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made in Germany

Control valves | Actuators Sensors | Electronic components | Actuators Regulators

SMART RELIABLE FLOW CONTROL SOLUTIONS

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EQUIPMENT FOR THERMAL AND REFRIGERATION SYSTEMS

Applications where RTK products are used

- Power plant technology
- Heating / cooling systems for water, steam, thermal oil
- Heat transfer media
- Refrigeration systems
- Process technology
- Petro chemical

Specialist for control valves...

For nearly 40 years, we have been helping our clients with our core competence in all imaginable applications of control technology. Because one thing is clear: **as an RTK customer you'll get more**. With our high-quality products, we offer you **security**, with all our experience, we can assist in the **optimization of control circuits**.
We don't see ourselves as valve sellers, we're control engineers through and through. That is why we are engaged with everything to do with control valves. We're also perfectly at home with **actuators, sensors and controllers**.

Obviously we want to earn your trust and maintain it over many years. That's why, the competence of our employees has top priority. We educate, promote, and support. Because a long-standing cooperation thrives on trust, competence and reliability.

RTK delivers quality. Made in Germany.

You know us as a specialist for control valves, but we have so much more to offer. More than 3000 colleagues are ready to help you worldwide. From ball valves to turbine bypass stations, in our group of companies we deal with high-quality products for oil & gas, power station, industrial, and process applications. Take advantage of this unique situation and discover our world, the world of Circor. www.Circor.com, www.circorenergy.com

SMART VALVES AND ACTUATORS

Made in Germany

What makes us so successful?

No matter in what area, we take ideas seriously and implement the good suggestions of our employees and customers. All in-house processes are regularly questioned in internal workshops and, where necessary, optimized – without the need for pressure from "Mounted on top". Customer workshops give us insight into the world of our customers and often result in new products or variants.

Tradition

No matter how often we question things and modify processes, one thing will never change: we want to manufacture reliable and durable products for our customers – products that meet a high-level industry standard and provide many years of trouble-free operation. New products are extensively checked and tested, modern production facilities with a high degree of vertical integration give us flexibility and control over quality.

Innovation

Now, we're back to good ideas again. Whether it´s a valve calculation program, automated manufacturing processes, product configurators (through which we can design, assemble and supply hundreds of thousands of product variants), fully automated test systems for control valves or even products with a certain "something" – concepts that today are industry standards often had their origins in Kornwestheim.

Reliability

Our well-trained employees are able to respond to the needs of our customers. The most important indicators receive interdepartmental evaluation everyday. This allows us to respond quickly and easily to any unforeseen circumstances. Because at the end, we want to keep what we promise.

Thoroughness

Whether in sales, construction, production planning or purchasing – here, you'll find specialists at work. When you receive an offer from RTK, you'll see that we have thoroughly engaged ourselves with the inquiry in hand. Operating data is tested and questioned, valves are carefully designed and a clear offer is produced that our customers can work with.

We deliver quality

CONTENT

Stellventile

Actuators

Regulators

Manual stop valves with bellows seal / Strainers

Sensors

Electric components

Other

CONTROL VALVES

- Electric and pneumatic control valves (heat control)
- Electric and pneumatic control valves (refrigeration)
- Shut-off valves
- Three way control valves
- Flow-control silencers
- RTK – Heavy duty control valves
- Electric control valves with fail closed unit
- Steam converting valves
- Multi nozzle lancer desuperheaters
- Feed-water control valves with re-circulation connection
- Continuous blow down valves
- Bottom blow down valves
- Valves for discharge / re-circulation control

MV 5211

PV 6221

Electric series

Pneumatic series

With electric actuators REact 15E REact 30E/DC	**With pneumatic actuators** ST 6115 ST 6135	**With Bellows seal**
MV 5211	PV 6211	–
MV 5214	PV 6214	yes
MV 5221	PV 6221	–
MV 5224	PV 6224	yes
MV 5231	PV 6231	–
MV 5234	PV 6234	yes

Technical data

	DIN		**ANSI**
Nominal diameter	DN 15 … 100		NPS ½ ... 4
Nominal pressure	PN 16 … 160		CL 150 … 900
Body materials	EN-GJL-250	(PN 16)	SA216 WCB
	EN-GJS-400-18-LT	(PN 16; 25)	SA351 CF8M
	GP240GH	(PN 16 … 160)	SA217 WC6
	G17CrMo5-5	(PN 63 … 160)	SA217 WC9
	GX5CrNiMo19-11-2	(PN 16 … 40)	
	Other materials available on request		
Flanges	According to DIN 2501; EN 1092-1 and EN 1092-2		According to ASME B16.5
	Different flanges on request		RF und RTJ
Butt Weld ends	According to DIN 3239 – part 1 or EN 12627		According to ASME B16.5
	Edge form DIN 2559-21 (Others on request)		
	End connection P235GH for body material GP-240 GH		
	End connection 13CrMo4-5 for body material G 17 CrMo 5-5		
Further End Connections	Threaded NPT according to ASME B16.11		
	Socket Weld Ends according to ASME B16.11 Class 3000		
Stem packing	Chevron rings PTFE-graphite (max. +250 °C)		
	Stuffing box pure graphite (max. +530 °C medium dependent)		
	Bellows seal with safety stuffing box (max. +350 °C PN 100 up to DN 40)		
	Stem packing with DVGW-Approval (max. 6 bar, +60 °C)		
	Stem packing for oxygen with BAM approval (max. +50 °C)		
Trim variations	Shut-off plug	1.4122, 1.4122 hardened, stellit	(open-close)
	Paraboloic plug	1.4122, 1.4122 hardened, stellit, Ferro Titanium	(equal% / linear)
	V-port plug	1.4122, 1.4122 hardened, stellit 1.4408	(equal% / linear)
	Perforated plug	1.4122, 1.4122 hardened	(equal% / linear)
	Mixing- / Diverting plug	1.4122, 1.4408	(linear)
	Soft seat PTFE graphite	PTFE graphite	
	Seat	1.4571 (AISI 316Ti), stellit	
	Stem	1.4571 (AISI 316Ti)	
	Quick Change Seat Ring one/two stage (Retainer SA487 CA6NM)		
	According to NACE MR0175 / MR0103		
	Other materials available on request		
Version for refrigerants	Chevron packing rings NBR (-60 °C to +100 °C)		
	Chevron rings PTFE-graphite (-60 °C to +250 °C)		
	Seals (gaskets) suitable for refrigerants		
	Bellows seal with safety stuffing box		
	Stem heater with glycerine cup, free from non-ferrous metals		
	Bonnet studs and nuts in stainless steel		
	Epoxy coating		
	Flanges with groove	nach EN 1092-1 (DIN 2512)	
Seat leakage	According DIN EN 1349		According to ANSI / FCI 70-2
	Class IV (metal to metal)		Class IV
	Class IV-S2 (lapped in metal to metal)		Class V (optional)
	Class VI (soft seat with PTFE-Graphite max. +200°C)		Class VI
Max. press / temp.	According to DIN EN 1092		ASME B16.34
Approvals	DGRL (CE), DVGW, ATEX (für PV...),		
	DNV-GL, RINA, ABS, TR TS (EAC), CRN, CCC		

Three way control valves 5170

MV 5174

Electric series

With electric actuator REact 15E	With Bellows seal
MV 5174	yes

Motorized control valves for mixing and diverting (up to DN 65) used for thermal oil and other process liquids

- Three-way design with shortened B-flange
- Long life chambered bellows seal with twist lock
- Actuator can be turned as desired for simple operating and cabling

Technical data

Nominal diameter	DN 50 und 65	
Nominal pressure	PN 16	
Body material	EN-GJS-400-18-LT	
Flanges	According to DIN EN 1092-2 Different flanges on request	
Stem packing	Metal bellows seal with safety stuffing box	(max. +350 °C)
Trim variations	Mixing plug 1.4122 Bellows + Stem 1.4571 Seat 1.4571 Other materials available on request	(linear) (AISI 316 Ti) (AISI A316 Ti)
Seat leakage	According to DIN EN 1349, Class IV	
Approvals	DGRL (CE), CCC	

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Three way control valves 5270 / 6270

MV 5274

PV 6274

Technical data

Nominal diameter	DN 20 … 100	
Nominal pressure	PN 16, 25	
Body materials	EN-GJL-250 EN-GJS-400-18-LT	(max. PN 16) (max. PN 25)
Flanges	Connection according to DIN 2501 Facing DIN 2526 Form C Connection according to DIN EN 1092 Different flanges on request	
Stem packing	Chevron rings PTFE-graphite Bellows seal with safety stuffing box	(max. +250 °C) (max. +350 °C)
Trim variations	Mixing plug 1.4122 / 1.4408 Stem + Seat 1.4571 Other materials available on request	(linear)
Seat leakage	According DIN EN 1349 Class IV (metal to metal) Class IV-S2 (lapped in metal to metal)	
Approvals	DGRL (CE), ATEX (für PV...), TR TS (EAC), CCC	

Electric series

Pneumatic series

With electric actuators REact 15E REact 30E/DC	**With pneumatic actuators** ST 6115 ST 6135	**With Bellows seal**
MV 5271	PV 6271	–
MV 5274	PV 6274	yes

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Electric series

Pneumatic series

With electric actuators REact 60E/DC REact 100E/DC	**With pneumatic actuators** ST 6160	**With Bellows seal**	**With Bellows seal PN100**
MV 5311	PV 6311	–	–
MV 5314	PV 6314	yes	yes
MV 5321	PV 6321	–	–
MV 5324	PV 6324	yes	–
MV 5331	PV 6331	–	–
MV 5334	PV 6334	yes	–

Technical data

	DIN		ANSI
Nominal diameter	DN 15 … 150		NPS ½ … 6
Nominal pressure	PN 16 … 160		CL 150 … 900
Body materials	EN-GJL-250	(PN 16)	SA216 WCB
	EN-GJS-400-18-LT	(PN 16; 25)	SA351 CF8M
	GP240GH	(PN 16 … 160)	SA217 WC6
	G17CrMo5-5	(PN 63 … 160)	SA217 WC9
	GX5CrNiMo19-11-2	(PN 16 … 40)	
	Other materials available on request		
Flanges	According to DIN 2501; EN 1092-1 and EN 1092-2 Different flanges on request		According to ASME B16.5
Butt weld ends	According to DIN 3239 – part 1 or EN 12627 Edge form DIN 2559-21 (Others on request) End connection P235GH for body material GP-240 GH End connection 13CrMo4-5 for body material G 17 CrMo 5-5		According to ASME B16.5
Further End Connections	Threaded NPT according to ASME B16.11 Socket Weld Ends according to ASME B16.11 Class 3000		
Stem packing	Chevron rings PTFE-graphite (max. +250 °C) Stuffing box pure graphite (max. +530 °C medium dependent) Bellows seal with safety stuffing box (max. +350 °C PN 100 up to DN 40) With TA-Luft (max. +400 °C) Stem packing with DVGW-Approval (6 bar, max. +60 °C) Stem packing for oxygen with BAM approval (max. +50 °C)		
Trim variations	Shut-off plug	1.4122, 1.4122 hardened, stellit	(Quick opening)
	Parabloic plug	1.4122, 1.4122 hardened, stellit, Ferro Titanium	(equal% / linear)
	V-port plug	1.4122, 1.4122 hardened, stellit 1.4408	(equal% / linear)
	Perforated plug	1.4122, 1.4122 hardened	(equal% / linear)
	Mixing- / Diverting plug	1.4122, 1.4408	(linear)
	Balanced plug	PTFE graphite	(equal% / linear)
	Soft seat PTFE-graphite	1.4571 (AISI 316Ti), stellit	
	Seat	1.4571 (AISI 316Ti), stellit	
	Stem	1.4571 (AISI 316Ti)	
	Quick Change Seat Ring one/two stage (Retainer SA487 CA6NM) According to NACE MR0175 / MR0103 Other materials available on request		
Version for refrigerants	Chevron packing rings NBR (-60 °C to +100 °C) Chevron rings PTFE-graphite (-60 °C to +250 °C) Seals (gaskets) suitable for refrigerants Bellows seal with safety stuffing box Stem heater with glycerine cup, free from non-ferrous metals Bonnet studs and nuts in stainless steel Epoxy coating Flanges with groove		
Seat leakage	According DIN EN 1349 Class IV (metal to metal) Class IV-S2 (lapped in metal to metal) Class VI (soft seat with PTFE-Graphite max. +200°C)		According to ANSI / FCI 70-2 Class IV Class V (optional) Class VI
Max. press / temp.	According to DIN EN 1092		ASME B16.34
Approvals	DGRL (CE), DVGW, TA-Luft, ATEX (für PV...), DNV-GL, RINA, ABS, TR TS (EAC), CRN, CCC		

MV 5411

MV 5421

PV 6411

Electric series

Pneumatic series

With electric actuators ST 5106 ST 5116	With pneumatic actuators ST 6175	With Bellows seal
MV 5411	PV 6411	–
MV 5414	PV 6414	yes
MV 5421	PV 6421	–
MV 5424	PV 6424	yes
MV 5431	PV 6431	–
MV 5434	PV 6434	yes

