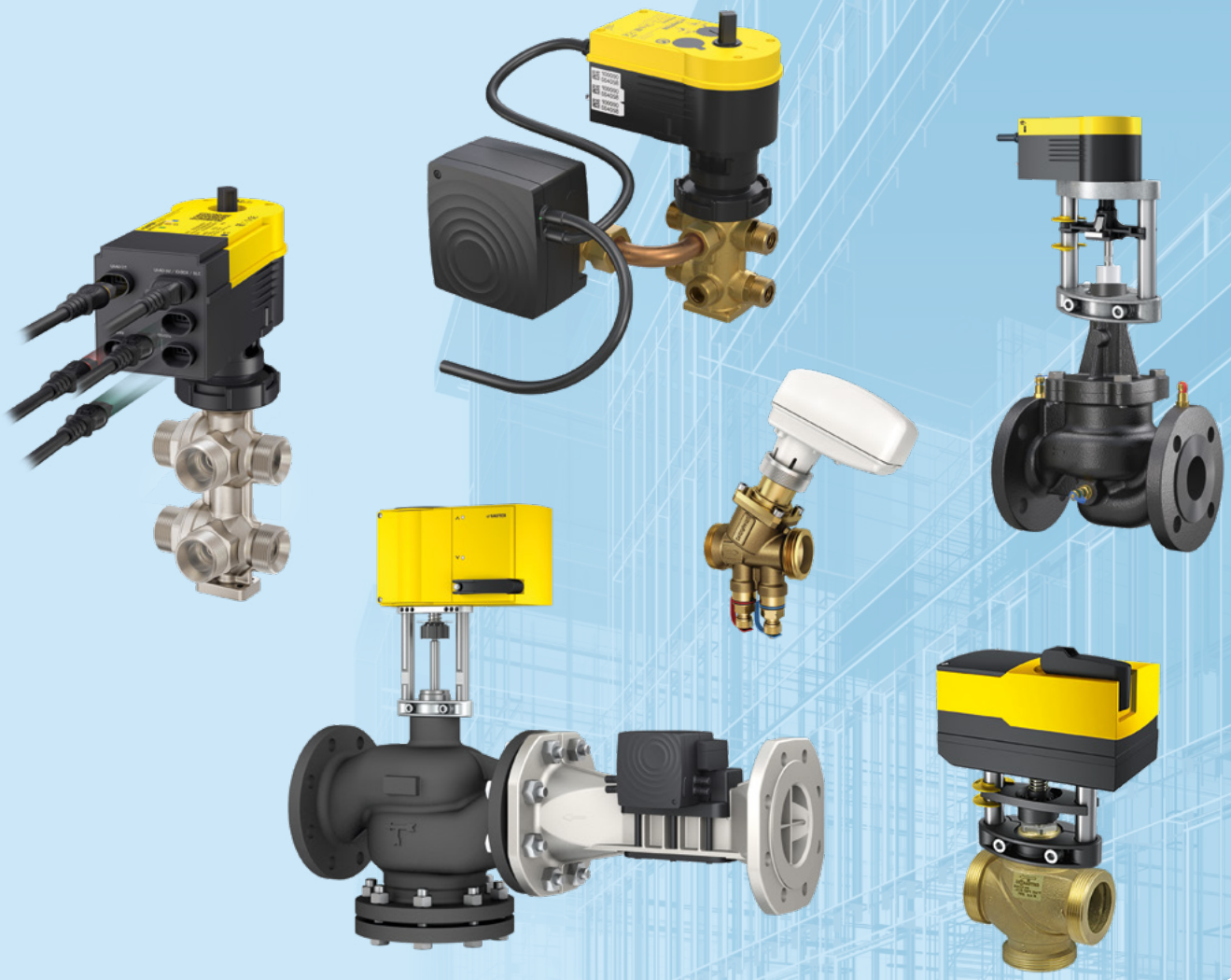


Valves and actuators

SAUTER Actuators – Reliable and Energy-Efficient HVAC Control

SAUTER

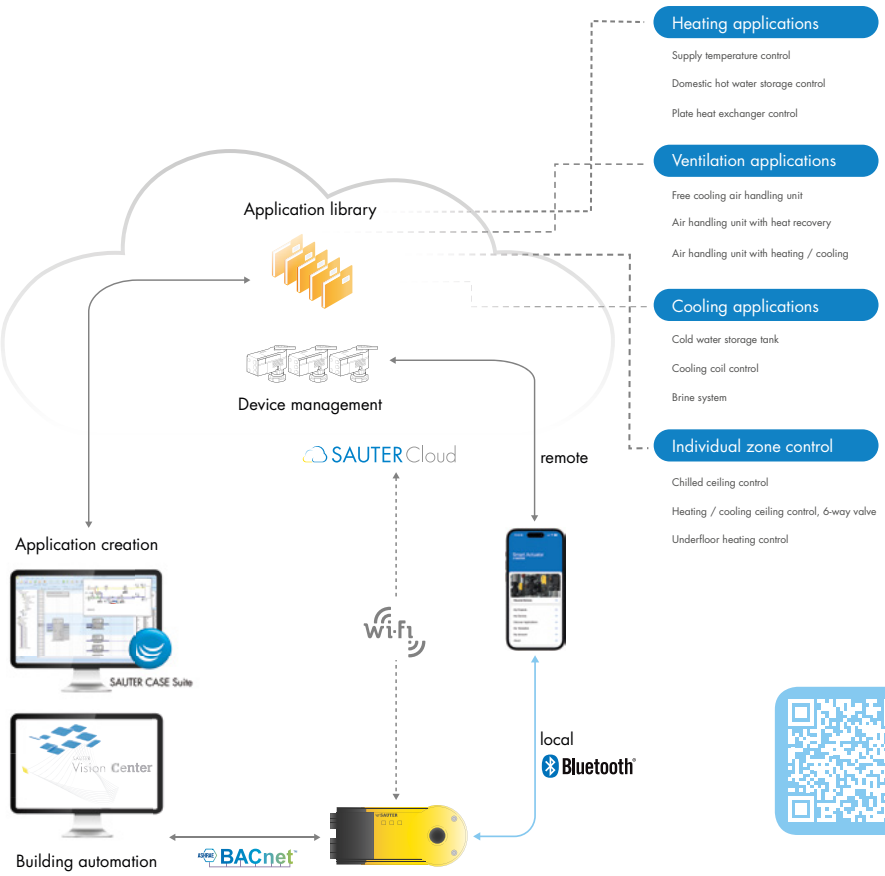
Creating Sustainable Environments.

Smart Actuator, 3 in 1: Actuator and controller with IoT integration.

Smart energy control for modern buildings.

Controlling and monitoring heating and ventilation systems or their subsystems usually requires complex automation systems. Planning, installation and commissioning of these systems is not only time-consuming, but also costly. Digitalisation of building operation now makes it possible for the first time to perform these tasks directly and autonomously using a single device: the Smart Actuator. Tested, pre-programmed applications in the Smart Actuator system enable easy commissioning and remote access for monitoring and maintenance via cloud services.

- Decentralised, autonomous control without a cabinet and automation station
- Applications from the SAUTER solution library for heating, ventilation and room automation
- Error-free, inexpensive wiring thanks to plug system
- Commissioning via smartphone app
- Remote access to applications and operating settings via the SAUTER Cloud



Website

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 and 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. Their compact design enables the devices to be installed in false ceilings without difficulty.

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 115SA IP

AKM 115SA MS/TP

AKM 115S

AKM 115

B2KL

6-way brass ball valve with electric rotary actuators

Model series		AKM					
Type				115			
Version		F120	F122	SF132	SF152	SAF232	SAF332
Voltage	230 V AC	●					
	24 V AC		●	●	●	●	●
	24 V DC			●	●	●	●
Positioning signal	2-point	●	●	●	●		
	3-point	●	●	●	●		
	0...10 V			●	●	●	●
	4...20 mA				●	[1]	[1]
Feedback	0...10 V			●	●	●	●
Running time [s]		120	120	35 60 120	6	35 60 120	35 60 120
Communication						BACnet MS/TP MQTT	BACnet/IP MQTT

[1] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0...20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

6-way ball valve with male thread in 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 Male thread 	B2KL015F400 B2KL015F401	15	G ¾"	0.25 0.4 0.65 1	Supplied	2
				1.25	None	
	B2KL020F411	20	G ¾"	0.7 1 1.6 2.1	Supplied	2
				2.8	None	

[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, brass, flat-sealing G ¾" – R ½", for B2KL015 and B2KL020F411
0378134 015	1 screw fitting, brass, flat-sealing G ¾" – solder nipple, for B2KL015 and B2KL020F411
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, gunmetal, -10...150 °C, PN16, DN 15
0560332 020	Strainer, gunmetal, -10...150 °C, PN16, DN 20
0560332 025	Strainer, gunmetal, -10...150 °C, PN16, DN 25

Accessories for AKM actuators

Type	Description
0510480001	Single auxiliary change-over contact for AKM 105/115 ball valve actuators
0510480002	Double auxiliary change-over contact for AKM 105/115 ball valve actuators

Accessories for AKM115SAF Smart Actuator

Type	Description
SAIO100F020	I/O module, 5 × UI/AO, 3 × relay
05393601000	Dummy plug spare part set IP54
EY-PS031F011	Power supply, 110...240 VAC/24 VDC, 1.25 A, 30 W, DIN rail mounting
EY-PS031F021	Power supply, 110...240 VAC/24 VDC, 2.5 A, 60 W, DIN rail mounting
EY-PS031F041	Power supply, 110...240 VAC/24 VDC, 4 A, 100 W, DIN rail mounting
EY-RU355*	Operating device, LCD, NTC, 5B
053060200**	Cable for Smart Actuator, 24 V, open end, 2-wire, 2-pin plug (red)
053060310**	Cable for Smart Actuator, U-I/O, open end, 3-wire, 3-pin plug (yellow)
053060320**	Cable for Smart Actuator, Ni1000, -35...100 °C, 3-pin plug (white)
053060340**	Cable for Smart Actuator, RS485, open end, 3-wire, 3-pin plug (green)
053060341**	Cable for Smart Actuator, RS485, 3-wire, 3-pin plug (green)
053060510**	Cable for Smart Actuator, U-I/O, open end, 3-wire, 5-pin plug (yellow)
053060530**	Cable for Smart Actuator, connection to I/O box, 5-pin plug (blue)
053060535**	Cable for Smart Actuator, SLC, open end, 5-wire, 5-pin plug (green)

! For available cable lengths, see PDS 53.100

Compact design for **energy-efficient control.**

Actuator for unit valves with SAUTER quality.
The SAUTER AXT represents the logical evolution of 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 single click.
The SAUTER AXS features integrated electrical protection and automatic stroke adjustment. It also has a first-open function, making it quick and easy to install. The SAUTER AXS is compatible with most valves of previous generations as well as third-party valves. This actuator for unit valves incorporates product intelligence which, with its wide range of accessories, enables it to be equipped for specific applications.

AXT 301, 311
AXS 315
AXF 217S
AXM 217S
AXM 217
VUL
BUL
VUT
BUT

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




Model series		AXM				AXF		AXT									AXS	
Type		217				217		301								311	315	
Version		F200	F202	SF402	SF404	SF404	SF405	F110	F112	F210	F212	F100	F102	HF110	HF112	F110	F112	SF102	SF202
Voltage	230 V AC	●						●		●		●		●		●			
	24 V AC		●	●	●	●	●		●		●		●		●		●	●	●
	24 V DC			●	●	●	●		●		●		●		●		●	●	●
Positioning signal	2-point	●	●					●	●	●	●	●	●	●	●	●	●		
	3-point	●	●																
	0…10 V			●	●	●	●											●	●
	4…20 mA			●	●	●	●												
Actuating power/N		120	120	120	160	160					100					125		125	
Stroke [mm]		6.3	6.3	5.5	5.5	6		5	5	5	5	5	5	4	4	6.5		6.5	
Failsafe position	Spindle retracted (NO)						●			●	●								●
	Spindle extended (NC)					●		●	●			●	●	●	●	●	●	●	
Running time [s/mm]		13	13	8	8	8		48	48	48	48	48	48	53	53	42		30	
Further properties												without cable[1]		Auxiliary contact					

[1] AXT301F100/102: Connection cable available as accessory

Unit valves in cast brass PN16 with equal percentage characteristic

	Type	DN	Con-nection	Kvs [m³/h]	Stroke [mm]	Δp_{max} [bar]				
2-way 2 °C…120 °C Male thread	VUL 010 F341	10	G ½B	0.16	4	4	4	3.8	3.8	3.8
	VUL 010 F331	10	G ½B	0.4	4	4	4	3.8	3.8	3.8
	VUL 010 F321	10	G ½B	0.63	4	4	4	3.8	3.8	3.8
	VUL 010 F311	10	G ½B	1	4	3.8	4	3.8	3.8	3.8
	VUL 010 F301	10	G ½B	1.6	4	3.8	4	3.8	3.8	3.8
	VUL 015 F311	15	G ¾B	2.5	4	1.1	1.1	1	1	1
	VUL 015 F301	15	G ¾B	3.5	4	1.1	1.1	1	1	1
	VUL 020 F301	20	G 1B	4.5	4	1.1	1.1	1	1	1
3-way 2 °C…120 °C Male thread	BUL 010 F330	10	G ½B	0.4	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F320	10	G ½B	0.63	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F310	10	G ½B	1.0	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F300	10	G ½B	1.6	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 015 F310	15	G ¾B	2.5	3.7	1.4	1.4	1.2	1.2	1.2
	BUL 015 F300	15	G ¾B	4	3.7	1.2	1.2	1	1	1
	BUL 020 F300	20	G 1B	5	3.7	1	1	0.8	0.8	0.8
3-way with T-bypass 2 °C…120 °C Male thread	BUL 010 F430	10	G ½B	0.4	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F420	10	G ½B	0.63	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F410	10	G ½B	1	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F400	10	G ½B	1.6	37	1.7	1.7	1.5	1.5	1.5
	BUL 015 F410	15	G ¾B	2.5	3.7	1.4	1.4	1.2	1.2	1.2
	BUL 015 F400	15	G ¾B	4	3.7	1.2	1.2	1	1	1
	BUL 020 F400	20	G 1B	5	3.7	1	1	0.8	0.8	0.8
	BUL 010 F630	10	Ø15	0.4	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F620	10	Ø15	0.63	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F610	10	Ø15	1	3.7	1.7	1.7	1.5	1.5	1.5
	BUL 010 F600	10	Ø15	1.6	3.7	1.7	1.7	1.5	1.5	1.5

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

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




Model series		AXM				AXF		AXT								AXS	
Type		217				217		301								311	315
Version		F200	F202	SF402	SF404	SF404	SF405	F110	F112	F210	F212	F100	F102	HF110	HF112	F110	F112	SF102	SF202
Voltage	230 V AC	●						●		●		●		●		●			
	24 V AC		●	●	●	●	●		●		●		●		●		●	●	●
	24 V DC			●	●	●	●		●		●		●		●		●	●	●
Positioning signal	2-point	●	●					●	●	●	●	●	●	●	●	●	●		
	3-point	●	●																
	0…10 V			●	●	●	●											●	●
	4…20 mA			●	●	●	●												
Actuating power/N		120	120	120	160	160		100								125		125	
Stroke [mm]		6.3	6.3	5.5	5.5	6		5	5	5	5	5	5	4	4	6.5		6.5	
Failsafe position	Spindle retracted (NO)						●			●	●								●
	Spindle extended (NC)					●		●	●			●	●	●	●	●	●	●	
Running time [s/mm]		13	13	8	8	8		48	48	48	48	48	48	53	53	42		30	
Further properties												without cable[1]		Auxiliary contact					

[1] AXT301F100/102: Connection cable available as accessory

Unit valves in cast brass PN16 with equal percentage characteristic

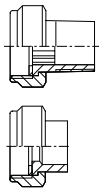
	Type	DN	Con-nection	Kvs (m^3/h)	Stroke (mm)	Δp_{max} (bar)				
2-way 2 °C…120 °C Male thread	VUT 010 F220	10	G ½	1.6	3	2.5	2.5	2.3	2.3	2.3
	VUT 010 F210	10	G ½	2.5	3	2.5	2.5	2.3	2.3	2.3
	VUT 010 F200	10	G ½	3.5	3	2.5	2.5	2.3	2.3	2.3
	VUT 015 F210	15	G ¾	4.5	3	1.8	1.8	1.6	1.6	1.6
	VUT 015 F200	15	G ¾	1.6	4	1.8	1.8	1.6	1.6	1.6
	VUT 020 F200	20	G 1	2.5	4	1	1	0.8	0.8	0.8
	VUT 020 F200	20	G 1	2.5	4	1	1	0.8	0.8	0.8
3-way 2 °C…120 °C Male thread	BUT 010 F200	10	G ½	1	3	1.7	1.7	1.7	1.7	1.7
	BUT 015 F210	15	G ¾	2.5	3	1.4	1.4	1.4	1.4	1.4
	BUT 020 F200	20	G 1	4.5	3	1	1	1	1	1
3-way with T-bypass 2 °C…120 °C Male thread	BUT 010 F420	10	G ½	0.63	3	1.7	1.7	1.7	1.7	1.7
	BUT 010 F410	10	G ½	1	3	1.7	1.7	1.7	1.7	1.7
	BUT 010 F400	10	G ½	1.6	3	1.7	1.7	1.7	1.7	1.7
	BUT 015 F410	15	G ¾	2.5	3	1.4	1.4	1.4	1.4	1.4
	BUT 015 F400	15	G ¾	3.5	4	1.2	1.2	1.2	1.2	1.2
	BUT 020 F400	20	G 1	4.5	4	1	1.0	1	1	1
	BUT 020 F400	20	G 1	4.5	4	1	1.0	1	1	1
	BUT 020 F400	20	G 1	4.5	4	1	1.0	1	1	1

