



# JDFF

## Fittings



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# Section 1

## Standards :

**ISO 2531**

**GB 13295 - 2003**

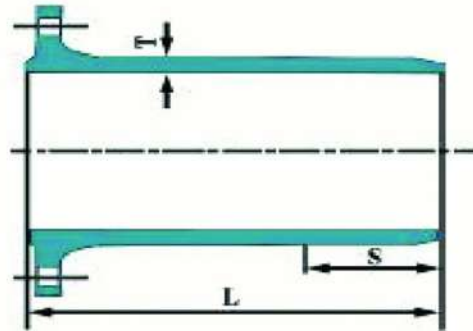
**ISO 7005 - 2**

**EN 545**

**EN 1092 -2**



Flanged Spigots.  
according to iso 2531  
Ductile iron (nodular iron)  
F Pieces



DN	T	Flanged Spigot				
		L	S	Mass(kg)		
				PN10	PN16	PN25
80	7	350	215	7.8	7.8	7.8
100	7.2	360	215	9.7	9.7	10.2
150	7.8	380	225	15.8	15.8	16.7
200	8.4	400	230	23	23	25
250	9	420	240	32	32	35.5
300	9.6	440	250	42.5	42.5	47.5
350	10.2	460	260	53	55	63.5
400	10.8	480	270	65.5	70	81
450	11.4	500	280	78.5	87	98.0
500	12	520	290	96	109	120
600	13.2	560	310	136	159	171
700	14.4	600	330	185	194	
800	15.6	600	330	233	245	
900	16.8	600	330	280	295	
1000	18	600	330	339	369	
1100	19.2	600	330	394	430	
1200	20.4	600	330	473	520	
1400	22.8	710	390	691	732	
1500	24	745	410	812	900	
1600	25.2	780	430	957	1024	
1800	27.6	850	470	1242	1322	
2000	30	920	500	1591	1687	
2200	32.4	990	540	1948	2115	
2400	34.8	1060	570	2409	2611	
2600	37.2	1130	610	2918	3153	


Casting Wall Thickness acc. to iso 2531

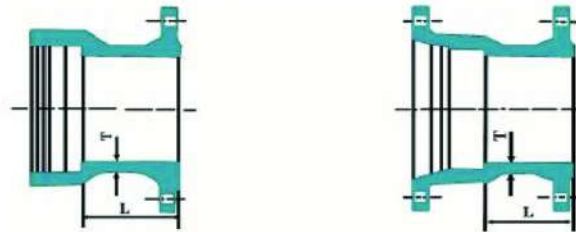
Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard

Flanged Sockets, Collar-type,  
according to iso 2531  
Ductile iron (nodular iron)  
EU Pieces 



Flanged socket

DN	T	L	Mass(kg)					
			T			K		
			PN10	PN16	PN25	PN10	PN16	PN25
80	7	130	8.3	8.3	8.3	9.3	9.3	9.3
100	7.2	130	10.2	10.2	10.7	11.3	11.3	12.4
150	7.8	135	16.4	16.4	17.3	18.0	18.0	19.0
200	8.4	140	24.5	24.5	26	24.5	24.0	26.0
250	9	145	32	32	35.5	32.5	32.0	35.5
300	9.6	150	39	39	44	44.5	44.0	49.5
350	10.2	155	47	48	60	53.0	55.5	63.0
400	10.8	160	60	60	75	64.0	68.0	78.5
450	11.4	165	70.5	78	88.5	74.5	82.0	92.5
500	12	170	84	93	107	87.0	100.0	110.0
600	13.2	180	112	135	146	115	138	149
700	14.4	190	161	161	216	162	174	211
800	15.6	200	209	209	287	205	220	274
900	16.8	210	259	259	356	252	271	341
1000	18	220	323	323	458	317	351	458
1100	19.2	230	406.4	414	550	377	412	440
1200	20.4	240	482	521	664	450	505	664
1400	22.8	310	654	723	882	654	723	882
1500	24	320	773	857	939	773	857	920
1600	25.2	330	887	989		897	999	1176
1800	27.6	350	1125	1251		1137	1263	1503
2000	30	370	1414	1567		1428	1581	1933
2200	32.4	390	1767	1934		1783	1950	
2400	34.8	410	2150	2352		2168	2370	
2600	37.2	480	2563	2798		2699	2934	

**S1: Casting Wall Thickness acc. to iso 2531**

**S2: Cement mortar lining according to iso 4179**


**Prptection By: \* Zinc & Bitumen External Coating acc. at iso 8179**

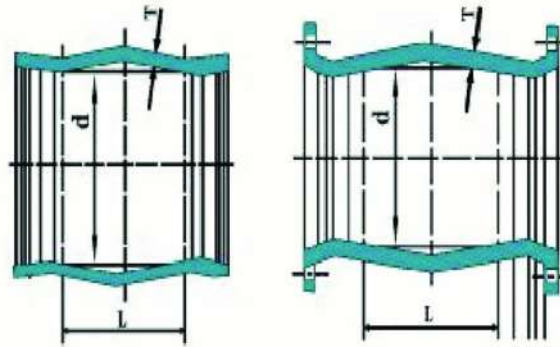
**OPTION:**

**Electro static epoxy powder coating acc. to works standard**





Collars Double socket  
 according to iso 2531  
 Ductile iron (nodular iron)  
 U Pieces 



Collar

DN	Collar			
	L	d	Mass(kg)	
			T	K
80	160	109	9.3	12.9
100	160	130	12.2	15.8
150	165	183	17.7	23.5
200	170	235	24.6	30.0
250	175	288	32.9	38.5
300	180	340	42.8	54.0
350	185	393	57.3	67.5
400	190	445	71.6	81.0
450	195	498	80	96.0
500	200	550	104.2	109
600	210	655	146.2	140
700	220	760	192	185
800	230	865	250.6	225
900	240	970	316.2	278
1000	250	1075	390	348
1100	260	1180	465.8	407
1200	270	1285	560	500
1400	340	1492	816	816
1500	350	1596	829	829
1600	360	1699	1094	1094
1800	380	1906	1427	1426
2000	400	2133		1818
2200	420	2320		2271
2400	440	2527		2794
2600	460	2734		3389


Casting Wall Thickness acc. to iso 2531

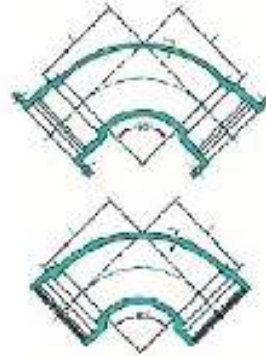
Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard

90° Socket Bends  
 according to iso 2531  
 Ductile iron (nodular iron)  
 90° MMK Pieces 



90° Socket bend 90°

DN	T	L	S	Mass(kg)	
				Double-socket	
				T	K
80	7	100	150	9	12.0
100	7.2	120	150	12.1	15.6
150	7.8	170	200	22	27.5
200	8.4	220	200	36.5	40.0
250	9	270	200	51.5	55.5
300	9.6	320	200	70.5	81.5
350	10.2	370	200	97.5	105
400	10.8	420	200	124	134
450	11.4	470	200	156	166
500	12	520	200	193	202
600	13.2	620	200	280	290
700	14.4	720	200	455	443
800	15.6	820	200	605	581
900	16.8	920	250	813	785
1000	18	1020	250	1045	935
1100	19.2	1120	250	1253	1168
1200	20.4	1220	250	1663	1660
1400	22.8	1220	300	2419	1918
1500	24	1270	300	2276	2230
1600	25.2	1290	300	3382	2543
1800	27.6	1320	300	-	3833
2000	30	1360	400		4783
2200	32.4	1400	400		5884
2400	34.8	1460	400		7205
2600	37.2	1520	400		8705

**Casting Wall Thickness acc. to iso 2531**


**Cement mortar lining according to iso 4179**

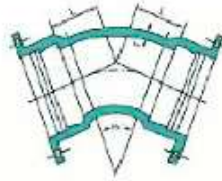
**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



45° Socket Bends  
according to iso 2531  
Ductile iron (nodular iron)  
45° MMK Pieces 



45° Socket bend 45°

DN	T	L	S	Mass(kg)	
				Double-socket	
				T	K
80	7	55	150	8.1	11.1
100	7.2	65	150	10.8	14.3
150	7.8	85	200	18.8	24.0
200	8.4	110	200	31	34.0
250	9	130	200	41.5	45.5
300	9.6	150	200	55	66
350	10.2	175	200	76	83.5
400	10.8	195	200	94	104
450	11.4	220	200	117	127
500	12	240	200	141	150
600	13.2	285	200	199	209
700	14.4	330	200	288	289
800	15.6	370	200	382	373
900	16.8	415	250	501	488
1000	18	460	250	640	628
1100	19.2	505	250	856	856
1200	20.4	550	250	1007	943
1400	22.8	515	300	1273	1223
1500	24	540	300	1640	1550
1600	25.2	565	300	1740	1647
1800	27.6	610	380	2296	2166
2000	30	660	380	2970	2791
2200	32.4	710	400	-	3757
2400	34.8	755	400	-	4659
2600	37.2	805	400	-	5714


Casting Wall Thickness acc. to iso 2531

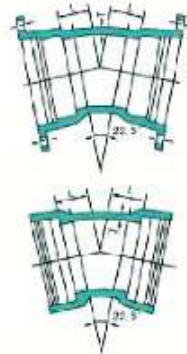
Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard

22.5° Socket Bends  
 according to iso 2531  
 Ductile iron (nodular iron)  
 22.5° MMK Pieces 



22.5° Socket bend

DN	T	L	S	Mass(kg)	
				Double-socket	
				T	K
80	7	40	150	7.7	10.7
100	7.2	40	150	10	13.5
150	7.8	55	200	17.3	22.5
200	8.4	65	200	27.5	30.5
250	9	75	200	36	40.5
300	9.6	85	200	47	58
350	10.2	95	200	64	71
400	10.8	110	200	78.50	88
450	11.4	120	200	95	105
500	12	130	200	113	123
600	13.2	150	200	154	164
700	14.4	175	200	223	223
800	15.6	195	200	291	281
900	16.8	220	250	377	364
1000	18	240	250	474	463
1100	19.2	260	250	644	601
1200	20.4	285	250	736	671
1400	22.8	260	300	933	882
1500	24	270	300	1377	1277
1600	25.2	280	300	1259	1167
1800	27.6	305	380	1663	1533
2000	30	330	380	2144	1965
2200	32.4	355	400	-	2705
2400	34.8	380	400	-	3358
2600	37.2	400	400	-	4085

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**


**Zinc & Bitumen External Coating acc. at iso 8179**

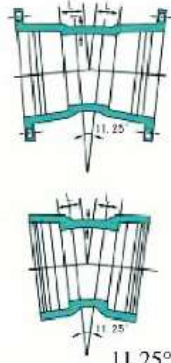
**OPTION:**

**Electro static epoxy powder coating acc. to works standard**





11.25° Socket Bends  
 according to iso 2531  
 Ductile iron (nodular iron)  
 11.25° MMK Pieces 