Technical data

	DIN		ANSI
Nominal diameter	DN 40 … 400		NPS 1 ½" … 12"
Nominal pressure	PN 16 … 160		Class 150 … 900
Body materials	EN-GJL-250	(PN 16)	SA216 WCB
	EN-GJS-400-18-LT	(PN 16; 25)	SA351 CF8M
	GP240GH	(PN 16 … 160)	SA217 WC6
	G17CrMo5-5	(PN 63 … 160)	SA217 WC9
	GX5CrNiMo19-11-2	(PN 16 … 40)	
	Other materials available on request		
Flanges	According to DIN 2501; EN 1092-1 and EN 1092-2		According to ASME B16.5
	Different flanges on request		RF und RTJ
Butt weld ends	According to DIN 3239 – part 1 or EN 12627		According to ASME B16.5
	Edge form DIN 2559-21 (Others on request)		
	End connection P235GH for body material GP-240 GH		
	End connection 13CrMo4-5 for body material G 17 CrMo 5-5		
Further End Connections	Threaded NPT according to ASME B16.11		
	Socket Weld Ends according to ASME B16.11 Class 3000		
Stem packing	Chevron rings PTFE-graphite (max. +250 °C)		
	Stuffing box pure graphite (max. +530 °C medium dependent)		
	Bellows seal with safety stuffing box (max. +350 °C PN 100 up to DN 40)		
	Stem packing with DVGW-Approval (6 bar, max. +60 °C)		
	Stem packing for oxygen with BAM approval (max. +50 °C)		
Trim variations	Shut-off plug	1.4122, 1.4122 hardened, stellit	(Quick opening)
	Paraboloic plug	1.4122, 1.4122 hardened, stellit, Ferro Titanium	(equal% / linear)
	V-port plug	1.4122, 1.4122 hardened, stellit 1.4408	(equal% / linear)
	Perforated plug	1.4122, 1.4122 hardened	(equal% / linear)
	Mixing- / Diverting plug	1.4122, 1.4408	(linear)
	Soft seat	PTFE graphite	
	Seat	1.4571 (AISI 316Ti), stellit	
	Stem	1.4571 (AISI 316Ti)	
	Quick Change Seat Ring one/two stage (Retainer SA487 CA6NM)		
	According to NACE MR0175 / MR0103		
	Other materials available on request		
Version for refrigerants	Chevron packing rings NBR (-60 °C to +100 °C)		
	Chevron rings PTFE-graphite (-60 °C to +250 °C)		
	Seals (gaskets) suitable for refrigerants		
	Bellows seal with safety stuffing box		
	Stem heater with glycerine cup, free from non-ferrous metals		
	Bonnet studs and nuts in stainless steel		
	Epoxy coating		
	Flanges with groove according to EN 1092-1 (DIN 2512)		
Seat leakage	According DIN EN 1349		According to ANSI / FCI 70-2
	Class IV (metal to metal)		Class IV
	Class IV-S2 (lapped in metal to metal)		Class V (optional)
	Class VI (soft seat with PTFE-Graphite max. +200°C)		Class VI
Max. press / temp.	According to DIN EN 1092		ASME B16.34
Approvals	DGRL (CE), DVGW, TA-Luft, ATEX (für PV...),		
	DNV-GL, RINA, ABS, TR TS (EAC), CRN, CCC		

Flow-control silencer
5200/
6400

SL Type-B

SL-Type

For liquid media	For gases and vapours
SL Type A	SL Type B

**Flow-control silencer / expansion after control valves to reduce noise after choked flow of gases and vapours.
In order to largely suppress cavitation / evaporation in liquid media and sound reduction.**

- Suitable for operating temperatures up to +530 °C
- System of two to four throttle plates
- Including pipe expansion
- Supplied ready to fit including the connecting elements

Technical data

Inlet and outlet	PN 40 … 160, Class 300 … 900	
	Different nominal pressure ranges for inlet and outlet on request	
Materials	P250GH	(PN 40 … 160)
	Equivalent to A105	(Class 300 … 900)
	1.4571	(PN 40 … 160)
	Equivalent to A316Ti	(Class 300 … 900)
	13CrMo4-5	(PN 63 … 160)
	Equivalent to A355	(Class 600 … 900)
	Other materials available on request	
Flanges	Connection to EN 1092 form B1	
	Connection to ASME B 16.5	
Approvals	DGRL (CE)	

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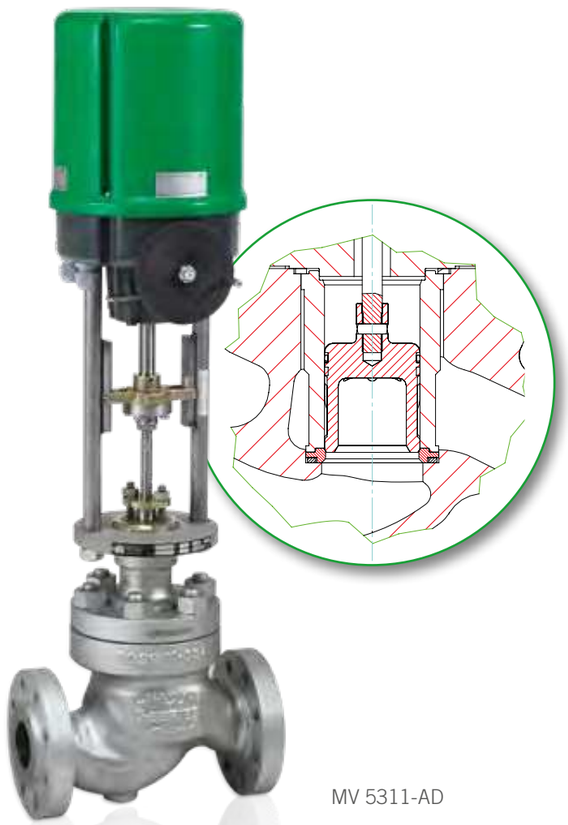
Heavy duty control valves 5200 / 6400

PV 6311-AD



MV 5311-AD

Electric series

With electric actuators
ST 5113
ST 5114
ST 5106
ST 5116

Pneumatic series

With pneumatic actuators
ST 6135
ST 6160
ST 6175

MV 5311-AD	PV 6311-AD
MV 5411-AD	PV 6411-AD

All-purpose cage guided globe control valve

- High flow capacities provide larger flow area, reduced body velocity and pressure loss
- Yoke lock nut guarantees easy disassembly
- Hardened / Stainless steel trim provides twice the service life of 316 stainless trim
- Cup seal with three times the wear surface of competitive valves for long lasting leak tight seal
- Multiple cage options for maximum versatility
- Balanced plug design provides smooth high pressure control
- Ultra compact actuators install in tight spaces
- Tighter shut-off design provides exceptional performance up to Class VI
- Compact actuators can easily be installed in tight spaces

Technical data

Body Assembly	Style: Single seated, top entry bolted bonnet, globe style body, cage guided balanced plug	
Nominal diameter	NPS 2 … 16	
Nominal pressure	CL 150 … 1500	NPS 2 ... 8
	CL 150 … 600	NPS 10 ... 16
Body material	Carbon steel, ASTM A216 Gr WCC	
	Chrome moly, ASTM A217 Gr WC9	
	Stainless steel, ASTM Gr CF8M	
Butt weld ends	RF, RTJ, BWE (NPT, SWE only for NPS 2)	
Stem packing	PTFE V-Rings	(-29 °C to +230 °C)
	Laminated graphite	(-29 °C to +566 °C)
Trim Types	Standard, Les-Cav I+II, Les-Sonic I+II	
Flow Characteristics	Equal percentage, Linear	
Trim Materials	Martensitic (series 400) / austenitic (series 300)	
	Standard and high temperature versions	
Trim Sizes	Full port, 80 %, 60 % and 40 % reduced	
	Custom, contact application engineering	
Kvs values	24 – 2666 m^3 / h	
Plug Seal Materials	C300 spring loaded seal with Inconel spring Class IV or V	(max. +300 °C)
	Double carbon-graphite seal rings LeakageClass IV	(max. +538 °C)
Shutoff Class	According ANSI / FCI 70-2	
	Standard trim Leakage Class V Leakage Class IV	 (-29 °C to +300 °C) (-29 °C to +427 °C)
	Standard trim Leakage Class IV	 (-29 °C to +538 °C)
Actuators	Spring and diaphragm pneumatic actuator	
	280, 530 or 1000 cm^2 actuator	
	Spring closed or spring open	
	Electric actuator	
	Optional: piston, double acting / spring return	

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MV 5300

Electric series

With electric actuators		Actuators
MV 52 …	Approved by German Technical Inspectorate	REact 30 ST 6151-5 REact 60 ST 6151-5
MV 53 …		REact 60 ST 6151-6 REact 100 ST 6151-6
MV 54 …		ST 5106 ST 6152-1 ST 5116 ST 6152-1

Fail close unit for motorized valves
MV 52 … / MV 53 … / MV 54 … series
2 way or 3 way design

- Approved by German Technical Inspectorate DIN EN 14597:2012-09 as safety functional device for steam and water in heating systems.
  (Valid only in combination with ST 6151-5)
- Valve closes on loss of power
- Closes smoothly even at large differential pressures
- Adjustable closing time for ST 6152-1
- Automatic return to normal operation possible

Technical data

	DIN	ANSI	
Nominal diameter	DN 15 … 100	NPS ½ … 4	(Series MV 52 …)
	DN 15 … 150	NPS ½ … 6	(Series MV 53 …)
	DN 40 … 250	NPS 1½ …10	(Series MV 54 …)
Nominal pressure	PN 16 ... 160	CL 150 … 900	
Stem packing	Chevron rings PTFE-graphite		(max. +250 °C)
	Bellows seal with safety stuffing box		(max. +300 °C)
Trim variations	V-port plug		(equal% / linear)
	Perforated plug		(equal% / linear)
Seat leakage	According DIN EN 1349		According to ANSI / FCI 70-2
	Class IV (metal to metal)		Class IV
	Class IV-S2 (lapped in metal to metal)		Class V (optional)
	Class VI (soft seat with PTFE-Graphite max. +200 °C)		Class VI

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

Steam converting valves 5351 / 6451

PV 6451

REflex

Electric series

With electric actuators
REact 60E/DC
REact 100E/DC
ST 5106
ST 5116

Pneumatic series

With pneumatic actuators
ST 6160
ST 6175

MV 5351	PV 6351
MV 5451	PV 6451

Steam-converting valves used to reduce the steam pressure while simultaneously cooling the steam.

- Steam pressure reduction and cooling in one unit
- Low-noise Perforated plug
- Water injection from below
- Wide control range
- Optimized control characteristic with adapted trim for steam and water

Technical data

Nominal diameter	DN 40 … 250	
Nominal pressure	PN 16 … 100	
Body materials	GP240GH	(PN 16 … 100)
	G17CrMo5-5	(PN 63 … 100)
Flanges	According to DIN 2501; EN 1092-1 and EN 1092-2 Different flanges on request	
Stem packing	Chevron rings PTFE-graphite	(max. +250 °C)
	Stuffing box pure graphite	(max. +530 °C)
Trim variations	Perforated plug 1.4122, 1.4122 hardened Stem + Seat 1.4571 Stellited seat Other materials available on request	(equal% / linear)
Seat leakage	According to DIN EN 1349 Class IV (metal to metal) Class IV-S2 (lapped in metal to metal)	
Max. press / temp.	According to DIN EN 1092	
Approvals	DGRL (CE) ATEX (für PV...), TR TS (EAC), CCC	

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

MDK 5351

PDK 6351

REcool

Electric series

With electric actuators
ST 5106
ST 5116

MDK 5351
MDK 5451

Pneumatic series

With pneumatic actuators
ST 6175

PDK 6351
PDK 6451

Injection cooler – Desuperheated steam cooler

- Variable control characterstics
- Precise steam temperature control
- Variable turndown ratio 10 :1 / 25:1
- Excellent atomising characterstic at ΔP water/ steam of minimum 10 bar at minimum. Steam velocity of 10 m/s.
- Max. ΔP Water/Steam upto 100 bar. No additional control valve is required.
- Tight shut-off, without any leakage
- High reliability due to simple parts and minimum wear

Multi nozzle lancer Desuperheater 5351 / 6451

Technical data

Body materials	15Mo3 (~ ASTM A182 F1) 13CrMo (~ ASTM A182 F12) Inner parts made of min.13 % chromium steels	
Flanges	Cooling water inlet flange DN 25 / 40 / 50 Mounting flange DN 80 / 100 Connection Optionsly in DIN or ANSI (On request) Minimum inside pipe diameter on mounting flange 76 mm	(PN 25 … PN 400) (PN 25 … PN 400)

Description of function

In cases where, steam conditioning valves are only of limited use or can no longer be used in the event of a subcritical steam pressure reduction requiring steam cooling, due to very small or very large water requirement (more than 25 % of the steam quantity) and/or where very large differences between the operating condition exist. In such cases, the steam temperature is controlled by injecting finely atomized cooling water into the steam flow by injection cooler of the series PDK 6X51 / MDK 5X51 after the steam pressure has been reduced. This brings the steam to the desired value (at least 5 K above the saturated steam temperature).

In the nozzle chambers, the cooling medium is accelerated and starts to rotate by means of a twist insert, so that a very finely atomized spray cone is created when it is discharged into the steam piping. This guarantees a very good mixing of the cooling medium with the hot steam flow and ensures an optimum cooling effect. By using several twist nozzles (the necessary number is adapted to the operating data) a very good and precise steam temperature control is achieved for the planned operating states between the minimum and maximum mass flow of hot steam that is to be cooled.

The valve seat is positioned directly upstream from the nozzle head which completely prevents any undesired dripping due to its tight connection with the control piston. The control piston is lapped tightly into the seat during production.

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

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Feed-water control valves with re-circulation connection 5291 / 5391

MV 5391

REflex

Electric series

With electric actuators
REact 30E/DC
REact 60E/DC
REact 100E/DC

MV 5291

MV 5391

REact

Control valve for steam boiler feed-water control systems

- Boiler-feed pump securely protected against falling below the minimum flow rate
- Adjustable re-circulation flow rate
- Perforated plug for feed-water control
- Boiler steam ratings 5 ... 50 t/h

Technical data

	DIN	ANSI
Nominal diameter	DN 25 ... 80	NSP 1 ... 3
Nominal pressure	PN 40	CL 150 CL 300
Body materials	1.0619 / 1.4408	SA216 WCB SA351 CF8M
Stem packing	Chevron rings PTFE-graphite	(bis +250 °C)
Trim variations	Perforated plug for feed-water and re-circulation (DN 40, DN 50, DN 65 re-circulation adjustable) 1.4122, 1.4122 hardened	
Seat leakage	According to DIN EN 1349 Class IV (metallisch dichtend)	According to ANSI / FCI 70-2 Class IV
Max. medium Temperature	+200 °C	
Max. press / temp.	According to DIN EN 1092	According to ASME B16.34
Approvals	DGRL (CE), ATEX (für PV...), TR TS (EAC), CCC	

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

Continuous blow down valves 5291 / 6291

MV 5291-D

PV6291-V

Technical data

	DIN	ANSI
Nominal diameter	DN 15, 20, 25, 40	NPS ½, ¾, 1 und 1½
Nominal pressure	PN 40	CL 300
Body material	GP-240-GH	SA 216 WCB
Stem packing	Chevron rings PTFE-graphite	(bis +250 °C)
Trim variations	Parabolic plug	
Seat leakage	According to DIN EN 1349 Class IV (metal to metal)	According to ANSI / FCI 70-2 Class IV
Max. press. / temp.	According to DIN EN 1092	According to ASME B16.34
Approvals	DGRL (CE), ATEX (für PV...), CCC	

Electric series

With electric actuators
REact 15 E

MV 5291-D
MV 5291-V

Pneumatic series

With pneumatic actuators
ST 6135

PV 6291-D
PV 6291-V

Motorized control valves for continuous blow down of steam boilers.