Important accessories for unit valves

Strainer, PN16, -10...150 °C

Type	Description
0560332015	Strainer, gunmetal, mesh aperture 0.5 mm, PN16, -10…150 °C, female G½"
0560332020	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10…150 °C, female G¾"

Accessories for VUL and BUL unit valves



Type	Description
0378133010	1 screw connecting fitting, brass, flat-sealing, female G½" – male R⅜"
0378133015	1 screw connecting fitting, brass, flat-sealing, female G¾" – male R½"
0378133020	1 screw connecting fitting, brass, flat-sealing, female G1" – male R¾"
0378134010	1 solder fitting d = 12 mm, flat-sealing, female G½"
0378134015	1 solder fitting d = 15 mm, flat-sealing, female G¾"
0378134020	1 solder fitting d = 22 mm, flat-sealing, female G1"
0378135010	1 compression fitting d = 15 mm, flat-sealing, female G½"
0378145015	1 compression fitting d = 15 mm, flat-sealing, female G¾"
0378145020	1 compression fitting d = 22 mm, flat-sealing, female G1"

Accessories for AXT 301/311 actuators

Type	Description
0550389K008	Adapter VA80, set of 5, off-white, M30x1.5, SM = 10.5 mm, for AXT 3/AXS 3
0550389K010	Adapter VA41, set of 5, dark green, M30x1.5, SM = 9.5 mm, for AXT 3/AXS 3
0550389K908	Protective cap incl. adapter VA 80H-SK (0550389K008), for AXT 301
0550600202	Connection cable, PVC, 2 m, for AXT301F10, white
0550600212	Connection cable, halogen-free, 2 m, for AXT 301 F10, white
0550600502	Connection cable, PVC, 5 m, for AXT 301 F10, white
0550600512	Connection cable, halogen-free, 5 m, for AXT 301 F10, white

Accessories for AXS 315 actuators

Type	Description
0550389K008	Adapter VA 80, set of 5, off-white, M30 x 1.5, SM = 10.5 mm, for AXT 3/AXS 3
0550389K010	Adapter VA 41, set of 5, dark green, M30 x 1.5, SM = 9.5 mm, for AXT3/AXS 3
0550600103	Connection cable, PVC, 1 m, for AXS 315S, white
0550600113	Connection cable, halogen-free, 1 m, for AXS 315S, white
0550600114	Connection cable, halogen-free + feedback, 1 m, for AXS 315S, white
0550600203	Connection cable, PVC, 2 m, for AXS 315S, white
0550600213	Connection cable, halogen-free, 2 m, for AXS 315S, white
0550600214	Connection cable, halogen-free + feedback, 2 m, for AXS 315S, white
0550600503	Connection cable, PVC, 5 m, for AXS 315S, white
0550600513	Connection cable, halogen-free, 5 m, for AXS 315S, white
0550600514	Connection cable, halogen-free + feedback, 5 m, for AXS 315S, white

Accessories for AXM 217 actuators

Type	Description
0550603001	Cable 24 V, PVC, pluggable, 3 m for AXM 217F
0550603003	Cable 230 V, PVC, pluggable, 3 m for AXM 217F
0550603004	Cable 230 V, PVC, pluggable, 7 m for AXM 217F

Accessories for AXM 217S actuators

Type	Description
0550603009	Cable 24 V, PVC, pluggable, 3 m for AXM 217S
0550603012	Cable 24 V, halogen-free, pluggable, 7 m for AXM 217S

Accessories for AXF 217S actuators

Type	Description
0550360010	Configurator for AXF217S actuators for unit valves (positioning signal, direction of operation, characteristic, emergency position)

SAUTER Valveco compact:
The all-rounder valve.

Compensate pressure fluctuations. Adjust hydraulic conditions.
SAUTER Valveco compact valves are indispensable when it comes to ensuring a hydraulically balanced system. These regulating valves are true all-rounders, combining three functions in a single compact unit, whether simply shutting off the flow or maintaining a constant set flow rate. SAUTER Valveco compact reliably withstands pressure fluctuations and, as a variable resistance, ensures hydraulically balanced conditions in your system. Combined with the AXT/AXS/AXM/AXF/AVM thermal or motorised actuators, this is a future-proof solution 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. For easy on-site inspection and adjustment of the optimum differential pressure, SAUTER Valveco compact valves are 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 system.

AXF 217
AXT 301, 311
AXM 217
AXS 315

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





Model series		AVM		AXM				AXF		AXT								AXS	
Type		115		217				217		301								311	315
Version		SAF232	SAF332	F200	F202	SF402	SF404	SF404	SF405	F110	F112	F210	F212	F100	F102	HF110	HF112	F110	F112	SF102	SF202
Voltage	230 V AC	●	●	●						●		●		●		●		●			
	24 V AC	●	●		●	●	●	●	●		●		●		●		●		●	●	●
	24 V DC					●	●	●	●		●		●		●		●		●	●	●
Positioning signal	2-point			●	●					●	●	●	●	●	●	●	●	●	●		
	3-point			●	●																
	0…10 V	●	●			●	●	●	●											●	●
	4…20 mA	●[1]	●[1]			●	●	●	●												
Actuating power/N		35 60 120		120	120	120	160	160		100								125		125	
Stroke [mm]				6.3	6.3	5.5	5.5	6		5	5	5	5	5	5	4	4	6.5		6.5	
Failsafe position	Spindle retracted (NO)								●			●	●								●
	Spindle extended (NC)							●		●	●			●	●	●	●	●	●	●	
Running time [s/mm]				13	13	8	8	8		48	48	48	48	48	48	53	53	42		30	
Further properties		[2]	[3] [4]											without cable[5]		Auxiliary contact					

[1] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0…20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

[2] BACnet MS/TP, MQTT communication

[3] BACnet/IP, MQTT communication

[4] For fitting on VDL010…VDL032, also order accessory 0510390067

[5] AXT301F100/102: Connection cable available as accessory

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

	Type	DN	Con-nection	Vol (l/h)	Stroke (mm)	Δp_{max} (bar)					
2-way Male thread 0 °C…120 °C	VDL010F210	10	G½	30..200	2.5	8	8	8	8	8	8
	VDL010F200	10	G½	65..370	5	8	8	8	8	8	8
	VDL015F220	15	G¾	30..200	2.5	8	8	8	8	8	8
	VDL015F210	15	G¾	65..370	5	8	8	8	8	8	8
	VDL015F200	15	G¾	100..575	2.5	8	8	8	8	8	8
	VDL015F200H	15	G¾	220..1330	5	8	8	8	8	8	8
	VDL020F220	20	G1	100..575	2.5	8	8	8	8	8	8
	VDL020F210	20	G1	160..990	4	8	8	8	8	8	8
	VDL020F200	20	G1	220..1330	5	8	8	8	8	8	8
	VDL020F210H	20	G1	300..1800	5.5	8	8	8	8	8	8
	VDL025F210	25	G1¼	280..1800	5.5	8	8	8	8	8	8
	VDL025F200	25	G1¼	600..3609	5.5	8	8	8	8	8	8
	VDL032F200	32	G1½	550..4001	5.5	8	8	8	8	8	8
2-way Male thread with measurement nipple	VDL010F211	10	G½	30..200	2.5	8	8	8	8	8	8
	VDL010F201	10	G½	65..370	5	8	8	8	8	8	8
	VDL015F221	15	G¾	30..200	2.5	8	8	8	8	8	8
	VDL015F211	15	G¾	65..370	5	8	8	8	8	8	8
	VDL015F201	15	G¾	100..575	2.5	8	8	8	8	8	8
	VDL015F201H	15	G¾	220..1330	5	8	8	8	8	8	8
	VDL020F221	20	G1	100..575	2.5	8	8	8	8	8	8
	VDL020F211	20	G1	160..990	4	8	8	8	8	8	8
	VDL020F201	20	G1	220..1330	5	8	8	8	8	8	8
	VDL020F211H	20	G1	300..1800	5.5	8	8	8	8	8	8
	VDL025F211	25	G1¼	280..1800	5.5	8	8	8	8	8	8
	VDL025F201	25	G1¼	600..3609	5.5	8	8	8	8	8	8
	VDL032F201	32	G1½	550..4001	5.5	8	8	8	8	8	8

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

SAUTER Valveco compact
VDL dynamic regulating valves with electrical linear actuators



Model series		AVM						
Type			215 [1]			322 [2] [3]		234
Version		F120R	SF132R	SF132-7	F120R	F122R	SF132R	SF132-7
Voltage	230 V AC	●			●		● [4]	● [5]
	24 V AC		●	●		●	●	●
	24 V DC		●	●		●	●	●
Positioning signal	2-point	●	●	●	●	●	●	●
	3-point	●	●	●	●	●	●	●
	0…10 V		●	●			●	●
	4…20 mA						●	●
Actuating power [N]		400	500	500		1000		1700
Stroke [mm]								
Failsafe position	Spindle retracted (NO)					● [6]	● [6]	
	Spindle extended (NC)					● [6]	● [6]	
Running time [s/mm]	Equal percentage	8	8/15	8	6/12	6/12	4/6	2/4/6
Further properties								

[1] For fitting on VDL040/VDL050F201, also order accessory 0510390029

[2] For fitting on VDL040/VDL050F201, also order accessory 0510390041

[3] For fitting on VDL050...VDL080F601*, also order accessory 0510390028

[4] Optional accessory 0500570003 230 V module for valve actuators AVM321S and AVM322S

[5] Optional accessory 0372332001 230 V module for valve actuators AVM/AVF234S and AVN224S

[6] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

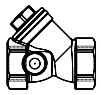
Dynamic regulating valve in ductile cast iron PN25 with linear characteristic

	Type	DN	Con-nection	Vol (m^3/h)	Stroke (mm)	Δp_{max} (bar)						
2-way with female thread 0 °C…120 °C	VDL040F201	40	G1½	1.4..9.5	15	6	6		6	6	6	
	VDL050F201	50	G2	1.4..11.5	15	6	6		6	6	6	
2-way with flange 1 °C…120 °C	VDL050F601	50	PN16	2.48..15.00	20			6	6	6	6	
	VDL050F601H	50	PN16	3.92..24.00	20			6	6	6	6	
	VDL065F601	65	PN16	4.38..25.00	20			6	6	6	6	
	VDL065F601H	65	PN16	5.95..35.00	20			6	6	6	6	
	VDL080F601	80	PN16	5.34..34.00	20			6	6	6	6	
	VDL080F601H	80	PN16	7.02..43.00	20			6	6	6	6	
	VDL100F601	100	PN16	12.1..68.0	40							6
	VDL100F601H	100	PN16	14.8..90.0	40							6
	VDL125F601	125	PN16	18.5..110.0	40							6
	VDL125F601H	125	PN16	23.0..135.0	40							6
	VDL150F601	150	PN16	25.6..148.0	43							6
	VDL150F601H	150	PN16	32.0..195.0	43							6
	VDL200F601	200	PN16	95.0..210.0	43							6
	VDL200F601H	200	PN16	130.0..280.0	43							6
	VDL250F601	250	PN16	190.0..475.0	48							6 [1]
	VDL250F601H	250	PN16	245.0..600.0	48							6 [1]
	VDL300F601	300	PN16	190.0..475.0	48							6 [1]
	VDL300F601H	300	PN16	245.0..600.0	48							6 [1]

[1] VDL250 and VDL300 can only be combined with AVM234SF132 and adapter set 0510390053!

Important accessories for Valveco compact

Strainer, PN16, -10...150 °C



Type	Description
0560332015	Strainer, gunmetal, mesh aperture 0.5 mm, PN16, -10…150 °C, female G½"
0560332020	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10…150 °C, female G¾"
0560332025	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10…150 °C, female G1"
0560332032	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10…150 °C, female G1¼"
0560332040	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10…150 °C, female G1½"
0560332050	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10…150 °C, female G2"

Accessories for AVM215...R, AVM322...R and AVM234S actuators

Type	Description
0510390028	Mounting set for SAUTER VDL valves up to 20 mm stroke, flange DN50 to DN80 with AVM322(S)..R
0510390029	Mounting set for SAUTER VDL valves, 15 mm stroke, thread DN40 and DN50 with AVM215(S)..R
0510390041	Mounting set for SAUTER VDL valves, 15 mm stroke, thread DN40 and DN50 with AVM322(S)..R
0510390053	Mounting set for SAUTER VDL valves, 48 mm stroke, flange DN100 and DN300 with AVM/AVF234S
0500570003	230 V module for valve actuators AVM321S and AVM322S
0500570001	Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122
0372332001	230 V module for valve actuators AVM/AVF234S and AVN224S

Accessories for AVM115SAF Smart Actuator

Type	Description
SAIO100F020	I/O module, 5 x UI/AO, 3 x relay
EY-PS031F011	Power supply, 110…240 VAC/24 VDC, 1.25 A, 30 W, DIN rail mounting
EY-PS031F021	Power supply, 110…240 VAC/24 VDC, 2.5 A, 60 W, DIN rail mounting
EY-PS031F041	Power supply, 110…240 VAC/24 VDC, 4 A, 100 W, DIN rail mounting
EY-RU355*	Operating device, LCD, NTC, 5B
0510390067	Mounting set for SAUTER VDL valves, 5.0 and 5.5 mm stroke with AVM105 and AVM115SAF (max. 250 N)
053060200**	Cable for Smart Actuator, 24 V, open end, 2-wire, 2-pin plug (red)
053060310**	Cable for Smart Actuator, U-I/O, open end, 3-wire, 3-pin plug (yellow)
053060320**	Cable for Smart Actuator, Ni1000, -35…100 °C, 3-pin plug (white)
053060340**	Cable for Smart Actuator, RS485, open end, 3-wire, 3-pin plug (green)
053060341**	Cable for Smart Actuator, RS485, 3-wire, 3-pin plug (green)
053060510**	Cable for Smart Actuator, U-I/O, open end, 3-wire, 5-pin plug (yellow)
053060530**	Cable for Smart Actuator, connection to I/O box, 5-pin plug (blue)
053060535**	Cable for Smart Actuator, SLC, open end, 5-wire, 5-pin plug (green)
05393601000	Dummy plug spare part set IP54

! For available cable lengths, see PDS 53.100

Accessories for AXT 301/311 actuators

Type	Description
0550389K008	Adapter VA80, set of 5, off-white, M30x1.5, SM = 10.5 mm, for AXT 3/AXS 3
0550389K010	Adapter VA41, set of 5, dark green, M30x1.5, SM = 9.5 mm, for AXT 3/AXS 3
0550389K908	Protective cap incl. adapter VA 80H-SK (0550389K008), for AXT 301
0550600202	Connection cable, PVC, 2 m, for AXT301F10, white
0550600212	Connection cable, halogen-free, 2 m, for AXT 301 F10, white
0550600502	Connection cable, PVC, 5 m, for AXT 301 F10, white
0550600512	Connection cable, halogen-free, 5 m, for AXT 301 F10, white

Accessories for AXS 315 actuators

Type	Description
0550389K008	Adapter VA 80, set of 5, off-white, M30 x 1.5, SM = 10.5 mm, for AXT 3/AXS 3
0550389K010	Adapter VA 41, set of 5, dark green, M30 x 1.5, SM = 9.5 mm, for AXT3/AXS 3
0550600103	Connection cable, PVC, 1 m, for AXS 315S, white
0550600113	Connection cable, halogen-free, 1 m, for AXS 315S, white
0550600114	Connection cable, halogen-free + feedback, 1 m, for AXS 315S, white
0550600203	Connection cable, PVC, 2 m, for AXS 315S, white
0550600213	Connection cable, halogen-free, 2 m, for AXS 315S, white
0550600214	Connection cable, halogen-free + feedback, 2 m, for AXS 315S, white
0550600503	Connection cable, PVC, 5 m, for AXS 315S, white
0550600513	Connection cable, halogen-free, 5 m, for AXS 315S, white
0550600514	Connection cable, halogen-free + feedback, 5 m, for AXS 315S, white

Accessories for AXM 217 actuators

Type	Description
0550603001	Cable 24 V, PVC, pluggable, 3 m for AXM 217F
0550603003	Cable 230 V, PVC, pluggable, 3 m for AXM 217F
0550603004	Cable 230 V, PVC, pluggable, 7 m for AXM 217F

Accessories for AXM 217S actuators

Type	Description
0550603009	Cable 24 V, PVC, pluggable, 3 m for AXM 217S
0550603012	Cable 24 V, halogen-free, pluggable, 7 m for AXM 217S

Accessories for AXF 217S actuators

Type	Description
0550360010	Configurator for AXF217S actuators for unit valves (positioning signal, direction of operation, characteristic, emergency position)

SAUTER eValveco:
Maximum comfort with minimum energy costs.

