

# Ball Sector Valve 4030

## DN 25 up to DN 300

### Motorvalve for the control of neutral and aggressive fluids with integrated positioner

- DN 25 up to DN300
- High Kvs-values up to 3840
- Excellent control characteristics
- Suitable for abrasive media
- Easily exchangeable seat ring
- Low maintenance
- Actuators can be easily fitted
- Efficient and easy to install
- optional with face to face dimension acc. ANSI ISA 75.08.02



### Technical Information Valve

Design	DN 25 - DN 250 flangeless wafer type DN 300 flange connection	
Nominal sizes	DN 25 up to DN 300	
Body material	1.4408 (CF8M)	
cast parts	1.4404 (316L)	
turned parts		
Bearing material	high temperature plain bearing (Iglidur Z)	
Connection to the actuator	mounting kit DIN/ISO 5211	
Nominal pressure	PN40 (for flanges PN 10 - PN 40), ANSI300, ANSI150	
DN 25 - DN 50	PN25 (for flanges PN 10 - PN 25), ANSI150	
DN 80 - DN100	PN16 (for flanges PN 10 - PN 16), ANSI150	
DN 150 - DN 300		
Fluid Temperature	-40°C up to +220°C	according to the sealings
Ambient temperature	-40°C up to +80°C	according to the actuator
	special version on request	
Vacuum	up to 50 mbar abs.	
Characteristic	almost equal percentage	
Rangeability	100:1	
Specific leakage rate	series KS2, DN25-DN250: ISO FE-BH-CC3-SSA0-t(-40°C/+220°C)-PN40-ISO 15848-1	
shaft and body sealing	series KS1, DN300: ISO FE-BH-CC1-SSA0-t(RT)-PN16-ISO 15848-1	

## Working pressure max.

Nominal size	maximum differential pressure (delta p)									
	seat ring PTFE			seat ring PEEK				seat ring Stellite		
DN	up to 80°C	120°C	170°C	up to 80°C	120°C	170°C	220°C	up to 80°C	170°C	220°C
	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar
25-50	25	16	6	40	40	25	16	40	40	25
80-100	16	12	5	25	25	16	10	25	25	16
150-300	16	12	4	16	16	12	8	16	16	12

Actuators for mounting according DIN/ISO5211

## Temperature limits

Seating	Sealing seating							
	Viton		EPDM		NBR		FFKM	
	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
PEEK	-15	200	-40	140	-30	100	-15	220
Stellite	-15	200	-40	140	-30	100	-15	220

## Kvs-Values

DN	Kvs-Wert reduced to				
	100%	63%	40%	25%	6,3%
25	21	12,7	8,4	5,25	1,45
40	70	40,32	25		
50	109	60,3			
65	155				
80	300				
100	390				
125	756				
150	810				
200	1365				
250	2220				
300	3840				

## Leakage

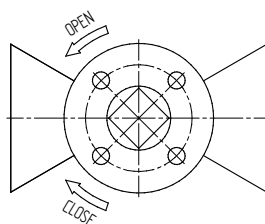
Seat ring	Ball sector	Leakage	
		Amount of the max. Kvs-value	class acc. EN 60534-4: (IEC 60534-4)
PTFE or PEEK	stainless steel polished	5x10 <sup>-7</sup>	IV-S1
PTFE or PEEK	stainless steel lapped		VI
PTFE or PEEK	stainless steel hard chrome plated	5x10 <sup>-7</sup>	IV-S1
PTFE or PEEK	stainless steel,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

## operation time / 90° with standard actuator

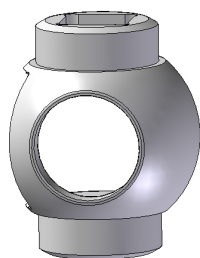
DN	operation time / 90° [s]
25	9
40	13
50	13
65	29
80	29
100	34
125	58
150	58
200	58

