

WAFER TYPE PROCESS VALVE T 211-C



PTFE-lined wafer type valve for chemically toxic and highly corrosive media.

TECHNICAL DATA

Nominal diameter:	DN (40)50 - DN 300
Face-to-face:	EN 558 Table 20
Flange accommodation:	EN 1092 PN 10/16 ASME Class 150
Flange Surface Design:	EN 1092 Form A/B ASME RF, FF
Top flange:	EN ISO 5211
Marking:	EN 19 PAS 1085
Tightness check:	EN 12266 (Leakage rate A)
Temperature range:	-40°C to +200°C (depending on working pressure)
Operating pressure:	max. 10 bar (16 bar special version)
Vacuum:	up to 1 mbar absolute, (with silicon elastomer inserts) from -10°C to +160°C

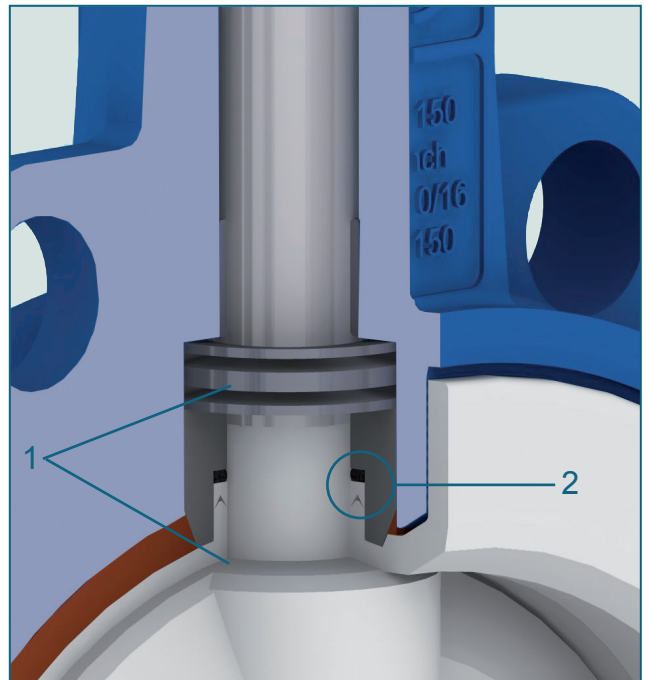
Valve Design
acc. to PAS 1085

FEATURES

- Environmental protection via EBRO-Safety seal
- TA-Luft/ VDI 2440, RWTÜV certified
- Isolation height according to plant prescription
- Maintenance-free
- Can be disassembled, material-specific recycling possible
- Material conform to FDA to EG 1935/2004