Keeping hydraulic system dynamics 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 valve or 6-way ball valve and a precise real-time ultrasound flow measurement can be easily integrated into the building automation system via Modbus or BACnet. 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 fulfil 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-way or 6-way valve and energy monitoring

Dynamic flow control system PN16

	Type	DN	BACnet MS/TP	Modbus RTU	Connection, sensor	Connection, ball valve	min [m³/h] [1]	max [m³/h] [2]	V@ Δp = 30 kPa	Δp_{max} [bar]
6-way 5 °C ... 90 °C	UVC116 MF015	15		●	G ¾	G ½	0.003	1.4	0.8	2
	UVC116 MF025	25		●	G 1"	G 1"	0.005	2.5	1.4	2
										
2-way 5 °C ... 130 °C	UVC102 MF065	65	●	●			0.175	48.8	26.7	1
	UVC102 MF080	80	●	●			0.280	70.7	38.7	1
	UVC102 MF100	100	●	●			0.420	118.7	65.0	1
										

[1] Minimum flow rate that can still be controlled.

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

Important accessories for eValveco

Strainer, PN16, -10...150 °C

	Type	Description
	0560332015	Strainer, gunmetal, mesh aperture 0.5 mm, PN16, -10...150 °C, female G½"
	0560332020	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G¾"
	0560332025	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1"

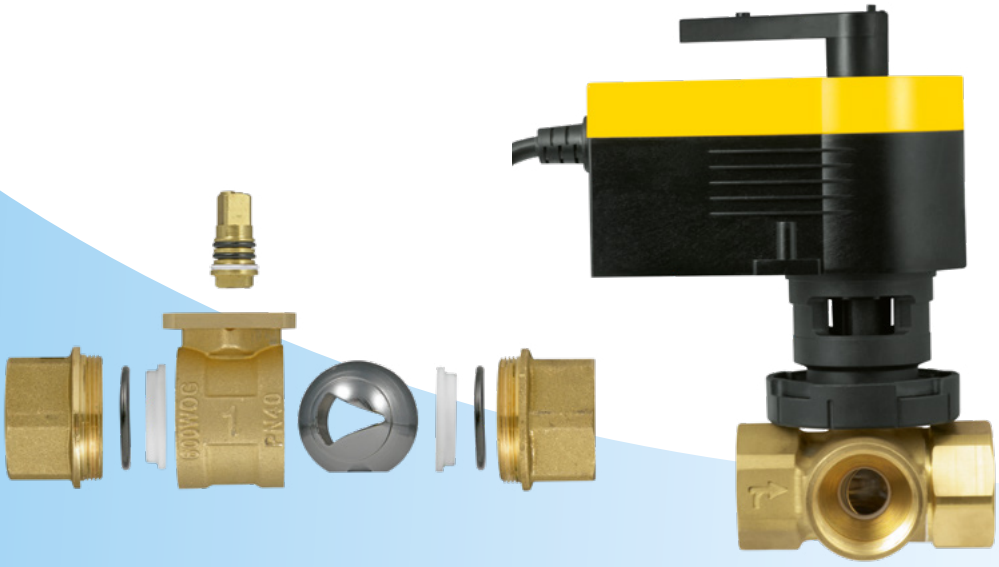
Accessories for UVC102 MF065 and UVC102 MF080

Type	Description
0500240001	Adapter for media temperature above 100 °C up to 150 °C for AVM322(S)
0378369101	Complete replacement stuffing box for DN 65...150

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 the 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
- Push the actuator onto the ball valve, turn the bayonet ring to lock – done
- The running time can be changed and the characteristic adjusted
- Detection of 2-point, 3-point or continuous actuators
- Anti-blocking function
- 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										AKF				ASF	
Type		105				115						112			113	112 [3]	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	SAF232	SAF332	F120	F122	F122	SF122	F220	F222
Voltage	230 V AC	●	●			●						●				●	
	24 V AC				●		●	●	●	●	●		●	●	●		●
	24 V DC				●			●	●	●	●		●	●	●		●
Positioning signal	2-point	●	●	●	●	●	●	●	●			●	●			●	●
	3-point	●	●	●	●	●	●	●	●					●			
	0...10 V				●			●	●	●	●				●		
	4...20 mA								●	●[4]	●[4]						
	Integrated controller with IoT and cloud									●	●						
Torque [Nm]		4				8						7				7	
Failsafe position	Angle of rotation 0°/90°											●	●	●	●	●	●
Running time [s/90°]		30	120	120	35 60 120	120	120	35 60 120	6	35 60 120	35 60 120		90			90	
Further properties										[1]	[2]					Auxiliary contacts	

[1] BACnet MS/TP, MQTT communication

[2] BACnet/IP, MQTT communication

[3] For fitting on ball valve, also order accessory 0510240001

[4] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0...20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

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

	Type	DN	Con-nection	Kvs [m³/h]	Angle of rotation	Δp_{max} [bar]			Mounting kit required
2-way with female thread -10 °C...130 °C 	VKR 015 F350-FF	15	Rp ½"	1	90°	1.8	3.5	3.5	3.5
	VKR 015 F340-FF	15	Rp ½"	1.6	90°	1.8	3.5	3.5	3.5
	VKR 015 F330-FF	15	Rp ½"	2.5	90°	1.8	3.5	3.5	3.5
	VKR 015 F320-FF	15	Rp ½"	4	90°	1.8	3.5	3.5	3.5
	VKR 015 F310-FF	15	Rp ½"	6.3	90°	1.8	3.5	3.5	3.5
	VKR 015 F300-FF	15	Rp ½"	10	90°	1.8	3.5	3.5	3.5
	VKR 020 F320-FF	20	Rp ¾"	4	90°	1.8	3.5	3.5	3.5
	VKR 020 F310-FF	20	Rp ¾"	6.3	90°	1.8	3.5	3.5	3.5
	VKR 020 F300-FF	20	Rp ¾"	10	90°	1.8	3.5	3.5	3.5
	VKR 025 F320-FF	25	Rp 1"	6.3	90°	1.8	3.5	3.5	3.5
	VKR 025 F310-FF	25	Rp 1"	10	90°	1.8	3.5	3.5	3.5
	VKR 025 F300-FF	25	Rp 1"	16	90°	1.8	3.5	3.5	3.5
	VKR 032 F320-FF	32	Rp 1¼"	10	90°	1.2	2.4	2.4	2.4
	VKR 032 F310-FF	32	Rp 1¼"	16	90°	1.2	2.4	2.4	2.4
	VKR 032 F300-FF	32	Rp 1¼"	25	90°	1.2	2.4	2.4	2.4
	VKR 040 F320-FF	40	Rp 1½"	16	90°	1.2	2.4	2.4	2.4
	VKR 040 F310-FF	40	Rp 1½"	25	90°	1.2	2.4	2.4	2.4
	VKR 040 F300-FF	40	Rp 1½"	40	90°	1.2	2.4	2.4	2.4
	VKR 050 F320-FF	50	Rp 2"	25	90°	1.2	2.4	2.4	2.4
	VKR 050 F310-FF	50	Rp 2"	40	90°	1.2	2.4	2.4	2.4
	VKR 050 F300-FF	50	Rp 2"	63	90°	1.2	2.4	2.4	2.4
3-way with female thread -10 °C...130 °C 	BKR 015 F340-FF	15	Rp ½"	1.6	90°	1.8	2	2	2
	BKR 015 F330-FF	15	Rp ½"	2.5	90°	1.8	2	2	2
	BKR 015 F320-FF	15	Rp ½"	4	90°	1.8	2	2	2
	BKR 015 F310-FF	15	Rp ½"	6.3	90°	1.2	2	2	2
	BKR 020 F320-FF	20	Rp ¾"	4	90°	1.8	2	2	2
	BKR 020 F310-FF	20	Rp ¾"	6.3	90°	1.8	2	2	2
	BKR 025 F310-FF	25	Rp 1"	10	90°	1.8	2	2	2
	BKR 032 F310-FF	32	Rp 1¼"	16	90°	1.2	2	2	2
	BKR 040 F310-FF	40	Rp 1½"	25	90°	1.2	2	2	2
	BKR 050 F310-FF	50	Rp 2"	40	90°	1.2	2	2	2

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

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



Model series		AKM										AKF				ASF	
Type		105				115						112		113		112 [3]	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	SAF232	SAF332	F120	F122	F122	SF122	F220	F222
Voltage	230 V AC	●	●			●						●				●	
	24 V AC				●		●	●	●	●	●		●	●	●		●
	24 V DC				●			●	●	●	●		●	●	●		●
Positioning signal	2-point	●	●	●	●	●	●	●	●			●	●			●	●
	3-point	●	●	●	●	●	●	●	●					●			
	0...10 V				●			●	●	●	●				●		
	4...20 mA								●	●[4]	●[4]						
	Integrated controller with IoT and cloud									●	●						
Torque [Nm]		4				8						7				7	
Failsafe position	Angle of rotation 0°/90°											●	●	●	●	●	●
Running time [s/90°]		30	120	120	35 60 120	120	120	35 60 120	6	35 60 120	35 60 120		90			90	
Further properties										[1]	[2]					Auxiliary contacts	

[1] BACnet MS/TP, MQTT communication

[2] BACnet/IP, MQTT communication

[3] For fitting on ball valve, also order accessory 0510240001

[4] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0...20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

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

	Type	DN	Con-nection	Kvs [m³/h]	Angle of rotation	Δp_{max} [bar]			Mounting kit required
Cut-off ball valve with female thread -10 °C...130 °C 	VKAI 015 F300	15	Rp ½"	15	90°	1.8	3.5	3.5	3.5
	VKAI 020 F300	20	Rp ¾"	22	90°	1.8	3.5	3.5	3.5
	VKAI 025 F300	25	Rp 1"	22	90°	1.8	3.5	3.5	3.5
	VKAI 032 F300	32	Rp 1¼"	35	90°	1.2	2.4	2.4	2.4
	VKAI 040 F300	40	Rp 1½"	68	90°	1.2	2.4	2.4	2.4
	VKAI 050 F300	50	Rp 2"	96	90°	1.2	2.4	2.4	2.4
L-port changeover with female thread -10 °C...130 °C 	BKLI 015 F300	15	Rp ½"	5	90°	1.8	2	2	2
	BKLI 020 F300	20	Rp ¾"	9	90°	1.8	2	2	2
	BKLI 025 F300	25	Rp 1"	9	90°	1.8	2	2	2
	BKLI 032 F300	32	Rp 1¼"	13	90°	1.2	2	2	2
	BKLI 040 F300	40	Rp 1½"	25	90°	1.2	2	2	2
	BKLI 050 F300	50	Rp 2"	37	90°	1.2	2	2	2
T-port changeover with female thread -10 °C...130 °C 	BKTI 015 F300	15	Rp ½"	12	90°	1.8	2	2	2
	BKTI 020 F300	20	Rp ¾"	16	90°	1.8	2	2	2
	BKTI 025 F300	25	Rp 1"	16	90°	1.8	2	2	2
	BKTI 032 F300	32	Rp 1¼"	25	90°	1.2	2	2	2
	BKTI 040 F300	40	Rp 1½"	49	90°	1.2	2	2	2
	BKTI 050 F300	50	Rp 2"	73	90°	1.2	2	2	2

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



Model series		AKM										AKF				ASF	
Type		105				115						112		113		112 [3]	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	SAF232	SAF332	F120	F122	F122	SF122	F220	F222
Voltage	230 V AC	●	●			●						●				●	
	24 V AC				●		●	●	●	●	●		●	●	●		●
	24 V DC				●			●	●	●	●		●	●	●		●
Positioning signal	2-point	●	●	●	●	●	●	●	●			●	●			●	●
	3-point	●	●	●	●	●	●	●	●					●			
	0...10 V				●			●	●	●	●				●		
	4...20 mA								●	●[4]	●[4]						
	Integrated controller with IoT and cloud									●	●						
Torque [Nm]		4				8						7				7	
Failsafe position	Angle of rotation 0°/90°											●	●	●	●	●	●
Running time [s/90°]		30	120	120	35 60 120	120	120	35 60 120	6	35 60 120	35 60 120		90			90	
Further properties										[1]	[2]					Auxiliary contacts	

[1] BACnet MS/TP, MQTT communication

[2] BACnet/IP, MQTT communication

[3] For fitting on ball valve, also order accessory 0510240001

[4] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0...20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

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

	Type	DN	Con-nection	Kvs [m³/h]	Angle of rotation	Δp_{max} [bar]			Mounting kit required
2-way with male thread -10 °C...130 °C 	VKRA 015 F350	15	G 1"	1	90°	1.8	3.5	3.5	3.5
	VKRA 015 F340	15	G 1"	1.6	90°	1.8	3.5	3.5	3.5
	VKRA 015 F330	15	G 1"	2.5	90°	1.8	3.5	3.5	3.5
	VKRA 015 F320	15	G 1"	4	90°	1.8	3.5	3.5	3.5
	VKRA 015 F310	15	G 1"	6.3	90°	1.8	3.5	3.5	3.5
	VKRA 020 F320	20	G 1¼"	4	90°	1.8	3.5	3.5	3.5
	VKRA 020 F310	20	G 1¼"	6.3	90°	1.8	3.5	3.5	3.5
	VKRA 020 F300	20	G 1¼"	10	90°	1.8	3.5	3.5	3.5
	VKRA 025 F320	25	G 1½"	6.3	90°	1.8	3.5	3.5	3.5
	VKRA 025 F310	25	G 1½"	10	90°	1.8	3.5	3.5	3.5
	VKRA 025 F300	25	G 1½"	16	90°	1.8	3.5	3.5	3.5
	VKRA 032 F320	32	G 2"	10	90°	1.2	2.4	2.4	2.4
	VKRA 032 F310	32	G 2"	16	90°	1.2	2.4	2.4	2.4
	VKRA 032 F300	32	G 2"	25	90°	1.2	2.4	2.4	2.4
	VKRA 040 F320	40	G 2¼"	16	90°	1.2	2.4	2.4	2.4
	VKRA 040 F310	40	G 2¼"	25	90°	1.2	2.4	2.4	2.4
	VKRA 040 F300	40	G 2¼"	40	90°	1.2	2.4	2.4	2.4
	VKRA 050 F320	50	G 2¾"	25	90°	1.2	2.4	2.4	2.4
	VKRA 050 F310	50	G 2¾"	40	90°	1.2	2.4	2.4	2.4
	VKRA 050 F300	50	G 2¾"	63	90°	1.2	2.4	2.4	2.4
3-way with male thread -10 °C...130 °C 	BKRA 015 F340	15	G 1"	1.6	90°	1.8	2	2	2
	BKRA 015 F330	15	G 1"	2.5	90°	1.8	2	2	2
	BKRA 015 F320	15	G 1"	4	90°	1.8	2	2	2
	BKRA 015 F310	15	G 1"	6.3	90°	1.2	2	2	2
	BKRA 020 F320	20	G 1¼"	4	90°	1.8	2	2	2
	BKRA 020 F310	20	G 1¼"	6.3	90°	1.8	2	2	2
	BKRA 025 F310	25	G 1½"	10	90°	1.8	2	2	2
	BKRA 032 F310	32	G 2"	16	90°	1.2	2	2	2
	BKRA 040 F310	40	G 2¼"	25	90°	1.2	2	2	2
	BKRA 050 F310	50	G 2¾"	40	90°	1.2	2	2	2

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

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



Model series		AKM										AKF				ASF	
Type		105				115						112			113	112 [3]	
Version		F100	F120	F122	SF132	F120	F122	SF132	SF152	SAF232	SAF332	F120	F122	F122	SF122	F220	F222
Voltage	230 V AC	●	●			●						●				●	
	24 V AC				●		●	●	●	●	●		●	●	●		●
	24 V DC				●			●	●	●	●		●	●	●		●
Positioning signal	2-point	●	●	●	●	●	●	●	●			●	●			●	●
	3-point	●	●	●	●	●	●	●	●					●			
	0...10 V				●			●	●	●	●				●		
	4...20 mA								●	● [4]	● [4]						
	Integrated controller with IoT and cloud									●	●						
Torque [Nm]		4				8						7				7	
Failsafe position	Angle of rotation 0°/90°											●	●	●	●	●	●
Running time [s/90°]		30	120	120	35 60 120	120	120	35 60 120	6	35 60 120	35 60 120		90			90	
Further properties										[1]	[2]					Auxiliary contacts	

[1] BACnet MS/TP, MQTT communication

[2] BACnet/IP, MQTT communication

[3] For fitting on ball valve, also order accessory 0510240001

[4] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0...20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

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

	Type	DN	Con-nection	Kvs [m³/h]	Angle of rotation	Δp_{max} [bar]			Mounting kit required
Cut-off ball valve with male thread -10 °C...130 °C 	VKAA 015 F300	15	G 1"	9	90°	1.8	3.5	3.5	3.5
	VKAA 020 F300	20	G 1¼"	17	90°	1.8	3.5	3.5	3.5
	VKAA 025 F300	25	G 1½"	22	90°	1.8	3.5	3.5	3.5
	VKAA 032 F300	32	G 2"	35	90°	1.2	2.4	2.4	2.4
	VKAA 040 F300	40	G 2¼"	68	90°	1.2	2.4	2.4	2.4
	VKAA 050 F300	50	G 2¾"	96	90°	1.2	2.4	2.4	2.4
T-port changeover Male thread -10 °C...130 °C 	BKTA 015 F300	15	G 1"	8	90°	1.8	2	2	2
	BKTA 020 F300	20	G 1¼"	13	90°	1.8	2	2	2
	BKTA 025 F300	25	G 1½"	13	90°	1.8	2	2	2
	BKTA 032 F300	32	G 2"	25	90°	1.2	2	2	2
	BKTA 040 F300	40	G 2¼"	49	90°	1.2	2	2	2
	BKTA 050 F300	50	G 2¾"	73	90°	1.2	2	2	2

