

Ball Sector Valve 4032

with high precision valve actuator, DN25 - DN250

Control valve with high-precision electric actuator for ball sector valves

- High-precision actuator
- Suitable for abrasive media (e.g. chalk milk and paper materials)
- Developed for use as a basis weight valve
- Actuation via step signal or analogue 4-20 mA (standard)
- Feedback via analogue signal 4-20 mA
- Easily replaceable seat ring
- Low maintenance
- Manual override



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
Actuator colour	blue				red	-
Design	KS2					KS1
Set point	analogue*	Bus Sys-tem	analogue*	Bus Sys-tem	Step signal	analogue
Set point signal	4 - 20 mA / 0 - 10 V / 3-point	Modbus 485	4 - 20 mA / 0 - 10 V / 3-point	Modbus 485	Step point control 24V	4 - 20 mA
Pulse duration					40ms	-
Burden						470 Ohm
Supply energy, electrical	24 V DC [±10%]					100...230 V AC [±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 (included in the delivery)
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
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

*Resolution of the control signal at least 12 bits, with 14 bits for the S4000 actuator

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Working pressure max.

Nominal size	zulässiger Differenzdruck (delta p)									
	seat ring PTFE			seat ring PEEK				seat ring Stellite		
DN	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
125-150	16	12	4	16	16	12	8	16	16	12
200-250	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					

Operating time for 90° / starting current

DN	Operating time 90°			Starting current
	S1500	S2000	S4000	
DN25 - DN50	30s (4s - 15min)		225s (0,4°/s)	5A
DN65 - DN100	30s (4s - 15min)		225s (0,4°/s)	7A
DN125 - DN150	30s (4s - 15min)		225s (0,4°/s)	10A
DN200 - DN250	30s (4s - 15min)		225s (0,4°/s)	13A

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Ordering Number System

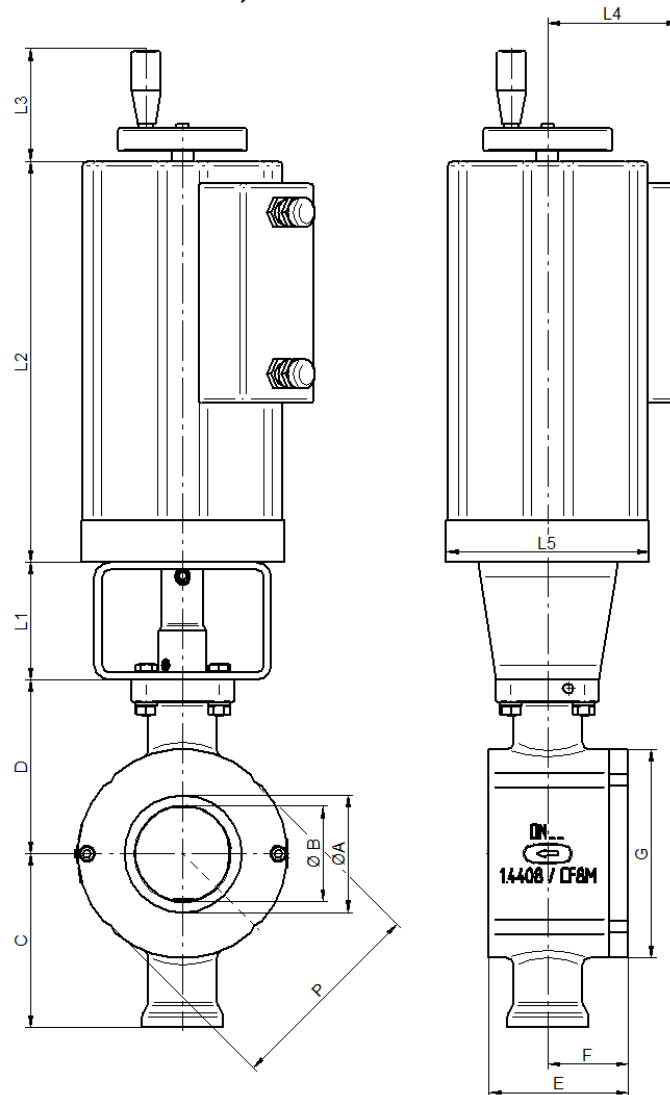
		Ordering Number:									
		4032/									...
Nominal Size											
E.g. DN 25 = 025	xxx										
Item											
Actuator	A										
Seal kit (repair kit without seat ring)	D										
Repair kit complete (with seat ring)	R										
Partial repair kit (seat ring, o-ring, part 15 and 16)	T										
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: PTFE; ball sector: stainless steel, hard-chromed	A										
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										
seat ring: PTFE (white); ball sector: stainless steel, polished (max. medium temperature: 170°C)	G										
seat ring: PEEK; ball sector: stainless steel polished	K										
seat ring: PEEK; ball sector: stainless steel, hard-chromed	P										
Sealing-material combination											
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 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										
Sealing of bearing pin with packing made of PTFE, O-ring (part 15) made of EPDM, Medium temperature: -40°C to +140°C	K										
Actuator											
Without mounting kit, without actuator, connection to bearing pin: square shaft	V										
High resolution electrical control actuator S1500	D										
High resolution electrical control actuator S2000	R										
High-resolution electric actuator S4000	T										
Control area											
At valve lower part only not selected	-										
4-20 mA	1										
3-point/step control 24V DC, pulse duration 40ms, position feedback 4-20 mA	3										
Activation via Modbus	M										
Supply voltage											
24V DC	3										
Kvs-value											
100%	-										
red. to 6,3%	3										
red. to 63%	A										
red. to 16%	D										
red. to 40%	K										
cabel, control											
control integrated in the actuator	B										

