

WAFER TYPE PROCESS VALVE T 211-C



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

TECHNICAL DATA

Nominal diameter:	(1½ inch) 2 inch - 12 inch
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°F to +392°F (depending on working pressure)
Operating pressure:	max. 145 psi (232 psi special version)
Vacuum:	up to 1 mbar absolute, (with silicon elastomer inserts) from +14°F to +320°F

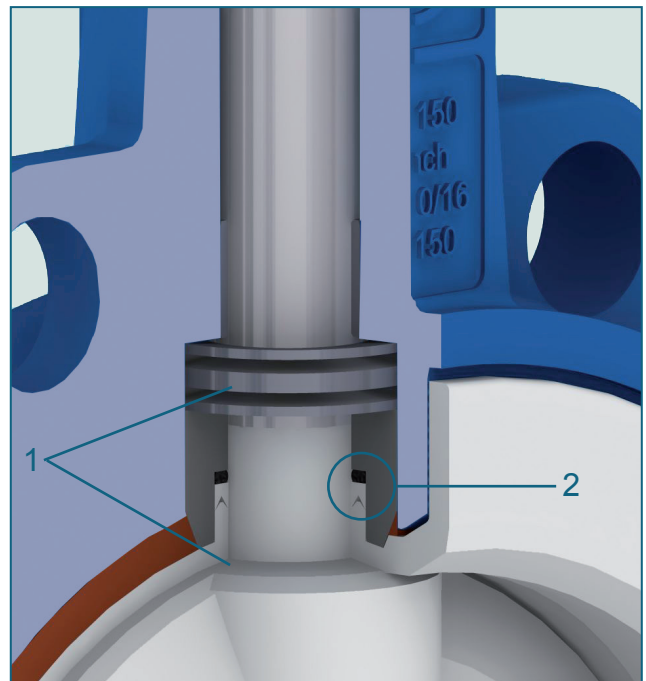
Valve Design
acc. to PAS 1085

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

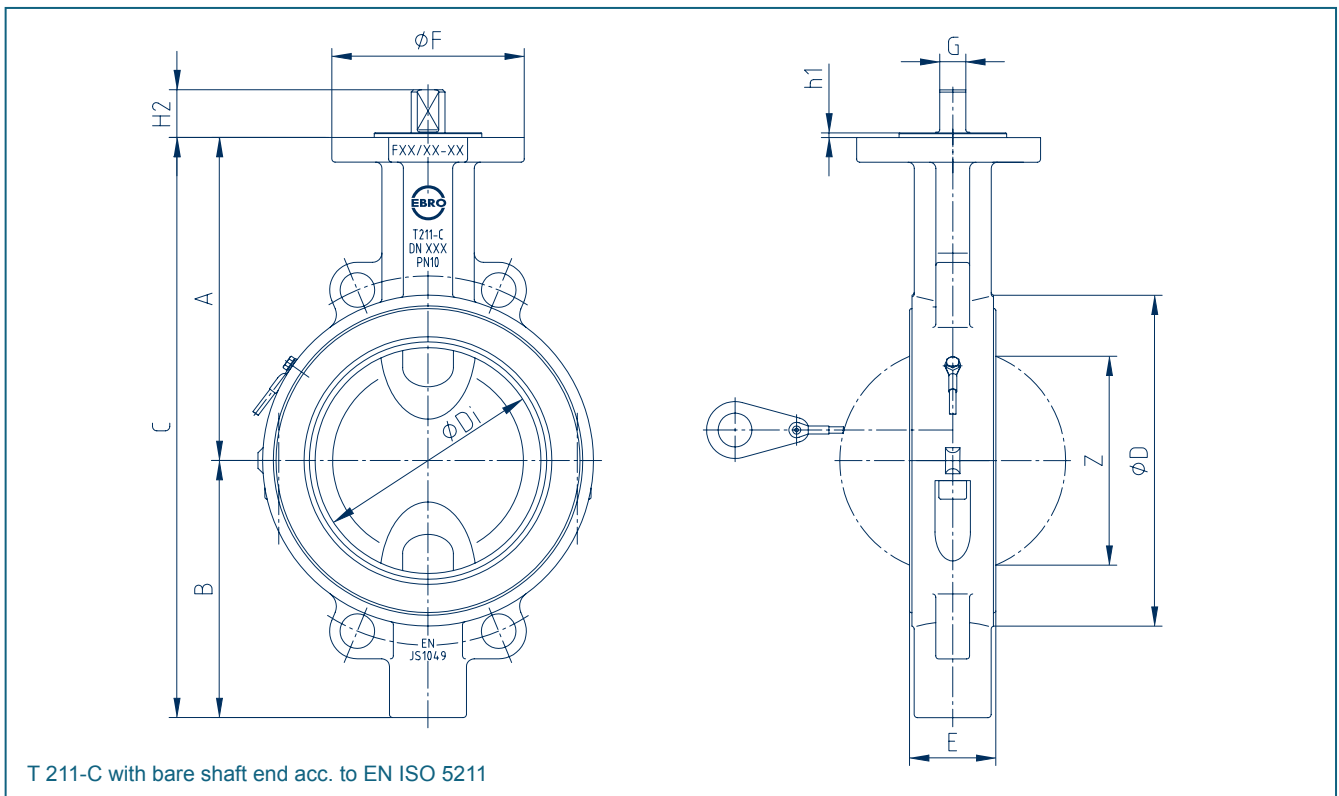
- Optimized low torques
- FEM dimensioned components
- Double flat shaft acc. to EN standards
- Shaft/ disc: duplex (one-piece lost-wax casting)
- Triple shaft bearing



