

with high precision valve actuator

Electrically operated control valve with a high-precision control actuator for Ball Sector Valves.

- High-precision actuator with high-efficient gear box
- Developed to use as a basis weight valve
- Input signal with step signal or analogue 4-20mA (standard)
- Feedback with analogue signal 4-20 mA
- Emergency manual operation
- Uneffected by contaminated media
- Seat ring facile convertible
- Low-maintenance



Technical Information Valve

Design	flangeless wafertype	
Nominal sizes	DN 25 up to DN 250	
Body material	cast parts	1.4408 (CF8M)
	turned parts	1.4404 (316L)
Bearing material	high temperature plain bearing	
Cutting site to the actuator	mounting kit DIN/ISO 5211	
Nominal pressure	DN 25 - DN50	PN40 (for flanges PN 10 - PN 40), ANSI300, ANSI150
	DN 80 - DN100	PN25 (for flanges PN 10 - PN 25), ANSI150
	DN 150 - DN 250	PN16 (for flanges PN 10 - PN 16), ANSI150
Fluid Temperature	-60°C up to +220°C depending on the sealings	
Ambient temperature	-40°C up to +80°C depending on the acuator	
	special version on request	
Vacuum	up to 50 mbar abs.	
Characteristic	almost equal percentage	
Rangeability	300:1	
Classification DIN EN ISO15848-1	ISO FE-BH-CC3-SSA0-t(-40°C/+220°C)-PN40-ISO 15848-1	

Technical Information Actuator

Actuator	S1500	S2000	S4000	Papyrus
Set point	analogue	analogue	analogue	analogue
Set point signal	4 - 20 mA / 3-point (40 ms)			4 - 20 mA
Burden				470 Ohm
Supply energy, electrical	24 VDC [±10%]			100...230 VAC [±10%], 50-60 Hz [±10%]
Actuator	Step motor with gearbox			servo motor with planetary gear
Turning angle detection	Integrated in the actuator			15 Bit absolute turning angle transmitter
Control	In the actuator			In a control cabinet
Resolution at the spherical sector	1300 steps / 90°	1600 steps / 90°	4000 steps / 90°	8192 steps / 90°
Reverse hysteresis	0,1°			
Adjusting range	0 - 90°			
Limit stops	Mechanical limit stops inside of the actuator			control system; no mechanical strokes
Stroking time	30s (4 s up to 15 min adjustable)			ca. 2 s up to 5 min.
Feed back	4 - 20 mA			4 - 20 mA, load resistor: 1kΩ max.
Ambient temperature limit, actuator	-40°C up to +80°C			-10°C up to +60°C
Ambient temperature limit, control cabinet	-			0°C up to +40°C
Protection class acc. DIN 40050	IP 67			IP 65

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Working pressure max.

Nominal size DN	maximum differential pressure (delta p)									
	seat ring PTFE			seat ring PEEK				seat ring Stellite		
	up to 80°C bar	120°C bar	170°C bar	up to 80°C bar	120°C bar	170°C bar	220°C bar	up to 80°C bar	170°C bar	220°C bar
25-50	25	16	6	40	40	25	16	40	40	25
65-100	16	12	5	25	25	16	10	25	25	16
125-250	16	12	4	16	16	12	8	16	16	12

Actuators for mounting according DIN/ISO5211, pilot pressure 5 - 6 bar
(for less than 5 bar pilot pressure, please inform us)

Temperature limits

Seating	Sealing seating									
	Viton		EPDM		NBR		FFKM		PFA-Silicone	
	Tmin [°C]	Tmax [°C]	Tmin [°C]	Tmax [°C]	Tmin [°C]	Tmax [°C]	Tmin [°C]	Tmax [°C]	Tmin [°C]	Tmax [°C]
PTFE	-15	170	-40	140	-30	100	-15	170	-45	170
PEEK	-15	200	-40	140	-30	100	-15	220	-45	220
Stellite	-15	200	-40	140	-30	100	-15	220	-45	220

