1.6	8	4	6	6	6	6	6	6	6	6	6
	VUD 015 F310	15	2.5	8	4	6	6	6	6	6	6	6	6	6
	VUD 015 F300	15	4	8	4	6	6	6	6	6	6	6	6	6
	VUD 020 F300	20	6.3	8	4	6	6	6	6	6	6	6	6	6
	VUD 025 F300	25	10	8	2.8	6	6	6	6	6	6	6	6	6
	VUD 032 F300	32	16	8	2.1	5.2	6	6	6	6	6	5.2	6	6
	VUD 040 F300	40	22	8	1.2	3.3	6	6	6	6	6	3.3	6	6
	VUD 050 F200	50	40	8	0.9	2	4	4	4	4	4	2	2	2
	VUD 050 F300	50	28	8	0.9	2	4	4	4	4	4	2	2	2
	VQD 065 F300	65	63	20					2.5	2.5	2.5	3	3	3
	VQD 065 F701D	65	50	20					2.5	2.5	2.5	3	3	3
	VQD 080 F300	80	100	20					1.5	1.5	1.5	3	3	3
	VQD 080 F701D	80	80	20					1.5	1.5	1.5	3	3	3
	VQD 100 F300	100	160	40								2	2	2
	VQD 100 F701D	100	125	40								2	2	2
3-way -10 °C...150 °C	BUD 015 F320	15	1.6	8	4	6	6	6	6	6	6	6	6	6
	BUD 015 F310	15	2.5	8	4	6	6	6	6	6	6	6	6	6
	BUD 015 F300	15	4	8	4	6	6	6	6	6	6	6	6	6
	BUD 020 F300	20	6.3	8	4	6	6	6	6	6	6	6	6	6
	BUD 025 F300	25	10	8	2.8	6	6	6	6	6	6	6	6	6
	BUD 032 F300	32	16	8	2.1	5.2	6	6	6	6	6	5.2	6	6
	BUD 040 F300	40	22	8	1.2	3.3	6	6	6	6	6	3.3	6	6
	BUD 050 F200	50	40	8	0.9	2	4	4	4	4	4	2	2	2
	BUD 050 F300	50	28	8	0.9	2	4	4	4	4	4	2	2	2
	BQD 065 F300	65	63	20					2.5	2.5	2.5	3	3	3
	BQD 065 F701D	65	50	20					2.5	2.5	2.5	3	3	3
	BQD 080 F300	80	100	20					1.5	1.5	1.5	3	3	3
	BQD 080 F701D	80	80	20					1.5	1.5	1.5	3	3	3
	BQD 100 F300	100	160	40								2	2	2
	BQD 100 F701D	100	125	40								2	2	2

VUE/VQE/BUE/BQE flanged valves in grey cast iron with electric linear actuators



Model series		AVM				AVM				AVF				AVM		AVF									
Type		105				115				321				322				124		125		234		234	
Version		F100	F120	F122	SF132	F120	F122	SF132	F110	F112	SF132	F120	F122	SF132	F130	F230	SF132	SF232	SF132	SF132	SF232				
Voltage	230 V AC	●	●			●			●		2)	●		2)	●	●			●	1)	●	1)			
	24 V AC			●	●		●	●		●	●		●	●			●	●							
	24 V DC				●			●		●	●		●	●											
Positioning signal	2-point	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
	3-point	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
	0...10 V				●			●			●			●			●	●			●	●			
Feedback	4...20 mA										●			●			●	●			●	●			
	0...10 V				●			●			●			●			●	●			●	●			
	4...20 mA										3)			3)											
Running time [s]		30	120	120	35 60 120	120	120	60 120	96 48	96 48	48 32	120 240	120 240	80 120	60 120	60 120	60 120	60 120	40/80 80/160 120/240	40/80 80/160 120/240					
	Return time [s]														18	18					15...30	2000			
Pushing force [N]		250				500				1000				1000				500		2500		2000			
Characteristic of the combination can be changed	linear				●			●			●			●			●	●			●	●			
	quadratic							●			●			●			●	●			●	●			
Spring return	without power, closes the valve														●		●				●				
	without power, opens the valve															●		●				●			

¹⁾ Requires accessory 0372332 001

²⁾ Requires accessory 0500570 003

³⁾ Requires accessory 0500420 002

Flanged valves in grey cast iron, PN16/10, equal percentage (F3**) and linear (F2**) characteristic

Type	DN	Kvs (m³/h)	Stroke (mm)	Δp_{max} [bar]																		
2-way -10 °C...150 °C	VUE 015 F350	15	0.4	8	4	6	10			6												
	VUE 015 F340	15	0.63	8	4	6	10			6												
	VUE 015 F330	15	1	8	4	6	10			6												
	VUE 015 F320	15	1.6	8	4	6	10			6												
	VUE 015 F310	15	2.5	8	4	6	10			6												
	VUE 015 F300	15	4	8	4	6	10			6												
	VUE 020 F300	20	6.3	8	4	6	10			6												
	VUE 025 F300	25	10	8	2.8	6	10			6												
	VUE 032 F300	32	16	8	2.1	5.2	10			5.2												
	VUE 040 F300	40	22	8	1.4	3.3	6			3.3												
	VUE 050 F200	50	40	8	0.9	2	4			2												
	VUE 050 F300	50	28	8	0.9	2	4			2												
	VQE 065 F300	65	63	20						2.5									3	3		
	VQE 065 F701D	65	65	20						2.5									3	3		
	VQE 080 F300	80	100	20						1.5									3	3		
	VQE 080 F701D	80	80	20						1.5									3	3		
	VQE 100 F300	100	160	40															2	2		
	VQE 100 F701D	100	125	40															2	2		
VQE 125 F300	125	220	40															1.5	1.4			
VQE 150 F300	150	320	40															1	1			
3-way -10 °C...150 °C	BUE 015 F330	15	1	8	4	6	10			6												
	BUE 015 F320	15	1.6	8	4	6	10			6												
	BUE 015 F310	15	2.5	8	4	6	10			6												
	BUE 015 F300	15	4	8	4	6	10			6												
	BUE 020 F300	20	6.3	8	4	6	10			6												
	BUE 025 F300	25	10	8	2.8	6	10			6												
	BUE 032 F300	32	16	8	2.1	5.2	10			5.2												
	BUE 040 F300	40	22	8	1.4	3.3	6			3.3												
	BUE 050 F200	50	40	8	0.9	2	4			2												
	BUE 050 F300	50	28	8	0.9	2	4			2												
	BQE 065 F300	65	63	20						2.5									3	3		
	BQE 065 F701D	65	50	20						2.5									3	3		
	BQE 080 F300	80	100	20						1.5									3	3		
	BQE 080 F701D	80	80	20						1.5									3	3		
	BQE 100 F300	100	160	40															2	2		
	BQE 100 F701D	100	125	40															2	2		
	BQE 125 F300	125	220	40															1.5	1.4		
	BQE 150 F300	150	320	40															1	1		

VUG/BUG flanged valves in ductile cast iron with electric linear actuators



Model series		AVM			AVM	AVF		AVN	
Type		322			234	234		224	
Version		F120	F122	SF132	SF132	SF132	SF232	SF132	SF232
Voltage		230 V AC		● ²⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
		24 V AC	●	●	●	●	●	●	●
		24 V DC	●	●	●	●	●	●	●
Positioning signal		2-point	●	●	●	●	●	●	●
		3-point	●	●	●	●	●	●	●
		0...10 V		●	●	●	●	●	●
		4...20 mA		●	●	●	●	●	●
Feedback		0...10 V		●	●	●	●	●	●
		4...20 mA		● ³⁾					
Running time [s]		120	120	80	40/80 80/160 120/240	40/80 80/160 120/240	15...30 2000	40/80 80/160 120/240	15...30 1100
Return time [s]									
Pushing force [N]			1000		2500				
Characteristic of the combination can be changed		linear		●	●	●	●	●	●
		quadratic			●	●	●	●	●
Spring return		without power, closes the ball valve				●		●	
		without power, opens the ball valve					●		●

¹⁾ Requires accessory 0372332 001

²⁾ Requires accessory 0500570 003

³⁾ Requires accessory 0500420 002

Flanged valves in ductile cast iron, PN25/16, equal percentage (F3**) characteristic

	Type	DN	Flange	Kvs (m³/h)	Stroke (mm)	Δp _{max} [bar]			
2-way -20 °C...200 °C	VUG 015 F374	15	PN25/16	0.16	20	16	16	16	16
	VUG 015 F364	15	PN25/16	0.25	20	16	16	16	16
	VUG 015 F354	15	PN25/16	0.4	20	16	16	16	16
	VUG 015 F344	15	PN25/16	0.63	20	16	16	16	16
	VUG 015 F334	15	PN25/16	1	20	16	16	16	16
	VUG 015 F324	15	PN25/16	1.6	20	16	16	16	16
	VUG 015 F314	15	PN25/16	2.5	20	16	16	16	16
	VUG 015 F304	15	PN25/16	4	20	16	16	16	16
	VUG 020 F304	20	PN25/16	6.3	20	16	16	16	16
	VUG 025 F304	25	PN25/16	10	20	15.2	16	16	16
	VUG 032 F304	32	PN25/16	16	20	9.4	16	16	10.5
	VUG 040 F304	40	PN25/16	25	20	6.1	16	13.5	6.5
	VUG 050 F304	50	PN25/16	40	20	4	11	8.5	4
	VUG 065 F316	65	PN16	63	40		7.1	5.6	
	VUG 065 F304	65	PN25	63	40		7.1	5.6	3
	VUG 080 F304	80	PN25/16	100	40		4.7	3.4	2
	VUG 100 F304	100	PN25	160	40		3	2.2	1.1
VUG 125 F304	125	PN25	250	40		2	1.6	0.8	
VUG 150 F304	150	PN25	340	40		1.5	1.2	0.6	
3-way -20 °C...200 °C	BUG 015 F334	15	PN25/16	1	20	16	16	16	16
	BUG 015 F324	15	PN25/16	1.6	20	16	16	16	16
	BUG 015 F314	15	PN25/16	2.5	20	16	16	16	16
	BUG 015 F304	15	PN25/16	4	20	16	16	16	16
	BUG 020 F304	20	PN25/16	6.3	20	16	16	16	16
	BUG 025 F304	25	PN25/16	10	20	15.2	16	16	16
	BUG 032 F304	32	PN25/16	16	20	9.4	16	16	10.5
	BUG 040 F304	40	PN25/16	25	20	6.1	16	13.5	6.5
	BUG 050 F304	50	PN25/16	40	20	4	11	8.5	4
	BUG 065 F316	65	PN16	63	40		7.1	5.6	
	BUG 065 F304	65	PN25	63	40		7.1	5.6	3
	BUG 080 F304	80	PN25/16	100	40		4.7	3.4	2
	BUG 100 F304	100	PN25	160	40		3	2.2	1.1
	BUG 125 F304	125	PN25	250	40		2	1.6	0.8
	BUG 150 F304	150	PN25	340	40		1.5	1.2	0.6