11.25° Socket bend

DN	T	L	S	Mass(kg)	
				Double-socket	
				T	K
80	7	30	150	7.4	10.5
100	7.2	30	150	9.7	13.1
150	7.8	35	200	16.2	21.5
200	8.4	40	200	25.5	29.0
250	9	50	200	33.5	37.5
300	9.6	55	200	43	54
350	10.2	60	200	58	65.5
400	10.8	65	200	70	79.0
450	11.4	70	200	83.5	93.5
500	12	75	200	98.5	108
600	13.2	85	200	131	141
700	14.4	95	200	186	187
800	15.6	110	200	243	234
900	16.8	120	250	309	297
1000	18	130	250	386	375
1100	19.2	140	250	525	495
1200	20.4	150	250	588	524
1400	22.8	130	300	747	697
1500	24	140	300	908	794
1600	25.2	140	300	1007	914
1800	27.6	155	380	1331	1200
2000	30	165	380	1702	1522
2200	32.4	190	400	-	2181
2400	34.8	205	400	-	2707
2600	37.2	215	400	-	3288

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

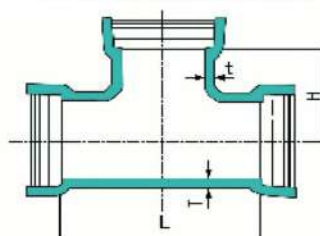
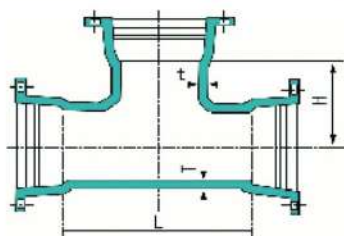
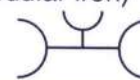
**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



All- Socket Tees  
 according to iso 2531  
 Ductile iron (nodular iron)  
 MMB Pieces



All-socket tee

DN × dn	T	L	t	H	Mass(kg)	
					T	K
80 × 80	7.0	170	7.0	85	13.8	16.8
100 × 80	7.2	170	7.0	95	16.7	19.9
100 × 100	7.2	190	7.2	95	18.2	21.5
150 × 80	7.8	170	7.0	120	24.5	28.5
150 × 100	7.8	195	7.2	120	26.5	30.5
150 × 150	7.8	255	7.8	125	31.5	36.5
200 × 80	8.4	175	7.0	145	35	36.0
200 × 100	8.4	200	7.2	145	37.5	38.5
200 × 150	8.4	255	7.8	150	43	45.0
200 × 200	8.4	315	8.4	155	50.5	50.5
250 × 80	9.0	200	7	210	47	48.3
200 × 100	9.0	200	7.2	210	48	49.0
250 × 150	9.0	315	7.8	220	59.0	61.0
250 × 200	9.0	315	8.4	220	63.5	63.5
250 × 250	9.0	375	9.0	230	71.5	71.5
300 × 100	9.6	205	7.2	235	54.5	66.5
300 × 150	9.6	320	7.8	245	68.0	80.5
300 × 200	9.6	320	8.4	245	72.0	84
300 × 250	9.6	375	9.0	250	85.5	92.1
300 × 300	9.6	435	9.6	260	90.5	106
350 × 100	10.2	205	7.2	260	70.5	78.0
350 × 150	10.2	325	7.8	270	86.5	95.0
350 × 200	10.2	325	8.4	270	90.5	98.0
350 × 250	10.2	375	9.0	275	105	109
350 × 300	10.2	440	9.6	285	111.0	122
350 × 350	10.2	495	10.2	290	124	133
400 × 100	10.8	210	7.2	285	83	92
400 × 150	10.8	325	7.8	295	101	111
400 × 200	10.8	325	8.4	295	105	114
400 × 250	10.8	375	9.0	300	116	128
400 × 300	10.8	440	9.6	310	127	140
400 × 350	10.8	495	10.2	315	137	152
400 × 400	10.8	560	10.8	320	155	167

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

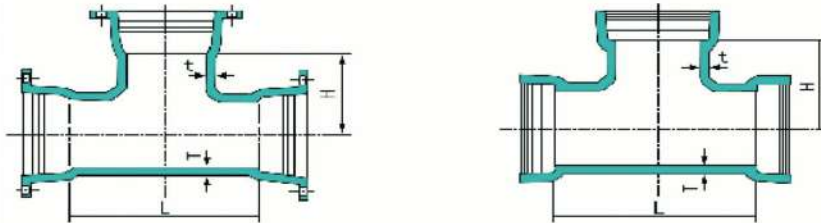
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



All- Socket Tees  
according to iso 2531  
Ductile iron (nodular iron)  
MMB Pieces



All-socket tee

DN × dn	T	L	t	H	Mass(kg)	
					T	K
450 × 100	11.4	215	7.2	320	106	116
450 × 150	11.4	330	7.8	320	117	128
450 × 200	11.4	330	8.4	320	121	131
450 × 250	11.4	375	9.0	325	138	147
450 × 300	11.4	445	9.6	335	146	160
450 × 350	11.4	495	10.2	340	161	175
450 × 400	11.4	560	10.8	345	175	188
450 × 450	11.4	620	11.4	350	190	203
500 × 100	12.0	215	7.2	345	115	123
500 × 150	12.0	330	7.8	345	135	145
500 × 200	12.0	330	8.4	345	139	148
500 × 250	12.0	380	9.0	350	161	168
500 × 300	12.0	450	9.6	360	167	179
500 × 350	12.0	500	10.2	365	187	198
500 × 400	12.0	565	10.8	370	198	210
500 × 450	12.0	620	11.4	375	214	224
500 × 500	12.0	680	12.0	380	231	242
600 × 100	13.2	220	7.2	395	169	168
600 × 150	13.2	340	7.8	395	175	184
600 × 200	13.2	340	8.4	395	178	187
600 × 250	13.2	380	9.0	400	205	213
600 × 300	13.2	455	9.6	410	211	223
600 × 350	13.2	500	10.2	415	246	248
600 × 400	13.2	570	10.8	420	248	259
600 × 450	13.2	620	11.4	425	280	281
600 × 500	13.2	685	12.0	430	296	296
600 × 600	13.2	800	13.2	440	325	337
700 × 100	14.4	345	7.2	445	279	269
700 × 150	14.4	345	7.8	445	283	273
700 × 200	14.4	345	8.4	445	289	279
700 × 300	14.4	460	9.6	460	326	316
700 × 400	14.4	575	10.8	470	361	350
700 × 500	14.4	650	12.0	480	411	399
700 × 600	14.4	810	13.2	490	461	450
700 × 700	14.4	925	14.4	500	536	519

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

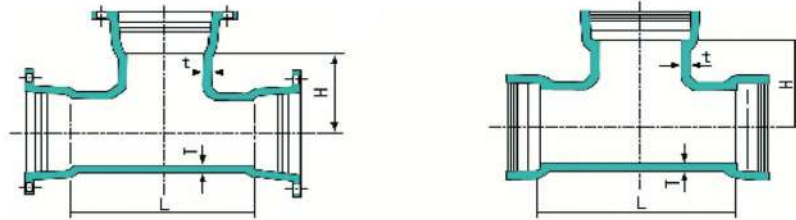
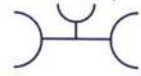
**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



All- Socket Tees  
 according to iso 2531  
 Ductile iron (nodular iron)  
 MMB Pieces



All-Socket tee

DN × dn	T	L	t	H	Mass(kg)	
					T	K
800 × 100	15.6	350	7.2	495	341	317
800 × 150	15.6	350	7.8	495	347	324
800 × 200	15.6	350	8.4	495	353	329
800 × 300	15.6	465	9.6	510	399	376
800 × 400	15.6	580	10.8	520	439	416
800 × 500	15.6	815	12.0	530	472	449
800 × 600	15.6	1045	13.2	540	629	606
800 × 700	15.6	1045	14.4	550	665	637
800 × 800	15.6	1045	15.6	565	701	666
900 × 100	16.8	355	7.2	545	446	416
900 × 150	16.8	355	7.8	545	450	420
900 × 200	16.8	355	8.4	545	458	427
900 × 300	16.8	590	9.6	570	535	505
900 × 400	16.8	590	10.8	570	556	526
900 × 500	16.8	820	12.0	590	803	770
900 × 600	16.8	1170	13.2	590	833	798
900 × 700	16.8	1050	14.4	615	878	843
900 × 800	16.8	1170	15.6	615	903	868
900 × 900	16.8	1170	16.8	625	944	899
1000 × 100	18.0	360	7.2	595	626	596
1000 × 150	18.0	360	7.8	595	632	602
1000 × 200	18.0	360	8.4	595	640	607
1000 × 300	18.0	595	9.6	620	761	729
1000 × 400	18.0	595	10.8	620	786	751
1000 × 500	18.0	830	12	640	900	941
1000 × 600	18.0	1290	13.2	640	1008	970
1000 × 700	18.0	1055	14.4	665	1081	1041
1000 × 800	18.0	1290	15.6	665	1129	1087
1000 × 900	18.0	1290	16.8	685	1150	1106
1000 × 1000	18.0	1290	18.0	685	1209	1164

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

**Zinc & Bitumen External Coating acc. at iso 8179**

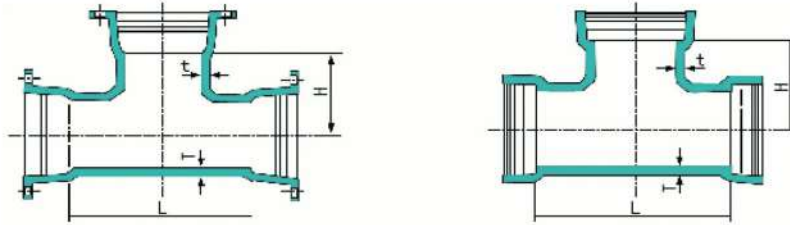
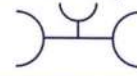
**OPTION:**

**Electro static epoxy powder coating acc. to works standard**





All- Socket Tees  
according to iso 2531  
Ductile iron (nodular iron)  
MMB Pieces



All-socket tee

DN × dn	T	L	t	H	Mass(kg)	
					T	K
1100 × 200	19.2	370	8.4	650	710	680
1100 × 400	19.2	600	10.8	670	909	675
1100 × 600	19.2	830	13.2	690	1052	822
1100 × 800	19.2	1065	15.6	715	1313	986
1100 × 1000	19.2	1295	18.0	735	1504	1172
1100 × 1100	19.2	1410	19.2	745	1626	1267
1200 × 100	20.4	375	7.0	700	713	669
1200 × 150	20.4	375	7.8	700	719	675
1200 × 200	20.4	375	8.4	700	725	681
1200 × 300	20.4	605	9.6	720	963	887
1200 × 400	20.4	605	10.8	720	978	900
1200 × 500	20.4	715	12.0	740	1095	1011
1200 × 600	20.4	840	13.2	740	1139	1055
1200 × 700	20.4	955	14.4	765	1390	1306
1200 × 800	20.4	1070	15.6	765	1449	1365
1200 × 900	20.4	1185	16.8	785	1596	1512
1200 × 1000	20.4	1300	18.0	785	1657	1564
1200 × 1200	20.4	1535	20.4	805	1900	1792
1400 × 100	22.8	385	7.2	820	916	884
1400 × 200	22.8	385	8.4	820	923	891
1400 × 400	22.8	800	10.8	820	1133	1098
1400 × 600	22.8	1030	13.2	840	1679	1422
1400 × 800	22.8	1260	15.6	865	1910	1641
1400 × 1000	22.8	1495	18.0	885	2441	1886
1400 × 1200	22.8	1725	20.4	905	2795	2133
1400 × 1400	22.8	1960	22.8	930	3124	2436
1600 × 100	25.2	400	7.2	920	2323	1173
1600 × 200	25.2	400	8.4	920		1183
1600 × 400	25.2	810	10.8	920		1435
1600 × 600	25.2	1040	13.2	940		1806
1600 × 800	25.2	1275	15.6	965		2073
1600 × 1000	25.2	1505	18.0	985		2363
1600 × 1200	25.2	1740	20.4	1010		2660
1600 × 1400	25.2	1970	22.8	1030		2992
1600 × 1600	25.2	2200	25.2	1050		3346