- Two-way design with (V) / without (D) sample valve
- Durable execution
- Hardened plug and seat for low wear operation
- body material GP-240-GH
- Parabolic plug with linear characteristic for exact dosing of blow down flow rate

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

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Bottom blowdown valves 6291

PV 6291 HV 6291 PV 6291-E

Pneumatic series

With pneumatic actuator ST 6135	With Handwheel
PV 6291	HV 6291
PV 6291-E	

Bottom blowdown valves for steam boilers

- Maintenance free stem packing
- Clear flow through valve
- Protection of stem packing by back sealing
- Easy replacement of plug
- Reduced susceptibility to water hammer due to bonnet having a smaller cross sectional area
- Guided plug which reduces plug vibration
- Supplied with high quality B7A grooved gaskets

Technical data

	Two-way design		Angle form	
	DIN	ANSI	DIN	
Nominal diameter	DN 20 … 65	NPS ¾ … 2 ½	DN 20 … 50	
Nominal pressure	PN 40	CL 300	PN 63 ... 160	
Body material	GP240GH	SA 216 WCB	GP240GH, Others on request	
Stem packing	Chevron rings PTFE-graphite	(max. +250 °C)	Chevron rings PTFE-graphite	(max. +290 °C)
Trim variations	Shut-off plug Stem + Seat 1.4571		Shut-off plug Stem + Seat	Stellited 1.4571 Stellited
Mounting position	Any			
Max. press / temp.	According to DIN EN 1092		According to ASME B16.34	
Options	Solenoid valve with control unit for bottom blowdown valve			
Function HV 6291	The bottom blowdown valve is operated by hand lever The valve closes automatically when the lever is released The valve can be blocked in the open position			
Function PV 6291	The air supply must not exceed 6 bar The bowdown valve must be quickly + fully opened			
Approvals	DGRL (CE), ATEX (für PV...), CCC			

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

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Valves for discharge / re-circulation control 5241 / 6341

REflex

REact

MV 5341

Electric series

With electric actuators
REact 30E/DC
REact 60E/DC
REact 100E/DC

Pneumatic series

With pneumatic actuators
ST 6135
ST 6160

MV 5241	PV 6241
MV 5341	PV 6341

Control valves for discharge / re-circulation used for water- or air-cooled condensers

- Three-way design
- Kvs value adjustable in gate B
- Plug can be rotated 80°
- Vacuum-resistant on re-circulation side
- Re-circulation plug assy cavitation resistant

Technical data

Nominal diameter	DN 50 … 150	
Nominal pressure	PN 16 … 40	
Body materials	EN-GJS-400-18-LT	(max. PN 25)
	GP240GH	(max. PN 40)
	GX5CrNiMo19-11-2	(max. PN 40)
Flanges	According to DIN 2501; EN 1092-1 and EN 1092-2 Different flanges on request	
Stem packing	Chevron rings PTFE-graphite	(max. +250 °C)
	Stuffing box pure graphite	(max. +530 °C medium dependent)
	With "TA-Luft" (MV 5341)	(max. +400 °C)
Trim variations	Diverting plug to control flow / re-circulation	(linear)
	Stem + Seat 1.4571 Parabolic plug 1.4122 Perforated plug 1.4122, 1.4122 hardened Other materials available on request	
Seat leakage	According to DIN EN 1349 Class IV (metal to metal)	
Max. press / temp.	According to DIN EN 1092	
Approvals	DGRL (CE), ATEX (für PV...), CCC	

Data sheet under https://www.rtk.de/en-us/Products/Valves-for-special-applications

ACTUATORS

- Electric actuators
- Pneumatic actuators

REact 15

Series

REact 15E- 038
REact 15 DC

Electric actuator for modulating control and shut/ off valves with brushless 24VDC motor technology (REdrive)

- operated by 3-term-step controllers or analogue signals 0/4-20 mA, 0/2..10V
- force switches for both directions
- limit switch for one direction, spindle retracted
- protection rating IP 65
- valve position indicator
- manual control
- optional accessories available

Options:

- Spring clamp connection terminals
- 2 freely selectable limit switches
- Anti condensation heater
- Feedback potentiometer
- Feedback transducer 2 or 3-Wire
- Digital valve positioner

Technical data

Type	REact 15 E			REact 15 DC			
Operating force	1,5 kN						
Closing force	1,7 kN						
Stroke	max. 35 mm						
Speed	0,38 mm/s			0,28 mm/s	0,38 mm/s	0,57 mm/s	1,14 mm/s
Power draw	13,2 VA			4,5 W	5 W	6,2 W	8,6 W
Isolation class	B						
Motor voltage	24 V AC-50/60 HZ	115 V AC-50/60 HZ	230 VAC - 50/60 HZ	24 VDC			
Motor rating standard	S1						
Limit switches	1 switch						
Protection rating	IP 65, DIN VDE 0470						
Ambient temperature	-20 °C bis +70 °C						
Mounting position	beliebig, jedoch Antrieb nicht nach unten hängend						
Gear lubricant	Divinol Fett Central, NIGI Klasse 0						
Cable glands	3 x M16						
Weight	4,2 kg						

Optional accessories

2 additional limit switch	2 additional circuit board is necessary Contact rating 5 A, 250 V	
Potentiometer	1 kΩ 2 kΩ 5 kΩ	
Position indicator	REtrans4W, 3-wire REtrans2W, 2-wire	0(4) – 20 mA 0 – 10 V
Digital positioner	REpos Input Output	 0(4) – 20 mA bzw. 0(2) – 10 V 0(4) – 20 mA bzw. 0(2) – 10 V
Heater	24 V / 3 W	

Data sheet under https://www.rtk.de/en-us/Products/Actuators

REact 30

Series

REact 30E- 028
REact 30E- 074
REact 30E- 112
REact 30 DC

Electric actuator for control and shut/off valves with brushless 24 VDC motor technology (REdrive)

- 3-point step control
- Separate force and limit switches for both directions
- Four speed settings as standard I DC
- Protection rating IP 65
- Valve position indicator
- Manual hand wheel
- Electrical connections via plug/socket connectors
- CE marking

Options:

- Power pack, input: 90-264 V 50/60 Hz I DC
- Heater
- Speeds individually pre-settable I DC
- Potentiometer
- Position indicator, 2 or 3-wire
- Positioner with display
- Bus system (Profibus DP, CANopen)
- Process controller integrated in cover
- Hydraulic system for fail-safe control

Technical data

Type	**REact 30 E**			**REact 30 DC**			
Operating force	2,8 kN						
Closing force	3,0 kN						
Stroke	max. 40 mm						
Speed	0,28 mm/s	0,74 mm/s	1,12 mm/s	0,2 mm/s	0,28 mm/s	0,42 mm/s	0,84 mm/s
Power draw	12 VA	27 VA	46 VA	9 W	10 W	13 W	21 W
Motor voltage	24 VAC, 115 V, 230 V, 50/60 Hz*			24 VDC			
Isolation class	B						
Motor rating standard	S1– 100%						
Limit switches	2 x force switch, 2 x switches Rating 4 A, 250 V 2 adjustable switches Rating max. 4 A, 250 V						
Protection rating	IP 65, DIN EN 60529			IP 65, DIN VDE 0470			
Ambient temperature	-20 °C bis +70 °C*						
Mounting position	beliebig, jedoch Antrieb nicht nach unten hängend						
Gear lubricant	Divinol Fett F 14 EP, NLGI Klasse						
Cable glands	4 x M 20						
Weight	4,5 kg						

*If you use the power supply (NG2450) the max. ambient temperature is -10°C till +60°C

Optional accessories

Potentiometer	max. 2	1 kΩ, 2 kΩ ,5 kΩ
Position indicator	REtrans4W, 3-wire	0(4) – 20 mA, 0(2) – 10 V
	REtrans2W, 2-wire	4 – 20 mA
REpos / digital positioner with display	REpos	
	Input	0(4) – 20 mA bzw. 0(2) – 10 V
	Output	0(4) – 20 mA bzw. 0(2) – 10 V
REpos with Profibus DP **REpos with CAN-Open**		
Heater	12-36 V – 3W/6W, 110-230V - 3 W / 6 W	
Power pack	Eingang: 90-264V 50/60Hz Ausgang: 24VDC	
Process controller	Qube, 1 Kanal PID	
Supplementary equipment	NRTL(Nationallly Recognized Testing Laboratory)-Certification for USA & Canada	
	Sea air resistant variant	

Additional options on request

Data sheet under https://www.rtk.de/en-us/Products/Actuators

Electric Actuators REact 60

REact 60

Series

REact 60E-030
REact 60E-045
REact 60E-090
REact 60E-170
REact 60 DC

Electric actuator for control and shut/off valves with brushless 24 VDC motor technology (REdrive)

- 3-point step control
- Separate force and limit switches for both directions
- Four speed settings as standard | DC
- Low height due to adaption spindle
- Protection rating IP 65
- Valve position indicator
- Manual hand wheel
- Electrical connections via plug/socket connectors
- CE marking

Options:

- Power pack, input: 90-264 V 50/60 Hz | DC
- Heater
- Speeds individually pre-settable | DC
- Potentiometer
- Position indicator, 2 or 3-wire
- REpos positioner with display
- Bus system (Profibus DP, CANopen)
- Process controller integrated in cover
- Hydraulic system for fail-safe control

Technical data

Type	**REact 60 E**				**REact 60 DC**			
Operating force	6,0 kN							
Stroke	max. 60 mm							
Speed	0,3 mm/s	0,45 mm/s	0,9 mm/s	1,7 mm/s	0,2 mm/s	0,3 mm/s	0,45 mm/s	0,9 mm/s
Power draw	27 VA	46 VA	46 VA	79 VA	11,5 W	12,5 W	18 W	27 W
Motor voltage	24 VAC, 115 V, 230 V, 50/60 Hz				24 VDC			
Isolation class	B							
Motor rating standard	S1 100%	S1 100%	S1 100%	S3 50%	S1 100%			
Force switches	2, directly wired							
Limit switches	2, directly wired							
Additional limit switches	2, rating 4 A, 250 V							
Protection rating	IP 65, DIN EN 60529							
Ambient temperature	-20 °C bis +70 °C*							
Mounting position	Any, except upside down							
Gear lubricant	Divinol Fett Central, NIGI grade 0							
Cable glands	4 x M 20							
Weight	6,7 kg							

*If you use the power supply (NG2450) the max. ambient temperature is -10°C till +60°C

Optional accessories

Potentiometer	max. 2	1 kΩ, 2 kΩ, 5 kΩ
Position indicator	REtrans4W, 3-wire	0(4) – 20 mA, 0(2) – 10 V
	REtrans2W, 2-wire	4 – 20 mA
REpos / digital positioner with display	REpos	
	Input	0(4) – 20 mA, 0(2) – 10 V
	Output	0(4) – 20 mA, 0 – (2)10 V
REpos with bus system CAN-Open		
REpos /with Profibus DP		
Heater	12-36 V – 3W/6W, 110-230V - 3 W / 6 W	
Power pack	Eingang: 90-264V 50/60Hz Ausgang: 24VDC	
Process controller	1-channel PID process controller	
Supplementary equipment	NRTL(Nationallly Recognized Testing Laboratory)-Certification for USA & Canada	
	Sea air resistant variant	

Additional options on request

Data sheet under https://www.rtk.de/en-us/Products/Actuators

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Electric Actuators REact 100

REact 100

Series

REact 100E-030
REact 100E-045
REact 100E-090
REact 100 DC

Electric actuator for control and shut/off valves with brushless 24 VDC motor technology (REdrive)

- 3-point step control
- Separate force and limit switches for both directions
- Four speed settings as standard I DC
- Low height due to adaption spindle
- Protection rating IP 65
- Valve position indicator
- Manual hand wheel
- Electrical connections via plug/socket connectors
- CE marking

Options:

- Power pack, input: 90-264 V 50/60 Hz I DC
- Heater
- Speeds individually pre-settable I DC
- Potentiometer
- Position indicator, 2 or 3-wire
- REpos positioner with display
- Bus system (Profibus DP, CANopen)
- Process controller integrated in cover
- Hydraulic system for fail-safe control

Technical data

Type	**React 100 E**			**REact 100 DC**			
Operating force	10 kN						
Stroke	max. 80 mm						
Speed	0,3 mm/s	0,45 mm/s	0,9 mm/s	0,2 mm/s	0,3 mm/s	0,45 mm/s	0,9 mm/s
Power draw	27 VA	46 VA	81 VA	18 W	21 W	28 W	41 W
Motor voltage	24 VAC, 115 V, 230 V, 50/60 Hz			24 VDC			
Isolation class	B						
Motor rating standard	S1 100%	S1 100%	S3 50%	S1 100%			
Force switches	2, directly wired						
Limit switches	2, directly wired						
Additional limit switches	2, rating 4 A, 250 V						
Protection rating	IP 65, DIN EN 60529						
Ambient temperature	-20 °C bis +70 °C*						
Mounting position	Any, except upside down						
Gear lubricant	Divinol Fett Central, NIGI grade 0						
Cable glands	4 x M 20						
Weight	6,7 kg						

*If you use the power supply (NG2450) the max. ambient temperature is -10°C till +60°C

Optional accessories

Potentiometer	max. 2	1 kΩ, 2 kΩ, 5 kΩ
Position indicator	REtrans4W, 3-Leiter	0(4) – 20 mA, 0(2) – 10 V
	REtrans2W, 2-Leiter	4 – 20 mA
REpos / digital positioner with display	REpos	
	Input	0(4) – 20 mA, 0(2) – 10 V
	Output	0(4) – 20 mA, 0(2) – 10 V
REpos with bus system CAN-Open		
REpos /with Profibus DP		
Heater	12-36 V – 3W/6W, 110-230V - 3 W / 6 W	
Power pack	Eingang: 90-264V 50/60Hz Ausgang: 24VDC	
Process controller	1-channel PID process controller	
Supplementary equipment	NRTL(Nationallly Recognized Testing Laboratory)-Certification for USA & Canada	
	Sea air resistant variant	

Additional options on request

Data sheet under https://www.rtk.de/en-us/Products/Actuators

Electric Actuators
REact 30DC PoP

REactDC-PoP

Series

REact 30DC-PoP

Electric 3kN actuator for control valves with emergency power supply REepac03

Characteristics REact 30DC PoP

- 24 V BLDC Motor technology
- Advanced motor electronic REdrive^{ecu}
- 3-point step operation
- Separate force and limit switches
- Four speed settings as standard
- Protection rating IP 65, NEMA 4X
- Valve position indicator
- Manual hand wheel
- Electrical connections via plug/socket connectors

Characteristics REepac03

- SuperCap technology
- maintenance free
- backup speed:
  1.1mm/sec. REact30 DC PoP low version
  3.1mm/sec. REact30 DC PoP high version
- max travel range: 40mm
- actuator spindle retracted or extended selectable via DIP switch
- life cycle: > 500 000 Cycles
- charging time : 60 sec/ max charge
- power supply: 24Vdc/ 4A
- degree of protection: IP65
- ambient temperature -20°C upto70°C