DESIGN FEATURES

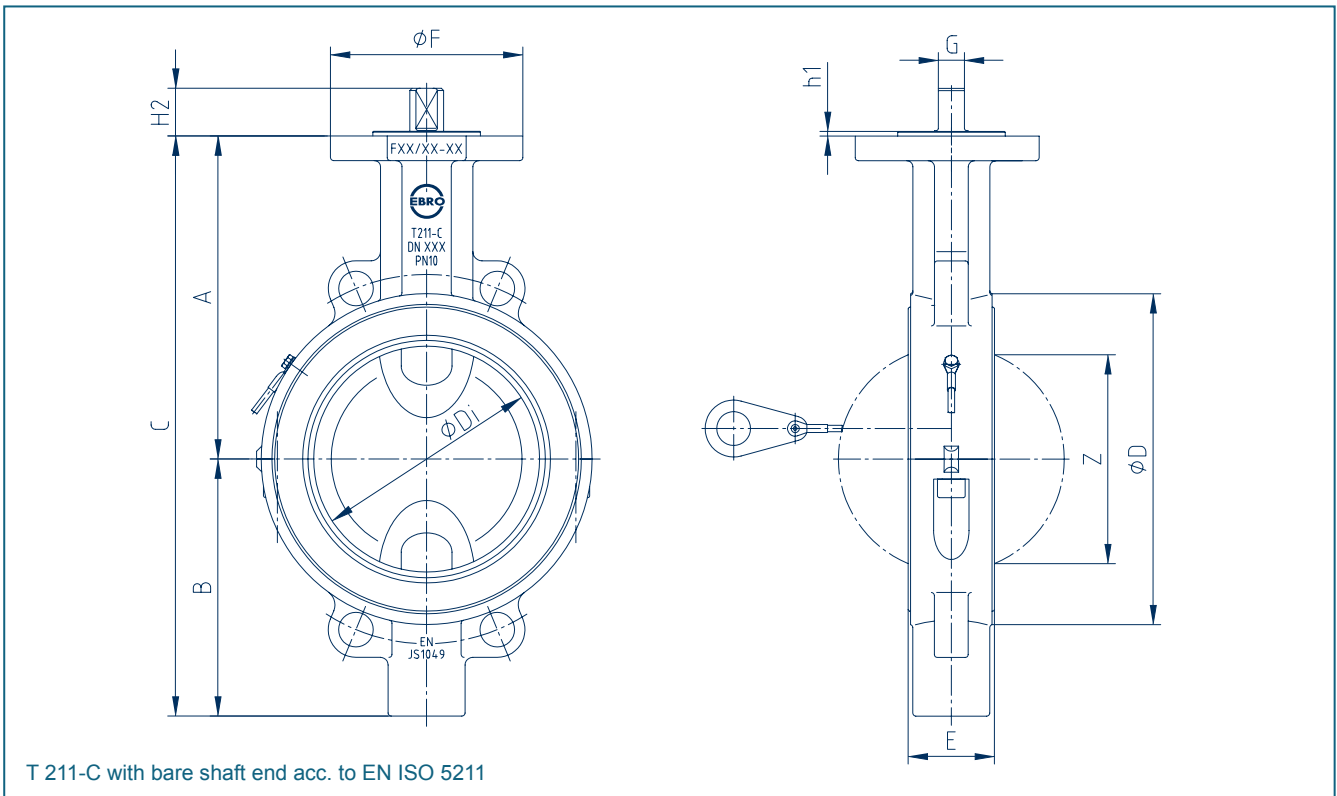
- Optimized low torques
- FEM dimensioned components
- Double flat shaft acc. to EN standards
- Shaft/ disc: duplex (one-piece lost-wax casting)
- Triple shaft bearing



Safety seal at both shaft ends:

1. Primary sealing by means of a Belleville spring washer, transmitting prestress on the spherical segment area.
2. Secondary sealing of the shaft by means of PTFE-Chevron and O-ring.

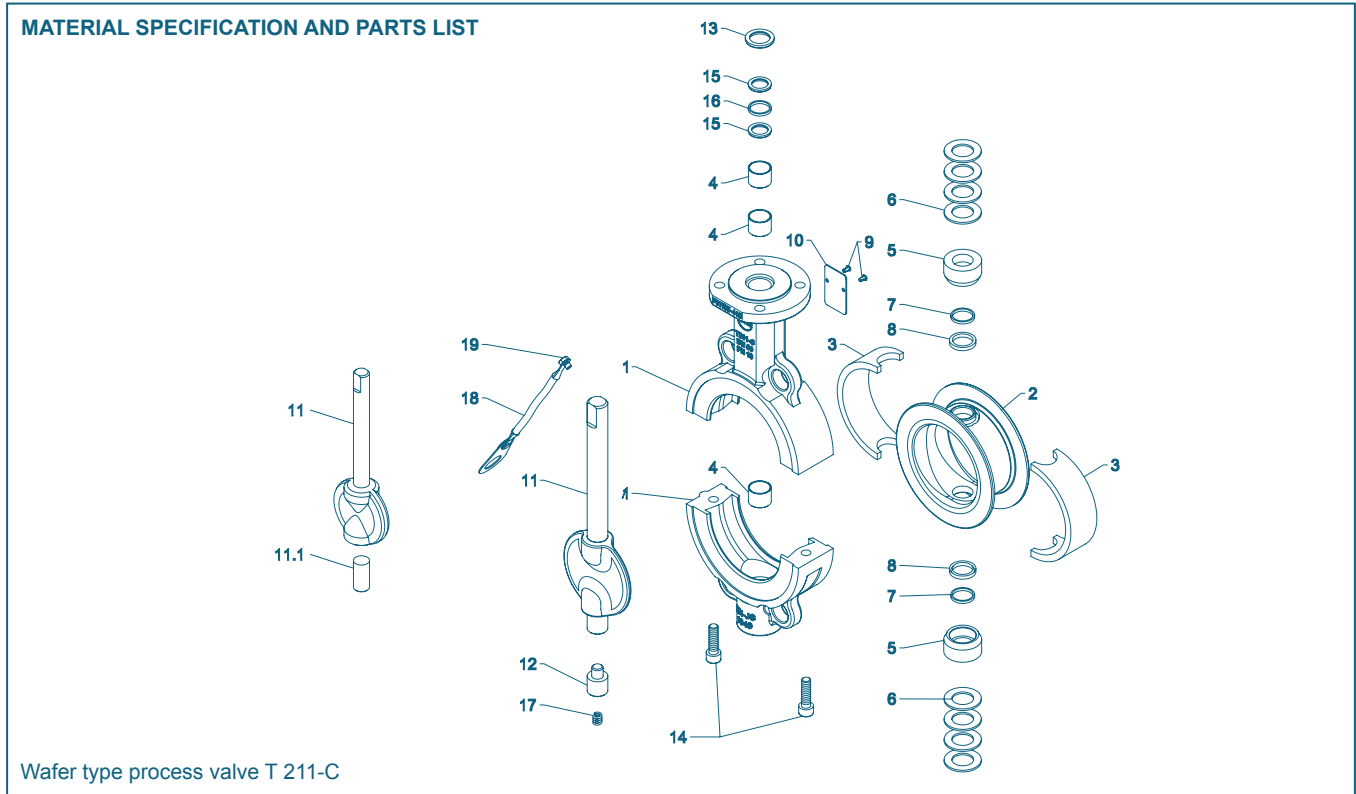
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DN [mm]	Size [in]	Dimensions [mm]											Weight [kg]	
		A	B	C	ØD	ØDi	E	Flange	ØF	G	h1	H2		Z
40/50	1½ 2	126	95	221	112	49	43	F07	90	11	3	22	25	3,5
65	2½	150	103	253	120	61	46	F07	90	11	3	22	41	4
80	3	157	124	281	138	80	46	F07	90	14	3	26	66	6
100	4	180	135	315	160	100	52	F07	90	14	3	26	85	8
150	6	210	167	377	215	151	56	F10	125	17	3	31	141	11
200	8	240	190	430	269	196	60	F12	150	17	3	31	187	18
250	10	275	232	507	324	248	68	F12	150	22	3	40,5	239	32
300	12	298	260	558	374	293	78	F14	175	22	4	41,5	283	46