Important accessories for ball valves

Strainer, PN16, -10...150 °C

Type	DN	Description
0560332 015	15	Strainer, gunmetal, mesh aperture 0.5 mm, PN16, -10...150 °C, female G½"
0560332 020	20	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G¾"
0560332 025	25	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1"
0560332 032	32	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1¼"
0560332 040	40	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1½"
0560332 050	50	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G2"

Accessories for VKx and BKx ball valves with female thread

Type	DN	Description
0560284 015	15	1 screw fitting, brass, flat-sealing, female G½" – male R½"
0560284 020	20	1 screw fitting, brass, flat-sealing, female G¾" – male R¾"
0560284 025	25	1 screw fitting, brass, flat-sealing, female G1" – male R1"
0560284 032	32	1 screw fitting, brass, flat-sealing, female G1¼" – male R1¼"
0560284 040	40	1 screw fitting, brass, flat-sealing, female G1½" – male R1½"
0560284 050	50	1 screw fitting, brass, flat-sealing, female G2" – male R2"

Accessories for VKx and BKx ball valves with male thread

Type	DN	Description
0361951 015	15	1 screw connecting fitting, brass, flat-sealing, female Rp½" – female G1"
0361951 020	20	1 screw connecting fitting, brass, flat-sealing, female Rp¾" – female G1¼"
0361951 025	25	1 screw connecting fitting, brass, flat-sealing, female Rp1" – female G1½"
0361951 032	32	1 screw connecting fitting, brass, flat-sealing, female Rp1¼" – female G2"
0361951 040	40	1 screw connecting fitting, brass, flat-sealing, female Rp1½" – female G2¼"
0361951 050	50	1 screw connecting fitting, brass, flat-sealing, female Rp2" – female G2¾"

Accessories for AKM 105 and AKM 115 (S) actuators

Type	Description
0510240 019	Cold adapter for media temp. < 5 °C for VKR/BKR ball valve with AKM ball valve actuator
0510240 011	Cold adapter for media temp. < 5 °C for VKR/BKR ball valve with AKF ball valve actuator
0510420 001	Temperature adapter for media temp. > 100 °C for VKR/BKR with AKM and AKF
0510480 001	Single auxiliary change-over contact for AKM 105/115 ball valve actuators
0510480 002	Double auxiliary change-over contact for AKM 105/115 ball valve actuators

Accessories for AKM115SAF Smart Actuator

Type	Description
SAIO100F020	I/O module, 5 x UI/AO, 3 x relay
05393601000	Dummy plug spare part set IP54
EY-PS031F011	Power supply, 110...240 VAC/24 VDC, 1.25 A, 30 W, DIN rail mounting
EY-PS031F021	Power supply, 110...240 VAC/24 VDC, 2.5 A, 60 W, DIN rail mounting
EY-PS031F041	Power supply, 110...240 VAC/24 VDC, 4 A, 100 W, DIN rail mounting
EY-RU355*	Operating device, LCD, NTC, 5B
053060200**	Cable for Smart Actuator, 24 V, open end, 2-wire, 2-pin plug (red)
053060310**	Cable for Smart Actuator, UI/O, open end, 3-wire, 3-pin plug (yellow)
053060320**	Cable for Smart Actuator, Ni1000, -35...100 °C, 3-pin plug (white)
053060340**	Cable for Smart Actuator, RS485, open end, 3-wire, 3-pin plug (green)
053060341**	Cable for Smart Actuator, RS485, 3-wire, 3-pin plug (green)
053060510**	Cable for Smart Actuator, UI/O, open end, 3-wire, 5-pin plug (yellow)
053060530**	Cable for Smart Actuator, connection to I/O box, 5-pin plug (blue)
053060535**	Cable for Smart Actuator, SLC, open end, 5-wire, 5-pin plug (green)

! For available cable lengths, see PDS 53.100

High-performance models 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 in 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 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 precise sealing surface of metal or stainless steel. This meets even the most stringent requirements for regulating and shut-off functions.

Versatile operation and flexible handling.
The reliability of SAUTER valves is ensured over the long term, even at high differential pressures. In addition, 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 actuating power ranging from 250 N to 2500 N and suitable valves for every application.

Actuators
Valves

VUN/BUN male threaded 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	SAF232	SAF332	F110	F112	SF132	F130	F230	SF132	SF232
Voltage	230 V AC	●	●			●					●		●[3]	●	●		
	24 V AC			●	●		●	●	●	●		●	●			●	●
	24 V DC				●			●	●	●		●	●				
Positioning signal	2-point	●	●	●	●	●	●	●			●	●	●	●	●	●	●
	3-point	●	●	●	●	●	●	●			●	●	●	●	●	●	●
	0...10 V				●			●	●	●			●			●	●
	4...20 mA								●[1]	●[1]			●			●	●
	Integrated controller with IoT and cloud								●	●							
Actuating power [N]		250				500			250[2]		1000			500			
Stroke [mm]		8				8			10		20			8			
Failsafe position	Spindle retracted											●[4]	●[4]	●		●	
	Spindle extended											●[4]	●[4]		●		●
Running time [s/mm]		4	15	15	4 8 15	15	15	8 15	4 6 12		6 12	6 12	4 12	8 15	8 15	8 15	8 15

[1] Optional accessory 0530603110 5 – Cable for Smart Actuator, I/O, 0...20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue).

[2] Can be switched to 500 N via software.

[3] Optional accessory 0500570003 230 V module for valve actuators AVM321S, AVM322S

[4] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

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

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

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

Area of use of 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...80, DN65...100		**VUE** **BUE** DN15...50		**VQE** **BQE** DN65...80, DN65...150	
Actuator model series		**AVM 105** **AVM 115** **AVF 124** **AVF 125**	**AVM 321**	**AKM 105** **AKM 115** **AKF 112** **AKF 113**	**AVM 105** **AVM 115** **AVF 124** **AVF 125**	**AVM 321**	**AVM 322**	**AVM 234** **AVF 234**	**AVM 105** **AVM 115** **AVF 124** **AVM 125**	**AVM 321**	**AVM 322**	**AVM 234** **AVF 234**
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									
	-10...2 °C	K1/K2	K1/K2	H10/H12	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2	K1/K2
Cold water	3...20 °C	●	●	●	●	●	●	●	●	●	●	●
Domestic hot water	21...100 °C	●	●	●	●	●	●	●	●	●	●	●
	101...130 °C	H1	H1	H11	H1	H1	H5	●	H1	H1	H5	●
Hot water	131...150 °C	H2	H2		H2	H2	H5	H3	H2	H2	H5	H3
	151...180 °C											
	181...200 °C											
	201...220 °C											
	221...230 °C											
Steam	100...115 °C											
	116...130 °C											
	131...180 °C											
	181...200 °C											
	201...220 °C											
	221...240 °C											

[1] PTFE stuffing box 0560260001 can only be used up to DN 125

● Standard model

	Accessories	Type	Description
	K1	0378284100	Stuffing box heater for VU./BU. valves, 230 V, 15 W
	K2	0378284102	Stuffing box heater for VU./BU. valves, 24 V AC, 15 W
	H1	0372249001	Temperature adapter for media temp. > 100 °C for AVM1./AVF12.
	H2	0372249002	Temperature adapter for media temp. > 130 °C for AVM1./AVF12.
	H3	0372336180	Adapter for media temperature above 130 °C up to 180 °C for valve actuators AVM/AVF234S and AVN224S
	H4	0372336240	Adapter for media temperature above 180 °C up to 240 °C for valve actuators AVM/AVF234S and AVN224S
	H5	0500240001	Adapter for media temperature above 100 °C up to 150 °C for AVM322(S)
	H6	0500240002	Adapter for media temperature above 130 °C up to 200 °C for AVM322(S)
	H10	0510240011	Cold adapter for media temp. < 5 °C for VKR/BKR ball valve with AKF ball valve actuator
	H11	0510420001	Temperature adapter for media temp. > 100 °C for VKR/BKR with AKM and AKF
	H12	0510240019	Cold adapter for media temp. < 5 °C for VKR/BKR ball valve with AKM ball valve actuator

Ductile cast iron PN16				Ductile cast iron PN25						Cast steel PN40			
VUG		**BUG**		**VUG**		**BUG**		**VUP**		**VUS**		**BUS**	
DN15...50	DN15...80	DN15...50	DN15...80	DN15...50	DN15...150	DN15...50	DN15...150	DN40	DN40...150	DN15...50	DN15...100	DN15...50	DN15...100
AVM 322	**AVM 234** **AVF 234** **AVN 224**	**AVM 322**	**AVM 234** **AVF 234** **AVN 224**	**AVM 322**	**AVM 234** **AVF 234** **AVN 224**	**AVM 322**	**AVM 234** **AVF 234** **AVN 224**	**AVM 322**	**AVM 234** **AVF 234** **AVN 224**	**AVM 322**	**AVM 234** **AVF 234**	**AVM 322**	**AVM 234** **AVF 234**
										FB	FB	FB	FB
S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	K1/K2	K1/K2	FB	FB	FB	FB
S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	K1/K2	K1/K2	FB	FB	FB	FB
S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	S[1] K1/K2	K1/K2	K1/K2	●	●	●	●
S[1]	S[1]	S[1]	S[1]	S[1]	S[1]	S[1]	S[1]	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●	●	●
H5	H3	H5	H3	H5	H3	H5	H3	H5	H3	H5	H3	H5	H3
H5	H3	H5	H3	H5	H3	H5	H3	H5	H3	H5	H3	H5	H3
				H6	H4	H6	H4	H6	H4	H6	H4	H6	H4
											H4		H4
											H4/G2		H4/G2
	●				●					●	●		
	●				●					●	●		
	H3				H3					H5	H3		
					H4					H6	H4		
											H4		
											H4/G2		

Stuffing box variants	**Type**	**Description**
G1	0378373001	Stuffing box for VUS/BUS valves DN15 to DN50, stainless steel, with graphite seal, temp. 220 °C to 260 °C
G2	0378373002	Stuffing box for VUS/BUS valves DN65 to DN100, stainless steel, with graphite seal, temp. 220 °C to 260 °C
G3	0560260001	Stuffing box for VUG/BUG valves DN15 to DN150, stainless steel/EPDM, temp. -10 °C to 150 C °(cold water)
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					
Type		105				115					321			322			234	124		125		234	
Version		F100	F120	F122	SF132	F120	F122	SF132	SAF232	SAF332	F110	F112	SF132	F110	F112	SF132	SF132	F130	F230	SF132	SF232	SF132	SF232
Voltage	230 V AC	●	●			●					●		●3)	●		●3)	●4)	●	●			●4)	●4)
	24 V AC			●	●		●	●	●	●		●	●		●	●	●			●	●	●	●
	24 V DC				●			●	●	●		●	●		●	●	●					●	●
Positioning signal	2-point	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●
	3-point	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●
	0…10 V				●			●	●	●			●			●	●			●	●	●	●
	4…20 mA								●1)	●1)			●			●	●			●	●	●	●
	Integrated controller with IoT and cloud								●	●													
Actuating power [N]		250				500			250[2]		1000			1000			2500	500				2000	
Stroke [mm]		8				8			10		20			20			49	8				49	
Failsafe position	Spindle retracted										●5)		●5)	●5)		●5)		●		●		●	
	Spindle extended										●5)		●5)	●5)		●5)			●		●		●
Running time [s/mm]		4	15	15	4 8 15	15	15	8 15	4 6 12		6 12	6 12	4 12	6 12	6 12	4 12	2 4 6	8 15	8 15	8 15	8 15	2 4 6	2 4 6

[1] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0…20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

[2] Can be switched to 500 N via software.

[3] Optional accessory 0500570003 230 V module for valve actuators AVM321S, AVM322S

[4] Optional accessory 0372332001 230 V module for valve actuators AVM/AVF234S and AVN224S

[5] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

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

	Type	DN	Flange	Kvs [m³/h]	Stroke [mm]	Δp_{max} [bar]						
2-way with flange -10 °C…150 °C	VUD 015 F320	15	PN6	1.6	8	4	6	6			6	
	VUD 015 F310	15	PN6	2.5	8	4	6	6			6	
	VUD 015 F300	15	PN6	4	8	4	6	6			6	
	VUD 020 F300	20	PN6	6.3	8	4	6	6			6	
	VUD 025 F300	25	PN6	10	8	2.8	6	6			6	
	VUD 032 F300	32	PN6	16	8	2.1	5.2	6			5.2	
	VUD 040 F300	40	PN6	22	8	1.2	3.3	6			3.3	
	VUD 050 F300	50	PN6	28	8	0.9	2	4			2	
	VUD 050 F200	50	PN6	40	8	0.9	2	4			2	
2-way with flange -10 °C…150 °C	VQD 065 F701D	65	PN6	50	20				2.5			3
	VQD 065 F300	65	PN6	63	20				2.5			3
	VQD 080 F701D	80	PN6	80	20				1.5			3
	VQD 080 F300	80	PN6	100	20				1.5			3
	VQD 100 F701D	100	PN6	125	40							2
	VQD 100 F300	100	PN6	160	40							2
3-way with flange -10 °C…150 °C	BUD 015 F320	15	PN6	1.6	8	4	6	6			6	
	BUD 015 F310	15	PN6	2.5	8	4	6	6			6	
	BUD 015 F300	15	PN6	4	8	4	6	6			6	
	BUD 020 F300	20	PN6	6.3	8	4	6	6			6	
	BUD 025 F300	25	PN6	10	8	2.8	6	6			6	
	BUD 032 F300	32	PN6	16	8	2.1	5.2	6			5.2	
	BUD 040 F300	40	PN6	22	8	1.2	3.3	6			3.3	
	BUD 050 F200	50	PN6	28	8	0.9	2	4			2	
	BUD 050 F300	50	PN6	40	8	0.9	2	4			2	
3-way with flange -10 °C…150 °C	BQD 065 F701D	65	PN6	50	20				2.5			3
	BQD 065 F300	65	PN6	63	20				2.5			3
	BQD 080 F701D	80	PN6	80	20				1.5			3
	BQD 080 F300	80	PN6	100	20				1.5			3
	BQD 100 F701D	100	PN6	125	40							2
	BQD 100 F300	100	PN6	160	40							2

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

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





Model series		AVM				AVM					AVM						AVF					
Type		105				115					321			322			234	124		125		234	
Version		F100	F120	F122	SF132	F120	F122	SF132	SAF232	SAF332	F110	F112	SF132	F110	F112	SF132	SF132	F130	F230	SF132	SF232	SF132	SF232
Voltage	230 V AC	●	●			●					●		●[3]	●		●[3]	●[4]	●	●			●[4]	●[4]
	24 V AC			●	●		●	●	●	●		●	●		●	●	●			●	●	●	●
	24 V DC				●			●	●	●		●	●		●	●	●					●	●
Positioning signal	2-point	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●
	3-point	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●
	0…10 V				●			●	●	●			●			●	●			●	●	●	●
	4…20 mA								●[1]	●[1]			●			●	●			●	●	●	●
	Integrated controller with IoT and cloud								●	●													
Actuating power [N]		250				500			250[2]		1000			1000			2500	500				2000	
Stroke [mm]		8				8			10		20			20			49	8				49	
Failsafe position	Spindle retracted										●[5]		●[5]	●[5]		●[5]		●		●		●	
	Spindle extended										●[5]		●[5]	●[5]		●[5]			●		●		●
Running time [s/mm]		4	15	15	4 8 15	15	15	8 15	4 6 12		6 12	6 12	4 12	6 12	6 12	4 12	2 4 6	8 15	8 15	8 15	8 15	2 4 6	2 4 6

[1] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0…20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

[2] Can be switched to 500 N via software.