Options:

- Power pack input: 90-264 V 50/60 Hz Out 24V dc
- anti condensation heater
- Potentiometer
- Position indicator, 2 or 3-wire
- Positioner with display
- Bus system (Profibus DP, CAN open)
- NRTL-Certification for USA & Canada
- Sea air resistant variant

Technical data

Type	**REact 30DC-PoP**			
Operating force	2,8 kN			
Closing force	3,0 kN			
Stroke	max. 40 mm			
Speed low type	0,2 mm/s	0,28 mm/s	0,42 mm/s	0,84 mm/s
Speed high type	0,6 mm/s	0,74 mm/s	1,12 mm/s	2,24 mm/s
Power draw low/high	9 / 26 W	10 / 33 W	13 / 43 W	21 / 48 W
Motor voltage	24 VDC			
Isolation class	B			
Motor rating standard	S1– 100%			
Force switches	2, directly wired			
Wegschalter	2, directly wired			
Additional limit switches	2, rating 4 A, 250 V			
Protection rating	IP 65, DIN VDE 0470 / NEMA 4X			
Ambient temperature	-20°C...70°C*			
Mounting position	any, except upside down			
Gear lubricant	Divinol Fett F 14 EP, NLGI grade			
Cable glands	4 x M 20			
Weight	4,5 kg			

*If you use the power supply (NG2450) the max. ambient temperature is -10°C till +60°C

Optional accessories

Potentiometer	Max. 2	1 kΩ, 5 kΩ, 10 kΩ
Position indicator	REtrans4W, 3-Leiter REtrans2W, 2-Leiter	0(4) – 20 mA, (0)2..10 V 0(4) – 20 mA, 2..10 V
Digital positioner with display	REpos input output	 (0)4..20mA,(0)2..10V (0)4..20mA,(0)2 10V
CAN-Bussystem CANopen		
REpos with Profibus DP		
Heater	12-36 V – 3W/6W, 110-230V - 3 W / 6 W	
Power pack	Input: 90-264V 50/60Hz Output:24VDC	
NRTL-Certification		

Additional options on request

Data sheet under https://www.rtk.de/en-us/Products/Actuators

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REacTron

Series

REacTron 30DC
REacTron 60DC
REacTron 100DC

Electric actuator for control valves with integrated single loop PID controller

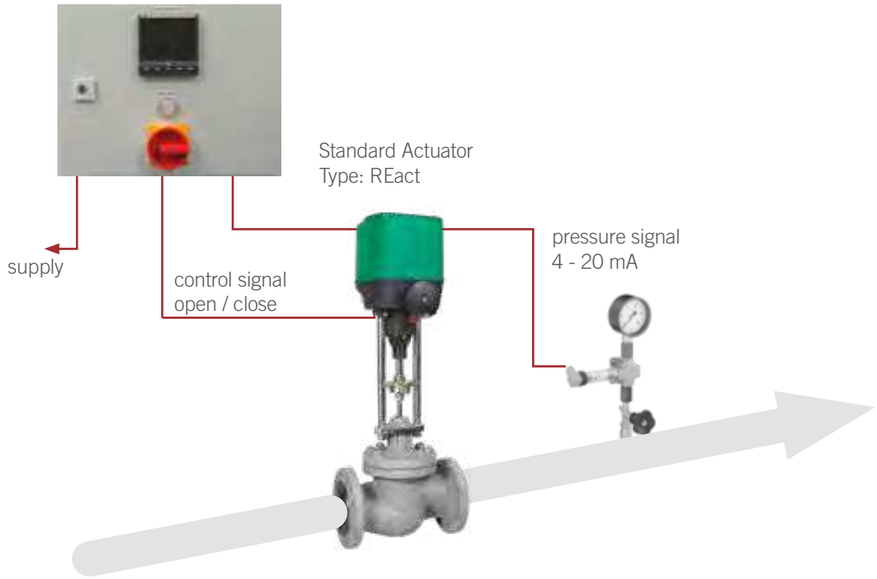
- single loop PID controller type : Qube
- power supply: 24V dc
- Input: mA, V, PT100, TC (free selectable)
- Output: 3-point step
- degree of protection: IP65
- ambient temperature : 0-50°C
- power unit : In 115/230Vac out 24Vdc
- prewired connectors

Options (optional Ausstattung):

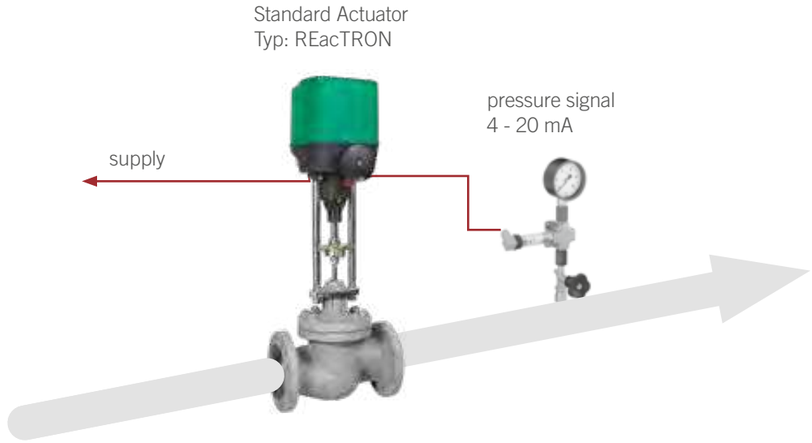
- interface RS485 Modbus (on request)
- REIog (starting up device for emergency closing unit)
- approval: NRTL

Application

Standard solution for a single loop PID process control



Low cost solution REacTron -> reduced material and costs



Data sheet under https://www.rtk.de/en-us/Products/Actuators

ST 5106

Series

ST 5106-20
ST 5106-60
ST 5106-61
ST 5116-20
ST 5116-60

Electric actuator for control and on / off valves

- Control via 3 point step
- Open and closed limit switches
- 2 freely selectable limit switches (only ST 5106)
- Handwheel
- Protection rating IP 65
- Mechanical stroke indicator

Options:

- Anti condensation heater
- Feedback potentiometer
- Feedback transducer 2 or 3-Wire
- Digital valve positioner
- Bus system (Profibus DP, CANopen)
- Hydraulic fail closed unit
- 3 Phase hybrid motor starter

Technical data

Type ST 5106	**-20**	**-60**	**-61**
Operating force	15 kN		
Stroke	Max. 80 mm		
Speed	0.3 mm/s	0.9 mm/s	1.8 mm/s
Power consumption	180 VA	180 VA	180 VA
Brake approx.	–	–	30 VA
Motor voltage	3~400 V 50 / 60 Hz* / 1~230 V 50 / 60 Hz* / 115 V		
Type ST 5116	**-20**	**-60**	
Operating force	20 kN		
Stroke	Max. 80 mm		
Speed	0.3 mm/s	0.85 mm/s	
Power consumption	180 VA		
Brake approx.	–	–	
Motor voltage	3~400 V 50 / 60 Hz*		
Motor rating standard	Switching frequency short term 2 pro sec. 50 % ED / 50 HZ 25 % ED / 60 HZ		
Force switches	2 Limit switches Contact rating max. 6 A, 250 V		
Protection rating	IP 55, DIN VDE 0470		
Ambient temperature	-20 °C to +60 °C		
Mounting position	Any, except upside down		
Cable glands	3 x M 20		
Weight	22 kg		

*For operation at 60 Hz the speed and power consumption increased by 20 %

Options

Limit switches	2 freely selectable Contact rating max. 6.5 A, 250 V	
Feedback potentiometer or Tandem version	Max. 2	1 kΩ, 5 kΩ, 10 kΩ
Feedback transducer	MU 4522, 3-Wire MU 4524, 2-Wire	0(4) – 20 mA 0(4) – 20 mA
Digital valve positioner	RE 3447 + Hybrid-Starter** Input Output	 0(4) – 20 mA respectively 0(2) – 10 V 0(4) – 20 mA
CAN-Bus system CANopen	BS 4591	
Profibus DP	BS 4581	
Anti condensation heater	24 V, 115 V, 230 V, 8 W	
** **Hybrid-Starter**	3 phase hybrid motor starter with electronic reversing contactor (needed for three phase actuators in combination with digital valve positioner RE 3447)	

Other options available on request

Data sheet under https://www.rtk.de/en-us/Products/Actuators


ST 6160

Series

ST 6115	120 cm²
ST 6135	280 cm²
ST 6160	530 cm²

Special applications

ST 6135.B6-__-C5-M
ST 6135.B6-__-OX
ST 6160.A6-__-C5-M
ST 6160.A6-__-OX

Pneumatic actuators for control and on/off valves

- Approved by German Technical Inspectorate (TÜV) as safety functional device for steam and water in heating systems.
- Spring closed or open
- Max. stroke 60 mm
- Max. air supply 6 bar
- Max. actuating force 10 kN
- Direct mounting of positioner with internal air supply
- Special applications possible
  -C5-M Marine air resistant
  -OX For oxygen as operating medium

Technical data

Type	ST 6115 .A6-3S	ST 6115 .C6-4S	ST 6135 .B6-2G	ST 6135 .B6-6G	ST 6160 .A6-6G	ST 6160 .C6-3G	ST 6160 .C6-7G
Diaphragm area	120 cm²		280 cm²		530 cm²	530 cm²	
Spring range (bar)	0.9 … 2.0	0.8 … 2.4	0.2 … 1.0	0.8 … 3.0	0.8 … 2.8	0.3 … 1.3	0.7 … 3.0
Stroke	20 mm	25 mm	35 mm		40 mm	60 mm*	
Operating pressure (bar)	Min. 2.2 Max. 6	Min. 2.6 Max. 6	Min. 1.2 Max. 6	Min. 3.2 Max. 6	Min. 3.0 Max. 6	Min. 1.5 Max. 6	Min. 3.2 Max. 6
Actuator volume	0.4 L_N		1.7 L_N		2.8 L_N	3.6 L_N	
Ambient temperature	-40 °C to +80 °C					-20 °C to +80 °C	
Coating	Acrylic						
Weight	3 kg		5 kg		12.5 kg	14 kg	
Connection	¼" NPT Female thread						
Mounting position	Any						

*50 mm for direction of action « open »; spring range reduced

Options

Handwheel	Mounted on top	
Limit switches	Contact rating max. 6 A, 400 V Protection IP 65	
3 / 2-solenoid valve	24 V DC, 24 V, 115 V, 230 V 50 / 60 Hz, EEx The safety function according to DIN EN 14597:2005-12 is only possible in combination with a solenoid valve which fullfills the requirements of the Mounted on top mentioned directive.	
Positioners		
SRP 981	0.2 … 1.0 bar	max. 6 bar
SRI 990	4 – 20 mA	2-Wire
SR 6136 (Sipart)	4 – 20 mA	2 / 3 / 4-Wire
SR TZIDC	4 – 20 mA	2-Wire
SR 1000 L	4 – 20 mA	2-Wire
SR 3300	4 – 20 mA	2-Wire

Other options available on request

Important note

The actuator needs in conjunction with the approval DIN EN 14597:2012-09 for failure free service, dry oil free instrument air

- Particle size 30 µm
- Pressure dewpoint 20 K under ambient temperature

Data sheet under https://www.rtk.de/en-us/Products/Actuators


ST 6175

Series

ST 6175.B6-__ 1000 cm²
ST 6175.C6-__ 1000 cm²

Pneumatic actuators for control and on/ off valves

- Actuating force max. 40 kN
- Spring closed or open
- Stroke max. 60 mm / 100mm
- Max air supply 6 bar

Technical data

Type	.B6-2S	.B6-3D	.B6-5D	.B6-7D	.C6-3S	.C6-3D	.C6-5D	.C6-7D
Diaphragm area	1000 cm²							
Spring range (bar)	0.3 … 0.9	0.7 … 2.1	1.2 … 3.4	1.6 … 4.7	0.5 … 1.4	0.8 … 2.1	1.4 … 3.4	1.9 … 4.7
Actuating force spring closed, closed position	3 kN	7 kN	12 kN	16 kN	5 kN	8 kN	14 kN	19 kN
Actuating force spring open, open position	40 kN	32 kN	21 kN	10 kN	38 kN	32 kN	21 kN	10 kN
Stroke	60 mm				100 mm			
Operating pressure (bar)	Min.1.1 Max. 6	Min. 2.3 Max. 6	Min. 3.6 Max. 6	Min. 4.9 Max. 6	Min. 1.6 Max. 6	Min. 2.3 Max. 6	Min. 3.6 Max. 6	Min. 4.9 Max. 6
Actuator volume	0.8 … 5.8 L_N				0.8 … 9 L_N			
Ambient temperature	-40 °C to +80 °C							
Coating	Acrylic							
Weight	35 kg	37 kg	39 kg	41 kg	45 kg	48 kg	54 kg	60 kg
Connection	⅜" NPT Female thread							
Mounting position	Any							

Options

Handwheel	Mounted on top	
Limit switches	Contact rating max. 6 A, 400 V Protection IP 65	
3 / 2 way solenoid valve	24 V DC, 24 V, 115 V, 230 V 50 / 60 Hz, EEx	
Solenoid valve	The safety function according to DIN EN 14597:2005-12 is only possible in combination with a solenoid valve which fullfills the requirements of the Mounted on top mentioned directive.	
Positioners		
SRP 981	0.2 … 1.0 bar	max. 6 bar
SRI 990	4 – 20 mA	2-Wire
SR 6136 (Sipart)	4 – 20 mA	2 / 3 / 4-Wire
SR TZIDC	4 – 20 mA	2-Wire
SR 1000 L	4 – 20 mA	2-Wire
SR 3300	4 – 20 mA	2-Wire

Other options available on request

Important note	The actuator needs in conjunction with the approval DIN EN 14597:2012-09 for failure free service, dry oil free instrument air • Particle size 30 µm • Pressure dewpoint +20 °C under ambient temperature

Data sheet under https://www.rtk.de/en-us/Products/Actuators

MANUAL STOP VALVES WITH BELLOWS SEAL

STRAINERS

HV 8014

Series

HV 8014
HV 8214

Manual stop valves for water, steam, air, thermal oil and other neutral, non aggressive fluids up to +400 °C.