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

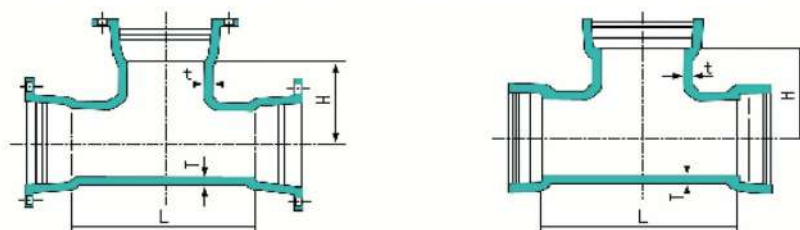
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



All- Socket Tees  
 according to iso 2531  
 Ductile iron (nodular iron)  
 MMB Pieces



All-socket tee

DN × dn	T	L	t	H	Mass(kg)
					K
1800 × 100	27.6	410	7.2	1020	1518
1800 × 200	27.6	410	8.4	1020	1525
1800 × 400	27.6	820	10.8	1020	1931
1800 × 600	27.6	1055	13.2	1040	2272
1800 × 800	27.6	1285	15.6	1065	2591
1800 × 1000	27.6	1520	18.0	1085	2933
1800 × 1200	27.6	1750	20.4	1110	3274
1800 × 1400	27.6	1980	22.8	1130	3652
1800 × 1600	27.6	2215	25.2	1150	4052
1800 × 1800	27.6	2445	27.6	1175	4498
2000 × 200	30	420	8.4	1120	1924
2000 × 400	30	830	10.8	1120	2299
2000 × 600	30	1065	13.2	1140	2793
2000 × 800	30	1300	15.6	1165	3179
2000 × 1000	30	1530	18.0	1185	3572
2000 × 1200	30	1760	20.4	1210	3968
2000 × 1400	30	1995	22.8	1230	4407
2000 × 1600	30	2225	25.2	1250	4850
2000 × 1800	30	2460	27.6	1275	5346
2000 × 2000	30	2690	30	1295	5873
2200 × 600	32.4	1080	13.2	1240	3500
2200 × 800	32.4	1310	15.6	1265	3803
2200 × 1000	32.4	1540	18	1285	4258
2200 × 1200	32.4	1775	20.4	1310	4725
2200 × 1400	32.4	2005	22.8	1330	5214
2200 × 1600	32.4	2240	25.2	1350	5722
2200 × 1800	32.4	2470	27.6	1375	6264
2200 × 2000	32.4	2700	30	1395	6835
2200 × 2200	32.4	2935	32.4	1415	7457
2400 × 600	34.8	1090	13.2	1340	4100
2400 × 800	34.8	1320	15.6	1365	4486
2400 × 1000	34.8	1555	18	1385	5018
2400 × 1200	34.8	1785	20.4	1410	5539
2400 × 1400	34.8	2020	22.8	1430	6102
2400 × 1600	34.8	2250	25.2	1450	6662
2400 × 1800	34.8	2489	27.6	1475	7263
2400 × 2000	34.8	2715	30	1495	7900
2400 × 2200	34.8	2945	32.4	1515	8558
2400 × 2400	34.8	3180	34.8	1540	9267

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

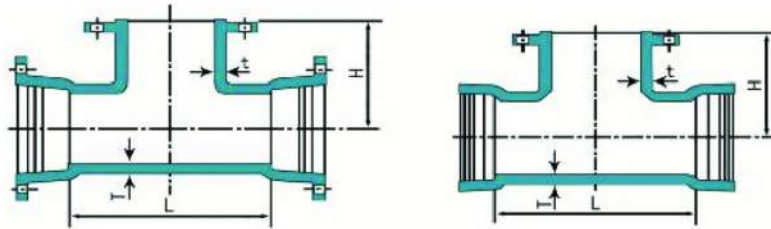
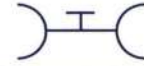
OPTION:

Electro static epoxy powder coating acc. to works standard





Double Socket Tees with Flanged Branch  
according to iso 2531  
Ductile iron (nodular iron)  
MMA Pieces



Double-socket tee with flanged branch

DN × dn	T	L	t	H	Mass(kg)					
					T			K		
					PN10	PN16	PN25	PN10	PN16	PN25
80 × 80	7.0	170	7.0	165	14.7	14.7	14.7	16.7	16.7	16.7
100 × 80	7.2	170	7.0	175	17.5	17.5	17.5	19.7	19.7	19.7
100 × 100	7.2	190	7.2	180	18.9	18.9	18.9	21	21	21.5
150 × 80	7.8	170	7.0	205	25.5	25.5	25.5	28.5	28.5	28.5
150 × 100	7.8	195	7.2	210	27	27	27.5	30.5	30.5	31
150 × 150	7.8	255	7.8	220	32.5	32.5	33.5	35.5	35.5	36.5
200 × 80	8.4	175	7.0	235	36.5	36.5	36.5	36.5	36.5	36.5
200 × 100	8.4	200	7.2	240	38.5	38.5	39	38.5	38.5	39.0
200 × 150	8.4	255	7.8	250	44.5	44.5	45.5	41.5	44.5	46.5
200 × 200	8.4	315	8.4	260	51.5	51	53	51.5	51.0	53.0
250 × 80	9.0	200	7.0	270	47.0	47.0	47.0	47.0	47.0	47.0
250 × 100	9.0	200	7.2	270	47.5	47.5	47.5	48	48.0	48.5
250 × 150	9.0	255	7.5	280	59	59.0	59.0	60.0	59.0	60.0
250 × 200	9.0	315	8.4	290	62.5	62.5	60	64	62.0	64.0
250 × 250	9.0	375	9.0	300	71	71	71	74.5	71.0	74.5
300 × 80		205		300	54.5	54.5	54.5	64.0	64.0	64.0
300 × 100	9.6	205	7.2	300	55.0	55.0	55.0	55.5	65.0	65.5
300 × 150	9.6	320	7.8	320	68.5	68.5	68.5	69.5	78.5	79.5
300 × 200	9.6	320	8.4	320	72	72	71.5	73.5	81.5	83.5
300 × 250	9.6	375	9.0	330	83.0	83.0	81.0	85.0	91.0	96.0
300 × 300	9.6	435	9.6	340	92	92	91.5	97	102	107
350 × 100	10.2	205	7.2	330	71	71	71	71.5	76.5	77.0
350 × 150	10.2	260	7.8	340	82.3	82.3	81.3	83.3	93.0	94.0
350 × 200	10.2	325	8.4	350	90.5	90.5	90.5	92.5	96.0	98.0
350 × 250	10.2	375	9.0	360	103	103	114	125	124	135
350 × 300	10.2	400	9.6	370	113	113	113	118	118	123
350 × 350	10.2	495	10.2	380	123	123	126	134	132	139
400 × 100	10.8	210	7.2	360	84	84	84	84.5	91.0	91.5
400 × 150	10.8	323	7.8	380	102	102	102	103	109	110
400 × 200	10.8	325	8.4	380	105	105	105	107	112	114
400 × 250	10.8	375	9.0	390	119	119	118	122	128	132
400 × 300	10.8	440	9.6	400	129	129	129	134	136	142
400 × 350	10.8	495	10.2	410	143	143	146	153	156	163
400 × 400	10.8	560	10.8	420	155	155	160	171	167	178

Casting Wall Thickness acc. to iso 2531

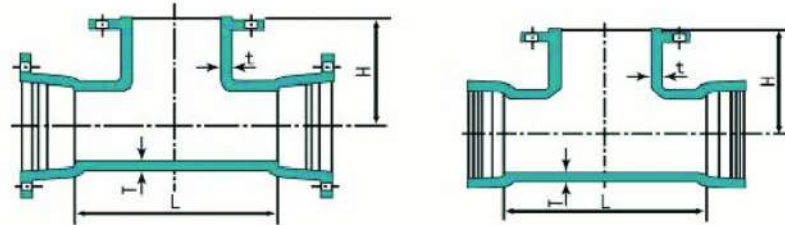
Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard

Double Socket Tees with Flanged Branch  
according to iso 2531  
Ductile iron (nodular iron)  
MMA Pieces



Double-socket tee with flanged branch

DN × dn	T	L	t	H	Mass(kg)					
					T			K		
					PN10	PN16	PN25	PN10	PN16	PN25
450 × 100	11.4	215	7.2	395	98.5	98.5	99.0	106	106	107
450 × 150	11.4	330	7.8	410	119	119	120	127	127	128
450 × 200	11.4	330	8.4	410	122	122	124	130	130	132
450 × 250	11.4	375	9.0	420	141	140	140	149	149	153
450 × 300	11.4	445	9.6	430	149	149	154	157	157	162
450 × 350	11.4	495	10.2	440	166	169	169	174	177	186
450 × 400	11.4	560	10.8	450	177	181	192	185	189	200
450 × 450	11.4	620	11.4	460	192	200	211	200	208	219
500 × 100	12.0	215	7.2	420	114	114	114	120	120	120
500 × 150	12.0	330	7.8	440	137	137	138	143	143	144
500 × 200	12.0	330	8.4	440	140	140	142	147	146	148
500 × 250	12.0	380	9.0	450	165	165	169	172	171	177
500 × 300	12.0	450	9.6	460	171	171	176	177	177	182
500 × 350	12.0	500	10.2	470	192	195	203	198	201	210
500 × 400	12.0	565	10.8	480	201	206	217	207	212	223
500 × 450	12.0	620	11.4	490	220	228	244	226	235	250
500 × 500	12.0	680	12.0	500	236	249	260	242	256	266
600 × 100	13.2	220	7.2	480	146	146	147	152	152	153
600 × 150	13.2	285	7.8	490	187	187	188	183	183	184
600 × 200	13.2	340	8.4	500	180	180	182	187	187	188
600 × 250	13.2	380	9.0	510	219	218	222	215	215	218
600 × 300	13.2	455	9.6	520	216	216	221	222	222	227
600 × 350	13.2	500	10.2	530	252	255	263	247	251	260
600 × 400	13.2	570	10.8	540	252	257	268	258	263	274
600 × 450	13.2	620	11.4	550	285	293	309	281	289	305
600 × 500	13.2	685	12.0	560	304	309	331	301	305	327
600 × 600	13.2	800	13.2	580	338	362	374	345	368	380
700 × 100	14.4	345	7.2	525	242	242	243	243	243	244
700 × 150	14.4	345	7.8	520	254	258	247	246	246	247
700 × 200	14.4	345	8.4	525	249	249	251	250	249	251
700 × 300	14.4	460	9.6	540	300	300	306	301	301	307
700 × 400	14.4	575	10.8	555	329	333	344	329	334	345
700 × 500	14.4	690	12.0	570			418	392	407	409
700 × 600	14.4	810	13.2	585	421	445	456	422	445	457
700 × 700	14.4	925	14.5	600	476	487		476	488	