## Torques and mounting kits

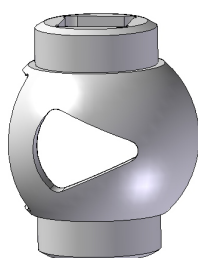
DN	rotation angle nominal	max. press. Nomial	max. press. Nomial	req. torque [Nm]		mounting kit ISO 5211 diagonal square shaft	
		PN	ANSI	on/off-operation	control operation	series 1	series 2
25	90°	PN40	ANSI 300	15	25	F04/SW11	F05/SW14
40	90°	PN40	ANSI 300	30	50	F05/SW14	F07/SW17
50	90°	PN40	ANSI 300	30	50	F05/SW14	F07/SW17
80	90°	PN25	ANSI 150	60	100	F07/SW17	F10/SW22
100	90°	PN25	ANSI 150	90	150	F07/SW17	F10/SW22
150	90°	PN16	ANSI 150	150	250	F10/SW22	F12/SW27
200	90°	PN16	ANSI 150	210	350	F12/SW27	F14/SW36
250	90°	PN16	ANSI 150	360	600	F12/SW27	F14/SW36
300	90°	PN16	ANSI 150	900	1500	F14/SW36	F16/SW46



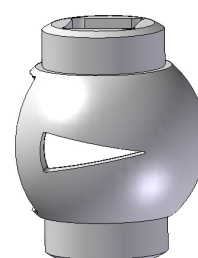
## Ball Sector Valve with reduced Kvs-values