[3] Optional accessory 0500570003 230 V module for valve actuators AVM321S, AVM322S

[4] Optional accessory 0372332001 230 V module for valve actuators AVM/AVF234S and AVN224S

[5] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

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

	Type	DN	Flange	Kvs [m³/h]	Stroke [mm]	Δp_{max} [bar]							
2-way with flange -10 °C…150 °C	VUE 015 F350	15	PN16/10	0.4	8	4	6	6			6		
	VUE 015 F340	15	PN16/10	0.63	8	4	6	6			6		
	VUE 015 F330	15	PN16/10	1	8	4	6	6			6		
	VUE 015 F320	15	PN16/10	1.6	8	4	6	6			6		
	VUE 015 F310	15	PN16/10	2.5	8	4	6	6			6		
	VUE 015 F300	15	PN16/10	4	8	4	6	6			6		
	VUE 020 F300	20	PN16/10	6.3	8	4	6	6			6		
	VUE 025 F300	25	PN16/10	10	8	2.8	6	6			6		
	VUE 032 F300	32	PN16/10	16	8	2.1	5.2	6			5.2		
	VUE 040 F300	40	PN16/10	22	8	14	3.3	6			3.3		
	VUE 050 F300	50	PN16/10	28	8	0.9	2	4			2.0		
	VUE 050 F200	50	PN16/10	40	8	0.9	2	4			2.0		
2-way with flange -10 °C…150 °C	VQE 065 F701D	65	PN16/10	50	20				2.5			3	3
	VQE 065 F300	65	PN16/10	63	20				2.5			3	3
	VQE 080 F701D	80	PN16/10	80	20				1.5			3	3
	VQE 080 F300	80	PN16/10	100	20				1.5			3	3
	VQE 100 F701D	100	PN16/10	125	40							2	2
	VQE 100 F300	100	PN16/10	160	40							2	2
	VQE 125 F300	125	PN16/10	220	40							1.4	1.4
	VQE 150 F300	10	PN16/10	320	40							1	1
3-way with flange -10 °C…150 °C	BUE 015 F330	15	PN16/10	1	8	4	6	6			6		
	BUE 015 F320	15	PN16/10	1.6	8	4	6	6			6		
	BUE 015 F310	15	PN16/10	2.5	8	4	6	6			6		
	BUE 015 F300	15	PN16/10	4	8	4	6	6			6		
	BUE 020 F300	20	PN16/10	6.3	8	4	6	6			6		
	BUE 025 F300	25	PN16/10	10	8	2.8	6	6			6		
	BUE 032 F300	32	PN16/10	16	8	2.1	5.2	6			5.2		
	BUE 040 F300	40	PN16/10	22	8	1.4	3.3	6			3.3		
	BUE 050 F300	50	PN16/10	28	8	0.9	2	4			2		
	BUE 050 F200	50	PN16/10	40	8	0.9	2	4			2		
3-way with flange -10 °C…150 °C	BQE 065 F701D	65	PN16/10	50	20				2.5			3	3
	BQE 065 F300	65	PN16/10	63	20				2.5			3	3
	BQE 080 F701D	80	PN16/10	80	20				1.5			3	3
	BQE 080 F300	80	PN16/10	100	20				1.5			3	3
	BQE 100 F701D	100	PN16/10	125	40							2	2
	BQE 100 F300	100	PN16/10	160	40							2	2
	BQE 125 F300	125	PN16/10	220	40							1.4	1.4
	BQE 150 F300	150	PN16/10	320	40							1	1

The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

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



Model series		AVM			AVM	AVF	
Type		322			234	234	
Version		F120	F122	SF132	SF132	SF132	SF232
Voltage	230 V AC	●		●[1]	●[2]	●[2]	●[2]
	24 V AC		●	●	●	●	●
	24 V DC		●	●	●	●	●
Positioning signal	2-point	●	●	●	●	●	●
	3-point	●	●	●	●	●	●
	0...10 V			●	●	●	●
	4...20 mA			●	●	●	●
Actuating power [N]		1000			2500	2000	
Stroke [mm]		20			49	49	
Failsafe position	Spindle retracted		●[3]	●[3]		●	
	Spindle extended		●[3]	●[3]			●
Running time [s/mm]		6 12	6 12	4 6	2 4 6	2 4 6	

[1] Optional accessory 0500570003 230 V module for valve actuators AVM321S, AVM322S

[2] Optional accessory 0372332001 230 V module for valve actuators AVM/AVF234S and AVN224S

[3] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

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 with flange 30 °C...200 °C	VUG 015 F374	15	PN25/16	0.16	20	16	16	16
	VUG 015 F364	15	PN25/16	0.25	20	16	16	16
	VUG 015 F354	15	PN25/16	0.4	20	16	16	16
	VUG 015 F344	15	PN25/16	0.63	20	16	16	16
	VUG 015 F334	15	PN25/16	1	20	16	16	16
	VUG 015 F324	15	PN25/16	1.6	20	16	16	16
	VUG 015 F314	15	PN25/16	2.5	20	16	16	16
	VUG 015 F304	15	PN25/16	4	20	16	16	16
	VUG 020 F304	20	PN25/16	6.3	20	16	16	16
	VUG 025 F304	25	PN25/16	10	20	15.2	16	16
	VUG 032 F304	32	PN25/16	16	20	9.4	16	16
	VUG 040 F304	40	PN25/16	25	20	6.1	16	13.5
	VUG 050 F304	50	PN25/16	40	20	4	11	8.5
	VUG 065 F316	65	PN16	63	40		7.1	5.6
	VUG 065 F304	65	PN25	63	40		7.1	5.6
	VUG 080 F304	80	PN25/16	100	40		4.7	3.4
	VUG 100 F304	100	PN25	160	40		3	2.2
	VUG 125 F304	125	PN25	250	40		2	1.6
	VUG 150 F304	150	PN25	340	40		1.5	1.2
3-way with flange 30 °C...200 °C	BUG 015 F334	15	PN25/16	1	20	16	16	16
	BUG 015 F324	15	PN25/16	1.6	20	16	16	16
	BUG 015 F314	15	PN25/16	2.5	20	16	16	16
	BUG 015 F304	15	PN25/16	4	20	16	16	16
	BUG 020 F304	20	PN25/16	6.3	20	16	16	16
	BUG 025 F304	25	PN25/16	10	20	15.2	16	16
	BUG 032 F304	32	PN25/16	16	20	9.4	16	16
	BUG 040 F304	40	PN25/16	25	20	6.1	16	13.5
	BUG 050 F304	50	PN25/16	40	20	4	11	8.5
	BUG 065 F316	65	PN16	63	40		7.1	5.6
	BUG 065 F304	65	PN25	63	40		7.1	5.6
	BUG 080 F304	80	PN25/16	100	40		4.7	3.4
	BUG 100 F304	100	PN25	160	40		3	2.2
	BUG 125 F304	125	PN25	250	40		2	1.6
	BUG 150 F304	150	PN25	340	40		1.5	1.2


The values specified apply when used as control valves (against the pressure). Values for use as diverting valves (with the pressure), other details and binding technical data can be found in the relevant data sheet (PDS, Product Data Sheet).

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



Model series		AVM			AVM	AVF	
Type		322			234	234	
Version		F120	F122	SF132	SF132	SF132	SF232
Voltage	230 V AC	●		●[1]	●[2]	●[2]	●[2]
	24 V AC		●	●	●	●	●
	24 V DC		●	●	●	●	●
Positioning signal	2-point	●	●	●	●	●	●
	3-point	●	●	●	●	●	●
	0...10 V			●	●	●	●
	4...20 mA			●	●	●	●
Actuating power [N]		1000			2500	2000	
Stroke [mm]		20			49	49	
Failsafe position	Spindle retracted		●[3]	●[3]		●	
	Spindle extended		●[3]	●[3]			●
Running time [s/mm]		6 12	6 12	4 6	2 4 6	2 4 6	

[1] Optional accessory 0500570003 230 V module for valve actuators AVM321S, AVM322S

[2] Optional accessory 0372332001 230 V module for valve actuators AVM/AVF234S and AVN224S

[3] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

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

2-way with flange
-10 °C...200 °C

Type	DN	Flange	Kvs [m³/h]	Stroke [mm]		Δp_{max} [bar]	
VUP 040 F304	40	PN25	25	14	25	25	25
VUP 050 F304	50	PN25	40	25		25	25
VUP 065 F304	65	PN25	63	25		25	25
VUP 080 F304	80	PN25	100	25		25	25
VUP 100 F304	100	PN25	160	40		25	20
VUP 125 F304	125	PN25	250	40		19	14
VUP 150 F304	150	PN25	350	40		15	10

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



Model series		AVM			AVM	AVF	
Type		322			234	234	
Version		F120	F122	SF132	SF132	SF132	SF232
Voltage	230 V AC	●		●[1]	●[2]	●[2]	●[2]
	24 V AC		●	●	●	●	●
	24 V DC		●	●	●	●	●
Positioning signal	2-point	●	●	●	●	●	●
	3-point	●	●	●	●	●	●
	0...10 V			●	●	●	●
	4...20 mA			●	●	●	●
Actuating power [N]		1000			2500	2000	
Stroke [mm]		20			49	49	
Failsafe position	Spindle retracted		●[3]	●[3]		●	
	Spindle extended		●[3]	●[3]			●
Running time [s/mm]		6 12	6 12	4 6	2 4 6	2 4 6	

[1] Optional accessory 0500570003 230 V module for valve actuators AVM321S, AVM322S

[2] Optional accessory 0372332001 230 V module for valve actuators AVM/AVF234S and AVN224S

[3] Optional accessory 0500570001 Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122

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 with flange	VUS 015 F375	15	PN40	0.16	20	35	40	40
	VUS 015 F365	15	PN40	0.25	20	35	40	40
	VUS 015 F355	15	PN40	0.4	20	35	40	40
	VUS 015 F345	15	PN40	0.63	20	35	40	40
	VUS 015 F335	15	PN40	1	20	35	40	40
	VUS 015 F325	15	PN40	1.6	20	35	40	40
	VUS 015 F315	15	PN40	2.5	20	35	40	40
	VUS 015 F305	15	PN40	4	20	35	40	40
	VUS 020 F305	20	PN40	6.3	20	35	40	40
	VUS 025 F305	25	PN40	10	20	17.4	37.8	29.7
	VUS 032 F305	32	PN40	16	20	12.2	28.7	22.5
	VUS 040 F305	40	PN40	25	20	6.2	16.4	12.8
	VUS 050 F305	50	PN40	40	20	3.7	10.5	8.2
	VUS 065 F305	65	PN40	63	30		6.1	4.7
	VUS 080 F305	80	PN40	100	30		3.9	3
	VUS 100 F305	100	PN40	160	30		1.5	1.5
3-way -10 °C...260 °C with flange	BUS 015 F225	15	PN40	1.6	20	35	40	40
	BUS 015 F215	15	PN40	2.5	20	35	40	40
	BUS 015 F205	15	PN40	4	20	35	40	40
	BUS 020 F205	20	PN40	6.3	20	35	40	34.7
	BUS 025 F205	25	PN40	10	20	17.4	37.8	29.6
	BUS 032 F205	32	PN40	16	20	12.2	27	21.1
	BUS 040 F205	40	PN40	25	20	6.2	16.4	12.8
	BUS 050 F205	50	PN40	40	20	3.7	10.5	8.2
	BUS 065 F205	65	PN40	63	30		6.1	4.7
	BUS 080 F205	80	PN40	100	30		3.9	3
	BUS 100 F205	100	PN40	160	30		2.5	1.9


Important accessories for male threaded and flanged valves

Strainer, PN16, -10...150 °C

Type	Description
0560332 015	Strainer, gunmetal, mesh aperture 0.5 mm, PN16, -10...150 °C, female G½"
0560332 020	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G¾"
0560332 025	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1"
0560332 032	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1¼"
0560332 040	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G1½"
0560332 050	Strainer, gunmetal, mesh aperture 0.8 mm, PN16, -10...150 °C, female G2"

Accessories for valves with 8 mm stroke

Type	Description
0361951 015	1 screw connecting fitting, brass, flat-sealing, female Rp½" – female G1"
0361951 020	1 screw connecting fitting, brass, flat-sealing, female Rp¾" – female G1¼"
0361951 025	1 screw connecting fitting, brass, flat-sealing, female Rp1" – female G1½"
0361951 032	1 screw connecting fitting, brass, flat-sealing, female Rp1¼" – female G2"
0361951 040	1 screw connecting fitting, brass, flat-sealing, female Rp1½" – female G2¼"
0361951 050	1 screw connecting fitting, brass, flat-sealing, female Rp2" – female G2¾"

Type	Description
0372249 001	Temperature adapter for media temp. > 100 °C for AVM1./ AVF12.
0372249 002	Temperature adapter for media temp. > 130 °C for AVM1./ AVF12.
0378284 100	Stuffing box heater for VU./BU. valves, 230 V, 15 W
0378284 102	Stuffing box heater for VU./BU. valves, 24 V AC, 15 W
0372240 001	Manual adjuster for valves with 8 mm stroke, VUD/BUD, VUE/BUE, VUN/BUN

Accessories for valves starting from 20 mm stroke

Type	Description
0372336 180	Adapter for media temperature above 130 °C up to 180 °C for valve actuators AVM/AVF234S and AVN224S
0372336 240	Adapter for media temperature above 180 °C up to 240 °C for valve actuators AVM/AVF234S and AVN224S
0378284 100	Stuffing box heater for VU./BU. valves, 230 V, 15 W
0378284 102	Stuffing box heater for VU./BU. valves, 24 V AC, 15 W
0500240 001	Adapter for media temperature above 100 °C up to 150 °C for AVM322(S)
0500240 002	Adapter for media temperature above 130 °C up to 200 °C for AVM322(S)

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

Type	Description
0372332 001	230 V module for valve actuators AVM/AVF234S and AVN224S
0372332 002	110 V module for valve actuators AVM/AVF234S and AVN224S
0372333 001	2 auxiliary change-over contacts, infinitely adjustable, for valve actuators AVM/AVF234S and AVN224S
0372461 001	Forced operation module for valve actuators AVM/AVF234S and AVN224S

Accessories for AVM 321 and AVM 322 actuators

Type	Description
0500420 002	4...20 mA feedback module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
0500570 001	Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122
0500570 003	230 V module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
0510480 003	Dual auxiliary switch unit for valve actuators AVM215(S), AVM321(S) with 8 mm stroke
0510480 004	Dual auxiliary switch unit for valve actuators AVM215(S), AVM322(S) with 20 mm stroke
0510600 001	Plug module, 1.2 m cable, 3-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
0510600 002	Plug module, 1.2 m cable, 3-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
0510600 003	Plug module, 1.2 m cable, 6-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
0510600 004	Plug module, 1.2 m cable, 6-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
0510600 005	Plug module, 5 m cable, 3-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
0510600 006	Plug module, 5 m cable, 3-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
0510600 007	Plug module, 5 m cable, 6-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
0510600 008	Plug module, 5 m cable, 6-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322

Accessories for AVM 105 and AVM 115 actuators

Type	Description
0372145 001	Single auxiliary change-over contact for actuators ASM/AVM 105/115
0372145 002	Double auxiliary change-over contact for actuators ASM/AVM 105/115
0372320 001	Hex key for manual adjustment of ASM/AVM 105/115, 215

Accessories for AVF 124 and AVF 125S actuators

Type	Description
0370881 001	Single auxiliary contact for valve actuators AVM/AVF 124/125

Accessories for AVM115SAF Smart Actuator

Type	Description
SAIO100F 020	I/O module for Smart Actuator, 6 x U-I/O (0...10 V, Ni1000, Pt1000, 100...2500 Ω), 3 x relays (changeover contact, 10 A capacitive/5 A inductive)
05305700 10D	Power supply module with 230 V/24 V DC, 15 VA power supply for Smart Actuator
05305700 20D	Distributor module with 230 V/24 V DC, 100 VA power supply for Smart Actuator
EY-RU355F 052	Operating device, LCD, NTC, 5B (+, -, UP, DOWN, PRES), white
05306020 001	Cable for Smart Actuator, 24 V, L = 1.0 m, open end, 2-wire, 2-pin plug (red)
05306031 001	Cable for Smart Actuator, U-I/O, L = 1.0 m, open end, 3-wire, 3-pin plug (yellow)
05306032 001	Cable for Smart Actuator, Ni1000, -35...100 °C, L = 1.0 m, 3-pin plug (white)
05306034 001	Cable for Smart Actuator, RS485, L = 1.0 m, open end, 3-wire, 3-pin plug (green)
05306034 105	Cable for Smart Actuator, RS485, L = 5.0 m, 3-wire, 3-pin plug (green)
05306051 001	Cable for Smart Actuator, U-I/O, L = 1.0 m, open end, 3-wire, 5-pin plug (yellow)
05306053 001	Cable for Smart Actuator, connection to I/O box, L = 1.0 m, 5-pin plug (blue)
05306053 505	Cable for Smart Actuator, SLC, L = 5.0 m, open end, 5-wire, 5-pin plug (green)

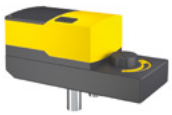
Reliable in every medium – tightly sealing **butterfly valves** from SAUTER.

Versatile and energy-efficient.
SAUTER butterfly valves are versatile wafer-type valves that are used for control or shut-off functions. Their tight seal reduces energy consumption. Heaters and coolers are connected to boilers or cooling systems as required. If this is not required or a changeover has to be performed, the SAUTER butterfly valve isolates 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 15 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, brine, water with additives etc., can be used.