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

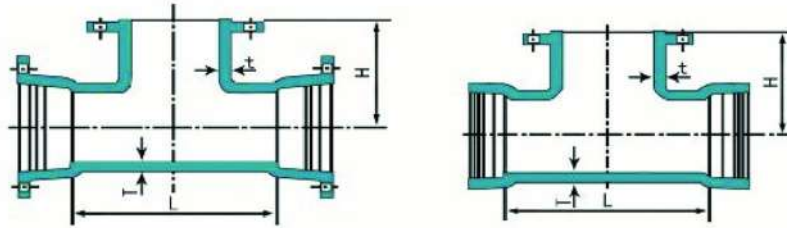
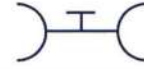
OPTION:

Electro static epoxy powder coating acc. to works standard





Double Socket Tees with Flanged Branch  
according to iso 2531  
Ductile iron (nodular iron)  
MMA Pieces



Double-socket tee with flanged branch

DN × dn	T	L	t	H	Mass(kg)					
					T			K		
					PN10	PN16	PN25	PN10	PN16	PN25
800 × 100	15.6	350	7.2	585	304	304	305	295	295	295
800 × 150	15.6	350	7.8	580	308	308	309	298	298	299
800 × 200	15.6	350	8.4	585	311	311	313	302	301	303
800 × 300	15.6	580	9.6	600	371	371	377	362	362	368
800 × 400	15.6	580	10.8	615	405	410	421	396	401	412
800 × 500	15.6	815	12.0	630	522	537	549	513	528	540
800 × 600	15.6	1045	13.2	645	588	612	624	579	603	614
800 × 700	15.6	1045	14.4	660	620	635	669	611	626	660
800 × 800	15.6	1045	15.6	675	640	655	708	631	646	699
900 × 100	16.8	355	7.2	630	378	378	378	365	365	366
900 × 150	16.8	355	7.8	640	381	381	382	368	368	369
900 × 200	16.8	355	8.4	645	385	384	386	371	371	373
900 × 300	16.8	590	9.6	660	455	455	461	442	442	448
900 × 400	16.8	590	10.8	675	497	502	513	484	488	499
900 × 500	16.8	820	12.0	690	666	681	693	653	668	690
900 × 600	16.8	1170	13.2	705	758	782	794	745	769	760
900 × 700	16.8	1050	14.4	720	788	803	837	775	790	824
900 × 800	16.8	1170	15.6	735	808	823	876	795	810	863
900 × 900	16.8	1170	16.8	750	835	854	920	822	841	907
1000 × 100	18.0	360	7.2	690	461	461	462	461	461	462
1000 × 150	18.0	360	7.8	700	464	464	465	451	451	452
1000 × 200	18.0	360	8.4	705	467	467	469	455	455	457
1000 × 300	18.0	595	9.6	720	552	552	558	552	552	558
1000 × 400	18.0	595	10.8	735	598	603	614	586	591	602
1000 × 500	18.0	830	12	750	852	867	879	852	867	879
1000 × 600	18.0	1290	13.2	765	958	982	994	946	970	981
1000 × 700	18.0	1055	14.4	780	985	1000	1032	985	1000	1032
1000 × 800	18.0	1290	15.6	795	1006	1021	1074	944	1009	1074
1000 × 900	18.0	1290	16.8	810	1052	1076	1137	1052	1076	1137
1000 × 1000	18.0	1290	18.0	825	1044	1086	1192	1059	1094	1192

Casting Wall Thickness acc. to iso 2531

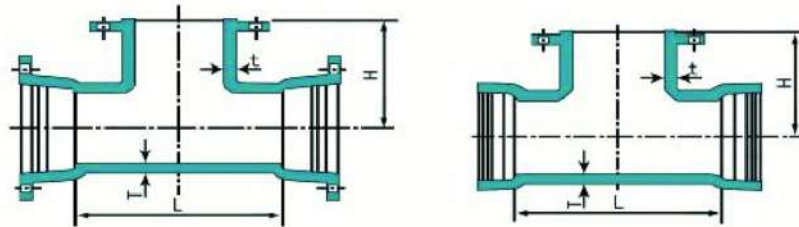
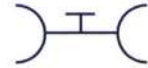
Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard

Double Socket Tees with Flanged Branch  
according to iso 2531  
Ductile iron (nodular iron)  
MMA Pieces



Double-socket tee with flanged branch

DN × dn	T	L	t	H	Mass(kg)					
					T			K		
					PN10	PN16	PN25	PN10	PN16	PN25
1100 × 200	19.2	370	8.4	765	782	782	784	531	531	533
1100 × 400	19.2	600	10.8	795	930	934	945	680	684	695
1100 × 600	19.2	830	13.2	825	1079	1103	1114	836	860	871
1100 × 800	19.2	1065	15.6	855	1321	1335	1388	1015	1029	1082
1100 × 1000	19.2	1295	10.8	885	1560	1595	1681	1205	1240	1326
1100 × 1100	19.2	1410	19.2	900	1679	1714	1814	1313	1348	1448
1200 × 100	20.4	375	7.0	810	763	763	763	676	676	676
1200 × 150	20.4	375	7.8	820	806	806	806	678	678	678
1200 × 200	20.4	375	8.4	825	682	682	684	618	618	620
1200 × 300	20.4	605	9.6	840	917	917	923	769	769	775
1200 × 400	20.4	605	10.8	855	852	856	867	787	792	803
1200 × 500	20.4	840	12.0	870	980	1018	1044	968	973	995
1200 × 600	20.4	840	13.2	885	1031	1055	1067	967	991	1003
1200 × 700	20.4	1070	14.4	900	1169	1184	1218	1169	1184	1218
1200 × 800	20.4	1070	15.6	915	1227	1242	1295	1162	1177	1295
1200 × 900	20.4	1300	16.8	930	1367	1427	1452	1367	1427	1452
1200 × 1000	20.4	1300	18.0	945	1436	1470	1556	1372	1406	1556
1200 × 1200	20.4	1535	20.4	975	1682	1736	1846	1617	1672	1846
1400 × 100	22.8	385	7.2	910	1120	1120	1120	1120	1120	1120
1400 × 200	22.8	385	8.4	920	1189	1189	1189	1189	1189	1189
1400 × 400	22.8	800	10.8	950	1357	1368	1374	1221	1226	1237
1400 × 600	22.8	1030	13.2	980	1478	1505	1519	1441	1464	1519
1400 × 800	22.8	1260	15.6	1010	1709	1728	1777	1677	1692	1777
1400 × 1000	22.8	1495	18.0	1040	1955	1996	2075	1929	1964	2075
1400 × 1200	22.8	1725	20.4	1070	2375	2439	2539	2205	2260	2539
1400 × 1400	22.8	1960	22.8	1100	2697	2765	2917	2501	2557	2917
1600 × 100	25.2	400	7.2	1020	1261	1261	1261	1261	1261	1261
1600 × 200	25.2	400	8.4	1030	1361	1361	1361	1361	1361	1361
1600 × 400	25.2	810	10.8	1060	1561	1565	1576	1561	1565	1576
1600 × 600	25.2	1040	13.2	1090	1908	1934	1942	1831	1854	1866
1600 × 800	25.2	1275	15.6	1120	2192	2211	2264	2121	2136	2189
1600 × 1000	25.2	1505	18.0	1150	2480	2522	2607	2416	2451	2536
1600 × 1200	25.2	1740	20.4	1180	2799	2863	2962	2743	2798	2907
1600 × 1400	25.2	1970	22.8	1210	3129	3186	3349	3073	3130	3293
1600 × 1600	25.2	2200	25.2	1240	3517	4607	4792	3461	3551	3741

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

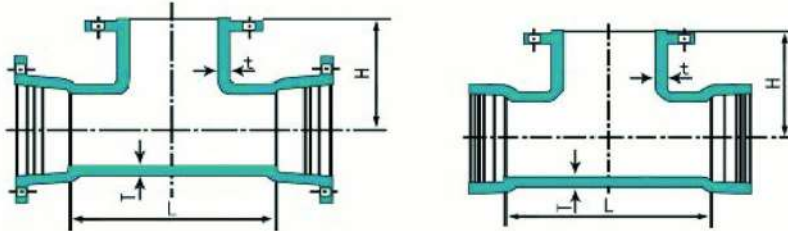
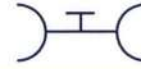
Electro static epoxy powder coating acc. to works standard





## Double Socket Tees with Flanged Branch according to iso 2531

Ductile iron (nodular iron)  
MMA Pieces



Double-socket tee with flanged branch

DN × dn	T	L	t	H	Mass(kg)				
					T		K		
					PN10	PN16	PN10	PN16	PN25
1800 × 100	27.6	410	7.2	1130			1742	1742	1742
1800 × 200	27.6	410	8.4	1140			1842	1842	1842
1800 × 400	27.6	820	10.8	1170			2042	2046	2059
1800 × 600	27.6	1055	13.02	1200	2414	2440	2302	2326	2337
1800 × 800	27.6	1285	15.6	1230	2748	2767	2642	2657	2710
1800 × 1000	27.6	1520	18.0	1260	3095	3137	2998	3032	3118
1800 × 1200	27.6	1750	20.4	1290	3460	3524	3371	3426	3535
1800 × 1400	27.6	1980	22.8	1320			3750	3807	3970
1800 × 1600	27.6	2215	25.2	1350			4188	4277	4498
1800 × 1800	27.6	2445	27.6	1380			4624	4735	4990
2000 × 200	30	420	8.4	1250			2230	2230	2232
2000 × 400	30	830	10.8	1280			2530	2534	2547
2000 × 600	30	1065	13.2	1310	2988	3015	2830	2853	2865
2000 × 800	30	1300	15.6	1340			3239	3254	3307
2000 × 1000	30	1530	18.0	1370	3790	3832	3648	3682	3768
2000 × 1200	30	1760	20.4	1400			4079	4134	4243
2000 × 1400	30	1995	22.8	1430	4645	4713	4523	4580	4743
2000 × 1600	30	2228	25.2	1460			5007	5097	5287
2000 × 1800	30	2460	27.6	1490			5497	5609	5863
2000 × 2000	30	2690	30	1520			6030	6168	6506
2200 × 600	32.4	1080	13.2	1420	3647	3674	3510	3507	
2200 × 800	32.4	1310	15.6	1450			3873	3888	
2200 × 1000	32.4	1540	18	1480			4347	4381	
2200 × 1200	32.4	1775	20.4	1510	5055	5119	4851	4906	
2200 × 1400	32.4	2005	22.8	1540			5349	5406	
2200 × 1600	32.4	2240	25.2	1570			5903	5992	
2200 × 1800	32.4	2470	27.6	1600	6579	6705	6442	6553	
2200 × 2000	32.4	2700	30	1630			7022	7160	
2200 × 2200	32.4	2935	32.4	1660			7688	7858	
2400 × 600	34.8	1090	17.2	1530			4085	4111	
2400 × 800	34.8	1320	15.6	1560	4383	4409	4566	4581	
2400 × 1000	34.8	1555	18	1590			5119	5154	
2400 × 1200	34.8	1785	20.4	1620	6005	6069	5682	5737	
2400 × 1400	34.8	2020	22.8	1650			6257	6314	
2400 × 1600	34.8	2250	25.2	1680			6866	6955	
2400 × 1800	34.8	2480	27.6	1710	7734	7860	7168	7579	
2400 × 2000	34.8	2715	30	1740			8120	8258	
2400 × 2200	34.8	2945	32.4	1770			8826	8996	
2400 × 2400	34.8	3180	34.8	1800			9614	9842	