Leakage

Seat ring	Ball sector	Amount of the max. Kvs-value	Leakage class acc. EN 60534-4: (IEC 60534-4)
PTFE or PEEK	stainless steel polished		VI
PTFE or PEEK	stainless steel hard chrome plated	5x10 ⁻⁷	IV-S1
Stellite	stainless steel, hard chrome plated + lapped	5x10 ⁻⁶	IV-S1

Kvs-Values

DN	Kvs-Value reduced to					
	100%	63%	40%	25%	16%	6,3%
25	25	12,7	7,9	5,3	3,6	1,45
40	70	40	25			
50	109	65	41			
65	190					
80	300					
100	390					
125	756					
150	810					
200	1365					
250	2220					

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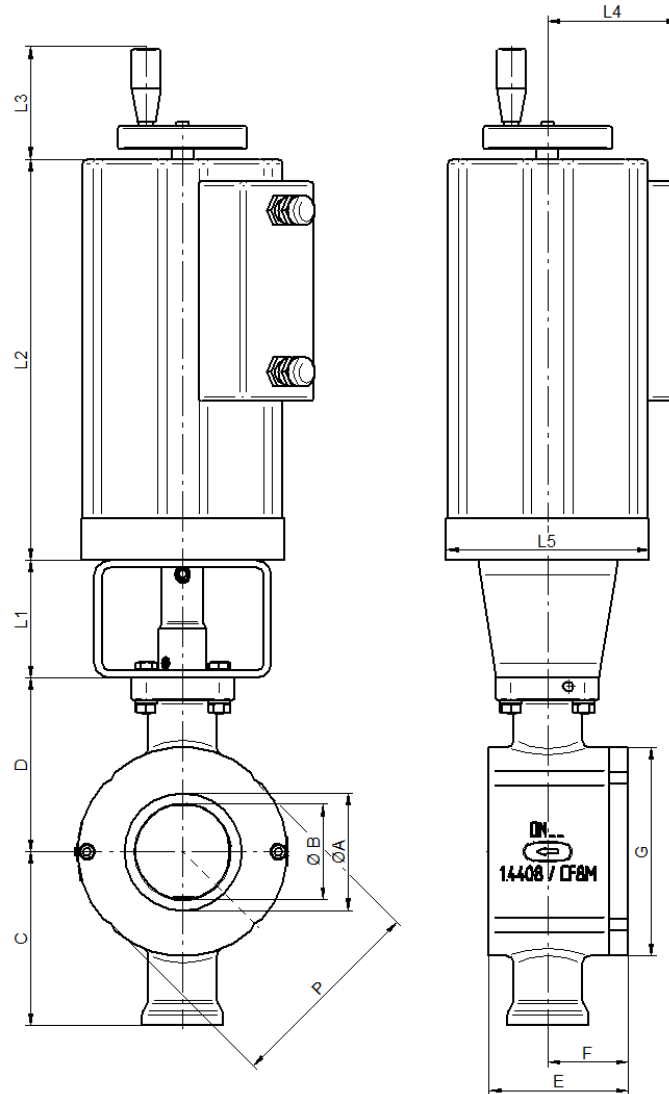
Ordering Number System

