ball sector valve series BS

- 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 Volume booster
  in order to reduce the response time
- optional with face to face dimension acc. ANSI ISA 75.08.02

TÜVRheinland®
TA-Luft zertifiziert

Technical Information Valve

Design		DN 25 - DN 250 flangeless wafertype DN 300 flange connection
Nominal sizes		DN 25 up to DN 300
Body material	cast parts turned parts	1.4408 (CF8M) 1.4404 (316L)
Material of the bearing shaft		1.4122
Bearing material		high temperature plain bearing (Iglidur Z)
Connection to the actuator		mounting kit DIN/ISO 5211
Nominal pressure	DN 25 - DN 50 DN 80 - DN100 DN 150 - DN 300	PN40 (for flanges PN 10 - PN 40), ANSI300, ANSI150 PN25 (for flanges PN 10 - PN 25), ANSI150 PN16 (for flanges PN 10 - PN 16), ANSI150
Fluid Temperature		-40°C up to +220°C according to the sealings
Ambient temperature		-40°C up to +80°C according to the acuator special version on request
Characteristic		almost equal percentage
Rangeability		300:1

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Valve sizes, Kvs-Values, Torques

DN	Kvs	hole mm	rotation angle nominal*	max. press. nomial DIN	max. press. nomial ANSI	req. torque [Nm] on/off-operation	req. torque [Nm] control operation	mounting kit DIN/ISO series 1	mounting kit DIN/ISO series 2
25-50%	12,5	15	65°	PN40	ANSI 300	15	25	F04/SW11	F05/SW14
25	21	19	90°	PN40	ANSI 300	15	25	F04/SW11	F05/SW14
40-50%	34	25	60°	PN40	ANSI 300	30	50	F05/SW14	F07/SW17
40	64	32	90°	PN40	ANSI 300	30	50	F05/SW14	F07/SW17
50	94	40	90°	PN40	ANSI 300	30	50	F05/SW14	F07/SW17
80	255	64	90°	PN25	ANSI 150	60	100	F07/SW17	F10/SW22
100	390	80	90°	PN25	ANSI 150	90	150	F07/SW17	F10/SW22
150	810	120	90°	PN16	ANSI 150	150	250	F10/SW22	F12/SW27
200	1365	155	90°	PN16	ANSI 150	210	350	F12/SW27	F14/SW36
250	2220	195	90°	PN16	ANSI 150	360	600	F12/SW27	F14/SW36
300	3840	250	90°	PN16	ANSI 150	900	1500	F14/SW36	F16/SW46

* All Valves can be rotated 90° when actuated. Though for valves with reduced bore holes a smaler angle of rotation is sufficient.

Valve seat combinations

Seat ring	Ball sector	Leakage	min. temp [°C]*
PTFE	stainless steel polished or hard chrome plated or lapped	$5x10^{-7}$ of max. Kvs	-40 up to +170°C
PEEK	stainless steel polished or hard chrome plated or lapped	$5x10^{-7}$ of max. Kvs	-40 up to +220°C
Stellit	stainless steel, hard chrome plated and lapped	Class IV-S1 acc. EN 1349 (IEC 534-4) $5x10^{-6}$ of max. Kvs	-40 up to +220°C
PTFE	stainless steel, hard chrome plated and lapped	Class VI acc. EN 1349 (IEC 534-4)	-40 up to +170°C
Stellit	stainless steel, hard chrome plated and lapped, seat holding ring hard chrome plated	$5x10^{-6}$ of max. Kvs	-40 up to +220°C

* Please note the restrictions of the o-ring material!

Shaft seals (o-ring)

	min. temp [°C]	max. temp [°C]	comment
Viton (Standard)	-15	200	
EPDM	-40	140	suitable for steam
NBR (P700)	-30	100	
FFKM (Perlast/Kalrez)	-15	220	suitable for steam

special material on request

Working pressure max.