100%



reduced to  
63%



reduced to  
25%

# Ball Sector Valve 4030



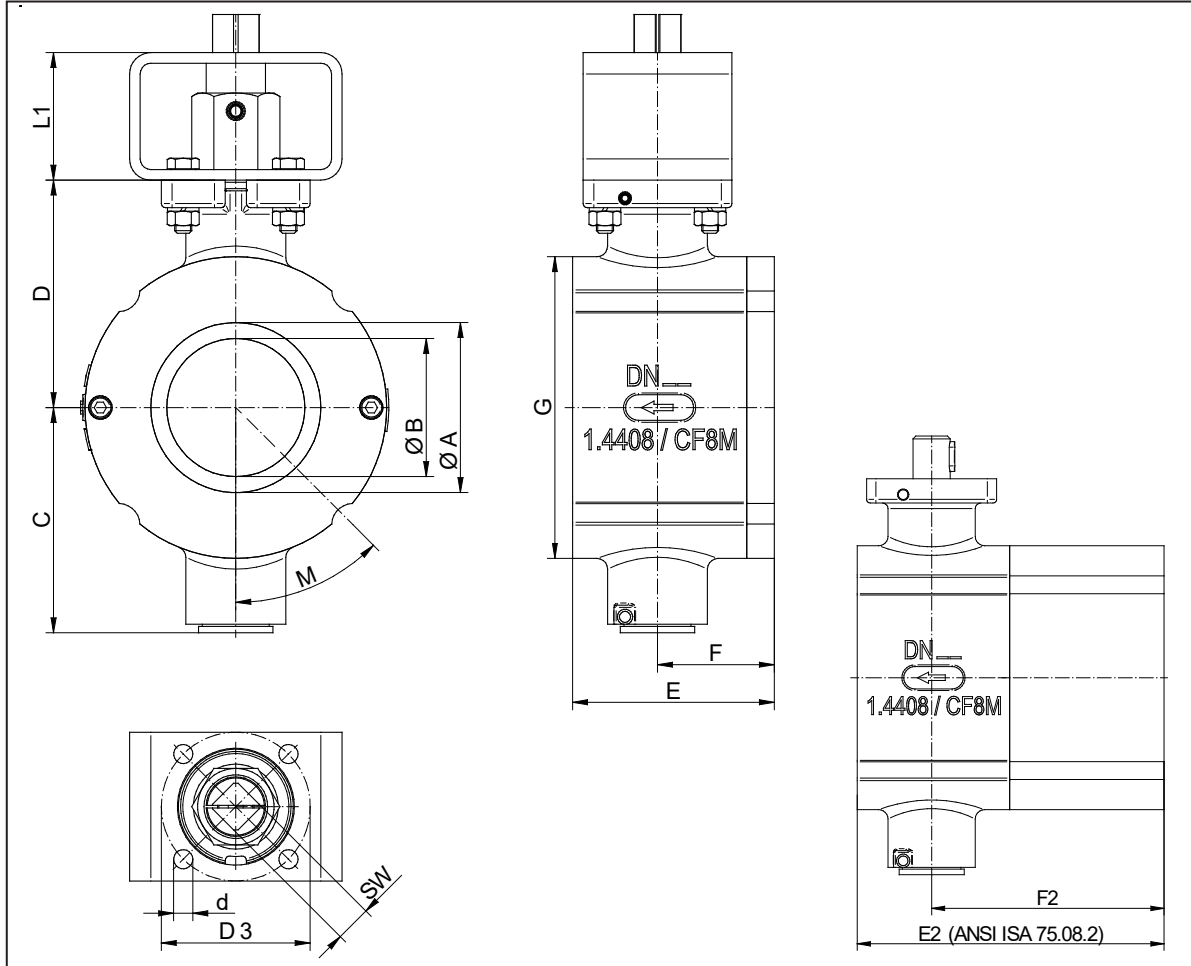
## Ordering Number System

Ordering Number:

Nominal Size	4030/									M				Z	...
e.g. DN 25 = 025	xxx														
Article															
valve		V													
repair-kit		R													
seat kit		D													
Connection															
KS1-flangeless design according DIN EN 1092-1							1								
KS1-flangeless design according ASME B 16.5, ANSI 150							E								
KS1-flangeless design according ASME B 16.5, ANSI 300							F								
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) / 1.4404							1								
Material combination															
seat ring: PTFE; ball sector: 1.4408, polished							1								
seat ring: PTFE; ball sector: 1.4408, hard chrome plated							A								
seat ring: Stellite; ball sector: 1.4408, hard chrome plated and lapped							B								
seat ring: PTFE; ball sector: 1.4408, hard chrome plated and lapped							E								
seat ring: TECAPEEK; ball sector: 1.4408, hard chrome plated							P								
Seal combination															
all seals (part 13-16) from VITON, medium temperature: -15°C up to +200							1								
all seals (part 13-16) from FFKM (Perlast/Kalrez), medium temperature: -15°C up to +220°C							A								
all seals (part 13-16) from EPDM, medium temperature: -30°C up to +140°C							D								
all seals (part 13-16) from NBR(P700), medium temperature: -40°C up 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 FFKM, fluid temperature: -40°C up to +100°C							5								
Packing made of PTFE; O-Ring (Teil 115) made of NBR, fluid temperature: -15°C up to +220°C							6								
Actuator															
without mounting kit, without actuator, connection to bearing pin: feather key							0								
without mounting kit, without actuator, connection to bearing pin: dihedron							V								
without mounting kit, without actuator, connection to bearing pin: square shaft							Z								
without actuator, with standard mounting kit according DIN/ISO 5211 (Series 1)							1								
el. rotating actuator (control), IP67, position electronic with feedback							J								
Electric part turn actuator (on/off - 3 step control), IP67							K								
Quarter turn motor actuator (on/off, 3-point) PS-Automation, IP67							3								
Quarter turn motor actuator (on/off, 3 point), remote-control type RCEL, IP67							4								
Quarter turn motor actuator (control), PS-Automation, type PSQ-AMS, IP67							P								
Quarter turn motor actuator (control), company Remote-Control, type RCEL, IP67							R								
Actuator mounting															
Standard							-								
Motorvoltage															
Mehrbereichs Spannungsversorgung 24..240V AC/DC								M							
230V, 50/60 Hz								-							
24V, 50/60Hz								1							
24V AC/DC								2							
24V DC								3							
115V, 50/60Hz								4							
Safety position															
without								-							
Control signal															
standard															
20 - 4 mA (20mA closed, 4mA open)														1	
adjusted to 0-10V														2	
Limit switches and feedback															
standard (please see data sheet)														-	
2 additional limit switches														A	
Kvs-value															
100%														-	
63%														A	
40%														K	