-> Actuator Papyros on request

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Dimensions KS2 with actuator S1500, S2000 or S4000



DN	A	B	C	D	E	F	L1	L2	L3	L4	L5	Weight (kg)
25	25	20	85	85	50	26	60	212	75	90	138	10,2
40	41	32	92	92	58	31	60	212	75	90	138	11
50	53	40	95	95	71	38	60	212	75	90	138	11,5
65	65	50	115,5	115,5	85	49	80	273	75	93	138	16
80	80	65	118,5	118,5	95	55	80	273	75	93	138	17,3
100	100	80	129,5	129,5	112	62	80	273	75	93	138	20,9
125	100	125	177,5	177,5	148	85	80	307	75	93	175	30,9
150	150	120	187	187	170	95	80	307	75	93	175	34,8
200	200	155	216	216	210	120	80	331	75	93	175	63,7
250	250	195	242	242	270	145	80	331	75	93	175	92

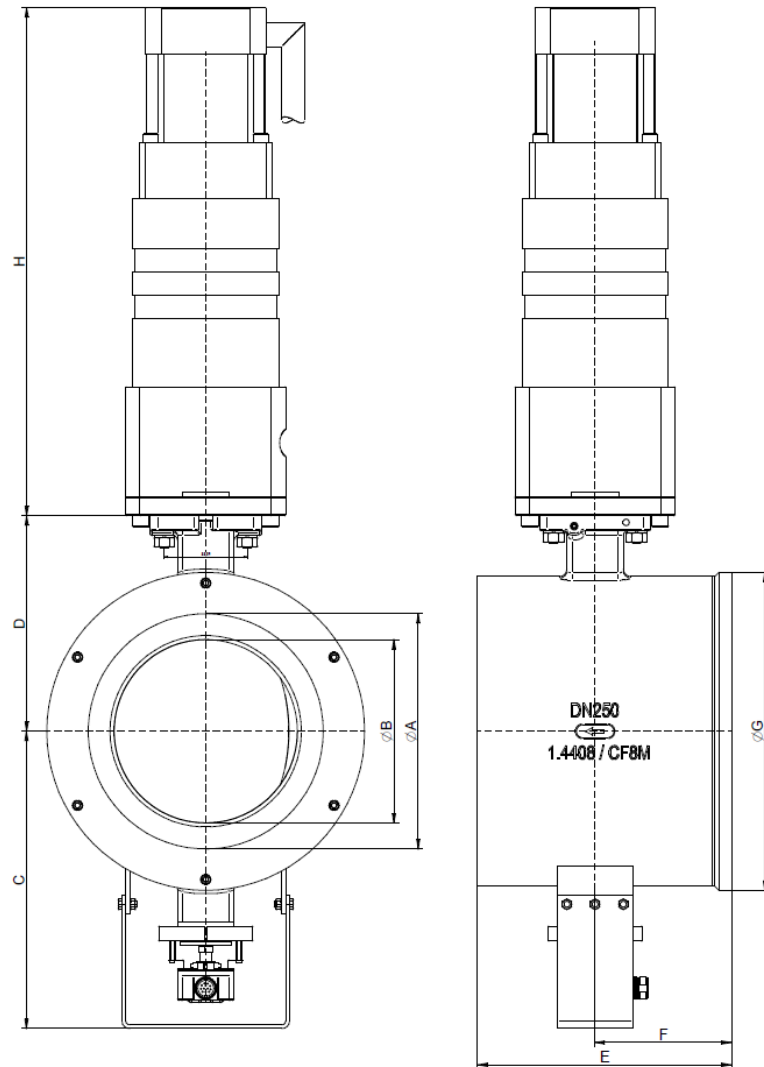
DN	PN					ANSI 150					ANSI 300			
	PN	G	P	M	Amount	G	P	M	Amount	G	P	M	Amount	
25	PN40	75	73	45	4	75	67,6	45	4	79	73	45	4	
40	PN40	96	94	45	4	96	87	45	4	99	94	45	4	
50	PN40	112	106	45	4	112	106	45	4	112	0	0	0	
65	PN25	129	0	0	0	129	125	45	4	129	0	0	0	
80	PN25	142	0	0	0	142	138	45	4	150	0	0	0	
100	PN25	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	---	---	---	---	
250	PN16	338	329	22,5	8	338	0	0	0	---	---	---	---	

*Dimensions in mm

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Dimensions of type KS1 with Papyrus actuator



DN	Ø A	Ø B	C	D	E	F	Ø G	H
100	100	80	210	118	112	62	174	485
150	150	120	248	156	170	96	220	485

*Dimensions in mm