Actuators
DEF

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




Model series		ADM								ASM					ASF						
Type		322						333					124			134		122				123	
Version		F120	F122	HF120	HF122	SF122	SF152	HF120	HF122	SF122	F120	F122	SF132	F130	SF132	F120	F122	F220	F222	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					●	●			●			●		●						●
	4…20 mA						●[1]														
Torque [Nm]		15						30			18	18	15	30		18					
Failsafe position	Angle of rotation 0°/90°															●	●	●	●	●	●
Running time [s/90°]		120	120	120	120	120	30	120	120	60	120	120	60	120	120	90	90	90	90	90	90
		240	240	240	240		60						120	240	240						
Further properties		Auxiliary contacts						Auxiliary contacts, potentiometers								Auxiliary contacts					

[1] Optional accessory 0500420002 4…20 mA feedback module

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

-10…130 °C

Type	DN	Con-nection	Kvs (m³/h)									
DEF 025 F200	25	PN16	36	10		16		10			10	
DEF 032 F200	32	PN16	40	10		16		10			10	
DEF 040 F200	40	PN16	50	10		16		10			10	
DEF 050 F200	50	PN16	85	10		16		10			10	
DEF 065 F200	65	PN16	215	7		16		7		7	7	
DEF 080 F200	80	PN16	420	4		10		4		7	4	
DEF 100 F200	100	PN16	800	2		10		2		7	2	
DEF 125 F200	125	PN16	1010			6				6		
DEF 150 F200	150	PN16	2100			5				5		
DEF 200 F200	200	PN16	4000			3				2		

Important accessories for butterfly valves and actuators

Type	Description
0510240014	Mounting set for SAUTER DEF butterfly valves DN25 to DN65 with ADM322
0510240015	Mounting set for SAUTER DEF butterfly valves DN80 and DN100 with ADM322
0500420002	4…20 mA feedback module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
0500570003	230 V module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
0510240031	Mounting set for SAUTER DEF butterfly valves DN25 to DN65 with ADM333
0510240032	Mounting set for SAUTER DEF butterfly valves DN80 to DN125 with ADM333
0510240033	Mounting set for SAUTER DEF butterfly valves DN150 and DN200 with ADM333
0510240041	Mounting set for SAUTER DEF butterfly valves DN25 to DN65 with ADM333 and hand lever
0510240042	Mounting set for SAUTER DEF butterfly valves DN80 to DN125 with ADM333 and hand lever
0510240043	Mounting set for SAUTER DEF butterfly valves DN150 and DN200 with ADM333 and hand lever
0510420020	Parallel relay for 3-point actuation of multiple ADM333F
0510510010	Heating resistor 3 W, 230 V, for ADM333
0510510012	Heating resistor 3 W, 24 V, for ADM333
0372455001	Mounting set for SAUTER DEF butterfly valves DN25 to DN65 with ASM124/134
0372455002	Mounting set for SAUTER DEF butterfly valves DN80 and DN100 with ASM124 and DN80 to DN125 with ASM134
0372455003	Mounting set for SAUTER DEF butterfly valves DN150 and DN200 with ASM134
0370990001	Single auxiliary change-over contact for damper actuators ASM124/134
0370990002	Double auxiliary change-over contact for damper actuators ASM124/134
0378113001	Mounting set for SAUTER DEF butterfly valves DN25 to DN100 with ASF122/123

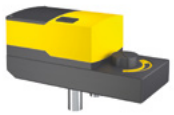
For heating installations, single-family homes and community heating – **rotary actuators and control valves** from SAUTER.

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 used 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 grey cast iron. To improve control accuracy when setting the supply temperature and while achieving maximum energy efficiency, we recommend using weather-dependent heating control with the ASM115SAF Smart Actuator or the EQJW 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 ranging from 5 Nm to 18 Nm. All SAUTER actuators are equipped with 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	F100	F120	F122	SF132	SF152	F120	F122	SF132	SF152	SAF232	SAF332	F120	F122	SF132
Voltage	230 V AC	●		●				●	●				●						●		
	24 V AC		●		●	●	●			●	●	●		●	●	●	●	●		●	●
	24 V DC		●		●	●	●				●	●			●	●	●	●			●
Positioning signal	2-point	●	●	●	●		●	●	●	●	●	●	●	●	●	●			●	●	●
	3-point	●	●	●	●		●	●	●	●	●	●	●	●	●	●			●	●	●
	0…10 V					●	●				●	●			●	●	●	●			●
	4…20 mA					●	●					●				●	●	●			
	Integrated controller with IoT and cloud																●	●			
Feedback	0…10 V					●	●								●	●	●	●			●
	4…20 mA						●[1]										●[2]	●[2]			
Torque [Nm]		15						5					10						18	18	15
Running time [s/90°]		120 240	120 240	120 240	120 240	120	30 60	30	120	120	35 60 120	3	120	120	60 120	6	60 120	60 120	120	120	60 120
Further properties		Auxiliary contacts																			

[1] Optional accessory 0500420002 4…20 mA feedback module

[2] Optional accessory 05306031105 – Cable for Smart Actuator, I/O, 0…20 mA, L = 5.0 m, open end, 3-wire, 3-pin plug (blue)

Control valves in grey cast iron with flange connection PN6

	Type	DN	Con-nection	Kvs (m^3/h)	Δp_{max} (bar)			
3-way control valve 2 °C…110 °C	MH32 F20 F200	20	PN6	12	1	1	1	1
	MH32 F25 F200	25	PN6	18	1	1	1	1
	MH32 F32 F200	32	PN6	28	1	1	1	1
	MH32 F40 F200	40	PN6	44	1	1	1	1
	MH32 F50 F200	50	PN6	66	0.5		0.5	0.5
	MH32 F65 F200	65	PN6	100	0.5		0.5	0.5
	MH32 F80 F200	80	PN6	150	0.5		0.5	0.5
	MH32 F100 F200	100	PN6	225	0.5			0.5
	MH32 F125 F200	125	PN6	310	0.5			0.5
	MH32 F150 F200	150	PN6	420	0.5			0.5
4-way control valve 2 °C…110 °C	MH42 F32 F200	32	PN6	28	1			1
	MH42 F40 F200	40	PN6	44	1			1
	MH42 F50 F200	50	PN6	66	0.5			0.5

Control valves in cast brass with female thread connection PN6

	Type	DN	Con-nection	Kvs (m^3/h)	Δp_{max} (bar)			
3-way control valve 2 °C…110 °C	M3R 015 F200	15	Rp ½	2.5	2	2		
	M3R 020 F200	20	Rp ¾	6	1	1		
	M3R 025 F200	25	Rp 1	12	1	1	1	
	M3R 032 F200	32	Rp 1¼	18	1	1	1	1
	M3R 040 F200	40	Rp 1½	26	1	1	1	1
	M3R 050 F200	50	Rp 2	40	1	1	1	1
4-way control valve 2 °C…110 °C	M4R 020 F200	20	Rp ¾	6	1	1		
	M4R 025 F200	25	Rp 1	12	1	1	1	
	M4R 032 F200	32	Rp 1¼	18	1	1	1	1
	M4R 040 F200	40	Rp 1½	26	1	1	1	1
	M4R 050 F200	50	Rp 2	40	1	1	1	1

Important accessories for control valves and actuators

Type	Description
0560284015	1 screw fitting, brass, flat-sealing, female G½" – male R½"
0560284020	1 screw fitting, brass, flat-sealing, female G¾" – male R¾"
0560284025	1 screw fitting, brass, flat-sealing, female G1" – male R1"
0560284032	1 screw fitting, brass, flat-sealing, female G1¼" – male R1¼"
0560284040	1 screw fitting, brass, flat-sealing, female G1½" – male R1½"
0560284050	1 screw fitting, brass, flat-sealing, female G2" – male R2"
0510240013	Mounting set for SAUTER M3R/M4R/MH32/MH42 control valves with ADM322
0500420002	4…20 mA feedback module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
0500570003	230 V module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
0361977002	Mounting set for SAUTER M3R/M4R/MH32/MH42 control valves with ASM105/115
0372145001	Single auxiliary change-over contact for actuators ASM/AVM 105/115
0372145002	Double auxiliary change-over contact for actuators ASM/AVM 105/115
0361977001	Mounting set for SAUTER M3R/M4R/MH32/MH42 control valves with ASM124
0370990001	Single auxiliary change-over contact for damper actuators ASM124/134
0370990002	Double auxiliary change-over contact for damper actuators ASM124/134
0370992001	Potentiometer, 2000 Ω for damper actuators ASM124/134
0370992002	Potentiometer, 130 Ω for damper actuators ASM124/134

modulo 6, ecos 5

Multi-core CPU for precise control and fast response times in building automation.

Designed to meet the growing demands of connected building systems.

The new generation of SAUTER modulo 6 and ecos 5 combines a state-of-the-art multi-core architecture with advanced cybersecurity features for secure and future-oriented building automation.

- High system performance thanks to a multi-core CPU architecture with large memory capacity for long-term data storage.
- High system scalability (decentralised I/O topologies)
- Enhanced service continuity through rapid system recovery
- Integration into existing SAUTER building and room automation solutions
- Smoother operation of moduWeb Unity on modulo 6 automation stations

With modulo 6 and ecos 5, SAUTER offers an enhanced platform for secure and connected building automation.

SAUTER modulo 6 and ecos 5 combine updated system architecture with current requirements for security and connectivity.

modulo 6

ecos 5

Systems
Components
Services
Facility Management

SAUTER
Creating Sustainable Environments.

Replacement made **easy.**

Ideal for retrofitting projects.
SAUTER makes your HVAC installation fit for the future. Our modern, energy-efficient actuators can be fitted onto practically all existing valves. This means they are also ideally suited for retrofitting projects. SAUTER valve actuators are powerful and economical. They are versatile, quick to install and ready for use straight away.

The electric linear actuators.
The electric valve actuators from SAUTER offer 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 quiet operation.

AVM 321, 322S...R
AVM 321, 322
AVM 215S..R
AVM 215
Actuators

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




Manufacturer	Type	DN	**AVM 215S F123R** **AVM 215 F120R** Stroke up to 20 mm	**AVM 322(S)...R** Stroke up to 20 mm	**AVM 322(S)...** Stroke up to 20 mm	**AVM 234S F132** **AVF234SF32** **AVN224SF32** Stroke up to 40 mm
Belimo	H6..R	15...65		0510390027	0510390012	
	H7..R	15...65		0510390027	0510390012	
	H4..B	15...50		0510390027	0510390012	
	H5..B	15...50		0510390027	0510390012	
	H6..N	15...65		0510390027	0510390012	
	H7..N	15...65		0510390027	0510390012	
Danfoss	VRB – VRG	15...50	0510390040			
	VFS/VL/VF	15...50	0510390039			
	VEFS2	25...50	0510390039			
Frese	OPTIMA Compac Threaded	40...50	0510390029	0510390041		
	OPTIMA Compac Flange	50...80	0510390038	0510390028		
	OPTIMA Compac Flange	100...300				0510390053
Herz	RBV	80...100				0510390057
	TV/PV	32...50				0510390057
	KV/KVP	65...80				0510390056
	PV/TV	15...25	0510390055			
	KV/KVP	15...50	0510390055			
	RBV	50...65	0510390055			
Honeywell	V5013R	15...50		0510390024	0510390008	
	V5016A	15...80		0510390024	0510390008	0372378001
	V5025A	15...80		0510390024	0510390008	0372378001
	V5049A	15...65		0510390024	0510390008	0372378001
	V5049B	15...65		0510390024	0510390008	
	V5050A	15...80		0510390024	0510390008	0372378001
	V5095A	15...80		0510390024	0510390008	0372378001
	V5328A	15...80		0510390024	0510390008	0372378001
	V5329A	15...80		0510390024	0510390008	
	V5049A	80...150				0372378002
	V5049B	80...150				0372378002
	V5025A	100...150				0372378002
	V5050A	100...150				0372378002
IMI	KTM512	65...100	0510390037			
	KTM512	15...50	0510390036			
	CV	15...50	0510390035			
	TA-Fusion	32...50	0510390033			
	TA-Fusion	65...80	0510390034			
ITT-Dräger	PSVF	15...32		0510390 026	0510390010	0372389001
	PSVD	15...32		0510390 026	0510390010	0372389001
	SVF	15...32		0510390 026	0510390010	0372389001
	SVD	15...32		0510390 026	0510390010	0372389001
	PSVF	40...50				0372389002
	PSVD	40...50				0372389002
	SVF	40...50				0372389002
	SVD	40...50				0372389002




Manufacturer	Type	DN	**AVM 215S F123R** **AVM 215 F120R** Stroke up to 20 mm	**AVM 322(S)..R** Stroke up to 20 mm	**AVM 322(S)...** Stroke up to 20 mm	**AVM 234S F132** **AVF234SF32** **AVN224SF32** Stroke up to 40 mm
Johnson Controls	VB7216	15...50				0372377001
	VB7816	15...50				0372377001
	VBD-4xx4	15...40		0510390023	0510390007	0372377001
	VBD-4xx4	50...150				0372377001
	VBD-4xx8	15...40		0510390023	0510390007	0372377001
	VBD-4xx8	50...150				0372377001
	VBF-0xx4	15...150				0372377001
	VBF-0xx8	15...150				0372377001
	VBF-2xx4	15...40		0510390023	0510390007	0372377001
	VBF-2xx4	50...100				0372377001
	VBF-2xx8	15...40		0510390023	0510390007	0372377001
	VBF-2xx8	50...100				0372377001
	VBB-2xxx	15...100				0372377001
	VG720x	15...50				0372377001
	VG740x	15...50				0372377001
	VG780x	15...50				0372377001
	VGS8..	15...50				0372377001
	VG82.. / VG84..	15...40		0510390023	0510390007	0372377001
	VG82.. / VG84..	50...150				0372377001
	VG8300N/H	40...150				0372377001
	VG88.. / VG89..	15...40		0510390023	0510390007	0372377001
	VG88.. / VG89..	50...150				0372377001
	VG94.. / VG98..	15...100				0372377001
LDM	RV113 R	15...50		0510390025	0510390009	0372386001
	RV113 M	15...50		0510390025	0510390009	0372386001
Satchwell	VZF1727	65...100				0372387001
Sauter	VDL	40...50	0510390029			
	V6R/B6R	15...50	0510390032		0510240012	0372338001
	V6F/B6F	15...50			0510240012	0372338001
	V6G/B6G	15...50			0510240012	0372338001
	V6S/B6S	15...50			0510240012	0372338001
	VXD/BXD	15...50			0510240012	0372338001
	VXE/BXE	15...50			0510240012	0372338001
	V6F/B6F	65...150				0372338002
	V6G/B6G	65...150				0372338002
	V6S/B6S	65...150				0372338002
	VXD/BXD	65...80				0372338002
	VXE/BXE	65...100				0372338002
	VQD/BQD	65...80		0510390020		
	VQE/BQE	65...80		0510390020		
	VUG/BUG	15...50		0510390020		
	VUS/BUS	15...50		0510390020		
	V66N	15...50		0510390020		
	V6R/B6R	15...50		0510390021		
	V6F/B6F	15...50		0510390021		
	V6G/B6G	15...50		0510390021		
	V6S/B6S	15...50		0510390021		
	VXD/BXD	15...50		0510390021		
	VXE/BXE	15...50		0510390021		
	VUN/BUN	15...50	0510390030			
	VUD/BUD	15...50	0510390030			
	VUE/BUE	15...50	0510390030			
	VQD/BQD	65...80	0510390031			
	VQE/BQE	65...80	0510390031			
	VUG/BUG	15...50	0510390031			
	VUS/BUS	15...50	0510390031			
	V66N	15...50	0510390031			




Manufacturer	Type	DN	**AVM 215S F123R** **AVM 215 F120R** Stroke up to 20 mm	**AVM 322(S)..R** Stroke up to 20 mm	**AVM 322(S)...** Stroke up to 20 mm	**AVM 234S F132** **AVF234SF32** **AVN224SF32** Stroke up to 40 mm
Schneider	V241/V341	15...50	0510390060	0510390061	0510390061	0510390062
	V321	65...100				0510390063
Siemens	VVF21	25...80		0510390022	0510390006	0372376010
	VVF21	100				0372376014
	VXF21	25...80		0510390022	0510390006	0372376010
	VXF21	100				0372376014
	VVF31	15...80		0510390022	0510390006	0372376010
	VVF31	100...150				0372376014
	VXF31	15...80		0510390022	0510390006	0372376010
	VXF31	100...150				0372376014
	VVF40	15...80		0510390022	0510390006	0372376010
	VVF40	100...150				0372376014
	VXF40	15...80		0510390022	0510390006	0372376010
	VXF40	100...150				0372376014
	VVF41	50		0510390022	0510390006	0372376010
	VVF41	65...150				0372376014
	VXF41	15...50		0510390022	0510390006	0372376010
	VXF41	65...150				0372376014
	VVF45	50		0510390022	0510390006	0372376010
	VVF45	65...150				0372376014
	VVF52	15...40		0510390022	0510390006	0372376010
	VVF52G	15...40		0510390022	0510390006	
	VVF52J	15...40		0510390022	0510390006	
	VVF52GJ	15...40		0510390022	0510390006	
	VVF61	15...50		0510390022	0510390006	0372376010
	VVG41	15...50		0510390022	0510390006	0372376010
	VPF52 (E/F)	15...40		0510390022	0510390006	0372376010
	VVG44/VXG44	15...50				
	VVG48/VXG48	15...50				
	VVF/VXF 61.65...61.92	65...150			0372376014	
	VXF32 PN10	100...150			0372376015	
	VXF22 PN6	100			0372376015	

Important accessories for AVM 322 and AVM 215 linear actuators

	Type	Description
	0500420002	4...20 mA feedback module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
	0500570001	Energy module for valve actuators AVM321S/AVM322S and AVM321F112/AVM322F122
	0500570003	230 V module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
	0510480003	Dual auxiliary switch unit for valve actuators AVM215(S), AVM321(S) with 8 mm stroke
	0510480004	Dual auxiliary switch unit for valve actuators AVM215(S), AVM322(S) with 20 mm stroke
	0510600001	Plug module, 1.2 m cable, 3-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600002	Plug module, 1.2 m cable, 3-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
	0510600003	Plug module, 1.2 m cable, 6-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600004	Plug module, 1.2 m cable, 6-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
	0510600005	Plug module, 5 m cable, 3-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600006	Plug module, 5 m cable, 3-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
	0510600007	Plug module, 5 m cable, 6-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600008	Plug module, 5 m cable, 6-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322