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

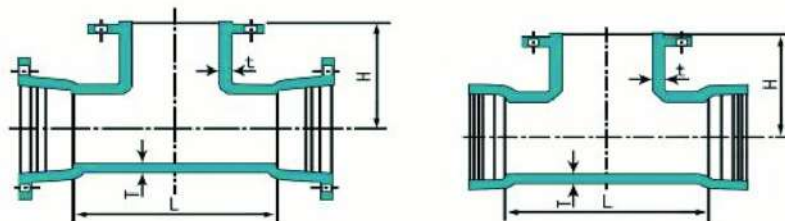
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



Double Socket Tees with Flanged Branch  
 according to iso 2531  
 Ductile iron (nodular iron)  
 MMA Pieces



Double-socket tee with flanged branch

DN × dn	T	L	t	H	Mass(kg)			
					T		K	
					PN10	PN16	PN10	PN16
2600 × 600	37.2	1100	13.2	1640	5205	5231	4955	4971
2600 × 800	37.2	1335	15.6	1670			5553	5568
2600 × 1000	37.2	1565	18	1700			6175	6210
2600 × 1200	37.2	1800	20.4	1730			6829	6884
2600 × 1400	37.2	2030	22.8	1750	7704	7772	7471	7528
2600 × 1600	37.2	2260	25.2	1790			8155	8244
2600 × 1800	37.2	2495	27.6	1820			8842	8954
2600 × 2000	37.2	2725	30	1850	9713	9866	9553	9691
2600 × 2200	37.2	2960	32.4	1880			10339	10510
2600 × 2400	37.2	3190	34.8	1910			11173	11401
2600 × 2600	37.2	3420	37.2	1940			11973	12226

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

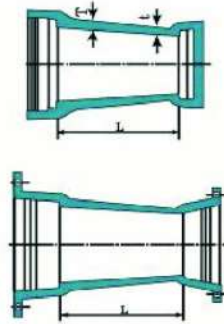
OPTION:

Electro static epoxy powder coating acc. to works standard





Socket Tapers  
according to iso 2531  
Ductile iron (nodular iron)  
MMR Pieces



socket taper

DN × dn	T	L	t	Mass(kg)	
				Double-Socket	
				T	K
100 × 80	7.2	90	7	9.2	11.9
150 × 80	7.8	190	7	14.9	18.6
150 × 100	7.8	150	7.2	15.3	19.1
200 × 100	8.4	250	7.2	23.5	26.0
200 × 150	8.4	150	7.8	24.0	27.0
250 × 150	9	250	7.8	32.5	36.0
250 × 200	9	150	8.4	33.0	35.0
300 × 150	9.6	350	7.8	43.0	50.0
300 × 200	9.6	250	8.4	43.5	49.0
300 × 250	9.6	150	9	41.5	47.5
350 × 200	10.2	360	8.4	59.0	62.5
350 × 250	10.2	260	9	51.0	61.0
350 × 300	10.2	160	9.6	52.5	61.5
400 × 250	10.8	360	9	72.0	76.5
400 × 300	10.8	260	9.6	67.5	77.0
400 × 350	10.8	160	10.2	62.0	73.0

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard

Socket Tapers  
according to iso 2531  
Ductile iron (nodular iron)  
MMR Pieces

DN × dn	T	t	L	Mass(kg)	
				Double-Socket	
				T	K
450 × 350	11.4	10.2	260	83	91
450 × 400	11.4	10.8	160	77.5	86.5
500 × 350	12	10.2	360	98.0	110
500 × 400	12	10.8	260	97	106
600 × 400	13.2	10.8	460	143	152
600 × 500	13.2	12	260	129	137
700 × 500	14.4	12	480	198	203
700 × 600	14.4	13.2	280	179	184
800 × 600	15.6	13.2	480	252	252
800 × 700	15.6	14.4	280	234	230
900 × 700	16.8	14.4	480	323	316
900 × 800	16.8	15.6	280	292	281
1000 × 800	18	15.6	480	397	386
1000 × 900	18	16.8	280	359	346
1100 × 1000	19.2	18	280	457	494
1200 × 1000	20.4	18	480	582	544
1400 × 1200	22.8	20.4	360	973	663
1500 × 1400	24	22.8	260		742
1600 × 1400	25.2	22.8	360	951	879
1800 × 1600	27.6	25.2	360	1235	1123
2000 × 1800	30	27.6	360	1566	1411
2200 × 2000	32.4	30	360	1943	1726
2400 × 2200	34.8	32.4	360	2374	2071
2600 × 2400	37.2	34.8	360	2877	2545

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

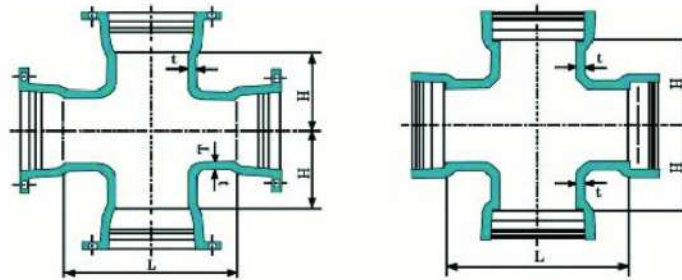
**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



**All Socket Cross**  
according to iso 2531  
Ductile iron (nodular iron)  
MMR Pieces



All socket cross

DN × dn	T	t	L	H	Mass(kg)	
					T	K
100 × 100	7.2	7.2	190	95	19.8	29.3
150 × 100	7.8	7.2	195	120	26.6	36.4
150 × 150	7.8	7.8	255	125	33.6	43.8
200 × 100	8.4	7.2	200	145	34.2	43.4
200 × 150	8.4	7.8	255	150	41.7	51.2
200 × 200	8.4	8.4	315	155	50.9	59.7
250 × 100	9	7.2	200	170	44.9	52.4
250 × 150	9	7.8	260	175	57.9	65.8
250 × 200	9.0	8.4	315	180	64.2	71.4
250 × 250	9.0	9.0	375	190	75.1	80.7
300 × 100	9.6	7.2	205	195	55.7	71.2
300 × 150	9.6	7.8	260	200	71.1	87
300 × 200	9.6	8.4	320	205	77.6	92.8
300 × 250	9.6	9.0	375	210	93.3	107
300 × 300	9.6	9.6	435	220	101	123
350 × 200	10.2	8.4	320	235	91.7	107
350 × 250	10.2	9.0	380	240	110	123
350 × 300	10.2	9.6	440	245	123	144
350 × 350	10.2	10.2	495	250	187	157
400 × 200	10.8	8.4	325	255	108	122
400 × 250	10.8	9.0	385	265	130	143
400 × 300	10.8	9.6	440	270	142	163
400 × 350	10.8	10.2	500	275	157	178
400 × 400	10.8	10.8	560	280	177	198
500 × 250	12.0	9.0	390	315	174	183
500 × 300	12.0	9.6	450	320	191	208
500 × 350	12.0	10.2	505	325	207	223
500 × 400	12.0	10.8	565	330	223	239
500 × 500	12.0	12.0	680	340	272	284

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



All Socket Cross  
according to iso 2531  
Ductile iron (nodular iron)  
MMR Pieces

DN × dn	T	t	L	H	Mass(kg)	
					T	K
600 × 300	13.2	9.6	455	370	249	256
600 × 350	13.2	10.2	510	375	267	274
600 × 400	13.2	10.8	570	380	278	284
600 × 500	13.2	12.0	685	390	330	332
600 × 600	13.2	13.2	800	400	399	392
700 × 350	14.4	10.2	520	425	413	410
700 × 400	14.4	10.8	575	430	447	441
700 × 500	14.4	12.0	690	440	520	510
700 × 600	14.4	13.2	810	450	607	589
700 × 700	14.4	14.4	925	460	712	691
800 × 400	15.6	10.8	580	480	548	527
800 × 500	15.6	12.0	700	490	682	608
800 × 600	15.6	13.2	815	500	725	692
800 × 700	15.6	14.4	930	510	831	796
800 × 800	15.6	15.6	1045	525	963	914
900 × 500	16.8	12.0	705	540	757	729
900 × 600	16.8	13.2	820	550	859	823
900 × 700	16.8	14.4	935	560	969	930
900 × 800	16.8	15.6	1050	575	1105	1052
900 × 900	16.8	16.8	1170	585	1262	1205
1000 × 600	18.0	13.2	825	600	1011	1003
1000 × 700	18.0	14.4	940	610	1130	1120
1000 × 800	18.0	15.6	960	625	1276	1251
1000 × 900	18.0	16.8	1175	635	1432	1404
1000 × 1000	18.0	18.0	1290	645	1612	1612
1100 × 700	19.2	14.4	950	660	1312	1257
1100 × 800	19.2	15.6	1065	675	1459	1390
1100 × 900	19.2	16.8	1180	685	1622	1549
1100 × 1000	19.2	18.0	1295	695	1803	1759
1100 × 1100	19.2	19.2	1410	705	2011	1922
1200 × 800	20.4	15.6	1070	725	1677	1652
1200 × 900	20.4	16.8	1185	735	1847	1818
1200 × 1000	20.4	18.0	1300	745	2034	2034
1200 × 1100	20.4	19.2	1420	755	2246	2701
1200 × 1200	20.4	20.4	1535	765	2497	2497
1400 × 900	22.8	16.8	1200	835	2261	2232
1400 × 1000	22.8	18.0	1315	845	2468	2468
1400 × 1100	22.8	19.2	1430	855	2683	2639
1400 × 1200	22.8	20.4	1545	865	2940	2940
1400 × 1400	22.8	22.8	1780	890	3446	3446

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

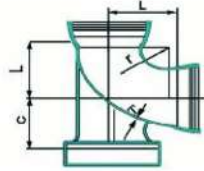
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



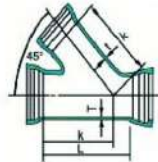
90 ° Double Socket Duckfoot Bend  
 according to iso 2531  
 Ductile iron (nodular iron)  
 MMR Pieces