## Dimensions KS1 without actuator (with mounting kit ISO 5211)

sealing of the bearing shaft with O-rings



DN	A	B	C	D	E	F	G	L1	d	D3	SW	DIN/ISO 5211
25	25	20	73	74	50	25,5	73	60	6,6	50	14	F 05
40	41	32	79	80	58	30,5	94	60	6,6	50	14	F 05
50	53	40	82	83	71	37,5	112	60	6,6	50	14	F 05
80	80	65	106	107	95	54,5	142	60	9	70	17	F 07
100	100	80	117	118	112	64,5	174	60	9	70	17	F 07
150	150	120	155	156	170	94	220	80	11	102	22	F 10
200	200	155	184	185	210	119	275	80	13,5	125	27	F 12
250	250	195	228	229	270	143	329	80	13,5	125	27	F 12

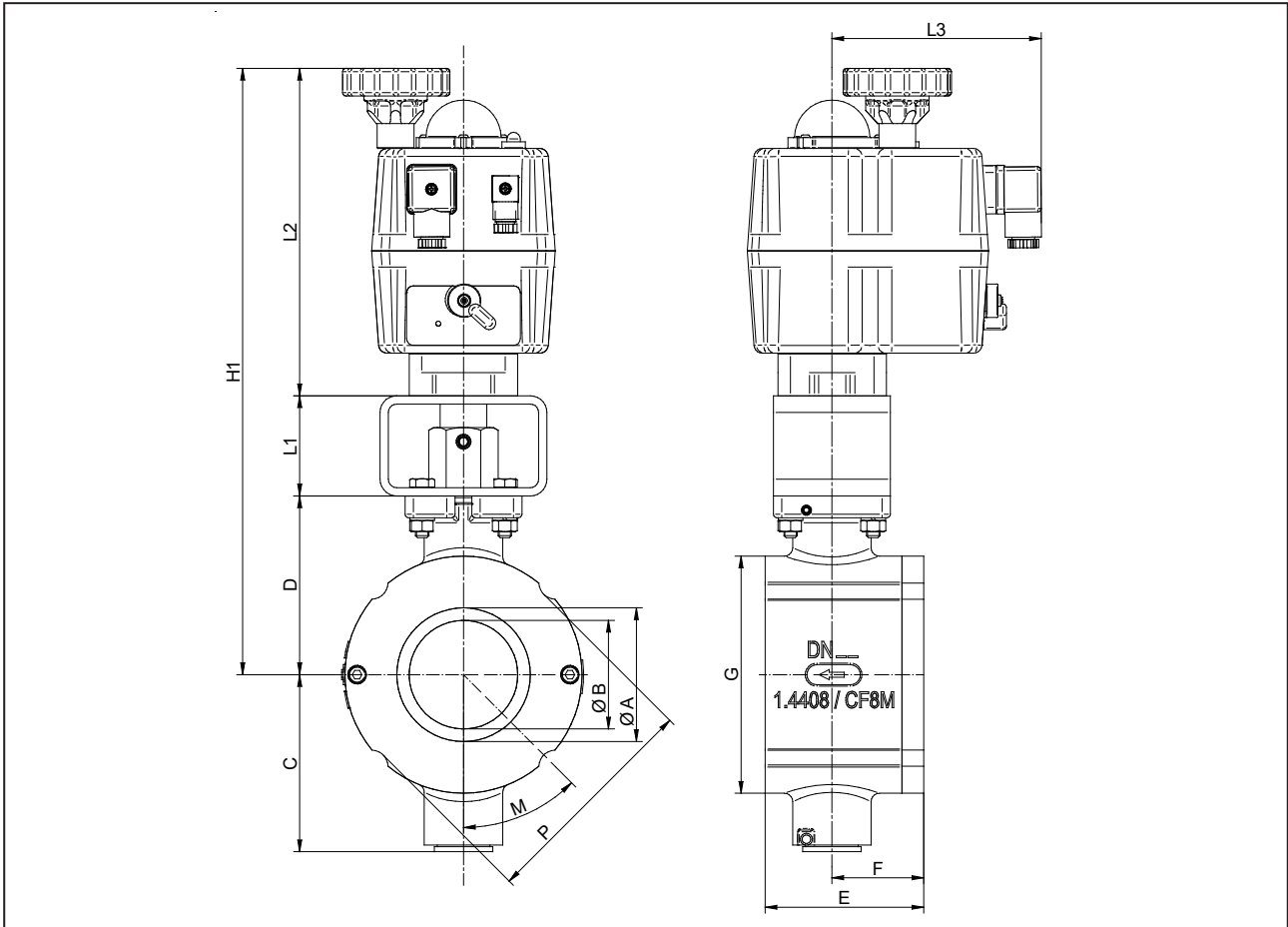
DN	E2	F2	ANSI ISA 75.08.2
25	102	78	
40	114	87	
50	124	91	
80	165	125	
100	194	144	
150	229	154	
200	242	152	
250	298	173	