VUP flanged valves, pressure-compensated, in ductile cast iron with electric linear actuators




Model series		AVM			AVM		AVF		AVN	
Type		322			234		234		224	
Version		F120	F122	SF132	SF132	SF132	SF232	SF132	SF232	
Voltage	230 V AC	•		• ²⁾	• ¹⁾	• ¹⁾	• ¹⁾	• ¹⁾	• ¹⁾	• ¹⁾
	24 V AC		•	•	•	•	•	•	•	•
	24 V DC		•	•	•	•	•	•	•	•
Positioning signal	2-point	•	•	•	•	•	•	•	•	•
	3-point	•	•	•	•	•	•	•	•	•
	0...10 V			•	•	•	•	•	•	•
	4...20 mA			•	•	•	•	•	•	•
Feedback	0...10 V			•	•	•	•	•	•	•
	4...20 mA			• ³⁾						
Running time [s]		120	120	80	40/80	40/80	40/80	40/80	40/80	
		240	240	120	80/160 120/240	80/160 120/240	80/160 120/240	80/160 120/240	80/160 120/240	
Return time [s]						15...30		15...30		
Pushing force [N]			1000		2500	2000		1100		
Characteristic of the combination can be changed	linear			•	•	•	•	•	•	•
	quadratic				•	•	•	•	•	•
Spring return	without power, closes the ball valve						•			•
	without power, opens the ball valve						•			•

¹⁾ Requires accessory 0372332 001

²⁾ Requires accessory 0500570 003

³⁾ Requires accessory 0500420 002

Flanged valves in ductile cast iron, PN25, pressure-compensated, equal percentage (F3**) characteristic

	Type	DN	Flange	Kvs (m³/h)	Stroke (mm)		Δp _{max} [bar]		
2-way -20 °C...200 °C 	VUP 040 F304	40	PN25	25	14	25	25	25	25
	VUP 050 F304	50	PN25	40	25		25	25	20
	VUP 065 F304	65	PN25	63	25		25	25	16
	VUP 080 F304	80	PN25	100	25		25	25	12
	VUP 100 F304	100	PN25	160	40		25	20	9
	VUP 125 F304	125	PN25	250	40		19	14	6
	VUP 150 F304	150	PN25	350	40		15	10	4

VUS/BUS flanged valves in cast steel with electric linear actuators



Model series		AVM			AVM	AVF		AVN	
Type		322			234	234		224	
Version		F120	F122	SF132	SF132	SF132	SF232	SF132	SF232
Voltage	230 V AC	●		● ²⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾
	24 V AC		●	●	●	●	●	●	●
	24 V DC		●	●	●	●	●	●	●
Positioning signal	2-point	●	●	●	●	●	●	●	●
	3-point	●	●	●	●	●	●	●	●
	0...10 V			●	●	●	●	●	●
Feedback	4...20 mA			●	●	●	●	●	●
	0...10 V			●	●	●	●	●	●
	4...20 mA			● ³⁾					
Running time [s]		120	120	80	40/80	40/80	40/80	40/80	
		240	240	120	80/160 120/240	80/160 120/240	80/160 120/240	80/160 120/240	
Return time [s]						15...30		15...30	
Pushing force [N]		1000			2500	2000		1100	
Characteristic of the combination can be changed	linear/equal percentage			●	●	●	●	●	●
	quadratic				●	●	●	●	●
Spring return	without power, closes VUS valve/opens BUS valve						●		●
	without power, opens VUS valve/closes BUS valve					●		●	

¹⁾ Requires accessory 0372332 001

²⁾ Requires accessory 0500570 003


³⁾ Requires accessory 0500420 002

Flanged valves in cast steel, PN40, equal percentage (F3**) and linear (F2**) characteristic


	Type	DN	Flange	Kvs (m³/h)	Stroke (mm)	ΔP _{max} [bar]			
2-way -10 °C...260 °C	VUS 015 F375	15	PN40	0.16	20	24	40	40	24.5
	VUS 015 F365	15	PN40	0.25	20	24	40	40	24.5
	VUS 015 F355	15	PN40	0.4	20	24	40	40	24.5
	VUS 015 F345	15	PN40	0.63	20	24	40	40	24.5
	VUS 015 F335	15	PN40	1	20	24	40	40	24.5
	VUS 015 F325	15	PN40	1.6	20	24	40	40	24.5
	VUS 015 F315	15	PN40	2.5	20	24	40	40	24.5
	VUS 015 F305	15	PN40	4	20	24	40	40	24.5
	VUS 020 F305	20	PN40	6.3	20	15.3	40	40	17.5
	VUS 025 F305	25	PN40	10	20	12.8	37.8	29.6	14.7
	VUS 032 F305	32	PN40	16	20	9	28.7	22.5	11.1
	VUS 040 F305	40	PN40	25	20	5.4	16.4	12.8	6.2
	VUS 050 F305	50	PN40	40	20	3.3	10.5	8.2	3.9
	VUS 065 F305	65	PN40	63	30		6.1	4.7	2.1
	VUS 080 F305	80	PN40	100	30		3.9	3	1.3
	VUS 100 F305	100	PN40	160	30		1.5	1.5	0.8
	VUS 125 F305	125	PN40	220	40		1	1	0.4
	VUS 150 F305	150	PN40	320	40		0.7	0.7	0.2
3-way -10 °C...260 °C	BUS 015 F225	15	PN40	1.6	20	24	40	40	24.5
	BUS 015 F215	15	PN40	2.5	20	24	40	40	24.5
	BUS 015 F205	15	PN40	4	20	24	40	40	24.5
	BUS 020 F205	20	PN40	6.3	20	15.3	40	34.7	17.5
	BUS 025 F205	25	PN40	10	20	12.8	37.8	29.6	14.7
	BUS 032 F205	32	PN40	16	20	9		21.1	10.4
	BUS 040 F205	40	PN40	25	20	5.4	16.4	12.8	6.2
	BUS 050 F205	50	PN40	40	20	3.3	10.5	8.2	3.9
	BUS 065 F205	65	PN40	63	30		6.1	4.7	2.1
	BUS 080 F205	80	PN40	100	30		3.9	3	1.3
	BUS 100 F205	100	PN40	160	30		2.5	1.9	0.8
	BUS 125 F305	125	PN40	220	40		1.7	1.3	0.5
	BUS 150 F305	150	PN40	320	40		1.2	0.9	0.3


Important accessories for male thread and flanged valves

Strainer in gunmetal, PN16, -10...150 °C

Type	Description
	0560332 015 ISO 228/1 - G ½, mesh aperture 0.5 mm
	0560332 020 ISO 228/1 - G ¾, mesh aperture 0.8 mm
	0560332 025 ISO 228/1 - G 1, mesh aperture 0.8 mm
	0560332 032 ISO 228/1 - G 1¼, mesh aperture 0.8 mm
	0560332 040 ISO 228/1 - G 1½, mesh aperture 0.8 mm
	0560332 050 ISO 228/1 - G 2, mesh aperture 0.8 mm

Accessories for valves with 8 mm stroke

Type	Description
	0361951 015 1 screw fitting in brass for male thread with flat seal, G 1B / Rp ½
	0361951 020 1 screw fitting in brass for male thread with flat seal, G 1¼B / Rp ¾
	0361951 025 1 screw fitting in brass for male thread with flat seal, G 1½B / Rp 1
	0361951 032 1 screw fitting in brass for male thread with flat seal, G 2B / Rp 1¼
	0361951 040 1 screw fitting in brass for male thread with flat seal, G 2¼B / Rp 1½
	0361951 050 1 screw fitting in brass for male thread with flat seal, G 2¾B / Rp 2

Type	Description
	0372249 001 Temperature adapter >100 °C to 130 °C for valves with 8 mm stroke (for AVM 1**, AVM 321)
	0372249 002 Temperature adapter >130 °C to 150 °C for valves with 8 mm stroke (for AVM 1**, AVM 321)
	0378284 100 Stuffing box heater 230 V, 15 W for media below 0 °C
	0378284 102 Stuffing box heater 24 V, 15 W for media below 0 °C
	0372240 001 Manual adjustment for valves with 8 mm stroke

Accessories for valves starting from 20 mm stroke

Type	Description
0372336 180	Adapter required for media >130 °C, for valves with 20 or 40 mm stroke (for AV* 234, AVN 224)
0372336 240	Adapter required for media >180 °C, for valves with 20 or 40 mm stroke (for AV* 234, AVN 224)
0378284 100	Stuffing box heater 230 V, 15 W for media below 0 °C, suitable for all valves
0378284 102	Stuffing box heater 24 V, 15 W for media below 0 °C, suitable for all valves
0500240001	Extension for media temperature up to 180° (AVM 321)
0500240002	Extension for media temperature up to 240° (AVM 321)