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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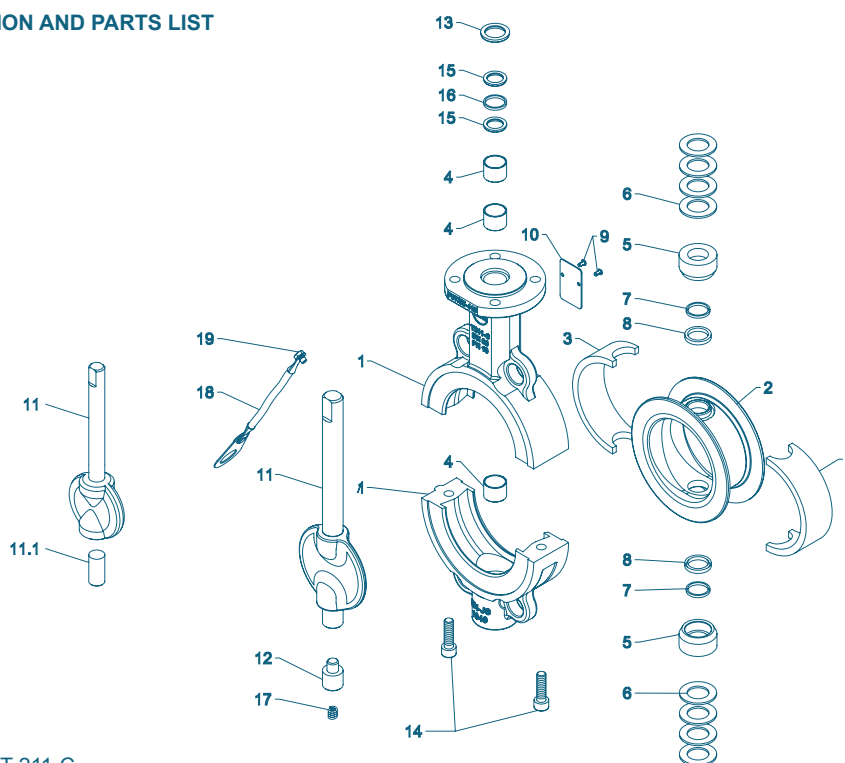


DN [mm]	Size [in]	Dimensions [in]												Weight [lb]
		A	B	C	ØD	ØDi	E	Flange	ØF	G	h1	H2	Z	
40/50	1½/ 2	4.96	3.74	8.70	4.41	1.93	1.69	F07	3.54	0.43	0.12	0.87	0.98	7.70
65	2½	5.91	4.06	9.96	4.72	2.40	1.81	F07	3.54	0.43	0.12	0.87	1.61	8.80
80	3	6.18	4.88	11.06	5.43	3.15	1.81	F07	3.54	0.55	0.12	1.02	2.60	13.20
100	4	7.09	5.31	12.40	6.30	3.94	2.05	F07	3.54	0.55	0.12	1.02	3.35	17.60
150	6	8.27	6.57	14.84	8.46	5.94	2.20	F10	4.92	0.67	0.12	1.22	5.55	24.30
200	8	9.45	7.48	16.93	10.59	7.72	2.36	F12	5.91	0.67	0.12	1.22	7.36	39.70
250	10	10.83	9.13	19.96	12.76	9.76	2.68	F12	5.91	0.87	0.12	1.59	9.41	70.50
300	12	11.73	10.24	21.97	14.72	11.54	3.07	F14	6.89	0.87	0.16	1.63	11.14	101.40

Subject to change without notice

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MATERIAL SPECIFICATION AND PARTS LIST