Dimensions for DN300 on request.

Dimension in mm

## Dimensions KS1 with standard actuator

sealing of the bearing shaft with O-rings



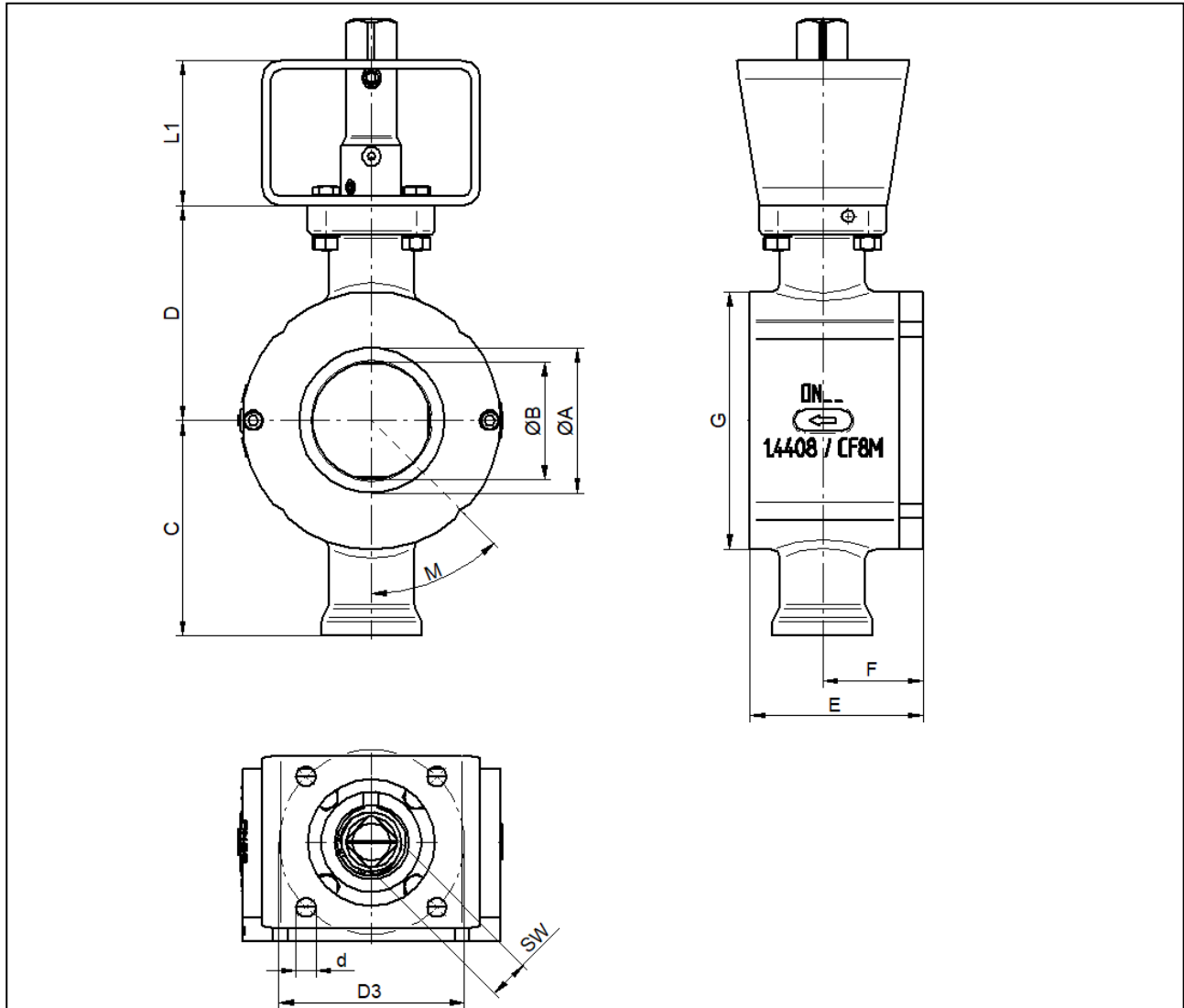
DN	A	B	C	D	E	F	L1	L2	L3	H1
25	25	20	73	74	50	26	60	169	130	303
40	41	32	79	80	58	31	60	196	130	336
50	53	40	82	83	71	38	60	196	130	339
80	80	65	106	107	95	55	60	196	130	363
100	100	80	117	118	112	62	80	254	128	432
150	150	120	155	156	170	95	80	254	128	490
200	200	155	184	185	210	120	80	254	128	519