Accessories for AVM 234S, AVF 234S and AVN 224S actuators

Type	Description
0313529 001	Split-range unit for adjusting sequences, suitable for all actuators
0372332 001	Module pluggable for 230 V supply voltage continuous, 2- or 3-point (for AV* 234, AVN 224)
0372332 002	Module pluggable for 100 V supply voltage continuous, 2- or 3-point (for AV* 234, AVN 224)
0372333 001	2 auxiliary change-over contacts, infinitely variable, load 6 [2]A (for AV* 234, AVN 224)

Accessories for AVM 105, AVM 115 actuators

Type	Description
0372145 001	Auxiliary change-over contacts, single
0372145 002	Auxiliary change-over contacts, double
0372320 001	Hexagon key for manual adjustment

Accessories for AVF 124, AVF 125S actuators

Type	Description
0370880 001	Mechanical stroke indicator
0370881 001	Auxiliary change-over contacts, single, infinitely variable

Accessories for AVM 321, AVM 322 actuators

Type	Description
0500420 001	Split-range unit module
0500420 002	4...20 mA feedback module
0500570 001	Energy module for AVM321S / AVM322S and AVM321F112 / AVM322F122 actuators
0500570 003	Continuous 230 V module
0510220 001	CASE Drives configuration tool
0510480 003	Double auxiliary switching unit for AVM215(S), AVM322(S) with 8 mm stroke
0510480 004	Double auxiliary switching unit for AVM215(S), AVM322(S) with 20 mm stroke
0510600 001	Cable module, 1.2 m, 3-wire, PVC
0510600 002	Cable module, 1.2 m, 3-wire, halogen-free
0510600 003	Cable module, 1.2 m, 6-wire, PVC
0510600 004	Cable module, 1.2 m, 6-wire, halogen-free
0510600 005	Cable module, 5 m, 3-wire, PVC
0510600 006	Cable module, 5 m, 3-wire, halogen-free
0510600 007	Cable module, 5 m, 6-wire, PVC
0510600 008	Cable module, 5 m, 6-wire, halogen-free

Reliable in every medium: tightly sealing **butterfly valves** from SAUTER.

Can be used universally, energy-efficient.

SAUTER butterfly valves are very versatile and are used for control or shut-off functions. Because they close absolutely tightly, they reduce energy consumption. Heaters and coolers are connected to boilers and cooling systems as required. If this is not required or a changeover has to be performed, the SAUTER butterfly valve separates the circuits completely and reliably.

Good equipment for flexibility and tightness.

Butterfly valves can be combined perfectly with SAUTER rotary actuators. They are so smooth-running that even actuators with only 1.5 or 30 Nm can be used. The hole pattern of the butterfly valve is designed to suit PN6, PN10 or PN16 flanges. An EPDM collar ensures the tightness of the valve so that different media, such as water, air, brine, water with additives etc., can be used.

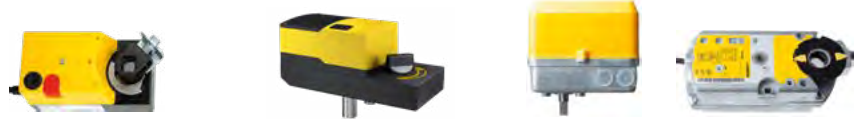


Actuators



DEF

DEF butterfly valves in grey cast iron with ASM, ASF, ADM or A44 rotary actuators



Model series		ASM			ASM		ADM					A44			ASF		ASF		
Type		124			134		322					W2			122		123		
Version		F120	F122	SF1 32	F130	SF1 32	F120	F122	HF120	HF1 22	SF1 22	SF1 52	F001	F020	SF001	F120	F122	F122	SF1 22
Voltage	230 V AC	•			•		•		•				•			•			
	24 V AC		•	•		•		•		•	•			•	•		•	•	•
	24 V DC			•		•		•		•	•						•	•	•
Positioning signal	2-point	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	3-point	•	•	•	•	•	•	•	•	•	•	•	•	•	•				
	0...10 V			•		•						•			•				•
	2...10 V											•							
	0...20 mA											•			•				
Feedback	4...20 mA										•	•							
	0...10 V			•		•					•	•			•				•
Running time [s]		120	120	120	120	120	120	120	120	120	30	90	120	120	90	90	90	90	
							240	240	240	240	120	60	120	120					
Torque [Nm]		18	18	15	30				15				30					18	
Rotation angle		90° fixed			90° fixed				≥90°				≥90°			90° fixed			
Double contacts integrated									•	•									

Tight-sealing butterfly valve PN16, flange PN6/10/16

	Type	DN	Δp _{max} (bar)							
-10...130 °C	DEF 025 F200	25	10			10		16		10
	DEF 032 F200	32	10			10		16		10
	DEF 040 F200	40	10			10		16		10
	DEF 050 F200	50	10			10		16		10
	DEF 065 F200	65	7	7		7		16		7
	DEF 080 F200	80	4	7		4		10		4
	DEF 100 F200	100	2	7		2		10		2
	DEF 125 F200	125		7				6		
	DEF 150 F200	150		6				5		
	DEF 200 F200	200		2				3		

Important accessories for butterfly valves and actuators

Type	Description
0378110 001	Assembly part DEF DN 25-65 for A44
0378111 001	Assembly part DEF DN 80-125 for A44
0378112 001	Assembly part DEF DN 150-200 for A44
0378113 001	Assembly part DEF DN 25-100 for ASF
0372455 001	Assembly parts DEF DN 25...65 for ASM 124/134
0372455 002	Assembly parts DEF DN 80...100 for ASM 124/134
0372455 002	Assembly parts DEF DN 125 for ASM 134
0372455 003	Assembly parts DEF DN 150...200 for ASM 134
0370990 002	Auxiliary change-over contacts, double, for ASM1 24/134
0370493 000	Auxiliary change-over contacts, double, for A44
0370640 001	Potentiometer 2000 Ω for A44
0510240 014	ADM 322 fitting kit with DEF DN 20...65
0510240 014	ADM 322 fitting kit with DEF DN 80...100

For heating installations, single-family homes and community heating: **rotary actuators and control valves** from SAUTER.

Control valves: reliability for trouble-free heating functions.

SAUTER control valves are used to control heating and cooling systems in buildings. The 3-way version is suitable for controlling and change-over functions, while the 4-way version is employed for higher temperatures in the return circuit. All variants are available either with thread in DN 15 to DN 50 made of brass or with flange connection in DN 20 to DN 150 made of ductile cast iron. To increase the regulating precision when setting the supply temperature and thus achieve a high degree of energy efficiency, we also recommend the weather-dependent SAUTER heating controller.

Ideally combined: control valves with rotary and damper actuators from SAUTER.

A complete family of actuators is available from SAUTER – with actuating power of 5 Nm to 18 Nm. All SAUTER actuators naturally have a manual adjuster.



Actuators



MH32F, 42F




M3R/M4R

Control valves in grey cast iron MH and cast brass M3R/M4R with ADM or ASM rotary actuators





Model series		ADM						ASM				ASM				ASM								
Type		322												105				115				124		
Version		F120	F122	HF120	HF122	SF122	SF152	F120	F122	SF132	SF152	F120	F122	SF132	SF152	F120	F122	SF132						
Voltage	230 V AC	•		•				•							•									
	24 V AC		•		•	•	•		•	•	•					•	•							
	24 V DC		•		•	•	•			•	•						•							
Positioning signal	2-point	•	•	•	•			•	•	•	•				•	•	•							
	3-point	•	•	•	•			•	•	•	•				•	•	•							
	0...10 V					•	•			•	•				•	•								
	2...10 V					•																		
	0...20 mA					•																		
Feedback	4...20 mA					•	•																	
	0...10 V					•	•			•	•				•	•								
Running time [s]		120	120	120	120	120	30			35					120	120	60							
		240	240	240	240		60	120	120	60	3	120	120	120	6	120	120	120						
Torque [Nm]					15					5					10		15/18							
Rotation angle					≥90°					90°					90°		90°							
Double contacts integrated				•	•																			

Control valves in grey cast iron with flange connection PN6

	Type	DN	Kvs (m³/h)	Δp _{max} (bar)				
 3-way valve 2 °C...110 °C	MH32 F20 F200	20	12			1	1	1
	MH32 F25 F200	25	18			1	1	1
	MH32 F32 F200	32	28			1	1	1
	MH32 F40 F200	40	44			1	1	1
	MH32 F50 F200	50	66					
	MH32 F65 F200	65	100			0.5	0.5	0.5
	MH32 F80 F200	80	150			0.5	0.5	0.5
	MH32 F100 F200	100	225			0.5		0.5
	MH32 F125 F200	125	310			0.5		0.5
	MH32 F150 F200	150	420			0.5		0.5
4-way valve 2 °C...110 °C	MH42 F32 F200	32	28			1		1
	MH42 F40 F200	40	44			1		1
	MH42 F50 F200	50	66			0.5		0.5

Control valves in cast brass with female thread connection PN6

	Type	DN	Connection	Kvs (m³/h)	Δp _{max} (bar)			
 3-way valve 2 °C...110 °C	M3R 015 F200	15	Rp ½	2.5		2	2	2
	M3R 020 F200	20	Rp ¾	6		2	2	2
	M3R 025 F200	25	Rp 1	12		1	1	1
	M3R 032 F200	32	Rp 1¼	18		1	1	1
	M3R 040 F200	40	Rp 1½	26		1	1	1
	M3R 050 F200	50	Rp 2	40		1	1	1
 4-way valve 2 °C...110 °C	M4R 020 F200	20	Rp ¾	6		2	2	2
	M4R 025 F200	25	Rp 1	12		2	2	2
	M4R 032 F200	32	Rp 1¼	18		1	1	1
	M4R 040 F200	40	Rp 1½	26		1	1	1
	M4R 050 F200	50	Rp 2	40		1	1	1

Important accessories for control valves and actuators

Type	Description
0361977 001	Assembly part for ASM 124
0361977 002	Assembly part for ASM 105/115 with lever
0370990 002	Auxiliary change-over contacts, double, for ASM 124/134
0510240 013	ADM 322 fitting kit with M3R, M4R, MH32, MH42

Retrofit actuators for valve types from a range of third-party manufacturers

Replacement made **easy**.