		Ordering Number:									
		4032/									Z ...
Nominal Size											
e.g. DN 25 = 025	xxx										
Item											
Actuator	A										
seal kit (repair kit without seat ring)	D										
repair kit complete (with seat ring)	R										
partial repair kit (seat ring, o-ring, part 15 and 16)	T										
Valve	V										
Design											
KS2-flangeless design according DIN EN 1092-1	3										
KS2-flangeless design according ASME B 16.5, ANSI 150	H										
KS2-flangeless design according ASME B 16.5, ANSI 300	I										
Body Material											
stainless steel 1.4408(CF8M) resp. 1.4404(AISI 316L)	1										
Seat-material combination											
seat ring: PTFE, ball sector: stainless steel, polished	1										
seat ring: stellite; ball sector: stainless steel, hard chromed	B										
seat ring: stellite; ball sector: stainless steel, hard chromed and lapped; holding ring: hard chromed	C										
Sealing-material combination											
all seals (part 13-16) from VITON, medium temperature: -15°C to +200°C	1										
all seals (part 13-16) from FFKM (Perlast/Kalrez), medium temperature: -15°C to +220°C	A										
all seals (part 13-16) from EPDM, medium temperature: -30°C to +140°C	D										
all seals (part 13-16) from NBR(P700), medium temperature: -40°C to +100°C	N										
Packing made of PTFE; O-Ring (Teil 115) made of VITON, fluid temperature: -15°C up to +200°C	3										
Packing made of PTFE; O-Ring (Teil 115) made of EPDM, fluid temperature: -30°C up to +140°C	4										
Packing made of PTFE; O-Ring (Teil 115) made of NBR, fluid temperature: -40°C up to +100°C	5										
Packing made of PTFE; O-Ring (Teil 115) made of FFKM, fluid temperature: -15°C up to +220°C	6										
Packing made of PTFE; O-ring (part 15) made of PFA-silicone, fluid temperature: -45°C to +220°C	8										
Actuator											
without mounting kit, without actuator, connection to bearing pin: feather key	0										
without mounting kit, without actuator, connection to bearing pin: square shaft	V										
high-resolution electrical control actuator „Papyros“, torque 200Nm, configured for step direction activation, position feedback 4-20 mA	A										
high resolution electrical control actuator „Papyros“, full load 400 Nm	C										
high resolution electrical control actuator S1500	D										
high resolution electrical control actuator S2000	R										
Control area											
at valve lower part only not selected	-										
8192 steps/90°	0										
4-20 mA	1										
activation via Profibus	P										
activation via Modbus	M										
Supply voltage											
variable AC/DC power supply 110-240V	-										
24V DC	3										
Kvs-value											
100%	-										
red. to 6,3%	3										
red. to 63%	A										
red. to 40%	K										
cabel, control											
activation inside control box, 10m connection cable between actuator and control box	-										
activation inside control box, 23m connection cable between actuator and control box	A										
Special version											
see following positions											S
test valve (nonstandard file)											V

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Dimensions KS2 with actuator S1500 and S2000



DN	A	B	C	D	E	F	L1	L2	L3	L4	L5
25	25	20	85	85	50	26	60	212	75	90	138
40	41	32	92	92	58	31	60	212	75	90	138
50	53	40	95	95	71	38	60	212	75	90	138
65	65	50	115,5	115,5	85	49	80	273	75	93	138
80	80	65	118,5	118,5	95	55	80	273	75	93	138
100	100	80	129,5	129,5	112	62	80	273	75	93	138
125	100	125	177,5	177,5	148	85	80	307	75	93	175
150	150	120	187	187	170	95	80	307	75	93	175
200	200	155	216	216	210	120	80	331	75	93	175

DN	PN	G	PN			ANSI 150				ANSI 300			
			P	M	Amount	G	P	M	Amount	G	P	M	Amount
25	PN40	75	73	45	4	75	67,6	45	4	79	73	45	4
40	PN40	96	94	45	4	96	87	45	4	99	94	45	4
50	PN40	112	106	45	4	112	106	45	4	112	0	0	0
65	PN25	129	0	0	0	129	125	45	4	129	0	0	0
80	PN25	142	0	0	0	142	138	45	4	150	0	0	0
100	PN25	174	164	22,5	8	176	0	0	0	182	0	0	0
125	PN16	200	194	22,5	8	200	194	45	8	---	---	---	---
150	PN16	220	0	0	0	220	0	0	0	---	---	---	---
200	PN16	280	0	0	0	280	0	0	0	---	---	---	---

Dimensions in mm

Text and pictures are not binding. We reserve the right to alter the equipment.