DN	PN	G	PN			ANSI 150				ANSI 300			
			P	M	Amount	G	P	M	Amount	G	P	M	Amount
25	PN40	73	0	0	0	73	67,6	45	4	73	0	0	0
40	PN40	94	0	0	0	94	85	45	4	94	0	0	0
50	PN40	112	109	45	4	112	106	45	4	112	0	0	0
80	PN25	142	0	0	0	142	136	45	4	150	0	0	0
100	PN25	174	164	22,5	8	174	0	0	0	182	0	0	0
150	PN16	220	0	0	0	220	0	0	0	---	---	---	---
200	PN16	275	0	0	0	275	0	0	0	---	---	---	---

Dimensions in mm

## Dimensions KS2 without actuator (with mounting kit ISO 5211)

Sealing of the bearing shaft with PTFE-packing

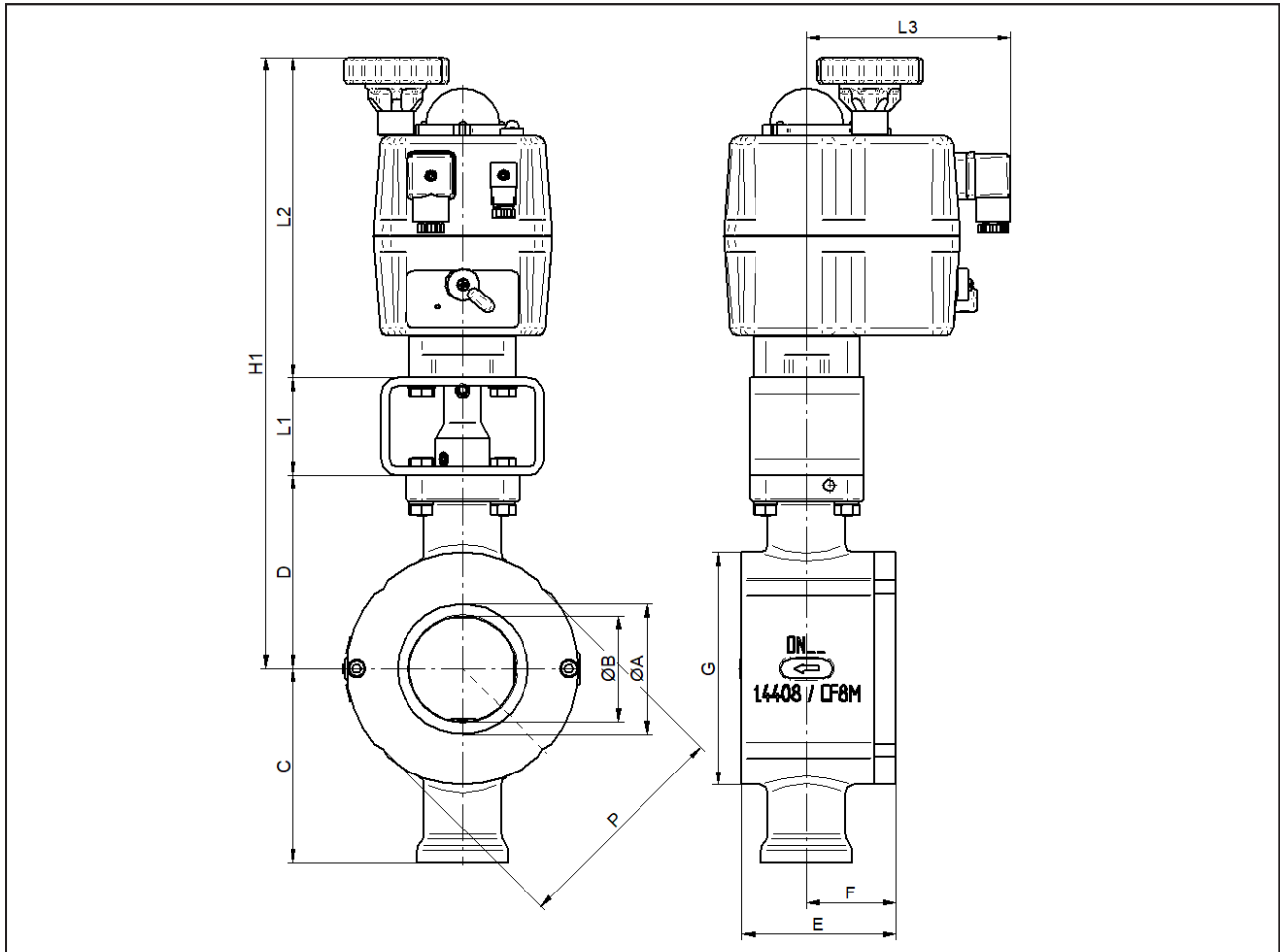


DN	A	B	C	D	E	F	G	L1	series 1				series 2				weight [kg]
									DIN ISO 5211	L1	SW	d	D3	DIN ISO 5211	L1	SW	
25	25	20	85	85	50	26	75	60	F 04	60	14	6,6	50	F 05	2,2		
40	41	32	92	92	58	31	96	60	F 05	60	17	9	70	F 07	3		
50	53	40	95	95	71	38	112	60	F 05	60	17	9	70	F 07	3,8		
65	65	50	115,5	115,5	85	49	129	60	F 07	80	22	11	102	F 10	6,4		
80	80	65	118,5	118,5	95	55	142	60	F 07	80	22	11	102	F 10	7,2		