- High Kvs-values (favorable Zeta-values)
- High seat tightness
- External threaded stem
- No rising handwheel
- Detachable stroke indicator
- Maintenance free

Technical data

Nominal diameter	DN 15 … 200	
Nominal pressure	PN 16, 25, 40	
Body materials	EN-GJS-400-18-LT GP240GH	
Flanges	Form C according to DIN 2526	
Stem packing	Bellows seal (TA-Luft) with safety stuffing box	
Plug form	Shut-off plug	
Seat tightness	Leakage rate 1 DIN 3230 – part 3	
Max. press / temp.	According to DIN EN 1092-1/-2	
Options	Soft seat Regulating plug Flanges with groove Stroke limitation locking device	(max. +200 °C) (HV 8214)

SF 8090

Series

SF 8090

Strainers are used to protect plants and their components from solid debris.
Suitable for water, steam, air, thermal oil and other neutral and non aggressive fluids up to +350 °C.

- Sieve made of stainless steel
- High Kvs-values (favorable Zeta-values)
- Easy to remove sieve for cleaning
- with drain plug

Technical data

Nominal diameter	DN 15 … 200
Nominal pressure	PN 16, 25, 40
Body materials	EN-GJS-500-7 (GGG 50) GP240GH
Flanges	Form C according to DIN 2526
Max. press / temp.	According to DIN EN 1092
Options	Flanges with groove Fine sieve With screw plug for pressure gauge connection

Data sheet under https://www.rtk.de/en-us/Products/Manual-stop-valves-and-strainers

SENSORS

- RTD Temperature probes
- Level sensors
- Electronic pressure-measuring station
- Power supply

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RTD Temperature probes WT 1100

WT 1104

WT 1102

Series

Screw in RTD Temperature probes

WT 1102-1	1 x PT100 / 160 mm
WT 1102-2	1 x PT100 / 250 mm
WT 1102-3	2 x PT100 / 160 mm
WT 1102-4	2 x PT100 / 250mm
WT 1102-MU	4 – 20 mA

Push in RTD Temperature probes for air measurement

WT 1104-1	1 x PT100 / to 400 mm
WT 1104-2	1 x PT100 / to 400 mm
WT 1104-4	2 x PT100 / to 1000 mm
WT 1104-MU	4 – 20 mA

Screw in RTD Temperature probes

Screw in RTD Temperature probes for standard applications are typically used for measuring temperatures of liquids or gases in pipelines or containers. They offer fast response time and come complete with stainless steel thermowell.

Measuring Insert	PT100 / temperature probe DIN EN60751 Class B	
Electrical Connection	2-Wire	
Process Connection	Thermowell, stainless steel 1.4571	
Temperature	-40 °C to +400 °C	
Pressure	PN max. 40 bar static	
Thread	G ½"	1.4571
Connection Head	Protection	IP 54
	Form	B / Aluminium
	Temperature	-40 °C to +85 °C (WT 1102-MU)
Design WT 1102-MU	2-Wire	Transducer
	Output	4 – 20 mA
	Please state required measuring range.	

Push in RTD Temperature probes for air measurement

With perforated brass thermowell and sliding stop flange

Measuring Insert	PT100 / Temperature probe DIN EN60751 Class B	
Electrical Connection	2-Wire	
Process Connection	Thermowell, brass	
Temperature	-40 °C to +400 °C	
Pressure	PN max. 40 bar static	
Thread	G ½"	1.4571
Connection Head	Protection	IP 54
	Form	B / Aluminium
	Temperature	-40 °C to +85 °C (WT 1104-MU)
Design WT 1104-MU	2-Wire	Transducer
	Output	4 – 20 mA
	Please state required measuring range.	

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

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Level sensors NI 1300

NI 1341

NI 1342

Series

NI 1341
- For thermal and refrigeration applications

NI 1342
- Shortened design
- For thermal and refrigeration applications

Standard version

- TÜV component tested WR. 12-416
- Electronic measurement system: Analogue technology, suitable for nuclear facilities
- Version available with shock, vibration or earthquake tests on request.
- Measuring range from 150 to 4000 mm
- Good temperature stability
- Excellent measuring precision
- LED trend display
- Connection thread G1

Technical data

Nominal pressure	PN 40 / PN 100	
Temp. max.	+238 °C (Medium)	PN 40
	+280 °C (Medium)	PN 100
Pressure max.	32 bar at +238 °C	(PN 40)
	40 bar at +20 °C	(PN 40)
	63 bar at +280 °C	(PN 100)
	100 bar at +20 °C	(PN 100)
Temperature range		
NI 1341	-60 °C to +280 °C (Medium)	
NI 1342	-20 °C to +70 °C (Medium)	
Materials	Wet parts	Stainless steel 1.4541
	Housing	Aluminium AlMgSi0, 5F25
	Connector	Polyamid PA
Electrical data	Output	4 – 20 mA, 3-Wire
	Load, max.	220 Ω
	Display	10 LEDs per 10 % steps
	Supply-voltage Standard	24 V DC / 100 mA
	Supply-voltage CAN-open	24 V DC / 250 mA
	Power consumption Standard	ca. 80 mA
	Protection rating	IP 65
	Ambient temperature	-20 °C to +70 °C
Options	Field bus interface	CAN-open
Operation	The level is determined by the weight of the displacer, which is located in the medium. The weight depends on the buoyancy therefore on the specific weight and the level. The buoyancy of the displacer, depending on level and density of the liquid, is measured with a spring balance and inductively transformed in a 4 … 20 mA signal. To be able to calibrate the level sensor, the density of the liquid must be known. If used with strongly agitated fluids it is recommended that the level sensor be installed outside the vessel, for this a reference vessel with connection flanges should be used.	
Application	1. Level measuring with LED display per 10 % steps and remote transmission with 4-20 mA output signal 2. Level-dependent pump regulation in combination with switch-gear SG 2411, SG 2431 3. Continuous level control with electronic controllers RE 3452, RE 3453 RE3472 and motor valve, series MV 5000	

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

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DR 1226

Series

DR 1226
DR 1226-K

Electronic pressure-measuring station for use in heating and refrigeration systems, suitable for gases and liquids

- Piezoresistive
- Measuring range up to 60 barg
- Power supply 12 … 30 V DC
- With pressure gauge
- Two-Wire system
- Protection rating IP 54

Technical data

Function	A piezoresistive pressure sensor produces a pressure-proportional bridge voltage. This voltage is normalised to the corresponding measuring range and is given as a 4 – 20 mA signal.
Supply-voltage	12 … 30 V DC
Output	4 – 20 mA
Load	Max. 400 Ω
Protection rating	IP 54 / 65
Accuracy	Class 1
Ambient temperature	-20 °C to + 60 °C
Dimensions	380 x 146 x 96 mm
Compression strength	Short-time 1.3 pressure range
Vacuum resistance	High-vacuum
Material	
DR 1226	GK-CuZn38A
DR 1226-K	Stainless steel 1.4541

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

NG 1534

Series

NG 1534

Switched mode AC/DC power supply

- Wide input range 85 … 264 V **AC**
  85 … 375 V **DC**
- Output: 24 V DC / 24 W
- Short-circuit-proof
- Compliance with:
  IEC / EN60950 EN50178
  UL / cUL60950, UL508C
- DIN top hat rail assembly
- Ambient temperature -10 °C to +70 °C
- Protection rating IP 20

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

ELECTRIC COMPONENTS

- Digital controllers
- Analog controllers
- Electric switch gears

RE 3172

Series

¼ DIN 96 x 96
RE 3172
RE 3472
RE 3672
RE 3972

On request

¼ DIN 96 x 96	⅛" DIN 48 x 96
RE 3173	RE 3172-M
RE 3473	RE 3472-M
RE 3673	RE 3672-M
RE 3973	RE 3972-M
	RE 3173-M
	RE 3473-M
	RE 3673-M
	RE 3973-M

Digital controllers with PID control RE3072/73 free configurable as:

- 3-term-step-controller for driving electric actuators e.g. RTK actuators series ST 5100

or

- Continuous controller for driving pneumatic actuators with positioner e.g.: RTK series SR 6136 , SR 6137

Inputs:
- Feedback potentiometer from actuator
- External set point

Additional RE3073/RE3073M
- Programmer function
- Second analogue/digital output

On request
- Interface RS485 or Profibus DP

Technical data

Typ	RE 3172 RE 3172-M	RE 3472 RE 3472-M	RE 3173 RE 3173-M	RE 3473 RE 3473-M	RE 3672 RE 3672-M	RE 3972 RE 3972-M	RE 3673 RE 3673-M	RE 3973 RE 3973-M
Input	PT100	0(4)–20 mA	PT100	0(4)–20 mA	PT100	0(4)–20 mA	PT100	0(4)–20 mA
Output	3-point step				0(4)–20 mA			
Additional outputs	2 Alarm contacts 1 Measuring transducer SP, PV				3 Alarm contacts			
Regulations for electrical apparatus	Directives 73 / 23 / EEC as amended by directives 93 / 68 / EEC EN61010-1:93 + A2:95							
Regulations for electromagwnetic compatibility	Directives 89 / 336 / EEC as amended by directives 92 / 13 / EEC							
Regulations for RF émissions	EN61000-6-3:2001 for residential environments EN61000-6-4:2001 for industrial environments							
Regulation for HF immunity	EN61000-6-2:2001 for industrial equipment and systems							
Power supply	Standard On request	100–240 V AC / 50–60 Hz 24 V DC / 50–60 Hz						
Power consumption	Max. 3 VA							
Protection rating	Rear terminal block Housing Front	IP20 IP00 IP65						
E-connection	Screw terminal / 1 mm²							
Housing	Switchboard mounting	96 (48) x 96 x 110 mm						
Ambient temperature	0 °C to +50 °C							
Humidity	Max. 95 % rel							
Approvals	CE, UL and cUL							

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

Analog controllers RE 3304

RE 3304

Series

RE 3304

Electronic 3-term step-controllers with PI-control

- For driving electric actuators
- Set point selection by manual controllers
- Indication of actual value
- Integrated power supply for transducer 24 VDC
- Switches for limiting values
- Manual and automatic operation
- Component mark TÜV.WRS(WR).91-355 for application in boiler feed controls

Technical data

Power supply	115 AC / 230 V AC ca. 10 VA
Input resistance	50 Ω
Input	4 – 20 mA
Output as power supply for the transducer	e.g. NI 1341 24 V DC / 80 mA
Ambient temperature	-10 °C to +40 °C
Housing	Plastic case 144 x 72 x 165 mm for switch board mounting
Controlled variable	Level
Transducer	NI 1341 / 42
Set point range	0 to 100 %
Sensitivity	Adjustable from 1 to 10 %
Proportional band	Adjustable from 10 to 100 %
Protection rating	IP20
Operation	Set value and measured value are compared in a voltage comparator. The different between the two values causes switching pulses which are transmitted to the control valve via mutually interlocked contacts. Simultaneous to the circuit of the relay, proportional band-capacitors are loaded nearly linear, and a saw-tooth impulse opposed to the difference of actual value and set value. The value of this proportional band impulses its increasing and fall time, are adjustable at the adjustments Xp, Tn, Ty. Two indicator lamps show whether The regulator has reached its final opened or closed position. Two integrated switches for limit values can be connected on demand, indicator lamps show whether the level is >NW<, >middle level<, or >HW<.

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

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Electronic limit switch SG 2431

SG 2431

Series

SG 2431

Electronic limit switch

- Input
  Motor voltage 0(4) – 20 mA or
  Voltage 0(2) – 10 V
- Output
  2 x relays (Changer)
- Contact status indication via LED
- Actual value indication via bar graph display
- Limit value adjustment via front side pushbuttons
- Additional functions such as:
  Hysteresis, window, On / off-delay, alarm, inverse operation
- Galvanic 3-way-isolation (up to 4 kV)

Technical data

Connection	A.C. voltage	230 V AC / 10 mA
Input	Load independent DC Motor voltage	0(4) – 20 mA
	Ri	ca. 100 Ω
	or DC voltage	0(2) – 10 V DC
	Ri	ca.100 kΩ
	Temperature error	< 30 ppm / °C
	Actual value indication	By bar graph display Up to 100 % green, from 100 % yellow over 110% red LED
	Status indication	Relays A and B
Directive	MV 2004 / 108 / EG	
Low Voltage Dirctive	MV 2006 / 95 / EG	
Output	2 x relays	
	Changeover contact	+250 V AC / max. 8 A resistive load
	Contact life cycle	10^5 Cycles (8 A)
	Mech. Life cycle	30 x 10^6 Cycles
Ambient conditions	Storage temperature	-40 °C max. +70 °C
	Operating temperature	0 °C max. +55 °C
	Isolation voltage:	< 4 kV In / output < 4 kV power supply
Mounting details	Housing for top hat rail	
	Protection rating	IP20 Housing / IP10 Clamps
	Mounting rail fixed	According to EN 50022-35
	Width	22.5 mm
	Weight	160 g
Operation	The limit switch SG 2431 is used to control limit values of standardized Motor voltage or voltage signals. Due to the two output relays with one potential free change over contact, two switching functions can be realized. The switching status of the operated relay is indicated by the LED display. The switching point can be adjusted by the front side push buttons and the effective relay direction by the slide switch on the side. Applications include: Threshold switching, supervisory relay, pump control, positioning element control of final signals.	