90° Double-Socket duckfoot bend

DN × dn	T	L	r	c	d	Mass(kg)
80	7.0	100	80	110	180	11.3
100	7.2	120	950	125	200	14.8
150	7.8	170	145	160	250	28.5
200	8.4	220	195	190	300	44.5
250	9.0	270	245	225	350	68.5
300	9.6	320	290	225	400	100.0
350	10.2	370	340	290	450	133.0
400	10.8	420	390	320	500	180.0
450	11.4	470	435	355	550	230.0
500	12.0	520	485	385	600	294.0
600	13.2	620	580	450	700	442.0
700	14.4	720	655	515	800	618.0
800	15.6	820	745	580	900	832.0
900	16.8	920	855	645	1000	1113.0
1000	18.0	1020	945	710	1100	1435.0
1100	19.2	1120	1065	775	1200	1781.0
1200	20.4	1220	1155	840	1300	2153.0

All- Socket Tee with 45 ° Angle Branch  
 according to iso 2531  
 Ductile iron (nodular iron)  
 MMR Pieces



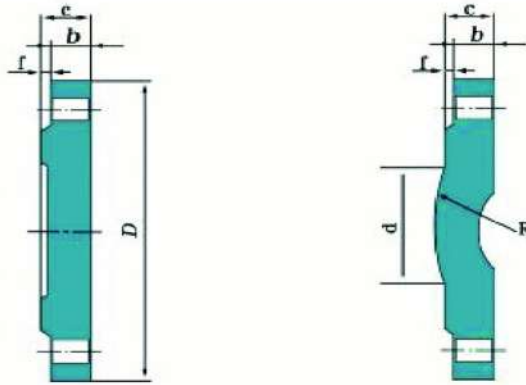
All-socket tee with 45° angle branch

DN × dn	T	t	L	K	Mass(kg)
80	8.1	8.1	500	375	19.0
100	8.4	8.4	540	405	25.5
150	9.1	9.1	640	480	45.5
200	9.8	9.8	735	560	71.5
250	10.5	10.5	830	640	106.0
300	11.2	11.2	930	715	151.0
350	11.9	11.9	880	790	169.0
400	12.6	12.6	970	870	209.0
450	13.3	13.3	1060	950	281.0
500	14.0	14.0	1140	1025	347.0
600	15.4	15.4	1310	1180	511.0

Casting Wall Thickness acc. to iso 2531  
 Cement mortar lining according to iso 4179  
 Zinc & Bitumen External Coating acc. at iso 8179  
 OPTION:  
 Electro static epoxy powder coating acc. to works standard



Blank Flanges  
 according to iso 2531  
 Ductile iron (nodular iron)  
 X Pieces l:-----



DN ≤ 250 Blank flanges DN ≥ 300

DN	Mass(kg)			
	PN10	PN16	PN25	PN40
80	3.5	3.5	3.5	4.2
100	4.3	4.3	4.8	5.8
150	7.2	7.2	8.3	12.3
200	11.0	10.8	13.3	23.4
250	16.9	16.6	21.0	34.5
300	24.0	23	30.0	51.0
350	32.5	37	46.5	
400	40.5	48.5	62.5	
450	50	63.5	79.0	
500	62	83	100	
600	94	130	154	
700	136	169		
800	189	235		
900	244	307		
1000	319	413		
1100	405	518		
1200	504	659		
1400	687	904		
1500	808	1092		
1600	955	1280		
1800	1240	1687		
2000	1630	2226		
2200	2214	3097		
2400	2781	3863		
2600	2865	4716		

Zinc & Bitumen External Coating acc. at iso 8179

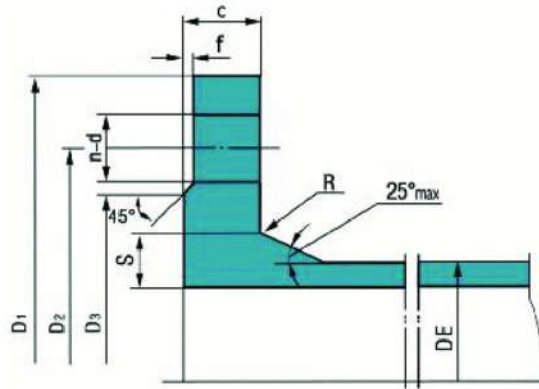
OPTION:

Electro static epoxy powder coating acc. to works standard





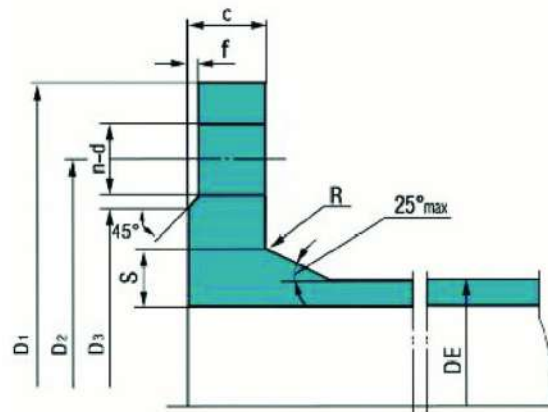
Dimensions of Flanges  
according to iso 2531 PN10  
Ductile iron (nodular iron)  
& accessories



PN10 Flange PN10

DN	D1	D2	D3	DE	c	f	S	R	Bolts			Mass (kg)
									d	size	n	
80	200	160	132	98	19	3	15	6	19	M16	8	2.9
100	220	180	156	118	19	3	15	6	19	M16	8	3.3
150	285	240	211	170	19	3	15	8	23	M20	8	5.1
200	340	295	266	222	20	3	16	8	23	M20	8	7.1
250	400	350	319	274	22	3	17.5	10	23	M20	12	9.9
300	455	400	370	326	24.5	4	19.5	10	23	M20	12	12.9
350	505	460	429	378	24.5	4	19.5	10	23	M20	16	14.7
400	565	515	480	429	24.5	4	19.5	10	28	M24	16	17.7
450	615	565	530	480	24.5	4	20.5	12	28	M24	20	20.2
500	670	620	582	532	26.5	4	21	12	28	M24	20	24.3
600	780	725	682	635	30	5	24	12	31	M27	20	33.7
700	895	840	794	738	32.5	5	23	16	31	M27	24	46.3
800	1015	950	901	842	35	5	24.5	16	34	M30	24	62.1
900	1115	1050	1001	945	37.5	5	26.5	16	34	M30	28	73
1000	1230	1160	1112	1048	40	5	28	16	37	M33	28	92.9
1100	1340	1270	1218	1152	42.5	5	30	20	37	M33	32	105
1200	1455	1380	1328	1255	45	5	31.5	20	40	M36	32	138
1400	1675	1590	1530	1462	46	5	32	20	43	M39	36	174.7
1500	1785	1700	1640	1668	47.5	5	33	20	43	M39	36	201.4
1600	1915	1820	1750	1668	49	5	34.5	20	49	M45	40	241.8
1800	2115	2020	1950	1875	52	5	36.5	20	49	M45	44	281.9
2000	2325	2230	2150	2082	55	5	38.5	20	49	M45	48	336.5
2200	2550	2440	2370	2288	59	6	41.5	20	56	M52	52	345.6
2400	2750	2650	2570	2495	62	6	43.5	20	56	M52	56	398.8
2600	2960	2850	2780	2702	65	6	45.5	20	56	M52	60	436.9

Dimensions of Flanges  
according to iso 2531- PN16  
Ductile iron (nodular iron)  
& accessories



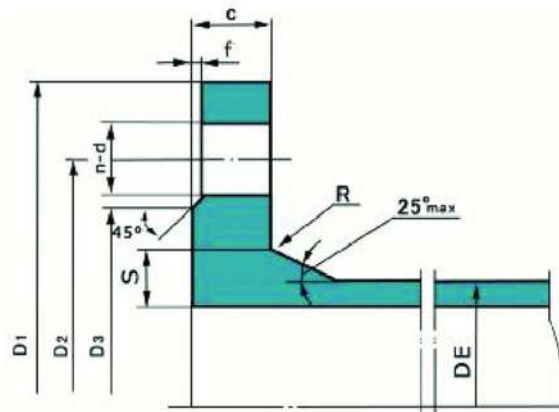
PN16 Flange

DN	D1	D2	D3	DE	c	f	S	R	Bolts			Mass (kg)
									d	size	n	
80	200	160	132	98	19	3	15	6	19	M16	8	2.9
100	220	180	156	118	19	3	15	6	19	M16	8	3.3
150	285	240	211	170	19	3	15	8	23	M20	8	5.1
200	340	295	266	222	20	3	16	8	23	M20	12	6.9
250	400	355	319	274	22	3	17.5	10	28	M24	12	9.6
300	455	410	370	326	24.5	4	19.5	10	28	M24	12	12.6
350	520	470	429	378	26.5	4	21	10	28	M24	16	17.4
400	580	525	480	429	28	4	22.5	10	31	M27	16	22.2
450	640	585	548	480	30	4	24	12	31	M27	20	28.1
500	715	650	609	532	31.5	4	25	12	34	M30	20	37.7
600	840	770	720	635	36	5	29	12	37	M33	20	57.4
700	910	840	794	738	39.5	5	27.5	16	37	M33	24	58
800	1025	950	901	842	43	5	30	16	40	M36	24	77
900	1125	1050	1001	945	46.5	5	32.5	16	40	M36	28	92
1000	1255	1170	1112	1048	50	5	35	16	43	M39	28	127.4
1100	1355	1270	1218	1152	53.5	5	37.5	20	43	M39	32	141
1200	1485	1390	1328	1255	57	5	40	20	49	M45	32	192.9
1400	1685	1590	1530	1462	60	5	42	20	49	M45	36	231.5
1500	1820	1710	1640	1565	62.5	5	44	20	56	M52	36	280.3
1600	1930	1820	1750	1668	65	5	45.5	20	56	M52	40	331.1
1800	2130	2020	1950	1875	70	5	49	20	56	M52	44	393.7
2000	2345	2230	2150	2082	75	5	52.5	20	62	M56	48	474.5
2200	2555	2440	2370	2288	81	6	56.5	20	62	M56	52	512.3
2400	2765	2650	2570	2495	86	6	60	20	62	M56	56	601
2600	2965	2850	2780	2702	91	6	63.5	20	62	M56	60	672





Dimensions of Flanges  
according to iso 2531- PN25  
Ductile iron (nodular iron)  
& accessories