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Pos.	Description	Material	Material-No.	ASTM	Pos.	Description	Material	Material-No.	ASTM
1	Body				11**	Disc/Shaft (one-piece type)			
	Nodular Cast Iron	EN-JS 1049	EN 1563	A395		St. Steel/St. Steel	X2CrNiMo22-5-3/	1.4469/	Duplex
2**	Seat						X2CrNiMo22-5-3	1.4469	
	PTFE	Polytetrafluorethylene	PTFE			St. Steel/PFA coated	X2CrNiMo22-5-3/	1.4469/	Duplex/
	M.-PTFE	Polytetrafluorethylene	modified				X2CrNiMo22-5-3/ Perfluoralkoxy		
	Cond.-PTFE	Polytetrafluorethylene	conductive			St. Steel/PFA conductive	X2CrNiMo22-5-3/	1.4469/	Duplex/
3**	Elastomer insert						X2CrNiMo22-5-3/ Perfluoralkoxy		
	Silicon	Silicon - rubber	MVQ	VMQ	11.1	Lower shaft (DN 40/50 only)			
4	DU-bearing					Stainless Steel	X2CrNiMoN22-5-3	1.4469	Duplex
	Steel / PTFE coated				12	Lower shaft stup (DN 65 - DN 200 only)			
5**	Trust collar					Stainless Steel	X39CrMo 17-1	1.4122	
	Stainless Steel	X5CrNiMo17-12-2	1.4401	316	13	Wiper ring			
6	Belleville spring washer					PTFE	Polytetrafluorethylene	PTFE	PTFE
	Stainless Steel	X12CrNi177	1.4568	631	14	Screw			
7**	O-Ring					Stainless Steel	A4-70		
	FPM	Fluorocarbon rubber	FPM	FKM	15**	Thrust ring			
8**	Chevron seal					PTFE	Polytetrafluorethylene	PTFE	PTFE
	PTFE	Polytetrafluorethylene	PTFE	PTFE	16**	O-Ring			
9	Groove pin					FPM	Fluorocarbon rubber		FKM
	Stainless Steel	A2			17	Spiral spring			
10	Type plate					Spring steel	X10CrNi 18-8	1.4310	301
	Stainless Steel				18	Buttstrap			
					19	Screw			
						Stainless Steel	A2-70		