Data sheet under https://www.rtk.de/en-us/Products/Sensors-Electronic-components

OTHERS

- General information 5000 - 7010
- Product description tables
- Certificates
- Delivery conditions

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Parabolic plug / Kvs values (m^3/h)

EN DN	ANSI NPS	Seat (mm)																			
		4	8	12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	
15	½"	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.25	1	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.5	1.7	2.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	¾"	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.25	1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.5	1.7	3.7	4.2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	1"	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.25	1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.5	1.7	4	5.2	7.5	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.25	1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.5	1.7	4.4	6.3	9.4	11	15	-	-	-	-	-	-	-	-	-	-	-	-	-
40	1,5"	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.25	1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.5	1.7	4.4	6.8	11	15	19	24	-	-	-	-	-	-	-	-	-	-	-	-
50	2"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	1.7	4.4	6.8	12	18	24	30	37	-	-	-	-	-	-	-	-	-	-	-
65	2,5"	-		2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	4.4	6.8	12	19	28	37	47	63	-	-	-	-	-	-	-	-	-	-
80	3"	-	-	-	6.8	12	19	31	45	58	79	95	-	-	-	-	-	-	-	-	-
100	4"	-	-	-	-	12	19	31	48	70	99	120	148	-	-	-	-	-	-	-	-
125	-	-	-	-	-	-	19	31	48	75	118	150	187	231	-	-	-	-	-	-	-
150	6"	-	-	-	-	-	-	-	48	75	127	179	234	292	333	-	-	-	-	-	-
200	8"	-	-	-	-	-	-	-	-	75	127	193	280	366	420	592	-	-	-	-	-
250	10"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	847	-	-	-	-
		-	-	-	-	-	-	-	-	-	127	193	302	438	527	747	926	-	-	-	-
300	12"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	977	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	193	302	466	565	813	1126	1333	-	-	-
400		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1455	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	680	1208	1753	2110	2290	2371	
Stroke (mm)		25						30			35		35	50	60	80	80	100	100	120	
													50*				100				

* for MV 54 … Stroke 50 mm

Perforated plug / Kvs values (m^3/h)

EN DN	ANSI NPS	Seat (mm)																			
		12	15	20	25	32	40	50	65	80	100	125	150	200	200	250	250	300	350	400	
15	½"	1.6	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	¾"	1.7	2.7	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	1"	1.7	2.7	4.8	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	1.7	2.7	4.8	7.6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	1.5"	1.7	2.7	4.8	7.6	12	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	2"	1.7	2.7	4.8	7.6	12	19	29	-	-	-	-	-	-	-	-	-	-	-	-	-
65	2.5"	-	-	4.8	7.6	13	19	30	49	-	-	-	-	-	-	-	-	-	-	-	-
80	3"	-	-	-	7.6	13	20	30	52	74	-	-	-	-	-	-	-	-	-	-	-
100	4"	-	-	-	7.6	13	20	30	52	78	116	-	-	-	-	-	-	-	-	-	-
125	-	-	-	-	-	13	20	30	52	78	122	181	-	-	-	-	-	-	-	-	-
150	6"	-	-	-	-	-	20	30	52	78	122	190	261	-	-	-	-	-	-	-	-
200	8"	-	-	-	-	-	-	30	52	78	122	190	273	403	465	-	-	-	-	-	-
250	10"	-	-	-	-	-	-	-	52	78	122	190	273	413	486	682	726	-	-	-	-
300	12"	-	-	-	-	-	-	-	-	78	122	190	273	413	486	725	785	1054	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	273	413	486	725	785	1100	1491	1861	
Stroke (mm)		25				30			40	50		60	80	80	100	80	100	100	120	150	

V-port plug / Kvs values (m^3/h)

EN DN	ANSI NPS	Seat (mm)															
		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
20	¾"	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	1"	-	7.5	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	9.4	11	15	-	-	-	-	-	-	-	-	-	-	-	-
40	1.5"	-	11	15	19	24	-	-	-	-	-	-	-	-	-	-	-
50	2"	-		18	24	30	37	-	-	-	-	-	-	-	-	-	-
65	2.5"	-	-	19	28	37	47	63	-	-	-	-	-	-	-	-	-
80	3"	-	-	-	31	45	58	79	95	-	-	-	-	-	-	-	-
100	4"	-	-	-	-	48	70	99	120	148	-	-	-	-	-	-	-
125	-	-	-	-	-	-	75	118	150	187	231	-	-	-	-	-	-
150	6"	-	-	-	-	-	-	127	179	234	292	333	-	-	-	-	-
200	8"	-	-	-	-	-	-	-	193	280	366	420	592	-	-	-	-
250	10"	-	-	-	-	-	-	-	-	302	438	527	747	926	-	-	-
300	12"	-	-	-	-	-	-	-	-	-	466	565	813	1126	1333	-	-
400	-	-	-	-	-	-	-	-	-	-	-	680	1208	1455	2110	2290	2371
Stroke (mm)		15							25	30	35	40	60	80	100	100	120

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Shut-off plug / Kvs values (m³/h)

EN DN	ANSI NPS	Seat (mm)																		
		8	12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
15	½"	1.7	2.7	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	¾"	1.7	3.7	4.2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	1"	1.7	4	5.2	7.5	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	4.4	6.3	9.4	11	15	-	-	-	-	-	-	-	-	-	-	-	-
40	1.5"	-	-	6.8	11	15	19	24	-	-	-	-	-	-	-	-	-	-	-
50	2"	-	-	-	12	18	24	30	37	-	-	-	-	-	-	-	-	-	-
65	2.5"	-	-	-	-	19	28	37	47	63	-	-	-	-	-	-	-	-	-
80	3"	-	-	-	-	-	31	45	58	79	95	-	-	-	-	-	-	-	-
100	4"	-	-	-	-	-	-	48	70	99	120	148	-	-	-	-	-	-	-
125	-	-	-	-	-	-	-	-	75	118	150	187	231	-	-	-	-	-	-
150	6"	-	-	-	-	-	-	-	-	127	179	234	292	333	-	-	-	-	-
200	8"	-	-	-	-	-	-	-	-	-	193	280	366	420	592	-	-	-	-
250	10"	-	-	-	-	-	-	-	-	-	-	302	438	527	747	926	-	-	-
300	12"	-	-	-	-	-	-	-	-	-	-	-	466	565	813	1126	1333	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-	680	1208	1753	2110	2290	2371
Stroke (mm)		15									25	30	35	40	60	80	100	100	120

Two stage parabolic plug / Kvs values (m³/h)

EN DN	Seat (mm)			
	4	8	12	15
15	-	0.7	1.5	
	-	1.2	2.0	2.4
20	-	0.7	1.8	
	-	1.2	2.9	4.0
25	-	0.7	1.8	
	-	1.2	2.9	4.0
32	-	0.7	1.8	
	-	1.2	3.3	4.5
40	-	0.7	1.8	
	-	1.2	3.3	5.0
50	-	0.7	1.8	
	-	1.2	3.3	5.0
65	-	-	1.8	
	-	-	3.3	5.0
Stroke (mm)	25			

Mixing plug / Kvs values (m³/h)

EN DN	ANSI NPS	Stroke (mm)	Seat (mm)	Kvs (m³/h)
20	-	15	32	6
25	1"		32	9.2
32	-		32	15
40	1.5"		40	24
50	2"		50	37
65	2.5"		65	63
80	3"	25	80	95
100	4"	30	100	148
125	-	35	125	231
150	6"	40	150	333
200	8"	60	200	592
250	10"	80 / 60*	250	926 / 847*
300	12"	100	300	1333
400	-	120	400	2371

*Stroke 60 mm for valves with bellows seal

Diverting plug / Kvs values (m³/h)

EN DN	ANSI NPS	Stroke (mm)	Seat (mm)	Kvs (m³/h)
20	-	15	25	4.2
25	1"		25	7.5
32	-		25	11
40	1.5"		32	19
50	2"		40	30
65	2.5"		50	47
80	3"		65	79
100	4"	25	80	120
125	-	30	100	187
150	6"	35	125	292
200	8"	40	150	420
250	10"	60	200	747
300	12"	80	250	1126** / 625***
400	-	120	320	2110** / 1250***

** Port A *** Port B

Two stage perforated plug / Kvs values (m³/h)

EN DN	Seat (mm)																	
	15	20	25	32	40	50	65	80	100	125	150	200	200	250	250	300	350	400
40	-	3.5	5.5	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	3.5	5.5	8.5	13.5	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	3.5	5.5	9.3	13.5	21	-	-	-	-	-	-	-	-	-	-	-	-
80	-	-	5.5	9.3	14.3	21	37	-	-	-	-	-	-	-	-	-	-	-
100	-	-	5.5	9.3	14.3	21	37	55	-	-	-	-	-	-	-	-	-	-
125	-	-	-	9.3	14.3	21	37	55	86	-	-	-	-	-	-	-	-	-
150	-	-	-	-	14.3	21	37	55	86	135	-	-	-	-	-	-	-	-
200	-	-	-	-	-	21	37	55	86	135	195	-	-	-	-	-	-	-
250	-	-	-	-	-	-	37	55	86	135	195	293	345	-	-	-	-	-
300	-	-	-	-	-	-	-	55	86	135	195	293	345	515	555	-	-	-
400	-	-	-	-	-	-	-	-	-	-	195	293	345	515	555	780	1055	-
Stroke (mm)	25			30			40	50		60	80	80	100	80	100	100	120	150

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Closing pressures control valves and on / off valves – Electric actuators

Seat (mm)		4 … 12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
REact 15	Shut-off pressure (bar)	40	40	25	15	8	5	2.5	1.0	-	-	-	-	-	-	-	-	-
	Mixing / V-port plug	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-
	Parabolic plug	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-
	Perforated plug	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-

Seat (mm)		4 … 12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
REact 30	Shut-off pressure (bar)	40	40	40	40	25	16	10	6	4	3	-	-	-	-	-	-	-
	Mixing / V-port plug	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-
	Parabolic plug	•	•	•	•	•	•	•	•	•	•[1)]	-	-	-	-	-	-	-
	Perforated plug	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-

Seat (mm)		4 … 12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
REact 60	Shut-off pressure (bar)	40	40	40	40	40	40	25.5	15.1	9.9	6.4	4.1	2.8	-	-	-	-	-
	Mixing / V-port plug	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-
	Parabolic plug	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-
	Perforated plug	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-

Seat (mm)		4 … 12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
REact 100	Shut-off pressure (bar)	40	40	40	40	40	40	40	27.1	17.9	11.5	7.3	5.1	-	-	-	-	-
	Mixing / V-port plug	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-
	Parabolic plug	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-
	Perforated plug	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-

Seat (mm)		4 … 12	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
ST 5106	Shut-off pressure (bar)	-	-	-	-	-	40	40	40	27.9	17.8	11.4	7.9	4.5	2.9	-	-	-
	Mixing / V-port plug	-	-	-	-	-	•	•	•	•	•	•	•	•	•	-	-	-
	Parabolic plug	-	-	-	-	-	•	•	•	•	•	•	•	•	•	-	-	-
	Perforated plug	-	-	-	-	-	•	•	•	•	•	•	•	•	•	-	-	-

• The points show the possible valve + acuator combinations
— The line shows the limits for valves with bellows seal
1) Stroke 35 mm for series MV 52 … / 53

Material pressure / Temperature ratings

Operating limits according to DIN EN 1092-1:2008 / DIN EN 1092-2:1997

PN	Material	Max. pressure in bar at temperature (°C)													
		-10	100	150	200	250	300	350	400	425	450	500	510	520	530
16	EN-GJL-250 (0.6025)	16	16	14	13	11	10	-	-	-	-	-	-	-	-
	EN-GJS-400-18-LT (0.7043)	16	16	16	15	14	13	11	-	-	-	-	-	-	-
	GP240GH (1.0619)	16	15	14	13	12	11	10	9	-	-	-	-	-	-
	GX5CrNiMo19-11-2 (1.4408)	16	16	14.5	13	12.5	11.5	11*	10.5*						
25	EN-GJS-400-18-LT (0.7043)	25	25	24	23	22	20	18	-	-	-	-	-	-	-
	GP240GH (1.0619)	25	23	22	19	18	17	16	15	-	-	-	-	-	-
	GX5CrNiMo19-11-2 (1.4408)	25	25	23	21	20	18	18*	17*	-	-	-	-	-	-
40	GP240GH (1.0619)	40	40	39	38	36	32	28	22	-	-	-	-	-	-
	GX5CrNiMo19-11-2 (1.4408)	40	40	36	33.5	31.5	29.5	28.5*	27*	-	-	-	-	-	-
	GX5CrNiMoNb19-11-2 (1.4581)	40	40	39	37	35	33	32	31	31	30	30	30	30	30
63	GP240GH (1.0619)	63	59	55	52	48	43	40	37	-	-	-	-	-	-
	G17CrMo5-5 (1.7357)	63	63	63	63	63	63	60	57	55	53	41	35	28	23
	GX5CrNiMo19-11-2 (1.4408)	63	63	57	53	50	47	45*	43*	-	-	-	-	-	-
	GX5CrNiMoNb19-11-2 (1.4581)	63	63	62	59	56	52	51	49	49	48	47	47	47	47
100	GP240GH (1.0619)	100	93	88	83	76	69	64	60	-	-	-	-	-	-
	G17CrMo5-5 (1.7357)	100	100	100	100	100	100	95	90	87	84	65	55	45	37
	GX5CrNiMo19-11-2 (1.4408)	100	100	91	84	79	74	71*	68*	-	-	-	-	-	-
	GX5CrNiMoNb19-11-2 (1.4581)	100	100	98	93	88	83	80	78	76	76	75	74	74	74
160	GP240GH (1.0619)	160	160	141	130	112	96	90	80	-	-	-	-	-	-
	G17CrMo5-5 (1.7357)	160	160	160	160	160	160	153	146	142	139	118	100	79	62

The values are rounded
* Exclusion of intercrystalline corrosion (no acids or acid-containing fluids)

Operating limits according to ASME B16.34:1996

Class	Material	Max. pressure in bar at temperature (°C)														
		-29	40	95	150	205	260	315	345	375	400	425	455	480	510	530
#150	A 216 WCB	20	20	18	16	14	12	10	8.5	7.5	6.5	5.5	-	-	-	-
#300		50	50	47	45	44	42	38	37	37	35	28	-	-	-	-
#600		100	100	93	90	87	82	75	74	73	69	56	-	-	-	-
#900		150	150	140	135	131	124	113	111	110	104	85	-	-	-	-
#150	A 351 CF8M	20	20	16	15	13	11	9	8	7	6	5.5	4	3.5	2.5	1
#300		50	50	43	38	35	33	31	30	29	29	29	29	28	26	24
#600		100	100	85	77	71	66	62	61	60	59	58	57	57	53	48
#900		150	150	128	116	106	98	93	92	90	88	87	86	86	80	72
#600	A 217 WC9	100	100	100	100	97	92	83	81	78	73	70	67	62	52	36
#900		150	150	150	150	146	137	125	121	117	110	105	100	93	78	54

The values are rounded

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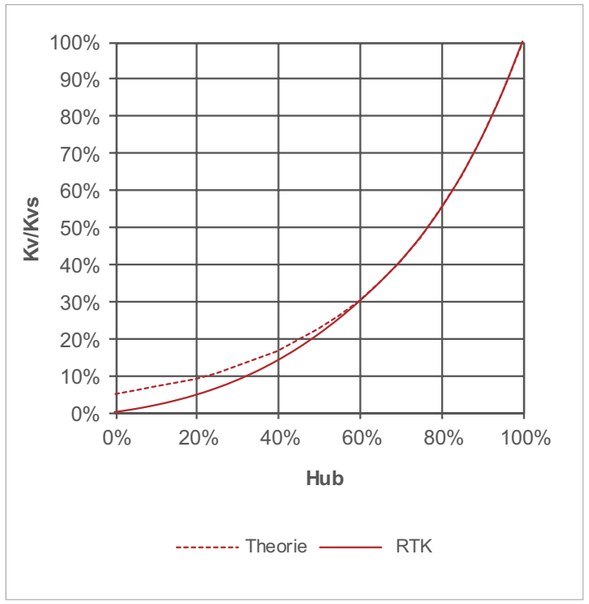
Plug characteristics for control valves

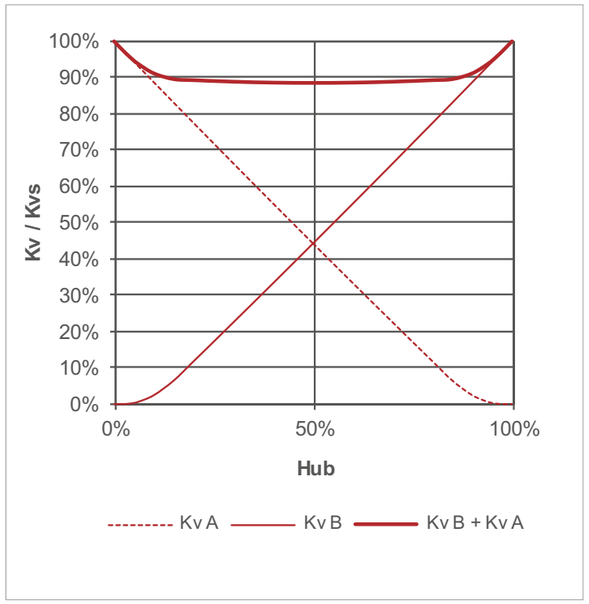
Equal percentage characteristic



The thick Continuous "equal percentage" line is a characteristic for practical use in industrial applications, which is continuously reduced to zero for small strokes. This characteristic allows suitable control even at small values.