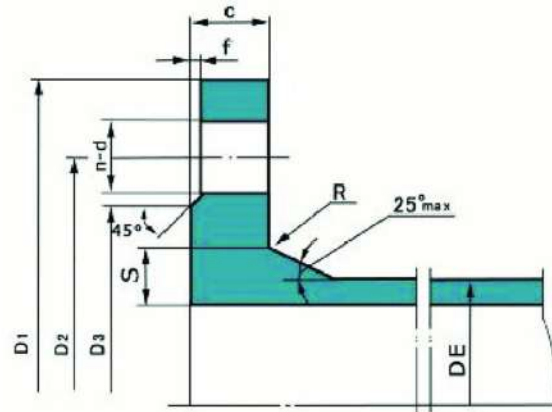


PN25 Flange

DN	D1	D2	D3	DE	c	f	S	R	Bolts			Mass (kg)
									d	size	n	
80	200	160	132	98	19	3	15	6	19	M16	8	2.9
100	235	190	156	118	19	3	15	6	23	M20	8	3.8
150	300	250	211	170	20	3	16	8	28	M24	8	6.1
200	360	310	274	222	22	3	17.5	8	28	M24	12	8.9
250	425	370	330	274	24.5	3	19.5	10	31	M27	12	13.2
300	485	430	389	326	27.5	4	22	10	31	M27	16	18.0
350	555	490	448	378	30	4	24	10	34	M30	16	25.3
400	620	550	503	429	32	4	25.5	10	37	M33	16	33.2
450	670	600	548	480	34.5	4	27.5	12	37	M33	20	39
500	730	660	609	532	36.5	4	29	12	37	M33	20	48.3
600	845	770	720	635	42	5	33.5	12	40	M36	20	69.2
700	960	875	820	738	46.5	5	32.5	16	43	M39	24	89.0
800	1085	990	928	842	51	5	35.5	16	49	M45	24	122
900	1185	1090	1028	945	55.5	5	39	16	49	M45	28	146
1000	1320	1210	1140	1048	60	5	42	16	56	M52	28	194
1100	1420	1310	1240	1152	64.5	5	45	20	56	M52	32	224
1200	1530	1420	1350	1255	69	5	48.5	20	56	M52	32	271
1400	1755	1640	1560	1462	74	5	52	20	62	M56	36	368
1600	1975	1860	1780	1668	81	5	56.5	20	62	M56	40	486
1800	2195	2070	1985	1875	88	5	61.5	20	70	M64	44	601.9
2000	2425	2300	2210	2082	95	5	66.5	20	70	M64	48	784.9



Dimensions of Flanges  
according to iso 2531- PN 40  
Ductile iron (nodular iron)  
& accessories



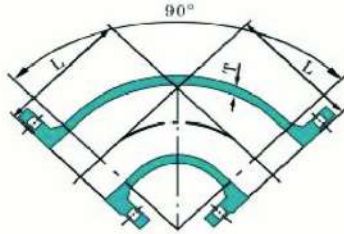
PN40 Flange

DN	D <sub>1</sub>	D <sub>3</sub>	c	b	f	s	Mass (kg)
40	150	84	19	16	3	15	1.7
50	165	99	19	16	3	15	2.1
(60)	175	108	19	16	3	15	2.1
65	185	118	19	16	3	15	2.4
80	200	132	19	16	3	15	2.9
100	235	156	19	16	3	15	3.8
125	270	184	23.5	20.5	3	16.5	5.9
150	300	211	26	23	3	18	8
200	375	284	30	27	3	21	14
250	450	345	34.5	31.5	3	24	23.2
300	515	409	39.5	35.5	4	27.5	33.5
350	580	465	44	40	4	31	46.7
400	660	535	48	44	4	33.5	66.9
500	755	615	52	48	4	36.5	82.3
600	890	735	58	53	5	40.5	124.1

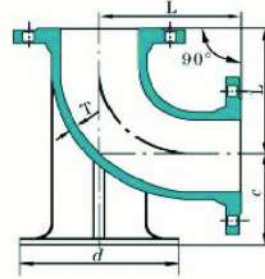
Nominal size DN	D <sub>2</sub>	Holes		Bolts
		Number	Diameter L <sub>2</sub>	Nominal diameter
40	110	4	19	M16
50	125	4	19	M16
(60)	135	8	19	M16
65	145	8	19	M16
80	160	8	19	M16
100	190	8	23	M20
125	220	8	28	M24
150	250	8	28	M24
200	320	12	31	M27
250	385	12	34	M30
300	450	16	34	M30
350	510	16	37	M33
400	585	16	40	M36
500	670	20	43	M39
600	795	20	49	M45



90 ° Double- Flanged Bend  
 according to iso 2531  
 Ductile iron (nodular iron)  
 N Pieces



90° Double-flanged bend



90° Double-flanged duckfoot bend

DN	T	90° Bends				90° Duckfoot bends					
		L	Mass(kg)			L	H	d	Mass(kg)		
			PN10	PN16	PN25				PN10	PN16	PN25
80	7	165	9.6	9.6	9.6	165	110	180	14.8	14.8	14.8
100	7.2	180	12	12	13	180	125	200	18.2	18.2	19.2
150	7.8	220	20.5	20.5	22.5	220	160	250	31.5	31.5	33.5
200	8.4	260	31.5	31	35	260	190	300	49	48.5	52.5
250	9	350	50.5	49.5	57	350	225	350	78.5	77.5	85
300	9.6	400	70	69.5	80	400	255	400	111	111	121
350	10.2	450	90.5	96	112	450	290	450	147	153	168
400	10.8	500	117	126	148	500	320	500	192	201	223
450	11.4	550	147	163	184	550	350	550	245	261	283
500	12	600	184	211	232	600	385	600	309	336	357
600	13.2	700	277	324	348	700	450	700	475	522	546
700	14.4	800	394	418	481.5	800	515	800	684	708	
800	15.6	900	543	573	664.5	900	580	900	944	974	
900	16.8	1000	708	746	858	1000	645	1000	1252	1290	
1000	18	1100	919	988	1135	1100	710	1100	1629	1698	
1100	19.2	1200	1164	1234	-	1200	775	1200	2080	2150	
1200	20.4	1300	1452	1562	1746	1300	840	1300	2599	2709	
1400	22.8	1350	1948	2062							
1500	24.0	1400	2273	2449							
1600	25.2	1450	2663	2841							
1800	27.6	1500	3348	3572							

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

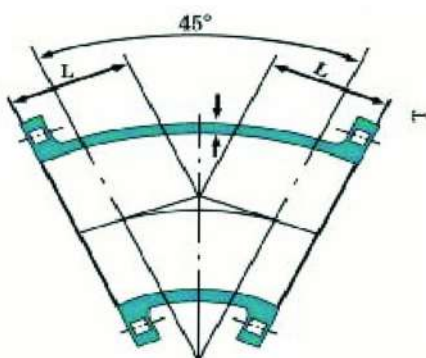
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



45 ° Double- Flanged Bends  
 according to iso 2531  
 Ductile iron (nodular iron)  
 FFK 45 ° Pieces



45° Double-flanged bend

DN	T	L	Mass(kg)			
			PN10	PN16	PN25	PN40
80	7	130	9.3	9.3	9.3	10.0
100	7.2	140	11.4	11.4	12.5	13.1
150	7.8	160	18.9	18.9	21.0	23.0
200	8.4	180	28	27.5	31.5	37.5
250	9	350	55.5	54.5	62	79.5
300	9.6	400	77.5	76.5	87.5	113.0
350	10.2	298	77	82.5	98	
400	10.8	324	97.5	107	129	-
450	11.4	349	120	135	157	-
500	12	375	148	175	196	-
600	13.2	426	216	263	287	-
700	14.4	478	304	328	392.5	-
800	15.6	529	414	444	535.5	-
900	16.8	581	531	569	682	-
1000	18	632	684	753	899	-
1100	19.2	695	857	927	-	-
1200	20.4	735	1062	1172	1356	-
1400	22.8	775	1431	1544	-	-
1500	24	810	1677	1853	-	-
1600	25.2	845	1972	2151	-	-
1800	27.6	910	2539	2763	-	-
2000	30	980	3243	3519	-	-
2200	32.4	880	3446	3804	-	-
2400	34.8	945	4277	4719	-	-
2600	37.2	1005	5175	5695	-	-

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

**Zinc & Bitumen External Coating acc. at iso 8179**

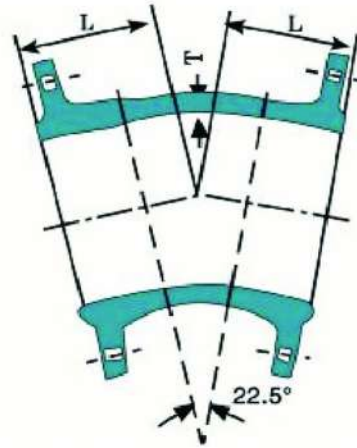
**OPTION:**

**Electro static epoxy powder coating acc. to works standard**





22 1/2° Double- Flanged Bends  
according to iso 2531  
Ductile iron (nodular iron)  
FFK 22 1/2° Pieces



22.5° Double-flanged bend

DN	T(mm)	R(mm)	L(mm)	S(mm)	Mass(kg)			
					A			
					PN10	PN16	PN25	PN 40
80	7.0	395	130	150	9.4	9.4	9.4	9.4
100	7.2	410	140	150	11.5	11.5	12.5	12.5
125	7.5	450	150	150	14.7	14.7	15.9	15.9
150	7.8	480	160	200	19.1	19.1	21.0	21.0
200	8.4	555	180	200	28.5	28.0	32.0	33.5
250	9.0	1370	350	200	56.5	56.0	63.5	70.0
300	9.6	1590	400	200	79.0	78.5	89.0	99.0
350	10.2	1050	298	200	78.5	84.0	99.5	-
400	10.8	1145	324	200	99.5	109.0	131.0	-
450	11.4	1240	349	200	122.0	138.0	160.0	-
500	12.0	1340	375	200	151.0	178.0	199.0	-
600	13.2	1535	426	200	221.0	268.0	292.0	-
700	14.4	1825	478	200	311.0	334.0	334.0	-
800	15.6	2080	529	200	423.0	453.0	445.0	-
900	16.8	2295	581	250	543.0	581.0	554.0	-
1000	18.0	2500	632	250	700.0	769.0	758.0	-
1100	19.2	2705	683	250	877.0	947.0	-	-
1200	20.4	2915	735	250	1088.0	1198.0	-	-
1400	22.8	3300	835	300	1551.0	1664.0	-	-
1500	24.0	3500	885	300	1838.0	2014.0	-	-
1600	25.2	3700	940	300	2190.0	2369.0	-	-
1800	27.6	1400	480	380	1640.0	1864.0	-	-
2000	30.0	1600	520	380	2081	2357.0	-	-
2100	31.2	1700	540	400	2371.0	2700.0	-	-
2200	32.4	1800	560	400	2484.8	2818.8	-	-
2400	34.8	2000	600	400	3032.8	3427.8	-	-
2600	37.2	2200	640	400	3645.8	4116.4	-	-

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

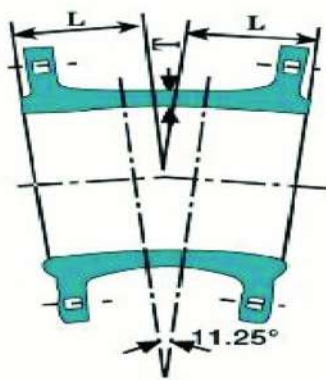
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



11° Double- Flanged Bends  
 according to iso 2531  
 Ductile iron (nodular iron)  
 FFK 11° Pieces