Ideal for retrofitting projects.

SAUTER will make your HVAC installation fit for the future. Our modern, energy-efficient actuators can be fitted onto practically all existing valves. Thus they are also ideally suited for retrofitting projects. SAUTER valve actuators are powerful and economical. They can be used in many applications, fitted quickly and are immediately ready for operation.

The electric linear actuators.

The electric actuators from SAUTER stand for optimum operating convenience and high energy efficiency. In stand-by mode, in particular, the energy consumption of the actuators is minimal. The patented automatic valve coupling enables fast, uncomplicated fitting of the actuator onto the valve and easy, safe commissioning. The sturdy construction guarantees durability without any additional maintenance work. The high-quality mechanical transmission system ensures a high level of precision and low operation noise.



AVM 321, 322S..R



AVM 321, 322



AVM 215S...R



AVM 215



Actuators

vialoq AVM 1000 and vialoq AVM 500 electric linear actuator for non-SAUTER valves and retrofitting



Model series		AVM				
Type		322			215	
Version		F120R	F122R	SF132R	F120R	SF132R
Voltage	230 V AC	•		• ¹⁾	•	
	24 V AC		•	•		•
	24 V DC		•	•		•
Positioning signal	2-point	•	•	•	•	•
	3-point	•	•	•	•	•
	0...10 V			•		•
Feedback	4...20 mA			•		
	0...10 V			•		•
	4...20 mA			• ²⁾		
Running time for the nominal stroke [s]		120	120	80	50	150
		240	240	120		300
Nominal stroke [mm]			20		20	
Pushing force [N]			1000		400	500

¹⁾ Requires accessory 0500570 003

²⁾ Requires accessory 0500420 002

Manufacturer	Type	DN	Fitting kit	
SAUTER	VUN/BUN	15-50		0510390 030
	VUD/BUD	15-50		0510390 030
	VUE/BUE	15-50		0510390 030
	VQD/BQD	65-80	0510390 020	0510390 031
	VQE/BQE	65-80	0510390 020	0510390 031
	VUG/BUG	15-80	0510390 020	0510390 031
	VUS/BUS	15-80	0510390 020	0510390 031
	V66N	15-50	0510390 020	0510390 031
	V6R/B6R	15-50	0510390 021	0510390 032
	V6F/B6F	15-50	0510390 021	0510390 032
	V6G/B6G	15-50	0510390 021	0510390 032
	V6S/B6S	15-50	0510390 021	0510390 032
	VXD/BXD	15-50	0510390 021	0510390 032
	VXE/BXE	15-50	0510390 021	0510390 032
Siemens	VVF21	25-80	0510390 022	
	VXF21	25-80	0510390 022	
	VVF31	15-80	0510390 022	
	VXF31	15-80	0510390 022	
	VVF40	15-80	0510390 022	
	VXF40	15-80	0510390 022	
	VVF41	50	0510390 022	
	VXF41	15-50	0510390 022	
	VVF45	50	0510390 022	
	VVF52	15-40	0510390 022	
	VVF52G	15-40	0510390 022	
	VVF52J	15-40	0510390 022	
	VVF52GJ	15-40	0510390 022	
	VVF61	15-50	0510390 022	
VVG41	15-50	0510390 022		
VPF52E/F	15-40	0510390 022		
Belimo	H6...R	15-65	0510390 027	
	H7...R	15-65	0510390 027	
	H4...B	15-50	0510390 027	
	H5...B	15-50	0510390 027	
	H6...N	15-65	0510390 027	
	H7...N	15-65	0510390 027	
Frese	Optima compact, Thread	40-50		0510390 029
	Optima compact, Flange	50-80	0510390 028	

vialoq AVM 1000 and vialoq AVM 500 electric linear actuator for non-SAUTER valves and retrofitting



Model series	AVM				
	322			215	
Type	F120R	F122R	SF132R	F120R	SF132R
Version					
Voltage					
	230 V AC		● ¹⁾	●	
	24 V AC	●	●		●
	24 V DC	●	●		●
Positioning signal					
	2-point	●	●	●	●
	3-point	●	●	●	●
	0...10 V		●	●	●
	4...20 mA		●		
Feedback					
	0...10 V		●		●
	4...20 mA		● ²⁾		
Running time for the nominal stroke [s]					
	120	120	80	50	150
	240	240	120		300
Nominal stroke [mm]		20		20	
Pushing force [N]		1000		400	500

¹⁾ Requires accessory 0500570 003

²⁾ Requires accessory 0500420 002

Manufacturer	Type	DN	Fitting kit	
LDM	RV113 R / M	15-80	0510390 025	
	VBD-4xx4	15-40	0510390 023	
	VBD-4xx8	15-40	0510390 023	
Johnson Controls	VBF-2xx4	15-40	0510390 023	
	VBF-2xx8	15-40	0510390 023	
	VG82xx / VG84xx	15-40	0510390 023	
	VG88xx / VG89xx	15-40	0510390 023	
	V5016A	15-80	0510390 024	
	V5025A	15-80	0510390 024	
	V5049A	15-65	0510390 024	
Honeywell	V5049B	15-65	0510390 024	
	V5050A	15-80	0510390 024	
	V5095A	15-80	0510390 024	
	V5328A	15-80	0510390 024	
	V5329A	15-80	0510390 024	
	PSVF	15-32	0510390 026	
ITT-Dräger	PSVD	15-32	0510390 026	
	SVF	15-32	0510390 026	
	SVD	15-32	0510390 026	
	TA-Fusion	32-50		0510390 033
	TA-Fusion	65-80		0510390 034
IMI	CV	15-50		0510390 035
	KTM512	15-50		0510390 036
	KTM512	65-100		0510390 037
	VFS	15-50		0510390 039
	VL	15-50		0510390 039
	VF	15-50		0510390 039
Danfoss	VEFS2	25-50		0510390 039
	VRB	15-50		0510390 040
	VRG	15-50		0510390 040
Schneider	V241 / V341	15-50		0510390 060

Important accessories for the ADM 322 rotary actuator

Type	Description
0500420 002	4...20 mA feedback module
0500570 003	Continuous 230 V module
0510600 001	Cable module, 1.2 m, 3-wire, PVC
0510600 002	Cable module, 1.2 m, 3-wire, halogen-free
0510600 003	Cable module, 1.2 m, 6-wire, PVC
0510600 004	Cable module, 1.2 m, 6-wire, halogen-free
0510600 005	Cable module, 5 m, 3-wire, PVC
0510600 006	Cable module, 5 m, 3-wire, halogen-free
0510600 007	Cable module, 5 m, 6-wire, PVC
0510600 008	Cable module, 5 m, 6-wire, halogen-free
0500570 001	Energy module for AVM321S / AVM322S and AVM321F112 / AVM322F122 actuators
0510480 004	Double auxiliary switching unit for AVM215[S], AVM322[S] with 20 mm stroke
0500420 001	Split-range unit module

AVM 1*5, AVF 12*, AV* 234 electric linear actuator for non-SAUTER valves and retrofitting



Model series		AVM				AVM			AVF				AVM		AVF	
Type		105				115			124		125		234		234	
Version		F100	F120	F122	SF132	F120	F122	SF132	F130	F230	SF132	SF232	SF132	SF132	SF132	SF232
Voltage	230 V AC	•	•			•			•	•			• ¹⁾	• ¹⁾	• ¹⁾	
	24 V AC			•	•		•	•			•	•	•	•	•	
	24 V DC				•			•					•	•	•	
Positioning signal	2-point	•	•	•	•	•	•	•			•	•	•	•	•	
	3-point	•	•	•	•	•	•	•	•	•			•	•	•	
	0...10 V				•			•			•	•	•	•	•	
	4...20 mA										•	•	•	•	•	
Feedback	0...10 V						•				•	•	•	•	•	
					•						•	•	•	•	•	
Running time for the nominal stroke [s]		30	120	120	35 60 120	120	120	60 120	60	60	60	60	80 160 240	80	80 160 240	
	Return time for the nominal stroke [s]								18	18				30	30	
Nominal stroke (mm)			8			8			8	8			40	40		
Pushing force [N]			250			500			500	500			2500	2000		
Spring return	without power, Spindle retracted								•		•			•		
	without power, Spindle extended									•	•	•		•	•	