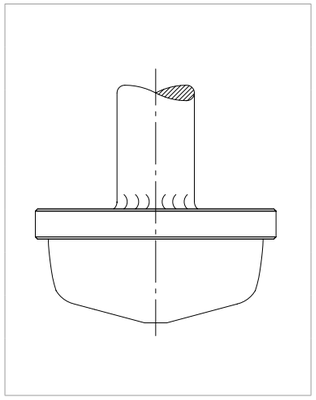
If not especially requested,in different version control valves are manufactured with this special "equal percentage" characteristic (see diagram characteristic RTK).

Linear Characteristic



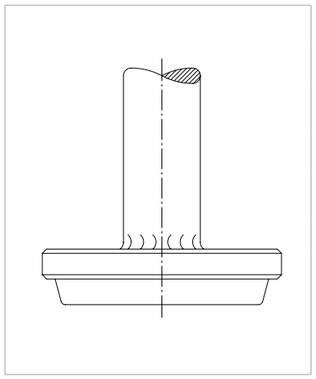
KvB Two-way valve
KvB + KvA Three-way valve

Plug types for 2-way valves



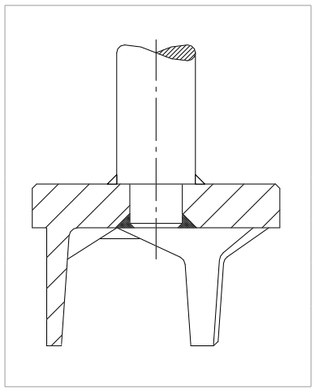
Parabolic plug

Characteristic	Linear / equal percentage
Materials	1.4122 Ferro titanium
Sealing	Metallic tight
Flow direction	Flow to open / flow to close
Rangeability	30:1 (max. 50:1)
Leakage	Class IV acc. to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media, especially for small Kvs valves



Shut-off plug

Characteristic	Quick opening
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to open / flow to close
Leakage	Class III according to DIN 3230 Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media



V-port plug

Characteristic	Linear
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to open / flow to close
Rangeability	30:1
Leakage	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media

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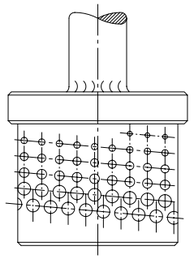
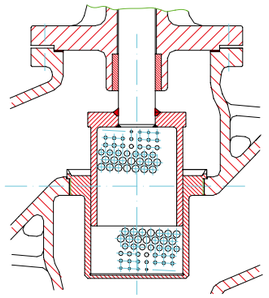
Plug types for 2-way valves



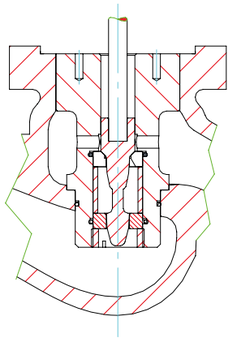
Perforated plug

Characteristic	Linear / equal percentage
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to open / flow to close
Rangeability	30:1 (max. 40:1)
Leakage	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media and noise reduction



Two-stage perforated plug

Characteristic	Linear / equal percentage
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to open / flow to close
Rangeability	30:1 (max. 40:1)
Leakage	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media and high difference pressures



Two-stage parabolic plug

Characteristic	Linear / equal percentage
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to open / flow to close
Rangeability	30:1 (max. 40:1)
Leakage	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media and high difference pressures

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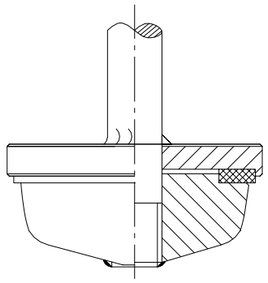
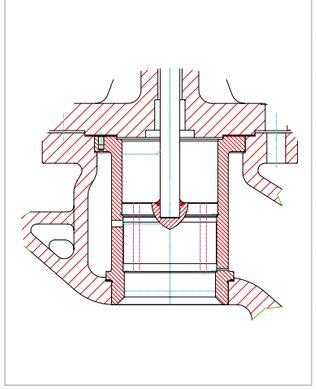
Plug types for 2-way valves



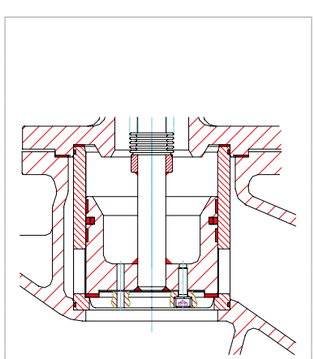
Option with soft sealing for parabolic plug, shut-off plug and V-port plug (example parabolic plug)

Characteristic	Linear / equal percentage / Qick opening
Material	1.4122
Sealing	Soft seal PTFE-graphite
Flow direction	Flow to open / flow to close
Leakage	Class I according to DIN 3230 Class VI according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of medium up to +200 °C with tight shut-off



Perforated plug, balanced valves

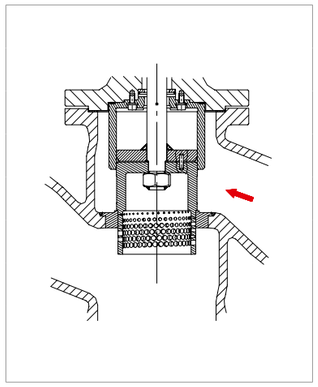
Characteristic	Linear / equal percentage
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to close
Rangeability	30:1 (max. 40:1)
Leakage	0,05 % of Kvs value according to DIN EN 1349 / ANSI / FCI 70-2
Application	All kinds of media Minimization of actuating forces



Balanced On / Off plug

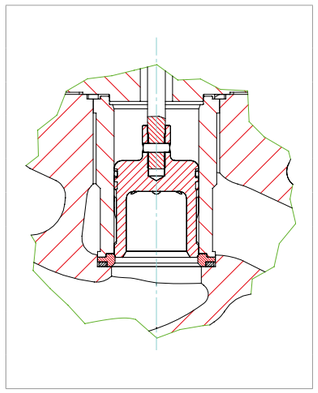
Characteristic	On / Off
Material	1.4122
Sealing	Soft seal tight PTFE-graphite
Flow direction	Flow to close
Leakage	Class III according to DIN 3230 Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Temperature	Max. +150 °C
Application	All kinds of media Minimization of actuating forces

Plug types for 2-way valves



Balanced plug

Characteristic	Linear / equal percentage
Material	1.4122
Sealing	Metallic tight
Flow direction	Flow to open
Leakage	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Temperature	Max. +530 °C
Application	All kinds of media Minimization of actuating forces

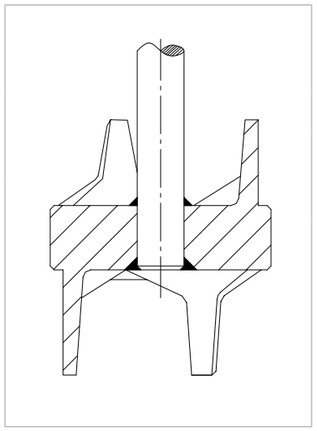


Balanced trim for RTK heavy duty valves

Characteristic	Standard Trim	Linear / Equal Percentage
	Les-Cav	Linear
	Les-Sonic	Linear
Material	Standard	410 Stainless steel (DIN equivalent 1.4006)
	Option	316 Stainless steel (DIN equivalent 1.4571)
		CA6NM Hi-temp (DIN equivalent 1.4313)
Sealing	C300 Spring loaded seal with Inconel spring (up to +300 °C)	
Rangeability	30:1	
Leckage	Standard Trim	Class IV (-20 °C to +427 °C)
		Class V (-20 °C to +300 °C)
	High Temp Trim	Class IV (-20 °C to +538 °C)
Application	All types of gases, steam, water and other liquids Les-Cav cage used to prevent valve trim damage due to valve cavitation Les-Sonic cage effectively reduces noise at the source	

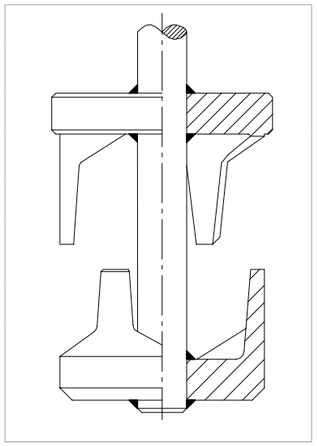
General information control valves 5000 - 7010

Plug types for 3-way valves



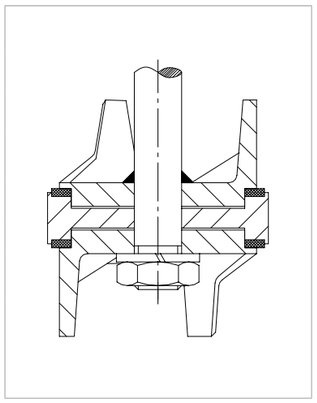
Mixing plug

Characteristic	Linear / linear
Material	1.4122
Sealing	Metallic tight
Rangeability	30:1 (max. 50:1)
Leakage	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
Application	Three way valves with mixing function (standard design)



Diverting plug

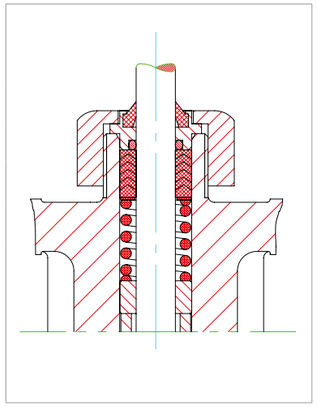
Characteristic	Linear / linear	
Material	1.4122	
Sealing	Metallic tight	
Rangeability	30:1	
Leakage	Port A	Class IV according to DIN EN 1349 / ANSI / FCI 70-2
	Port B	0,1 % of Kvs
Application	Three way valves with diverting function	



Mixing plug with soft seal

Characteristic	Linear / linear
Material	1.4122
Sealing	Soft seal tight PTFE-graphite
Rangeability	30:1 (max. 50:1)
Leakage	Class I according to DIN 3230 Class VI nach DIN EN 1349 / ANSI / FCI 70-2
Application	Three way valves with mixing function up to +200 °C with tight shut-off

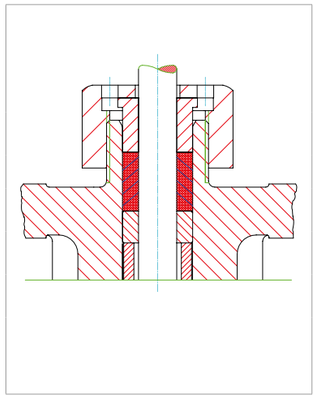
Stem packings



PTFE-graphite stem packing

Maintenance free chevron rings with pre stressed spring

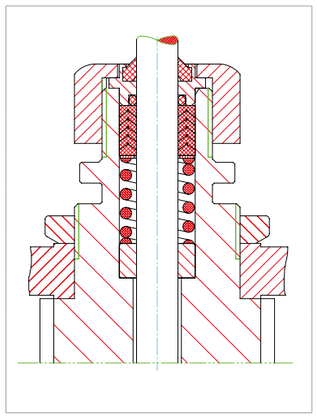
Material	PTFE-graphite
Temperature	-10 °C to max. +250 °C (-60 °C for K-Version)
Pressure	Max. 40 bar
Friction	[kp] = 3 x Stem diameter (mm)
Application	All kinds of media



Graphite stem packing

Pure flexible graphite rings and two anti extrusion inconel wire reinforced flexible graphite rings

Material	Graphite
Temperature	-10 °C to max. +530 °C (medium dependent) (-60 °C for K-Version)
Pressure	Max. 40 bar
Friction	[kp] = 10 x Stem diameter (mm)
Application	All kinds of media

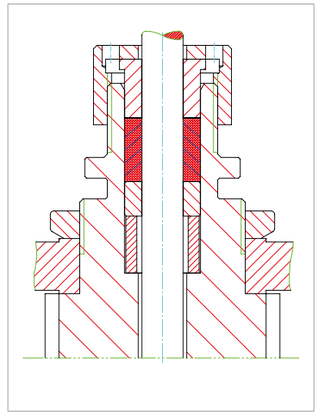


PTFE-graphite stem packing

Maintenance free chevron rings with pre stressed spring, bonnet with cooling ribs

Material	PTFE-graphite
Temperature	-10 °C to max. +250 °C (-60 °C for K-Version)
Pressure	Max. 160 bar
Friction	[kp] = 3 x Stem diameter (mm)
Application	All kinds of media

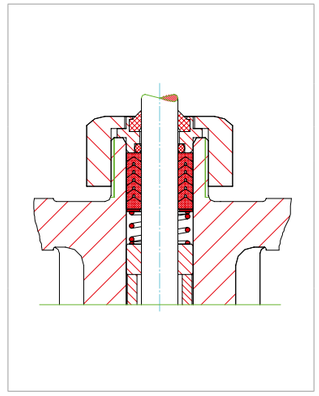
Stem packings



Graphite stem packing

Pure flexible graphite rings and two anti extrusion inconel wire reinforced flexible graphite rings, bonnet with cooling ribs

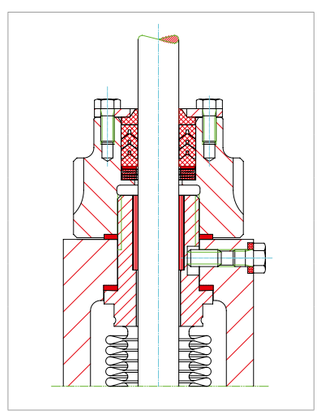
Material	Graphite
Temperature	-10 °C to max. +530 °C (medium dependent) (-60 °C for K-Version)
Pressure	Max. 160 bar
Friction	[kp] = 10 x Stem diameter (mm)
Application	All kinds of media