100	100	80	129,5	129,5	112	62	174	60	F 07	80	22	11	102	F 10	11		
125	100	125	177,5	177,5	148	85	200	80	F 10	80	27	13,5	125	F 12	20		
150	150	120	187	187	170	95	220	80	F 10	80	27	13,5	125	F 12	23		
200	200	155	216	216	210	120	275	80	F 12	80	36	17	140	F 14	40		
250	250	195	242	242	270	145	338	80	F 12	80	36	17	140	F 14	66		

Dimensions in mm

## Dimensions KS2 with standard actuator

Sealing of the bearing shaft with PTFE-packing



DN	A	B	C	D	E	F	L1	L2	L3	H	Weight [kg]
25	25	20	85	85	50	26	60	169	130	314	4,8
40	41	32	92	92	58	31	60	196	130	348	6,2
50	53	40	95	95	71	38	60	196	130	351	6,9
65	65	50	115,5	115,5	85	49	60	196	130	372	11
80	80	65	118,5	118,5	95	55	60	196	130	375	17
100	100	80	129,5	129,5	112	62	80	254	128	464	18
125	100	125	177,5	177,5	148	85	80	254	128	512	27
150	150	120	187	187	170	95	80	254	128	521	30
200	200	155	216	216	210	120	80	254	128	550	48

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	275	0	0	0	275	0	0	0	---	---	---	---

Dimensions in mm