Above-mentioned materials of the basic version, other materials upon request

** recommended spare parts

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TORQUE

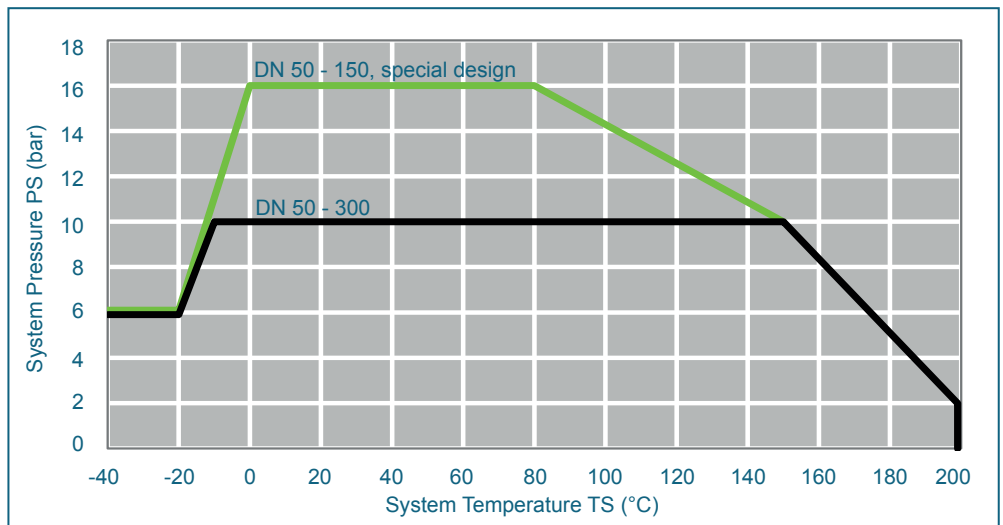
- The torque values specified (Md) are based on dry media and are measured with air at a temperature of 20 °C
- The values specified are based on the initial breakaway torque (disc disengages from seat, torque then drops)
- Dynamic torque specification available upon request

Regarding the dimensioning of actuators, please contact our engineers.

PRESSURE/TEMPERATURE DIAGRAM

DN (mm)	40/50	65	80	100	150	200	250	300
Size (in)	1½ 2	2½	3	4	6	8	10	12
MD (Nm)	35	35	55	70	135	170	320	380
MAST (Nm)*	105	105	250	250	480	480	1020	1020

*Maximum torques (Nm)



Pressure-Temperature-Diagram for valves with silicone elastomer inserts

Service limitation with Fluor carbon inserts (FPM) from -10°C up to +120°C

Service limitation with EPDM elastomer inserts from -10°C up to +180°C

Vacuum service to 1mbar absolute, from -10°C up to +160°C. Valve installation between flanges

K_V-VALUES

- The K_V-value [m³ per hour] is the flow of water at a temperature of 5°C to 30°C (41°F to 86°F) at Δp of 1 bar

- The K_V-values specified are based on tests carried out by the Delfter Hydraulics Laboratories, the Netherlands

- Permissible velocity of flow
V_{max} 4,5 m/s for liquids,
V_{max} 70 m/s for gases

- The throttle function is linear at an angle 30° to 70°

- Avoid cavitation

For further values, please contact our engineers.

DN [mm]	Size [in]	Opening angle α°							
		20°	30°	40°	50°	60°	70°	80°	90°

1) K_V-values metal disc

40/50	1½ 2	4	5	16	35	57	81	101	114
65	2½	5	8	25	56	99	153	216	287
80	3	13	12	30	69	131	216	328	467
100	4	13	25	61	121	207	319	459	627
150	6	50	94	171	303	509	810	1226	1778
200	8	137	149	344	696	1178	1764	2426	3137
250	10	178	291	562	1021	1699	2626	3832	5348
300	12	395	378	820	1638	2751	4079	5538	7049

2) K_V-values PFA-disc

40/50	1½ 2	2	4	13	25	40	53	63	66
65	2½	3	9	26	48	74	98	117	126
80	3	4	14	38	71	108	143	171	186
100	4	6	16	48	95	151	209	262	303
150	6	18	60	161	317	526	787	1096	1452
200	8	125	176	395	756	1234	1807	2449	3136
250	10	138	333	644	1103	1744	2599	3702	5086
300	12	203	462	872	1479	2329	3471	4950	6814

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