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Pos.	Description	Material	Material-No.	ASTM	Pos.	Description	Material	Material-No.	ASTM
1	Body				11**	Shaft/Disc	one-piece		
	Nodular Cast Iron	EN-JS 1049	EN 1563	A395		St. Steel /St. Steel	GX2CrNiMoN26-7-4	1.4469	EN 10213
2**	Seat					St. Steel /St. Steel PFA	GX2CrNiMoN26-7-4	1.4469	
	PTFE	Polytetrafluorethylene	PTFE	PTFE *			Perfluoroalkoxy	PFA	PFA
3**	Elastomer insert				11.1	Lower shaft (1½ inch/2 inch only)			
	Silicon	Silicon - rubber	MVQ	VMQ		Stainless Steel	X2CrNiMoN22-5-3	1.4462	Duplex
4	DU-bearing				12	Lower shaft stup (2½ inch - 8 inch only)			
	PTFE coated					Stainless Steel	X39CrMo 17-1	1.4122	
5**	Trust collar				13	Wiper ring			
	Stainless Steel	X5CrNiMo17-12-2	1.4401	316		PTFE	Polytetrafluorethylene	PTFE	PTFE
6	Belleville spring washer				14	Screw			
	Stainless Steel	X12CrNi177	1.4568	631		Stainless Steel	A4-70	1.4401	A193-B8
7**	O-Ring				15**	Thrust ring			
	FPM	Fluorocarbon caoutchouc	FPM	FKM		PTFE	Polytetrafluorethylene	PTFE	PTFE
8**	Chevron seal				16**	O-Ring			
	PTFE	Polytetrafluorethylene	PTFE	PTFE		FPM	Fluorocarbon caoutchouc		FKM
9	Groove pin				17	Spiral spring			
	Stainless Steel	A2				Spring steel	X10CrNi 18-8	1.4310	301
10	Type plate				18	Buttstrap			
	Stainless Steel								
					19	Screw			
						Stainless Steel	A2-70		A193-B8

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

* optional: electrically conductive

** recommended spare parts

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TORQUE [lb-ins]

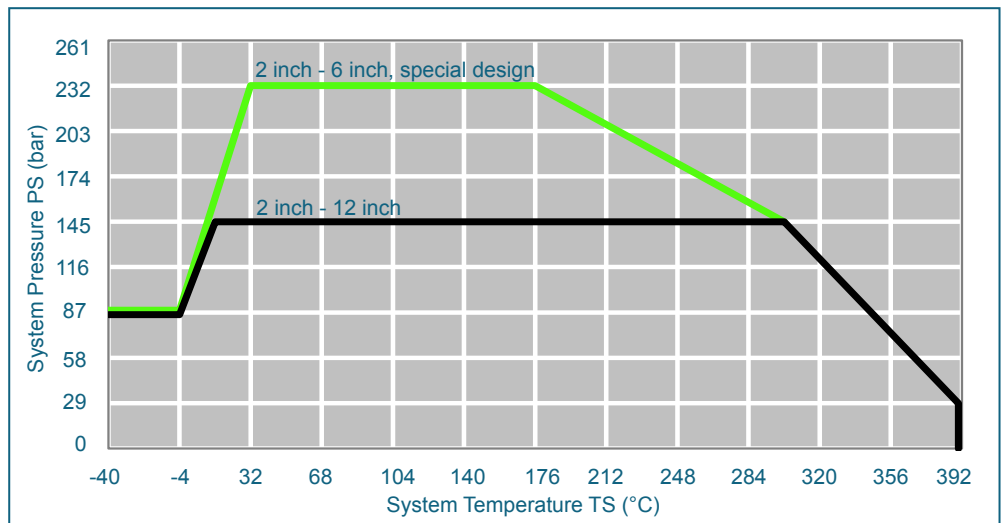
- The torque values specified (Md) are based on dry media and are measured with air at a temperature of 68°F
- The values specified are based on the initial breakaway torque (disc disengages from seat, torque then drops)
- Dynamic torque specification available upon request

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	310	310	487	620	1195	1505	2832	3363
MAST*	929	929	2213	2213	4248	4248	9028	9028

*Maximum torques (Inch Lbs)



Pressure-Temperature-Diagram for valves with silicone elastomer inserts

Service limitation with Fluor carbon inserts (FPM) from +14°F up to +248°F

Service limitation with EPDM elastomer inserts from +14°F up to +356°F

Vacuum service to 1mbar absolute, from +14°F up to +320°F. Valve installation between flanges

K_V-VALUES

- The K_V-value [US Gallon per minute] is the flow of water at a temperature of 41°F to 86°F at Δp of 15 psi
 - 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	18	22	70	154	251	357	445	502
65	2½	22	35	110	247	436	674	951	1264
80	3	57	53	132	304	577	951	1444	2056
100	4	57	110	269	533	911	1405	2021	2761
150	6	220	414	753	1334	2241	3566	5398	7828
200	8	603	656	1515	3064	5187	7767	10681	13812
250	10	784	1281	2474	4495	7480	11562	16872	23547
300	12	1739	1664	3610	7212	12112	17959	24383	31036
2) K _V -values PFA-disc									
40/50	1½ 2	9	18	57	110	176	233	277	291
65	2½	13	40	114	211	326	431	515	555
80	3	18	62	167	313	476	630	753	819
100	4	26	70	211	418	665	920	1154	1334
150	6	79	264	709	1396	2316	3465	4826	6393
200	8	550	775	1739	3329	5433	7956	10783	13807
250	10	608	1466	2835	4856	7679	11443	16299	22393
300	12	894	2034	3839	6512	10254	15282	21794	30001

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