Stem packing with DVGW approval

Maintenance free chevron rings with pre stressed spring

Material	NBR
Temperature	-10 °C to max. +60 °C (-60 °C for K-Version)
Pressure	Max. 6 bar
Friction	[kp] = 2 x Stem diameter (mm)
Application	Natural gas

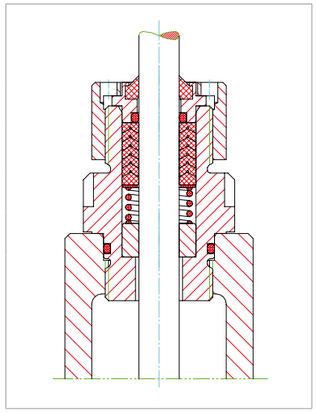


Bellows seal with stem packing for refrigerants

Maintenance free metal bellows stem seal with safety packing

Material	1.4571
Temperature	-60 °C to +350 °C
Pressure	Max. 25 bar
Friction	[kp] = 1 x Stem diameter (mm)
Application	All kinds of media

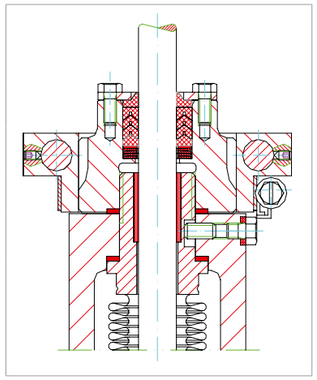
Stem packing



Chloroprene stem packing

Maintenance free chevron rings with pre stressed spring

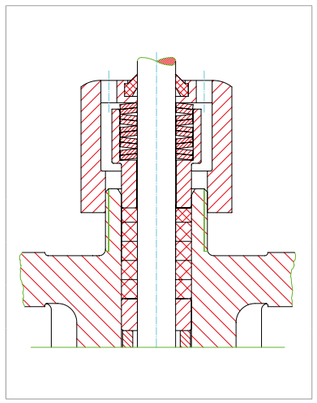
Material	NBR
Temperature	-60 °C to +150 °C
Pressure	Max. 40 bar
Friction	[kp] = 2 x Stem diameter (mm)
Application	Refrigerants



Bellows seal with stem packing for refrigerants

Maintenance free metal bellows stem seal with safety packing

Material	1.4571
Temperature	-60 °C to +350 °C
Pressure	Max. 25 bar
Friction	[kp] = 1 x Stem diameter (mm)
Application	Refrigerants

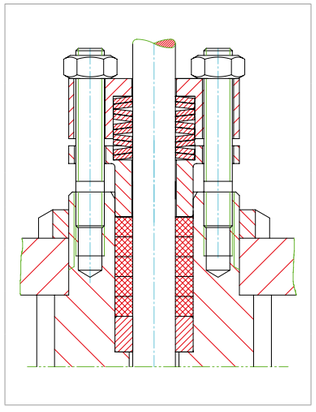


Stem packing with “TA-Luft” approval

Carbon fiber packing with pre stressed disc spring

Material	Carbon fiber fibrous web PTFE, aramid fibrous web
Temperature	-10 °C to max. +250 °C (- 60 °C for K-Version)
Pressure	Max. 40 bar
Friction	[kp] = 10 x Stem diameter (mm)
Application	Chemical industry

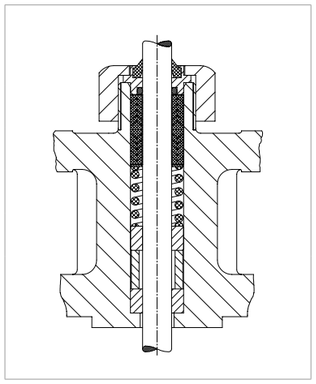
Stem packing



Stem packing with “TA-Luft” approval

Carbon fiber packing with pre stressed disc spring

Material	Carbon fiber, Pure graphite Special fibrous web
Temperature	-10 °C to max. +400 °C (-60 °C for K-Version)
Pressure	Max. 40 bar
Friction	[kp] = 30 x Stem diameter (mm)
Application	Chemical Industry

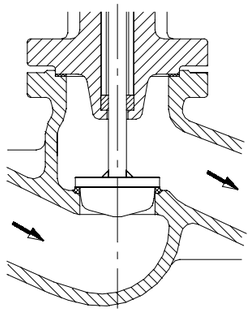


PTFE-graphite stem packing

2 sets of maintenance free chevron rings with pre stressed spring

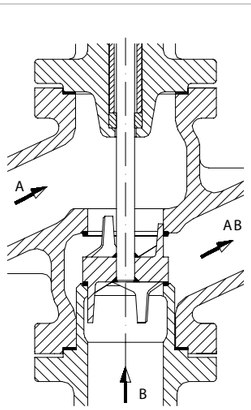
Material	PTFE-graphite
Temperature	Max. +250 °C
Pressure	Max. 40 bar
Friction	[kp] = 6 x Stem diameter (mm)
Application	All kinds of media Suitable for vacuum application

Types of valves



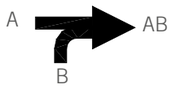
Two way valve

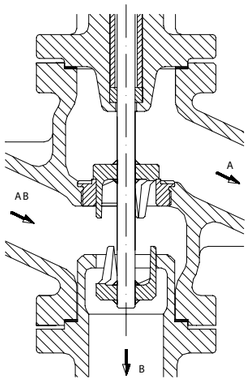
Application
Shut-off, control of flow, pressure, ...



Mixing Valve

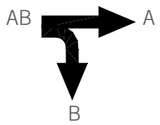
Application
Mixing two flows, bypass for heat exchangers



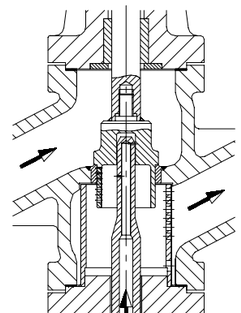


Diverting valve

Application
Diverting two flows, bypass for heat exchangers

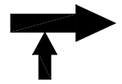


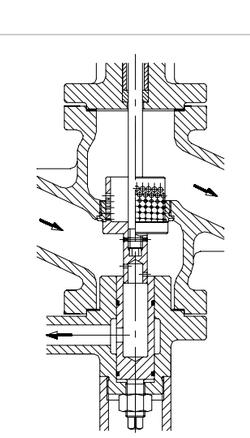
Types of valves



Desuperheating valve

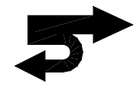
Application
Pressure reducing and steam cooling
by water injection

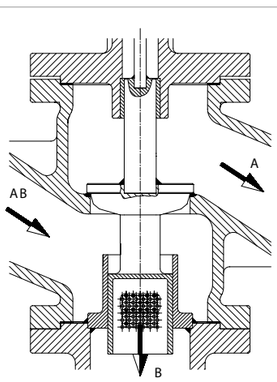




Feed water control valve with re-circulation connection

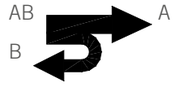
Application
Control of flow rate with re-circulation connection
to protect the pump from falling below the minimum
flow rate





Control valves for controlling discharge/re-circulation

Application
Diverting in two flows
Control of dischargere/circulation in water- or air-cooled
condensers, with adjustable Kvs value in port B



Series Overview

Series	Act. force	Stem diameter	Valve series 2-way valve	3-way valve	Possible actuators
MV 5200	1,5 kN 3 kN	12 mm 12 mm	MV 5210	MV 5220 MV 5230 MV 5270	REact 15 (1,5 kN) / REact 30 (2,8 Kn) REact 15 (1,5 kN) / REact 30 (2,8 Kn) REact 15 (1,5 kN) / REact 30 (2,8 Kn)
MV 5300	6 - 10 kN	12 mm	MV 5310	MV 5320 MV 5330	ST 5113 (6 kN) ST 5114 (10 kN) Actuators from other manufacturers
MV 5400	10 - 56 kN	32 mm	MV 5410	MV 5420 MV 5430	ST 5106 (15 kN) ST 5116 (20 kN) Actuators from other manufacturers
MV 5900	> 56 kN < 80 kN	60 mm	MV 5910	MV 5920 MV 5930	Actuators from other manufacturers

Type Code

MV 5 Actuator	2 Actuating force	1 Type of valve	1 Stem packing
5: electric (MV)	2: 3 kN 3: 6 - 10 kN 4: 10 - 56 kN 9: > 56 kN < 80 kN	1: 2-way valve 2: 3-way mixing valve 3: 3-way diverting valve 4: 3-way valve for regulation flow/circulation 5: Steam-converting valve 7: 3-way mixing valve with shortened B-flange 9: Valves for special applications - Continous blow down valve - Bottom blow down valve - Valve with re-circulation connection	1: Stuffing box - PTFE / graphite - Pure graphite - Packing acc.“TA Luft“ - Gas-packing (acc. to DVGW) 4: Bellows seal - With safety stuffing box - Additionally with leakage monitoring

Our current documentation can be found on our homepage under http://www.rtk.de/en/welcome.html

Series Overview

Series	Act. force	Stem diameter	Valve series 2-way valve	3-way valve	Possible actuators
MV 5200-K	1,5 kN 3 kN	12 mm 12 mm	MV 5210-K	MV 5220-K MV 5230-K MV 5270-K	REact 15 (1,5 kN) / REact 30 (2,8 Kn) REact 15 (1,5 kN) / REact 30 (2,8 Kn) REact 15 (1,5 kN) / REact 30 (2,8 Kn)
MV 5300-K	6 - 10 kN	12 mm	MV 5310-K	MV 5320-K MV 5330-K	REact 60 (6 kN) REact 100 (10 kN) Actuators from other manufacturers
MV 5400-K	10 - 56 kN	32 mm	MV 5410-K	MV 5420-K MV 5430-K	ST 5106 (15 kN) ST 5116 (20 kN) Actuators from other manufacturers
MV 5900-K	> 56 kN < 80 kN	60 mm	MV 5910-K	MV 5920-K MV 5930-K	Actuators from other manufacturers

Type Code

MV 5 Actuator	2 Actuating force	1 Type of valve	1 Stem packing	-K Version for refrigerants
5: electric (MV)	2: 3 kN 3: 6 - 10 kN 4: 10 - 56 kN 9: > 56 kN < 80 kN	1: 2-way valve 2: 3-way mixing valve 3: 3-way diverting valve	1: Stuffing box - PTFE / graphite - Pure graphite - Packing acc.“TA Luft“ - Gas-packing (acc. to DVGW) 4: Bellows seal - With safety stuffing box - Additionally with leakage monitoring	- Without nonferrous metals - Studs and nuts of stainless steel - Gaskets compatible for refrigerants - Acrylic coating

Our current documentation can be found on our homepage under http://www.rtk.de/en/welcome.html

Series Overview

Series	Effec. area / Act. force	Stem diameter	Valve series 2-way valve	3-way valve	Possible actuators
P6200	120 cm^2 280 cm^2 < 10 kN	12 mm	PV 6210	PV 6220 PV 6230 PV 6270	ST 6115 ST 6135
PV 6300	530 cm^2 < 10 kN	12 mm	PV 6310	PV 6320 PV 6330	ST 6160 Actuators from other manufacturers
PV 6400	1000 cm^2 < 56 kN	32 mm	PV 6410	PV 6420 PV 6430	ST 6175 Actuators from other manufacturers
PV 6900	> 56 kN < 80 kN	60 mm	PV 6910	PV 6920 PV 6930	Actuators from other manufacturers

Type Code

PV 6 Actuator	2 Effec. area / Act. force	1 Type of valve	1 Stem packing
6: pneumatic (PV)	2: 120 / 280 cm^2 < 10 kN 3: 530 cm^2 < 10 kN 4: 1000 cm^2 < 56 kN 9: > 56 kN < 80 kN	1: 2- way valve 2: 3-way mixing valve 3: 3-way diverting valve 4: 3-way valve for regulation flow/circulation 5: Steam-converting valve 7: 3-way mixing valve with shortened B-flange 9: Valves for special applications - Continous blow down valve - Bottom blow down valve - Valve with re-circulation connection	1: Stuffing box - PTFE / graphite - Pure graphite - Packing acc.“TA Luft“ - Gas-packing (acc. to DVGW) 4: Bellows seal - With safety stuffing box - Additionally with leakage monitoring

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Series Overview

Series	Effec. area / Act. force	Stem diameter	Valve series 2-way valve	3-way valve	Possible actuators
P6200-K	120 cm^2 280 cm^2 < 10 kN	12 mm	PV 6210-K	PV 6220-K PV 6230-K PV 6270-K	ST 6115 ST 6135
PV 6300-K	530 cm^2 < 10 kN	12 mm	PV 6310-K	PV 6320-K PV 6330-K	ST 6160 Actuators from other manufacturers
PV 6400-K	1000 cm^2 < 56 kN	32 mm	PV 6410-K	PV 6420-K PV 6430-K	ST 6175 Actuators from other manufacturers
PV 6900-K	> 56 kN < 80 kN	60 mm	PV 6910-K	PV 6920-K PV 6930-K	Actuators from other manufacturers

Type Code

PV 6 Actuator	2 Effec. area / Act. force	1 Type of valve	1 Stem packing	-K Version for refrigerants
6: pneumatic (PV)	2: 120 / 280 cm^2 < 10 kN 3: 530 cm^2 < 10 kN 4: 1000 cm^2 < 56 kN 9: > 56 kN < 80 kN	1: 2-way valve 2: 3-way mixing valve 3: 3-way diverting valve	1: Stuffing box - PTFE / graphite - Pure graphite - Packing acc.“TA Luft“ - Gas-packing (acc. to DVGW) 4: Bellows seal - With safety stuffing box - Additionally with leakage monitoring	- Without nonferrous metals - Studs and nuts of stainless steel - Gaskets compatible for refrigerants - Acrylic coating

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Certificates + Approvals

- DIN EN ISO-9001-2015
- Druckgeräterichtlinien (PED) 97 / 23EG
  Modul H / H1, CE0036
- DIN CERTCO
- TA-Luft
- Vd-TÜV Wasserstand 100
- DVGW
- ATEX Konformitätserklärung, 94 / 9 / EG
- TR TS (EAC)
- LR- Lloyd's Register
- DNV-GL
- BV-Bureau Veritas
- RINA-Registro Italiano Navale
- ABS-American Bureau of Shipping
- China Compulsory Product Certificate (CCC)

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