¹⁾ Requires accessory 0372332 001

Manufacturer	Type	DN	Fitting kit
SAUTER	V4F/S/N	15-32	0372338 001
	V4F/S/N	40-100	0372338 002
	B4F/S/N	15-32	0372338 001
	B4F/S/N	40-100	0372338 002
	V14R/B14R	15-25-40	0372338 001
	V6F/G/S	15-50	0372338 001
	V6F/G/S	65-150	0372338 002
	B6F/G/S	15-50	0372338 001
	B6F/G/S	65-150	0372338 002
	B6D	15-65	0372338 001
	B16D/B16E	25-80	0372338 001
	VXD/VXE	15-50	0372338 001
	VXD/VXE	65-100	0372338 002
	BXD/BXE	15-50	0372338 001
	BXD/BXE	65-100	0372338 002
	V6R/B6R	15-50	0372338 001
Johnson Controls	VBD-4xx4	50-150	0372377 001
	VBD-4xx8	50-150	0372377 001
	VBF-0xx4	15-150	0372377 001
	VBF-0xx8	15-150	0372377 001
	VBF-2xx4	50-100	0372377 001
	VBF-2xx8	50-100	0372377 001
	VBB-2xxx	15-100	0372377 001
	VG82../VG84..	50-150	0372377 001
VG88../VG89..	50-150	0372377 001	
Honeywell	V5016A	15-80	0372378001
	V5025A	15-80	0372378001
	V5049A	15-65	0372378001
	V5049B	15-65	0372378001
	V5050A	15-80	0372378001
	V5095A	15-80	0372378001
	V5328A	15-80	0372378001
Frese	Optima compact	50-80	0510390 052
	Optima compact	100-300	0510390 053

AVM 1*5 , AVF 12*, AV* 234 electric linear actuator for non-SAUTER valves and retrofitting



Model series		AVM				AVM			AVF				AVM	AVF	
Type		105				115			124	125		234	234		
Version		F100	F120	F122	SF132	F120	F122	SF132	F130	F230	SF132	SF232	SF132	SF132	SF232
Voltage	230 V AC	•	•			•			•	•			• ¹⁾	• ¹⁾	• ¹⁾
	24 V AC			•	•		•	•			•	•	•	•	•
	24 V DC				•			•					•	•	•
Positioning signal	2-point	•	•	•	•	•	•	•			•	•	•	•	•
	3-point	•	•	•	•	•	•	•	•	•			•	•	•
	0...10 V				•			•			•	•	•	•	•
	4...20 mA										•	•	•	•	•
Feedback	0...10 V				•		•				•	•	•	•	•
Running time for the nominal stroke [s]		30	120	120	35 60 120	120	120	60 120	60	60	60	60	80 160 240	80 160 240	80 160 240
Return time for the nominal stroke [s]									18		18			30	30
Nominal stroke (mm)			8			8				8			40	40	
Pushing force [N]			250			500				500			2500	2000	
Spring return	without power, closes the valve								•		•			•	
	without power, opens the valve									•		•		•	•

¹⁾ Requires accessory 0372332 001

Manufacturer	Type	DN	Fitting kit
Siemens	WF21/VXF21	25-80	0372376 010
	WF21/VXF21	100	0372376 014
	WF31/VXF31	15-80	0372376 010
	WF31/VXF31	100-150	0372376 014
	WF40/VXF40	15-80	0372376 010
	WF40/VXF40	100-150	0372376 014
	WF41/VXF41	50	0372376 010
	WF41/VXF41	65-150	0372376 014
	WF45	50	0372376 010
	WF45	65-150	0372376 014
	WF52	15-40	0372376 010
	WF61	15-40	0372376 010
	WF61	65-150	0372376 014
	VXF61	15-50	0372376 010
	VXF61	65-150	0372376 014
	WG41	15-50	0372376 010
	WG41	15-50	0372376 010
	VPF52[E/F]	15-40	0372376 010
	WG44/VXG44	15-50	0372273 001
	WG45/VXG45	15-50	0372273 001
ITT Dräger	PSVF	40-50	0372389 002
	PSVD	40-50	0372389 002
	SVF	40-50	0372389 002
	SVD	40-50	0372389 002

Important accessories for the AVM 1*5, AVF 12*, AV* 234 linear actuators

	Type	Description
AVM 105	0372145 001	Auxiliary change-over contacts, single
AVM 115	0372145 002	Auxiliary change-over contacts, double
	0372320 001	Hexagon key for manual adjustment
AVF 124	0370880 001	Mechanical stroke indicator
AVF 125S	0370881 001	Auxiliary change-over contacts, single, infinitely variable
	0313529 001	Split-range unit for adjusting sequences, suitable for all actuators
AVM 234S	0372332 001	Module pluggable for 230 V supply voltage continuous, 2- or 3-point (for AV* 234, AVN 224)
AVF 234S	0372332 002	Module pluggable for 100 V supply voltage continuous, 2- or 3-point (for AV* 234, AVN 224)
	0372333 001	2 auxiliary change-over contacts, infinitely variable, load 6 (2)A (for AV* 234, AVN 224)

vialoq ADM 15 electric rotary actuator for non-SAUTER valves and retrofitting



Model series		ADM							
Type		322							
Version		F120	F122	HF120	HF122	PF120	PF122	SF122	SF152
Voltage	230 V AC	•		•		•			
	24 V AC		•		•		•	•	•
	24 V DC		•		•		•	•	•
Positioning signal	2-point	•	•	•	•	•	•		•
	3-point	•	•	•	•	•	•		•
	0...10 V							•	•
	2...10 V							•	•
	0...20 mA							•	•
Feedback	4...20 mA							•	•
	0...10 V							•	•
Running time [s]		120	120	120	120	120	120	120	30
		240	240	240	240	240	240	240	60
Torque [Nm]		15							
Rotation angle		≥90°							
With integrated double auxiliary contacts				•	•				
With integrated 1000 Ω potentiometer						•	•		

Manufacturer	Type	DN	Fitting kit
SAUTER	MH32R...	15-50	0510240 013
	MH42R...	15-32	0510240 013
	DEF..	20-65	0510240 014
	DEF...	80-100	0510240 015
Honeywell	DR...	15-65	0510390 002
	ZR...	15-65	0510390 002
Danfoss	HRB 3	15-50	0510390 003
	HRB 4	15-50	0510390 003
Calefi	610	20-40	0510390 004
	611	20-40	0510390 004
	612	20-40	0510390 004
Coster	VSG3..	20-50	0510390 005
	VFG...	20-100	0510390 005
	VSF...	40-100	0510390 005

Important accessories for the ADM 322 rotary actuator

Type	Description
0500420 002	4...20 mA feedback module
0500570 003	Continuous 230 V module
0510220 001	CASE Drives configuration tool
0510600 001	Cable module, 1.2 m, 3-wire, PVC
0510600 002	Cable module, 1.2 m, 3-wire, halogen-free
0510600 003	Cable module, 1.2 m, 6-wire, PVC
0510600 004	Cable module, 1.2 m, 6-wire, halogen-free
0510600 005	Cable module, 5 m, 3-wire, PVC
0510600 006	Cable module, 5 m, 3-wire, halogen-free
0510600 007	Cable module, 5 m, 6-wire, PVC
0510600 008	Cable module, 5 m, 6-wire, halogen-free
0500420 001	Split-range unit module

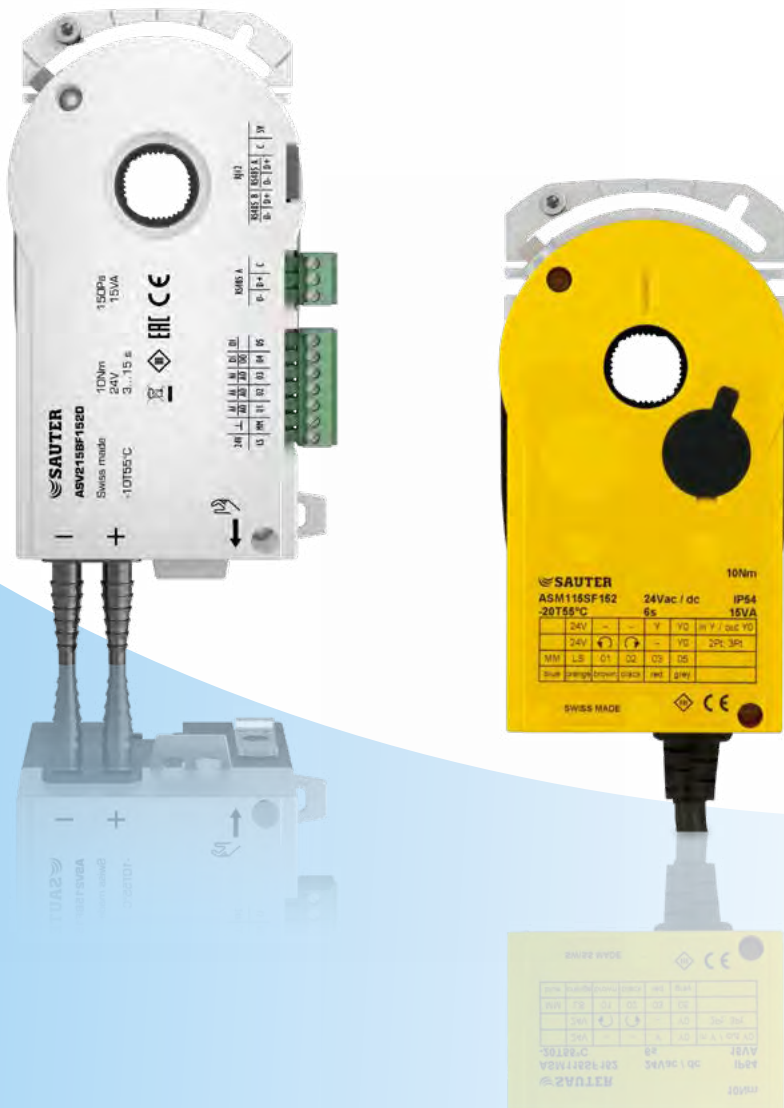
The compact solution: Damper actuators and VAV controllers from SAUTER.

The innovation.

SAUTER has developed an integrated compact solution for room-pressure control, fume-cupboard control and air conditioning based on its extensive know-how in the field of critical environments and classic volume flow control. Thanks to the combination of the high-precision static differential pressure sensor and the tried and tested actuator and control technology, all the required ventilation applications can be provided with one device.

High precision and reliability.