Nominal size	maximum differential pressure (delta p)									
	seat ring PTFE			seat ring PEEK				seat ring Stellit		
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
80-100	16	12	5	25	25	16	10	25	25	16
150-300	16	12	4	16	16	12	8	16	16	12

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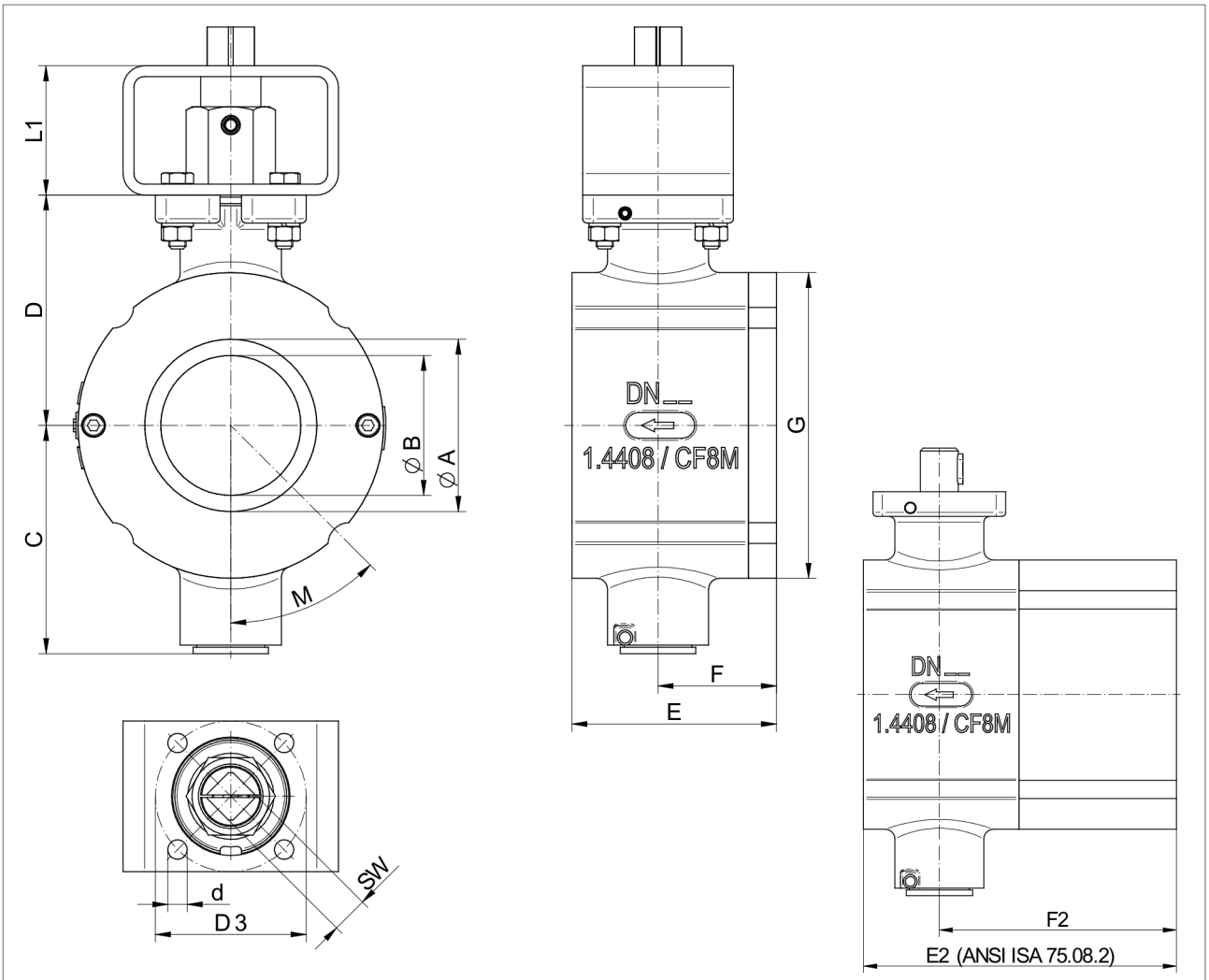
Dimensions without actuator (with mounting kit ISO 5211)



DN	A	B	C	D	E	F	G	L1	d	D3	SW	DIN/ISO 5211	weight (kg)
25	25	20(15)	73	74	50	26	73	60	6,6	50	14	F 05	2,4
40	41	32(25)	79	80	58	31	94	60	6,6	50	14	F 05	3,3
50	53	40	82	83	71	38	112	60	6,6	50	14	F 05	4,3
80	80	65	106	107	95	55	142	60	9	70	17	F 07	8
100	100	80	117	118	112	62	174	60	9	70	17	F 07	11,5
150	150	120	155	156	170	95	220	80	11	102	22	F 10	23,4
200	200	155	184	185	210	120	280	80	13,5	125	27	F 12	42,5
250	250	195	228	229	270	145	338	80	13,5	125	27	F 12	66,1

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

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