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

	Type	Description
AVM 234S AVF 234S	0372332001	230 V module for valve actuators AVM/AVF234S and AVN224S
	0372332002	110 V module for valve actuators AVM/AVF234S and AVN224S
	0372333001	2 auxiliary change-over contacts, infinitely adjustable, for valve actuators AVM/AVF234S and AVN224S
	0372333002	2 auxiliary change-over contacts with gold-plated contact, infinitely adjustable, for valve actuators AVM/AVF234S and AVN224S
	0372334001	Potentiometer, 2000 Ω, 1 W, 24 V, for valve actuators AVM/AVF234S and AVN224S
	0372334006	Potentiometer, 1000 Ω, 1 W, 24 V, for valve actuators AVM/AVF234S and AVN224S
	0372461001	Forced operation module for valve actuators AVM/AVF234S and AVN224S

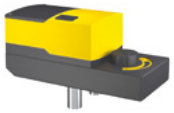
AVM 1*5, AVF 12* electric linear actuator for non-SAUTER valves and retrofitting

Manufacturer	Type	DN	**AVM 105** Stroke up to 8 mm	**AVM 115** Stroke up to 8 mm	**AVF 124/125** Stroke up to 8 mm
Siemens	VVG44/VXG44	15...50		0372273001	
	VVG48/VXG48	15...50		0372273001	
	VVP459/VXP459	15...40		0372273001	
Sauter	VDL (from 5 mm stroke, max. 250 N)	10...32		0510390067	

Important accessories for AVM 1*5 linear actuators

	Type	Description
AVM 105 AVM 115	0372145001	Single auxiliary change-over contact for actuators ASM/AVM 105/115
	0372145002	Double auxiliary change-over contact for actuators ASM/AVM 105/115
	0372320001	Hex key for manual adjustment of ASM/AVM 105/115, 215

vialoq ADM322 electric rotary actuator for non-SAUTER valves and retrofitting



Manufacturer	Type	DN	ADM322
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
Caleffi	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 ADM 322 rotary actuator

	Type	Description
	0500420002	4...20 mA feedback module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
	0500570003	230 V module for valve actuators AVM321S, AVM322S and rotary actuator ADM322SF152
	0510600001	Plug module, 1.2 m cable, 3-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600002	Plug module, 1.2 m cable, 3-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
	0510600003	Plug module, 1.2 m cable, 6-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600004	Plug module, 1.2 m cable, 6-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
	0510600005	Plug module, 5 m cable, 3-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600006	Plug module, 5 m cable, 3-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322
	0510600007	Plug module, 5 m cable, 6-wire, PVC, for valve actuators AVM3 and rotary actuators ADM322
	0510600008	Plug module, 5 m cable, 6-wire, halogen-free, for valve actuators AVM3 and rotary actuators ADM322

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 Pharma

VAV Compact

Actuators

ASV2*5 VAV controller

Model series		ASV			
Type		205	215	215	
Version		BF132E	BF132E	BF152D	BF152E
Voltage	24 V AC	●	●	●	●
	24 V DC	●	●	●	●
Inputs	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	SLC	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 75 90 107	60 75 90 105	3...15	3...15
Damper shaft [mm]	Round	8...16	8...16	8...16	
	Square	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_v static membrane sensor

Important accessories for ASV2* volume flow controllers

Type	Description
0372301001	Spindle adapter for squared-end hollow profile (× 15 mm), collective packaging, 10 pieces
XAFP100F001	Flow probe to measure flow rates in ventilation ducts
0300360001	USB connection set
0297867001	Reference pressure container
0430360100	IP30 protection set
0430360200	Replacement LP connectors
0372129001	Anti-torsion device

ASM electric air damper actuators






Model series		ASM																
Type		105					115						124			134	
Version		F100	F120	F122	SF132	SF152	F120	F122	SF132	SAF232	SAF332	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				●	●			●	●	●	●			●		●
	4...20 mA					●				●[3]	●[3]	●					
Feedback	0...10 V				●	●			●	●	●	●			●		●
	4...20 mA									●[3]	●[3]						
	Auxiliary switch	●[1]	●[1]	●[1]	●[1]		●[1]	●[1]	●[1]				●[4]	●[4]	●[4]	●[4]	●[4]
	Potentiometer	●[2]	●[2]	●[2]	●[2]		●[2]	●[2]	●[2]				●[5]	●[5]	●[5]	●[5]	●[5]
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 60 120	3	120	120	60 120	35 60 120	35 60 120	6	120	120	60 120	120 240	120 240
Communication										BACnet MS/TP MQTT	BACnet/IP MQTT						
Damper shaft [mm]	Round	8...16					8...16						12...20			12...20	
	Square	6.5...12.5					6.5...12.5						10...16			10...16	

[1] Optional accessory 0372145001 – Single auxiliary contact/0372145002 – Double auxiliary contact

[2] Optional accessory 0372286001 – Pot. 130 Ω/0372286002 – Pot. 1000 Ω/0372286003 – Pot. 5000 Ω

[3] Optional accessory 05306031105 – I/O cable (I), 3-pin, L = 5.0 m, open cable end, 3-wire

[4] Optional accessory 0370990001 – Single auxiliary contact/0370990002 – Double auxiliary contact

[5] Optional accessory 0370992001 – Pot. 130 Ω/0370992002 – Pot. 2000 Ω

Important accessories for ASM1*5 air damper actuators

Type	Description
0313529001	Split-range unit module for setting sequences 0...10 V
0361977002	Mounting set for SAUTER M3R/M4R/MH32/MH42 control valves with ASM105/115
0372145001	Single auxiliary change-over contact for actuators ASM/AVM 105/115
0372145002	Double auxiliary change-over contact for actuators ASM/AVM 105/115
0372286001	Potentiometer, 130 Ω for actuators ASM/AVM 105/115
0372286002	Potentiometer, 1000 Ω for actuators ASM/AVM 105/115
0372286003	Potentiometer, 5000 Ω for actuators ASM/AVM 105/115
0372300001	Fixing bracket as anti-torsion device for ASV115/205/215 and ASM105/115, 230 mm long
0372320001	Hex key for manual adjustment of ASM/AVM 105/115, 215

Important accessories for ASM124 and ASM134 air damper actuators

Type	Description
0313529001	Split-range unit module for setting sequences 0...10 V
0361977001	Mounting set for SAUTER M3R/M4R/MH32/MH42 control valves with ASM124
0370059000	Clamping lever for shaft d = 8...18 mm
0370990001	Single auxiliary change-over contact for damper actuators ASM124/134
0370990002	Double auxiliary change-over contact for damper actuators ASM124/134
0370992001	Potentiometer, 2000 Ω for damper actuators ASM124/134
0370992002	Potentiometer, 130 Ω for damper actuators ASM124/134
0372152001	Accessory for ASM124 for short spindle
0372200001	Fixing bracket for damper actuators ASM124/134
0372201001	Spindle extension for damper actuators ASM124/134
0372202001	Lever and fixing strap for damper actuators ASM124/134
0372203001	Carrier stem for auxiliary contact 0370990...
0372204001	Spindle for clamping lever 0370059000
0372455003	Assembly part; DEF DN 150...200 for ASM 134
0372455001	Mounting set for SAUTER DEF butterfly valves DN25 to DN65 with ASM124/134
0372455002	Mounting set for SAUTER DEF butterfly valves DN80 and DN100 with ASM124 and DN80 to DN125 with ASM134
0372455003	Mounting set for SAUTER DEF butterfly valves DN150 and DN200 with ASM134

Accessories for AKM115SAF Smart Actuator

Type	Description
SAIO100F020	I/O module, 5 × UI/AO, 3 × relay
05393601000	Dummy plug spare part set IP54
EY-PS031F011	Power supply, 110…240 VAC/24 VDC, 1.25 A, 30 W, DIN rail mounting
EY-PS031F021	Power supply, 110…240 VAC/24 VDC, 2.5 A, 60 W, DIN rail mounting
EY-PS031F041	Power supply, 110…240 VAC/24 VDC, 4 A, 100 W, DIN rail mounting
EY-RU355*	Operating device, LCD, NTC, 5B
053060200**	Cable for Smart Actuator, 24 V, open end, 2-wire, 2-pin plug (red)
053060310**	Cable for Smart Actuator, U-I/O, open end, 3-wire, 3-pin plug (yellow)
053060320**	Cable for Smart Actuator, Ni1000, -35…100 °C, 3-pin plug (white)
053060340**	Cable for Smart Actuator, RS485, open end, 3-wire, 3-pin plug (green)
053060341**	Cable for Smart Actuator, RS485, 3-wire, 3-pin plug (green)
053060510**	Cable for Smart Actuator, U-I/O, open end, 3-wire, 5-pin plug (yellow)
053060530**	Cable for Smart Actuator, connection to I/O box, 5-pin plug (blue)
053060535**	Cable for Smart Actuator, SLC, open end, 5-wire, 5-pin plug (green)

! For available cable lengths, see PDS

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
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						●						●
	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	
	Square	6.4...13				6.4...13		6...18				6...18	

Important accessories for ASF air damper actuators

	Type	Description
	0370997001	Lever adapter for converting rotation into stroke for ASF12.
	0370998001	Lever adapter for converting rotation into stroke with support plate for ASF
	0372245001	Lever adapter for converting rotation into stroke for damper actuators ASF112/124(S)
	0372245002	Lever adapter for converting rotation into stroke with support plate for damper actuators ASF112/124(S)
	0378113001	Mounting set for SAUTER DEF butterfly valves DN25 to DN100 with ASF122/123
	0510240001	Mounting set for SAUTER VKR/BKR ball valves with ASF112/ASF113

Smart Sensor **viaSens**

The new dimension in room automation

The SAUTER viaSens Smart Sensor enables demand-based control of heating, ventilation, air conditioning and lighting – for energy-efficient and comfortable spaces.

- Measurement of temperature, humidity, air quality, CO_2, presence, brightness and sound levels
- Demand-based room control through presence detection
- LED light ring for intuitive indication of room conditions
- Dynamic constant-light control through brightness detection
- Wireless communication via Bluetooth Mesh
- Integration via IP and MQTT secured through TLS as an IoT device
- Easy commissioning via app
- Flexible installation for new builds and modernisation projects

Smart sensor technology for intelligent buildings.

With viaSens, SAUTER provides the foundation for energy-efficient, flexible and future-ready room automation – delivering greater comfort, optimised operations and intelligent building usage.

Systems
Components
Services
Facility Management

SAUTER
Creating Sustainable Environments.

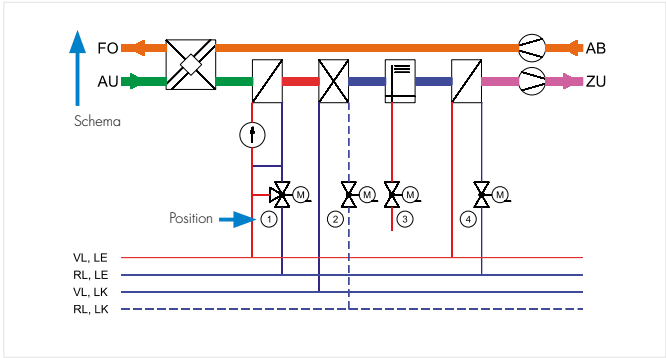
Overview table of applications

			Valve type																		
	Schema	Position	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	UVC
Application			PN16	PN16	PN16	PN16 PN25	PN40	PN40	PN16	PN 6 PN16	PN16 PN25	PN40	PN40	PN40	PN16	PN6 PN16	PN16 PN25	PN25	PN40	PN16	PN6	PN16
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		●	●	●	●	●		●	●			●		●	●						●
Radiator	2		●	●	●	●																
Underfloor unit	3		●	●	●	●																●
Heating circuits	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	14

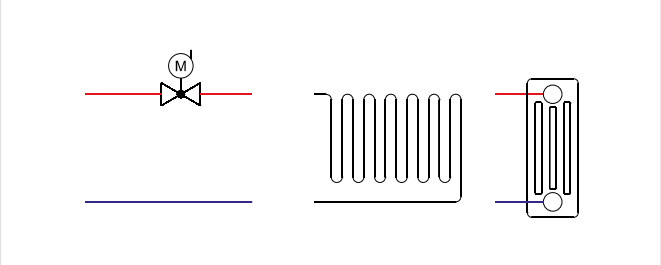
Graphical overview/application profiles

The numbering relates to the *Schema* and *Position* columns in the table of application profiles shown opposite.

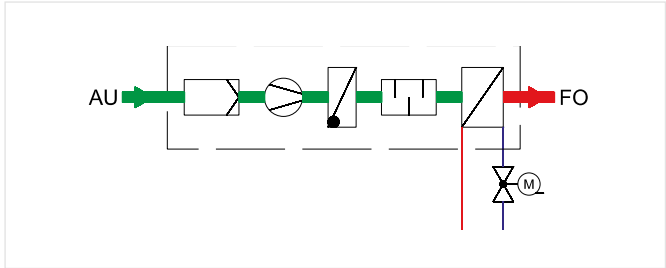
1 Ventilation and air-conditioning



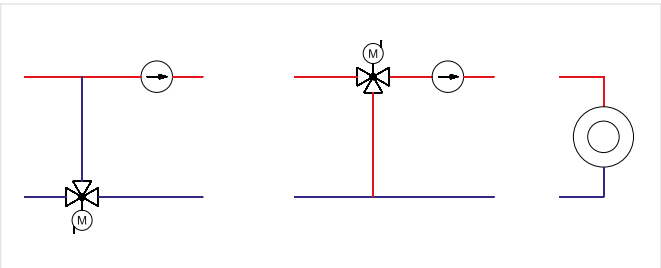
2 Chilled ceilings, underfloor heating and radiators



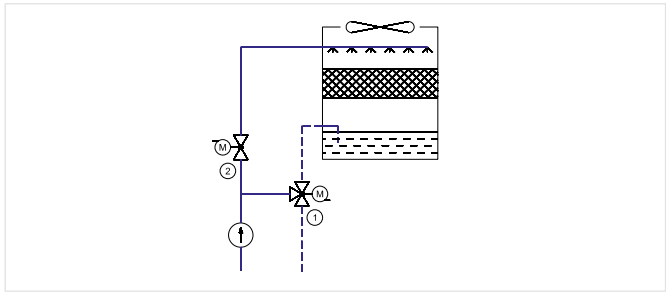
3 Underfloor units



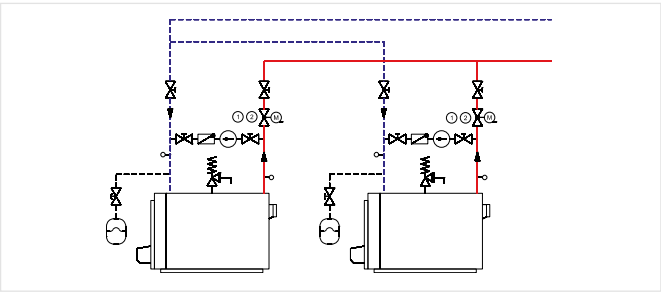
4 Static heating



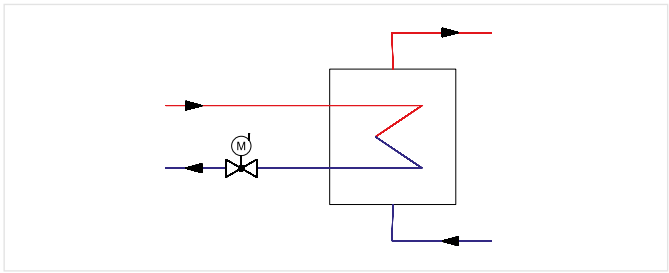
5 Cooling towers



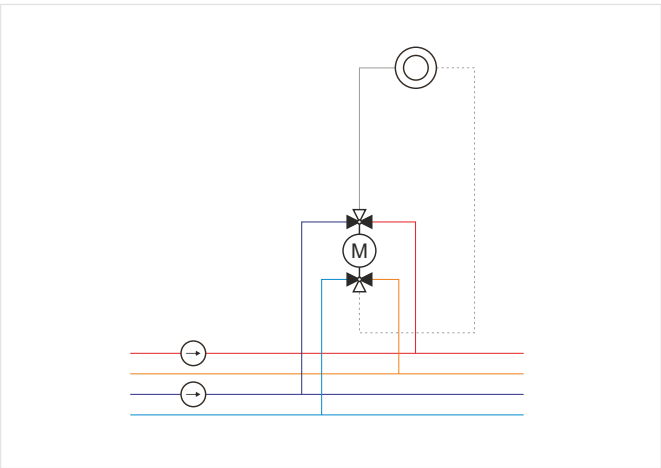
6 Multi-boiler installations



7/8 Local heating, district heating



9 4-pipe system



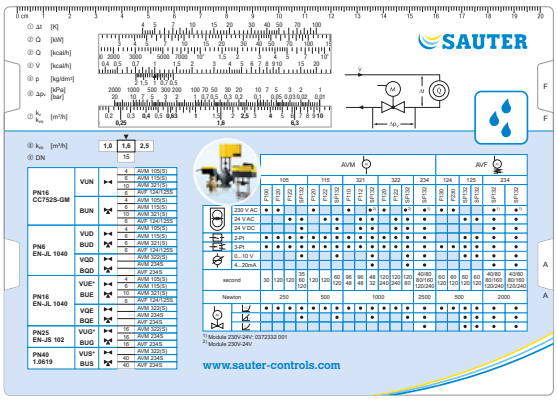
Valve selection –
calculation using SAUTER tools.