With innovative control algorithms and precise positioning of the damper actuator, the integrated compact solution from SAUTER ensures precise volume flow control in offices, sealed clean rooms and laboratories. The commissioning with sophisticated SAUTER software tools helps save time and money.



VAV controller ASV2*5



Model series		ASV			
Type		205	215	215	
Version		BF1 32E	BF1 32E	BF1 52D	BF1 52E
Voltage	24 V AC	●	●	●	●
	24 V DC	●	●	●	●
Positioning signal	0...10 V	2 ¹⁾	2 ¹⁾	3 ¹⁾	3 ¹⁾
	DI	1 ¹⁾	1 ¹⁾	2 ¹⁾	2 ¹⁾
	NI, NTC, Pt	1 ¹⁾	1 ¹⁾		
Outputs	0...10 V	2 ¹⁾	2 ¹⁾	3 ¹⁾	3 ¹⁾
	DO, PWM	2 ¹⁾	2 ¹⁾	1 ¹⁾	1 ¹⁾
Bus systems	SIC	2 ²⁾	2 ²⁾	2 ²⁾	2 ²⁾
	BACnet MS/TP	●	●	●	●
Angle of rotation, max [°]		95	95	95	
Torque [Nm]		5	10	10	
Holding torque [Nm]		5	10	30	
Measuring range of dp sensor ³⁾ [Pa]		300	300	150	300
Running time for 90° [s]		30 45 60	60 75	3...15	3...15
		75 90 107	90 105		
Damper shaft [mm]	Round	8...16	8...16	8...16	
	Quadratic	6,5...12,7	6,5...12,7	6,5...12,7	

¹⁾ configurable as input or output via software

²⁾ two SAUTER bus interfaces enable the connection of accessories and direct integration into a BMS

³⁾ Δp_s static membrane sensor

Important accessories for the VAV controller ASV2*

Type	Description
0372301001	Spindle adapter for squared-end hollow profile (x 15 mm), collective packaging, 10 pieces
XAFP100F001	Flow probe to measure the air volume in ventilation ducts
0300360001	USB connection set
0297867001	Reference pressure container
0430360100	IP30 protection set
0430360200	Replacement LP connector
0372129001	Torsion protection

ASM electric air damper actuators



Model series		ASM													
Type		105					115				124			134	
Version		F100	F120	F122	SF132	SF152	F120	F122	SF132	SF152	F120	F122	SF132	F130	SF132
Voltage	230 V AC	●	●				●				●			●	
	24 V AC			●	●	●		●	●	●		●	●		●
	24 V DC				●	●			●	●			●		●
Positioning signal	2-point	●	●	●	●	●	●	●	●	●	●	●	●		●
	3-point	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	0...10 V				●	●			●	●			●		●
Feedback	4...20 mA					●			●						●
	0...10 V				●	●			●	●			●		●
	4...20 mA					●			●						●
Auxiliary switch		● ¹⁾	● ¹⁾	● ¹⁾	● ¹⁾		● ¹⁾	● ¹⁾	● ¹⁾		● ³⁾	● ³⁾	● ³⁾	● ³⁾	● ³⁾
	Potentiometer	● ²⁾	● ²⁾	● ²⁾	● ²⁾		● ²⁾	● ²⁾	● ²⁾		● ⁴⁾	● ⁴⁾	● ⁴⁾	● ⁴⁾	● ⁴⁾
Angle of rotation, max [°]				95				95				95		95	
Torque [Nm]				5				10				18	15	30	
Holding torque [Nm]				5				10				18	15	30	
Spring return															
Running time for 90° [s]		30	120	120	35	3	120	120	60	6	120	120	60	120	120
Reset time for 90° [s]					60				120				120	240	240
Damper shaft [mm]	Round				8...16				8...16				12...20		12...20
	Quadratic				6.5...12.5				6.5...12.5				10...16		10...16

¹⁾ Required accessory 0372145001 – Single auxiliary contact / 0372145002 – Double auxiliary contact

²⁾ Required accessory 0372286001 – Pot. 130 Ω / 0372286002 – Pot. 1000 Ω / 0372286003 – Pot. 5000 Ω

³⁾ Required accessory 0370990001 – Single auxiliary contact / 0370990002 – Double auxiliary contact

⁴⁾ Required accessory 0370992001 – Pot. 130 Ω / 0370992002 – Pot. 2000 Ω

Important accessories for the air damper actuators ASM1*5

Type	Description
0313529001	Split-range unit for adjusting sequences; installation in separate junction boxes
0361977002	Assembly materials for M3R/M4R, MH32F/MH42F with ASM 105, 115
0372145001	Auxiliary change-over contacts, single
0372145002	Auxiliary change-over contacts, double
0372286001	Potentiometer 130 Ω
0372286002	Potentiometer 1000 Ω
0372286003	Potentiometer 5000 Ω
0372300001	Anti-torsion device, long (230 mm)
0372301001	Spindle adapter for squared-end hollow profile (x 15 mm), collective packaging, 10 pieces
0372320001	Hex spanner as visualisation for position indicator

Important accessories for the air damper actuators ASM124 and ASM134

Type	Description
0313529001	Split-range unit for adjusting sequences; installation in separate junction boxes
0361977001	Assembly materials for M3R/M4R, MH32F/MH42F with ASM 124
0370059000	Clamping lever for shaft Ø 8...18 mm
0370990001	Auxiliary change-over contacts, single
0370990002	Auxiliary change-over contacts, double
0370992001	Potentiometer 2000 Ω, 1 W
0370992002	Potentiometer 130 Ω, 1 W
0372200001	Fitting bracket
0372201001	Spindle extension with coupling
0372202001	Lever, mounting tape
0372203001	Carrier stem for auxiliary contact
0372204001	Spindle for clamping lever 0370059
0372455001	Assembly part; DEF DN 25...65 for ASM 124, 134
0372455002	Assembly part; DEF DN 80...100 for ASM 124; DN 125 for ASM 134
0372455003	Assembly part; DEF DN 150...200 for ASM 134

ASF electric air damper actuators with spring return



Model series		ASF												
Type		112				113		122				123		
Version		F120	F122	F220	F222	F122	SF122	F120	F122	F220	F222	F122	SF122	
SVoltage	230 V AC	•		•				•		•				
	24 V AC		•		•	•	•		•		•	•	•	
	24 V DC		•		•	•	•		•		•	•	•	
Positioning signal	2-point	•	•	•	•			•	•	•	•			
	3-point						•						•	
	0...10 V													
Feedback	4...20 mA													
	0...10 V						•						•	
	4...20 mA													
	Auxiliary switch			2	2					2	2			
	Potentiometer													
Angle of rotation, max [°]			95			95			95				95	
Torque [Nm]			7			7			18				18	
Holding torque [Nm]			7			7			18				18	
Spring return		•	•	•	•	•	•	•	•	•	•	•	•	
Running time for 90° [s]		90	90	90	90	90	90	90	90	90	90	90	90	
Reset time for 90° [s]		15	15	15	15	15	15	15	15	15	15	15	15	
Damper shaft [mm]	Round		6.4...20.5				6.4...20.5		8...25				8...25	
	Quadratic		6.4...13				6.4...13		6...18				6...18	

Important accessories for the air damper actuators ASF

Typ	Beschreibung
0370997001	Lever attachment for converting rotary and stroke motion
0370998001	Lever attachment for converting rotary and stroke motion, with support plate for fitting on wall or base plate

Valve specification – calculating with the tools from SAUTER.

SAUTER valve slide rule.

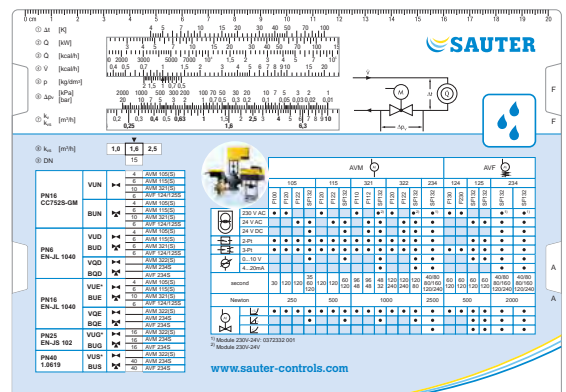
SAUTER has further developed its practical valve slide rule. You can use it to specify the valve nominal diameter depending on the flow rate for liquids and saturated steam. You can order the slide rule at your sales partner or sales consultant.

SAUTER VALVEDIM software.

A tried and tested tool for convenient valve and actuator specification, SAUTER provides installers and project engineers with its SAUTER VALVEDIM PC software. The tool comprises three function levels:

1. Valve and actuator specification
 - using recommended values for a rough specification of the required versions and variables;
 - based on the existing or stipulated installation values for the definitive specification of the required versions and variables.
2. Selection of the valve and the suitable actuator based on characteristics.
3. Direct transfer of the results to the project documentation.

VALVEDIM is available from your SAUTER subsidiary or as a download at <https://www.sauter-controls.com/produkt/case-suite/>.



Valve specification

Valve specification – manual calculation

Here you will find all the necessary information for the manual valve specification.

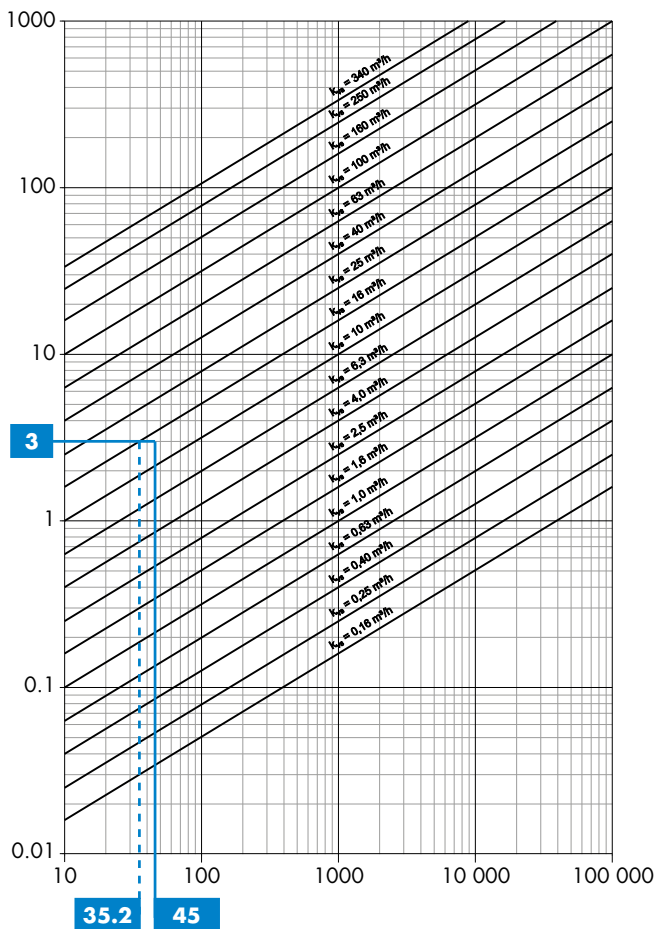
[1] Variables, constants and formulas

Variable	Description	Value	Unit
\dot{V}	Volume flow		m^3/h
\dot{Q}_{to}	Supplied heat per unit of time (heat flow)		kW, kJ/h
\dot{Q}_{from}	Supplied heat per unit of time (heat flow)		kW, kJ/h
Δt	Temperature difference		K
c_w	Specific thermal capacity of water	4,19 $= 1,164 \cdot 10^{-3}$	kJ/(kg·K) kWh/(kg·K)
ρ_w	Density of water	Supposition: $\rho_w = \text{const.} = 1000$	kg/m^3
Δp_v	Pressure difference across the valve		bar, kPa
k_v	Calculated flow rate for the valve		m^3/h
k_{vs}	Actual flow rate for the valve at nominal stroke, selected according to table or chart		m^3/h

[2] Calculation formula for k_v

$$k_v = \dot{V} \cdot \sqrt{\frac{1 \text{ bar}}{\Delta p_v}}$$

[3] Diagram



[4] Calculations

The following are given:

$$\dot{Q}_{\text{to}} = 70 \text{ kW} \approx 250\,000 \text{ kJ/h}$$

$$\Delta t = 20 \text{ K}$$

$$\Delta p_v = 45 \text{ mbar} = 4.5 \text{ kPa} \text{ (corresponds to 450 mm water column)}$$

To be found:

$$\dot{V}, k_v$$

Approximate calculation of \dot{V}

$$\text{Assumption: } \dot{Q}_{\text{to}} = \dot{Q}_{\text{from}}$$

$$\dot{Q}_{\text{to}} = \dot{Q}_{\text{from}} = \dot{V} \cdot c_w \cdot \Delta t \cdot \rho_w$$

$$\Rightarrow \dot{V} = \frac{\dot{Q}_{\text{to}}}{c_w \cdot \Delta t \cdot \rho_w}$$

$$\Rightarrow \dot{V} = \frac{70}{1.164 \cdot 10^{-3} \cdot 20 \cdot 1000} \cdot \frac{\text{kW} \cdot (\text{kg} \cdot \text{K}) \cdot \text{m}^3}{\text{kWh} \cdot \text{K} \cdot \text{kg} \cdot \text{h}} \approx 3 \text{ m}^3/\text{h}$$

Calculation of K_v

$$k_v = 3 \text{ m}^3/\text{h} \cdot \sqrt{\frac{1 \text{ bar}}{0.045 \text{ bar}}} \approx 14.1 \text{ m}^3/\text{h}$$

Determination of flow rate

Determination of k_v from the diagram

$$\underline{k_{vs} = 16 \text{ m}^3/\text{h}}$$

Example plotted: Given are the volume flow ($3 \text{ m}^3/\text{h}$) and a desired Δp_v of 45 mbar, which results in a K_v value of 14.1 m^3/h . The K_{vs} values entered are deliverable values. Selected: A valve with $k_{vs} = 16 \text{ m}^3/\text{h}$, which results in a pressure difference Δp_v of 35.2 mbar.

Application overview as table

		Valve type																			
		VUL	BUL	VUT	VDL	BKR	BKT BKL	BUN	BUD BQD BUE BQE	BUG	BUS	VKR	VKAI	VUN	VUD VQD VUE VQE	VUG	VUP	VUS	DEF	MH M3R M4R	
Application	Schematic Position	PN16	PN16	PN16	PN16 PN25	PN40	PN40	PN16	PN6 PN16	PN16 PN25	PN40	PN40	PN40	PN16	PN6 PN16	PN16 PN25	PN25	PN40	PN16	PN6	
Intelligent unitary control		•	•	•	•	•						•									
Ventilation/ air-conditioning preheater	1 1				•	•		•	•	•	•	•		•	•	•	•	•	•		•
Ventilation/air-conditioning cooler	1 2				•	•						•		•	•	•	•	•	•		
Ventilation/ air-conditioning steam humidifier	1 3															•			•		
Ventilation/ air-conditioning reheater	1 4					•		•	•	•	•	•		•	•	•	•	•	•		
Chilled ceiling	2	•	•	•	•	•	•	•	•			•	•	•	•						
Underfloor heating	2	•	•	•	•	•		•	•			•		•	•						
Radiators	2	•	•	•	•																
Underfloor devices	3	•	•	•	•																
Heating groups	4					•		•	•	•	•	•		•	•	•	•	•	•		•
Cooling tower (regulating valve)	5 1							•						•							
Cooling tower (shut-off damper)	5 2																				•
Multi-boiler installation (regulating valve)	6 1					•			•	•	•	•		•	•	•	•	•	•		
Multi-boiler installation (shut-off damper)	6 2						•		•	•	•		•	•	•	•	•	•	•	•	•
Local heating	7					•		•	•	•	•	•		•	•	•	•	•	•		
District heating	8									•	•					•	•	•			
Page numbers		7	7	8	11/12	15/17	16/18	21	24/25	26	28	15/17	16/18	21	24/25	26	27	28	31	33	

SAUTER CASE Drives



USB/RS232



CASE Drives

SAUTER CASE Drives allows you to set and read the actuator parameters on site (e.g. running time and operating hours). Accordingly, SAUTER CASE Drives can also be used as a diagnostic and maintenance tool. The connection is via a serial port on the PC and the socket on the actuator. The set consists of:

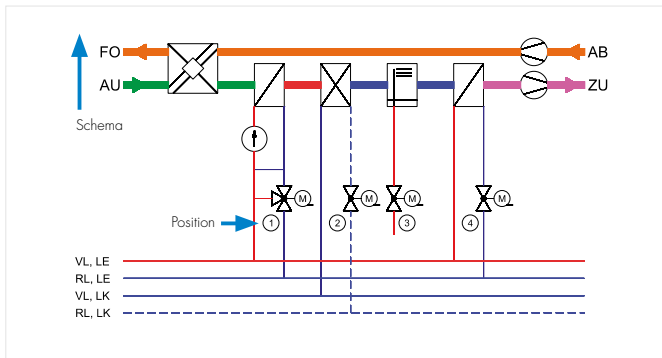
- software incl. installation and operating instructions
- fitting instructions
- connection plug and cable
- interface converter for the PC

The application is designed for commissioning and service technicians and experienced operators.

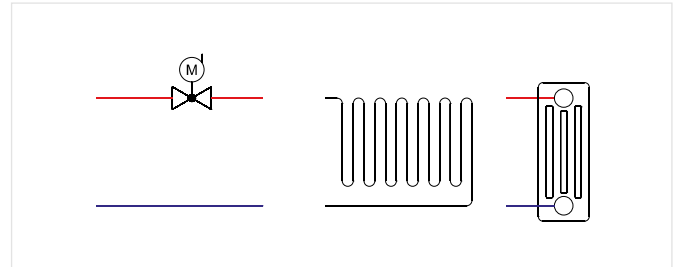
Graphical overview/application profiles

The numbering relates to the *Schematic* and *Position* columns in the adjacent table representation of the application profiles.

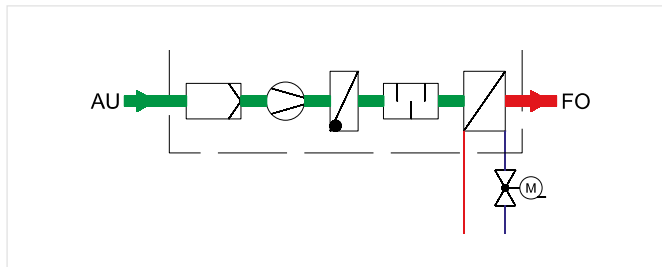
1 Ventilation and air-conditioning



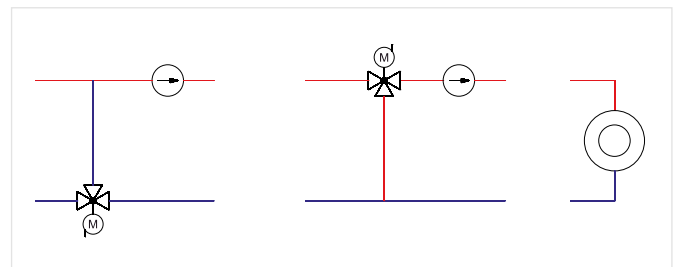
2 Chilled ceilings, underfloor heating and radiators