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

SAUTER VALVEDIM software.
SAUTER provides installers and project engineers with its SAUTER VALVEDIM PC software, a proven tool for convenient valve and actuator selection. The tool comprises three functional levels:

1. Valve and actuator determination
   - on the basis of recommended values to determine the required designs and sizes;
   - on the basis of existing or specified system data to definitively determine the required designs and sizes.
2. Selection of the valve and the appropriate actuator based on specific 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/en/produkt/case-suite/.



Valve selection – manual calculation

Here you will find all the information you need for manual valve selection.

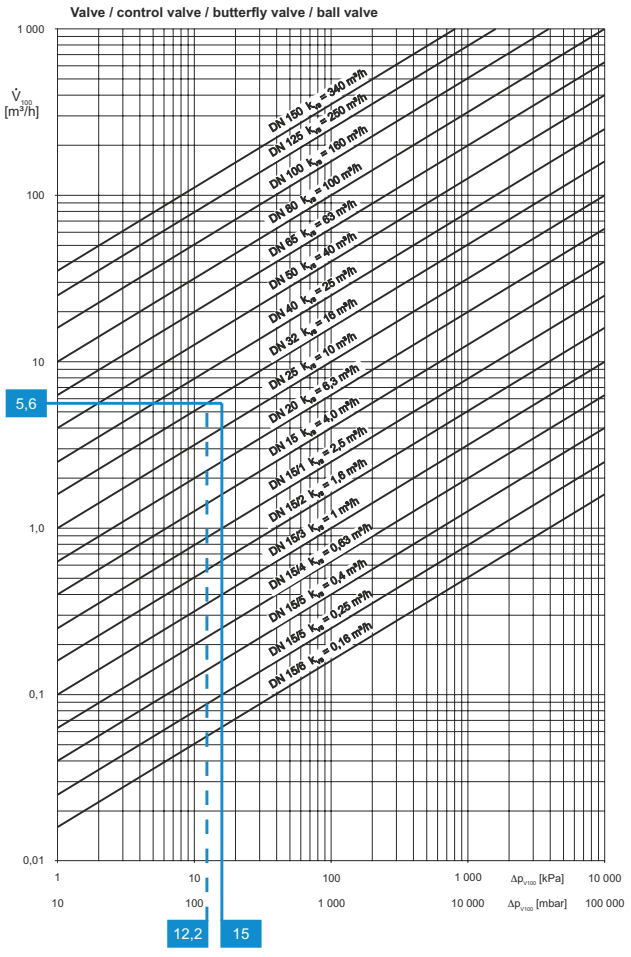
[1] Variables, constants and formulas

Variable	Description	Value	Unit
$\dot{V}$	Volume flow		m^3/h
$\dot{Q}_{zu}$	Heat quantity supplied per time (heat flow)		kW, kJ/h
Δt	Temperature difference		K
c_w	Specific heat capacity of water	$4.19 = 1.164 \cdot 10^{-3}$	kJ/(kg·K) kWh/(kg·K)
ρ_w	Density of water	*Assumption* : ρ_w = *const.* = 1000	kg/m^3
Δp_v	Maximum admissible pressure difference over the valve		bar, kPa
k_v	Calculated flow parameter for the valve		m^3/h
k_{vs}	Actual flow value of the valve at nominal stroke, selected according to table or diagram		m^3/h

[2] Calculation formula for k_v for water

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

[3] Chart



[4] Calculations

The following are given:

$\dot{Q}_{zu}$ = 130 kW ≈ 468.000 kJ/h

Δt = 20 K

Δp_v = 150 mbar = 15 kPa (corresponds to 1.5 m water column)

We are looking for:

$\dot{V}$, k_v

Approximate calculation of $\dot{V}$

Assumption:

$$\dot{Q}_{zu} = \dot{V} \cdot c_w \cdot \Delta t \cdot \rho_w$$

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

$$\Rightarrow \quad \dot{V} = \frac{130}{1.164 \cdot 10^{-3} \cdot 20 \cdot 1000} \cdot \frac{\text{kW} \cdot (\text{kg} \cdot \text{K}) \cdot \text{m}^3}{\text{kWh} \cdot \text{K} \cdot \text{kg} \cdot \text{h}} \approx \mathbf{5.6\ m^3/h}$$

Calculation of K_v

$$k_v = 5.6\ \text{m}^3/\text{h} \cdot \sqrt{\frac{1\ \text{bar}}{0.15\ \text{bar}}} \approx \mathbf{14.4\ m^3/h}$$

Determination of flow rate

Determination of k_v from the chart

k_{vs} = 16 m^3/h

Example plotted: given a volume flow (5.6 m^3/h) and a desired Δpv of 150 mbar, this results in a Kv value of 14.4 m^3/h.
The Kvs values entered are deliverable values. Selected: a valve with k_{vs} = 16 m^3/h, which results in a pressure difference Δpv of 122 mbar.

Basic hydraulic circuits

Quick overview and areas of use

SAUTER provides installers and project engineers with its SAUTER VALVEDIM PC software, a proven tool for convenient valve and actuator selection. The tool comprises three functional levels:

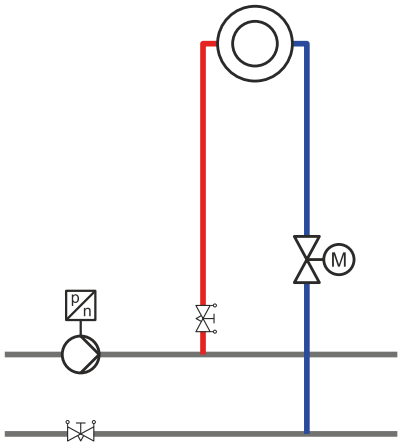
- **Throttling circuits** are highly flexible and have a wide range of uses, particularly in air handling and storage applications.
- **Diversion circuits** are especially effective in air handling, domestic hot water and heat recovery applications.
- **Injection circuits** are well suited to systems with a more constant secondary circuit and variable temperature control.
- **Mixing circuits** are particularly suitable for simple heating circuits and lower supply temperatures.

Category	System section	Area of use	Throttling circuit	Throttling circuit with PICV	Diversion circuit	Injection circuit with 2-way valve	Injection circuit with PICV	Mixing circuit
Heating applications	Ventilation	Air heaters without risk of freezing	●	●	●			
Heating applications	Ventilation	Air heaters with risk of freezing				●	●	●
Cooling applications	Ventilation	Air coolers with dehumidification	●	●	●			
Cooling applications	Ventilation	Air coolers without dehumidification				●	●	
Cooling applications	Ventilation	Heat recovery systems				●	●	
Heating applications	District heating	Direct or indirect (with heat exchanger) district and local heating connections	●	●				
Cooling applications	District heating	Direct or indirect (with heat exchanger) district and local cooling connections	●	●				
Heating applications	Primary heating	Low-temperature boiler systems				●	●	●
Heating applications	Primary heating	Condensing boilers	●	●		●	●	●
Heating applications	Primary heating	Systems with condensing boilers	●	●		●	●	●
Heating applications	Primary heating/cooling	Heat pumps and thermal storage tanks				●	●	●
Heating applications	Primary heating/cooling	Charging/discharging of storage tanks	●	●				
Cooling applications	Primary heating/cooling	Cooling generation						●
Heating applications	Primary heating	Simple heating circuits	●	●		●	●	●
Heating applications	Intelligent unitary control	Radiator heating	●	●		●	●	●
Heating applications	Intelligent unitary control	Underfloor heating	●	●		●	●	●
Heating applications	Intelligent unitary control	Zone control	●	●	●	●	●	
Heating applications	Intelligent unitary control	Intelligent unitary control	●	●				
Heating applications	Hot water supply	Domestic water heating				●	●	●
Heating applications	Hot water supply	Domestic hot water storage	●	●		●	●	●

Throttling circuit with static control valve

Description

The throttling circuit provides a simple, robust and flexibly adaptable solution for systems with variable demand.
Capacity is controlled by adjusting the flow rate using a 2-way control valve.
Throttling affects the flow rate in both the secondary circuit and the primary circuit.
The resulting differential pressure changes affect adjacent circuits and consumers.
The control valve can be installed in either the supply line or the return line.
Installation in the return line is preferred in order to minimise thermal stress caused by high or low media temperatures.



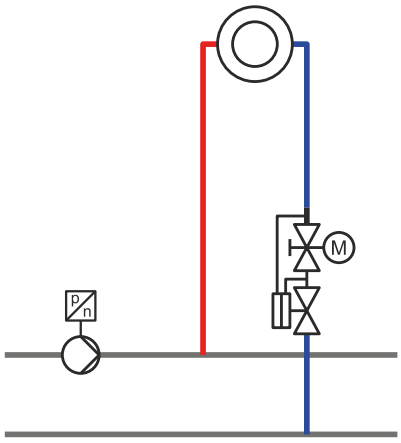
Characteristics

- Variable flow rates in both the secondary and primary circuits
- Reduced flow rates and flow velocities at partial load (temperature stratification in the consumer)
- Approximately constant supply temperatures in the secondary circuit
- High temperature differential between supply and return at partial load (low return temperatures in heating mode)
- Pressurised manifold required (or a separate pump in the circuit)
- Risk of freezing with air heaters

Throttling circuit with dynamic control valve (PICV)

Description

The throttling circuit with a dynamic control valve (PICV) combines flexible flow control with high stability and precise control performance.
Capacity is controlled by adjusting the flow rate using a dynamic 2-way control valve.
Throttling affects the flow rate in both the secondary circuit and the primary circuit.
The control valve can be installed in either the supply line or the return line.
Installation in the return line is preferred in order to minimise thermal stress caused by high or low media temperatures.



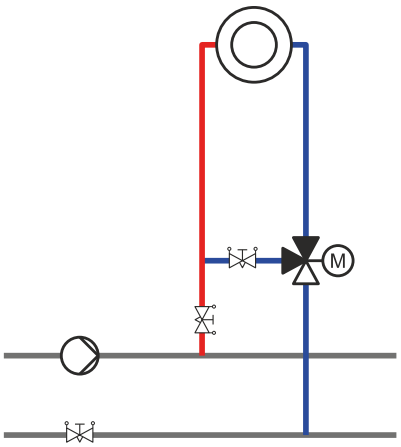
Characteristics

- Variable flow rates in both the secondary and primary circuits
- Reduced flow rates and flow velocities at partial load (temperature stratification possible in the consumer)
- Approximately constant supply temperatures in the secondary circuit
- High temperature differential between supply and return at partial load (low return temperatures in heating mode)
- The flow rate remains constant across the dynamic valve in the event of pressure fluctuations and high differential pressures
- Pressurised manifold required (or a separate pump in the circuit)
- Risk of freezing with air heaters

Diversion circuit

Description

The diversion circuit provides fast response times for convenient control.
Capacity is controlled by adjusting the flow rate using a 3-way control valve in the secondary circuit. The flow rate on the primary side remains constant. At partial load, a portion of the supply flow is diverted directly to the consumer return line via the bypass of the 3-way control valve.
Adjacent circuits are not affected, thanks to decoupling via the bypass.
The 3-way control valve should preferably be installed in the return line as a mixing valve.
This avoids mechanical stress caused by unfavourable flow conditions within the valve.



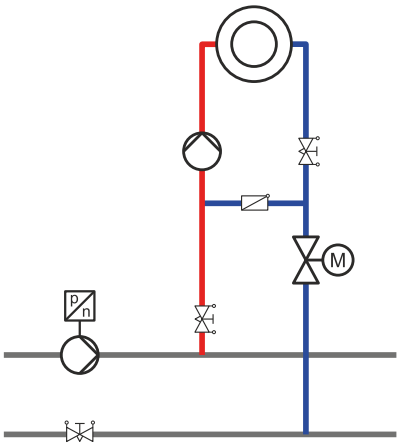
Characteristics

- Variable flow rates in the secondary circuit
- Constant flow rates in the primary circuit
- Reduced flow rates and flow velocities at partial load in the secondary circuit (temperature stratification in the consumer)
- Approximately constant supply temperatures in the secondary circuit
- Equalisation of the primary-side return temperature to the supply temperature at partial load (return temperature increase in heating mode)
- Pressurised manifold required
- Risk of freezing with air heaters

Injection circuit with static 2-way control valve

Description

The injection circuit with a 2-way control valve provides a high level of control comfort through constant flow rates in the secondary circuit.
Capacity is controlled by adjusting the supply temperature in the secondary circuit.
The flow rate on the primary side is controlled using the 2-way control valve. At the mixing point, the required amount of medium is injected into the secondary circuit according to the valve position. The same amount is reduced via the bypass, resulting in a constant flow rate in the secondary circuit. Changes in the primary-side flow rate lead to differential pressure fluctuations that affect adjacent circuits.



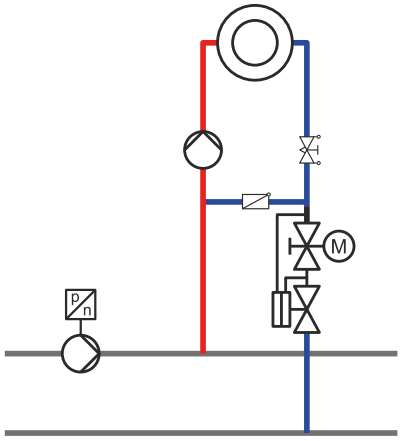
Characteristics

- Constant flow rates in the secondary circuit (no temperature stratification in the consumer)
- Variable flow rates in the primary circuit
- Variable supply temperatures in the secondary circuit
- High temperature differential between supply and return at partial load on the primary side (low return temperatures in heating mode)
- Pressurised manifold required

Injection circuit with dynamic 2-way control valve (PICV)

Description

The injection circuit with a dynamic 2-way control valve provides precise, convenient control with constant flow rates in the secondary circuit.
Capacity is controlled by adjusting the supply temperature in the secondary circuit.
The flow rate on the primary side is controlled using the dynamic 2-way control valve.
At the mixing point, the required amount of medium is injected into the secondary circuit according to the valve position. The same amount is reduced via the bypass, resulting in a constant flow rate in the secondary circuit.



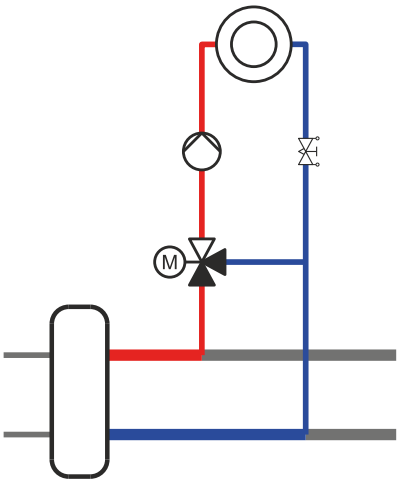
Characteristics

- Constant flow rates in the secondary circuit (no temperature stratification in the consumer)
- Variable flow rates in the primary circuit
- Variable supply temperatures in the secondary circuit
- High temperature differential between supply and return at partial load on the primary side (low return temperatures in heating mode)
- The flow rate remains constant across the valve in the event of pressure fluctuations and high differential pressures
- Pressurised manifold required

Mixing circuit

Description

The mixing circuit provides a proven and cost-effective solution for reliable temperature control.
Capacity is controlled by adjusting the supply temperature in the secondary circuit.
The flow rate on the primary side is controlled using the 3-way control valve. In the mixing valve, medium from the return flow is added according to the valve position. The same amount is reduced in the primary circuit, resulting in a constant flow rate in the secondary circuit.
The zero-loss or low-loss header prevents the circuits from affecting each other. A zero-loss or low-loss header is necessary for reliable control.
The 3-way control valve should preferably be installed in the supply line as a mixing valve. This avoids mechanical stress caused by unfavourable flow conditions within the valve.



Characteristics

- Constant flow rates in the secondary circuit (no temperature stratification in the consumer)
- Variable flow rates in the primary circuit
- Variable supply temperatures in the secondary circuit
- High temperature differential between supply and return at partial load on the primary side (low return temperatures in heating mode)
- Zero-loss or low-loss header required

Vision Center

Rethinking Smart Building Management

SAUTER Vision Center enables efficient and sustainable building management – with demand-based control, energy management and building analytics.

With SAUTER Vision Center, buildings can be controlled and monitored efficiently, intuitively and securely – from individual sites to complex smart-building infrastructures.

- Centralised visualisation and operation of all functions
- Intuitive user interface for efficient operation of technical installations
- Scalable platform from standalone buildings to large real estate complexes
- Real-time monitoring, alarm management and trend analysis
- Integration of open standards such as BACnet, MQTT and OPC
- Secure remote access and modern web technology

SAUTER Vision Center combines modern building automation with intelligent facility management – for sustainable, energy-efficient and future-proof buildings.

Systems
Components
Services
Facility Management

SAUTER
Creating Sustainable Environments.

Notes

P100014407

SAUTER Head Office

Im Surinam 55
CH-4058 Basel
info@sauter-controls.com
www.sauter-controls.com

SAUTER
Creating Sustainable Environments.