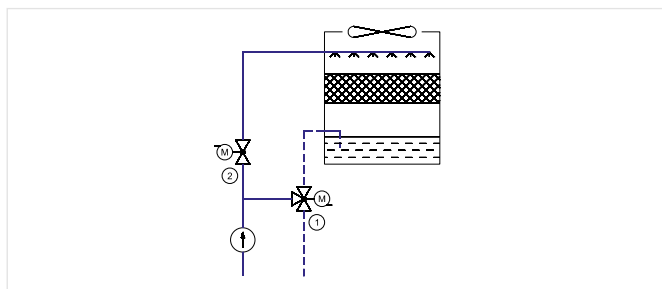
3 Underfloor units



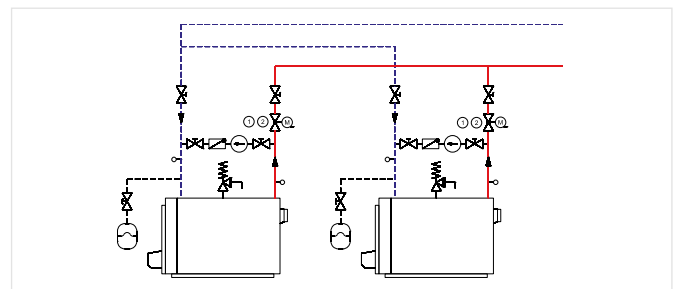
4 Static heating



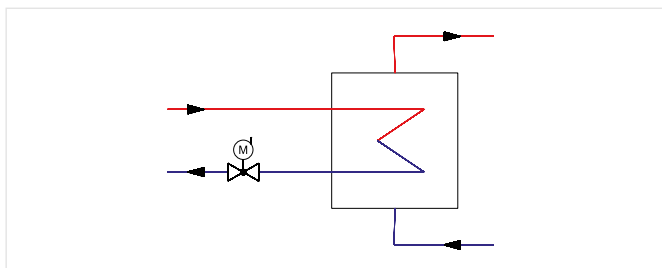
5 Cooling towers



6 Multi-boiler installations



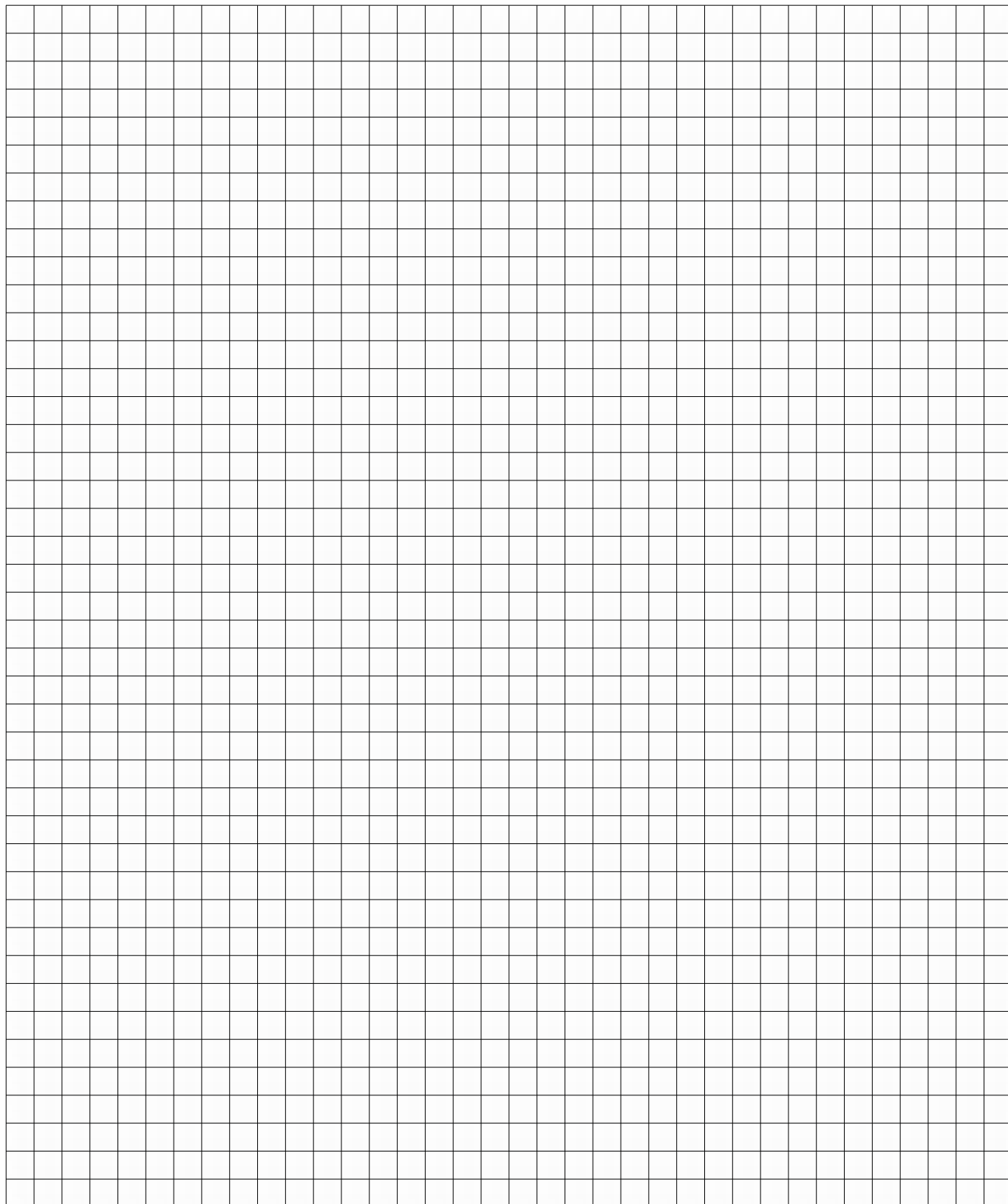
7/8 Local heating, district heating



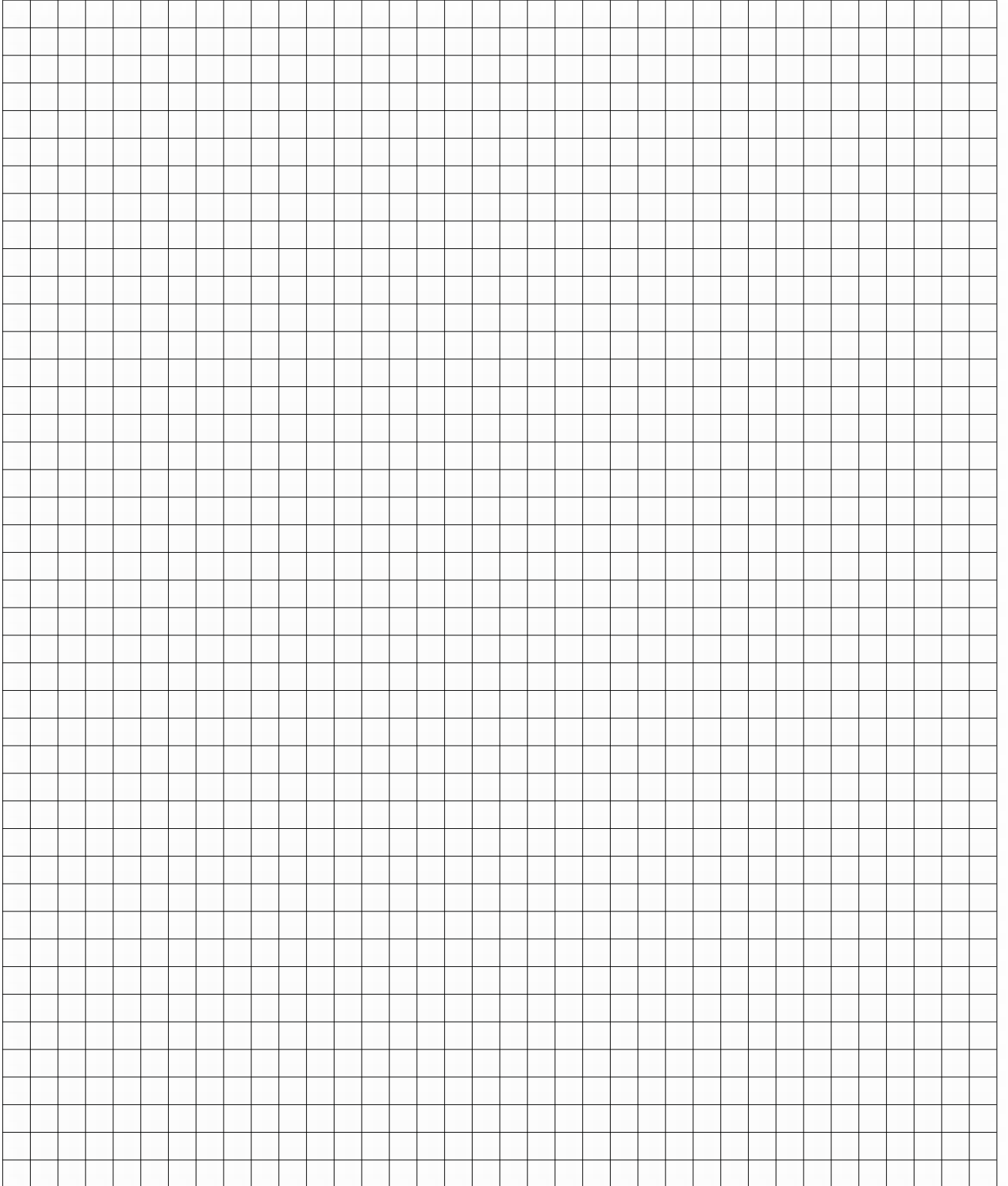
9 4-pipe system



Notes



Notes



Systems

Components

Services

Facility Services

P100014407

www.sauter-controls.com

Subject to change. © 2019 Fr. Sauter AG

**SAUTER**
Creating Sustainable Environments.