11.25° Double-flanged bend

DN	T(mm)	R(mm)	L(mm)	S(mm)	Mass(kg)			
					A			
					PN10	PN16	PN25	PN40
80	7.0	800	130	150	9.5	9.5	9.5	9.5
100	7.2	830	140	150	11.5	11.5	12.5	12.5
125	7.5	910	150	150	14.8	14.8	16.0	16.2
150	7.8	975	160	200	19.1	19.1	21.0	21.0
200	8.4	1115	180	200	28.5	28.0	32.0	33.0
250	9.0	2770	350	200	56.5	56.0	63.5	69.0
300	9.6	3220	400	200	79.5	79.0	89.5	97.0
350	10.2	2120	298	200	79.0	84.0	100.0	-
400	10.8	2315	324	200	100.0	109.0	131.0	-
450	11.4	2505	349	200	123.0	139.0	160.0	-
500	12.0	2710	375	200	152.0	179.0	200.0	-
600	13.2	3095	426	200	222.0	269.0	294.0	-
700	14.4	3685	478	200	313.0	336.0	392.5	-
800	15.6	4200	529	200	426.0	455.0	535.5	-
900	16.8	4630	581	250	546.0	584.0	682.0	-
1000	18.0	5045	632	250	704.0	773.0	899.0	-
1100	19.2	5460	683	250	882.0	952.0	-	-
1200	20.4	5890	735	250	1094.0	1204.0	1356.0	-
1400	22.8	6700	835	300	1560.0	1674.0	-	-
1500	24.0	7150	885	300	1849.0	2025.0	-	-
1600	25.2	7600	940	300	2203.0	2382.0	-	-
1800	27.6	1600	345	380	1342.0	1566.0	-	-
2000	30.0	1800	375	380	1694.0	1970.0	-	-
2100	31.2	2000	390	400	1939.0	2267.0	-	-
2200	32.4	2200	405	400	1995.8	2329.8	-	-
2400	34.8	2400	435	400	2420.2	2824.8	-	-
2600	37.2		465	400	2899.8	3369.4	-	-

**Casting Wall Thickness acc. to iso 2531**


**Cement mortar lining according to iso 4179**

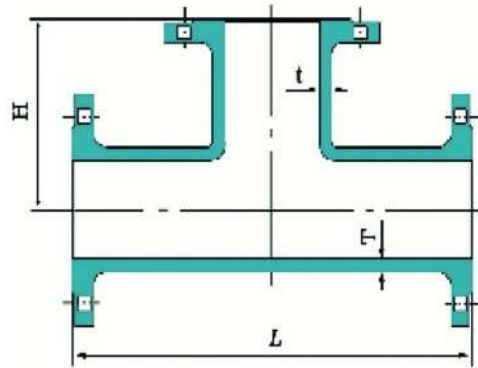
**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



All - Flanged Tees :  
 according to iso 2531  
 Ductile iron (nodular iron)  
 T pieces 



All-flanged tee

DN × dn	T	L	t	H	Mass(kg)			
					PN10	PN16	PN25	PN40
80 × 80	7.0	330	7.0	165	15.8	15.8	15.8	15.8
100 × 80	7.2	360	7.0	175	18.6	18.6	19.6	19.6
100 × 100	7.2	360	7.2	180	19.5	19.5	21	21
150 × 80	7.8	440	7.0	205	29	29	31	32
150 × 100	7.8	440	7.2	210	30	30	32.5	33.5
150 × 150	7.8	440	7.8	220	33.5	33.5	36.5	38.0
200 × 80	8.4	520	7.0	235	43	42.5	46.5	51.0
200 × 100	8.4	520	7.2	240	44	43.5	48	52.0
200 × 150	8.4	520	7.8	250	47	47	52	56.0
200 × 200	8.4	520	8.4	260	51	50.5	56.5	61.0
250 × 80	9.0	700	7	270	49.7	49.3	56.7	80.0
250 × 100	9.0	700	7.2	275	68.5	68	76	81.0
250 × 150	9.0	700	7.8	325	73.5	73	81	87.0
250 × 200	9.0	700	8.4	325	77.5	76.5	86	99.0
250 × 250	9.0	700	9.0	350	84	83	93.5	118.0
300 × 100	9.6	800	7.2	300	94.5	93.5	105	108.0
300 × 150	9.6	800	7.8	350	99	98.5	110	118.0
300 × 200	9.6	800	8.4	350	103	102	115	129.0
300 × 250	9.6	800	9.0	375	109	108	121	147.0
300 × 300	9.6	800	9.6	400	117	116	132	165.0
350 × 100	10.2	850	7.2	325	117	123	139	
350 × 150	10.2	850	7.8	325	120	126	143	
350 × 200	10.2	850	8.4	325	124	129	147	
350 × 250	10.2	850	9.0	325	128	134	154	
350 × 300	10.2	850	9.6	425	140	145	166	
350 × 350	10.2	850	10.2	425	145	153	177	
400 × 100	10.8	900	7.2	350	146	155	178	
400 × 150	10.8	900	7.8	350	149	158	181	
400 × 200	10.8	900	8.4	350	152	161	185	
400 × 250	10.8	900	9.0	350	151	161	198	
400 × 300	10.8	900	9.6	450	168	177	204	
400 × 350	10.8	900	10.2	450	170	183	215	
400 × 400	10.8	900	10.8	450	179	193	226	

Casting Wall Thickness acc. to iso 2531


Cement mortar lining according to iso 4179

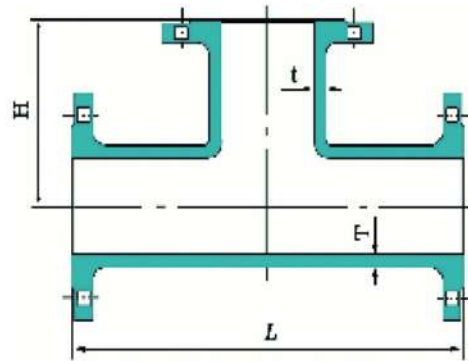
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



All - Flanged Tees :  
 according to iso 2531  
 Ductile iron (nodular iron)  
 T pieces 



All-flanged tee

DN × dn	T	L	t	H	Mass(kg)		
					PN10	PN16	PN25
450 × 100	11.4	950	7.2	375	177	193	215
450 × 150	11.4	950	7.8	375	180	196	219
450 × 200	11.4	950	8.4	375	183	199	222
450 × 250	11.4	950	9.0	375	194	210	237
450 × 300	11.4	950	9.6	475	199	215	242
450 × 350	11.4	950	10.2	475	207	227	260
400 × 400	11.4	950	10.8	475	210	230	263
450 × 450	11.4	950	11.4	475	216	240	272
500 × 100	12.0	1000	7.2	400	215	242	264
500 × 150	12.0	1000	7.8	400	218	245	267
500 × 200	12.0	1000	8.4	400	221	248	271
500 × 250	12.0	1000	9.0	400	218	258	280
500 × 300	12.0	1000	9.6	500	237	264	291
500 × 350	12.0	1000	10.2	500	239	268	298
500 × 400	12.0	1000	10.8	500	248	279	311
500 × 450	12.0	1000	11.4	500	249	298	327
500 × 500	12.0	1000	12.0	500	261	301	333
600 × 100	13.2	1100	7.2	450	301	340	352
600 × 150	13.2	1100	7.8	450	309	356	381
600 × 200	13.2	1100	8.4	450	312	359	388
600 × 250	13.2	1100	9.0	450	307	360	392
600 × 300	13.2	1100	9.6	550	328	375	404
600 × 350	13.2	1100	10.2	550	329	380	413
600 × 400	13.2	1100	10.8	550	338	390	424
600 × 450	13.2	1100	11.4	550	338	417	448
600 × 500	13.2	1100	12.0	550	349	420	464
600 × 600	13.2	1100	13.2	550	367	438	473
700 × 100	14.4	540	7.2	510	235	295	366
700 × 150	14.4	595	7.8	515	255	296	659
700 × 200	14.4	650	8.4	525	281	304	366.9
700 × 250	14.4	705	9.0	530	289	320	719
700 × 300	14.4	760	9.6	540	319	342	444
700 × 400	14.4	870	10.8	555	358	386	453.5
700 × 500	14.4	980	12.0	570	442	481	796
700 × 600	14.4	1200	13.2	585	476	523	827
700 × 700	14.4	1200	14.4	600	499	534	609

Casting Wall Thickness acc. to iso 2531


Cement mortar lining according to iso 4179

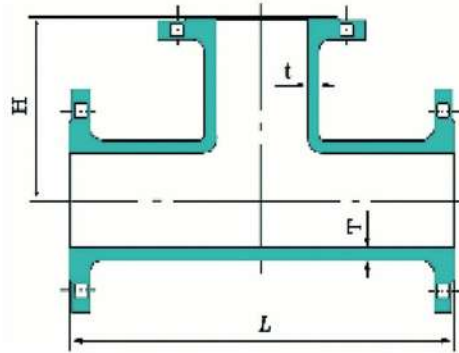
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



All - Flanged Tees :  
 according to iso 2531  
 Ductile iron (nodular iron)  
 T pieces 



All-flanged tee

DN × dn	T	L	t	H	Mass(kg)		
					PN10	PN16	PN25
800 × 100	15.6	580	7.2	570	345	383	528
800 × 150	15.6	585	7.8	575	349	387	476
800 × 200	15.6	690	8.4	585	368	397	487.5
800 × 300	15.6	800	9.6	600	413	443	620
800 × 400	15.6	910	10.8	615	459	493	588
800 × 500	15.6	1020	12.0	630	561	599	795
800 × 600	15.6	1350	13.2	645	633	687	776.5
800 × 700	15.6	1350	14.4	660	663	711	1054
800 × 800	15.6	1350	15.6	675	685	730	836.5
900 × 100	16.8	620	7.2	630	428	476	730
900 × 150	16.8	675	7.8	635	432	480	603
900 × 200	16.8	730	8.4	645	454	492	650
900 × 300	16.8	840	9.6	660	523	569	690
900 × 400	16.8	950	10.8	675	561	604	717.5
900 × 500	16.8	1060	12.0	690	726	784	960
900 × 600	16.8	1500	13.2	705	810	872	981
900 × 700	16.8	1500	14.4	720	843	901	995
900 × 800	16.8	1500	15.6	735	860	913	1021
900 × 900	16.8	1500	16.8	750	887	944	1071
1000 × 100	18.0	660	7.2	690	524	572	621
1000 × 150	18.0	715	7.8	695	534	582	744
1000 × 200	18.0	770	8.4	705	570	638	782
1000 × 300	18.0	880	9.6	720	651	739	1516
1000 × 400	18.0	990	10.8	735	694	767	913
1000 × 500	18.0	1100	12	750	955	1007	1551
1000 × 600	18.0	1650	13.2	765	1036	1129	1269.5
1000 × 700	18.0	1650	14.4	780	1067	1152	1601
1000 × 800	18.0	1650	15.6	795	1085	1168	1621
1000 × 900	18.0	1650	16.8	810	1095	1219	1616
1000 × 1000	18.0	1650	18.0	825	1150	1253	1416.5

Casting Wall Thickness acc. to iso 2531


Cement mortar lining according to iso 4179

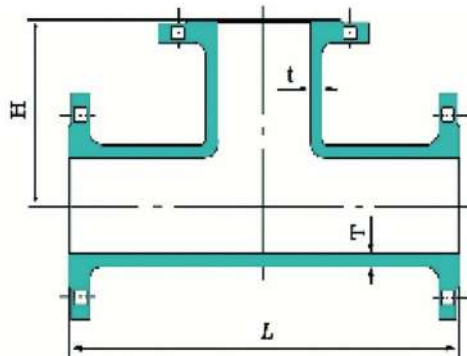
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



All - Flanged Tees :  
 according to iso 2531  
 Ductile iron (nodular iron)  
 T pieces 



All-flanged tee

DN × dn	T	L	t	H	Mass(kg)	
					PN10	PN16
1100 × 400	19.2	1030	10.8	795	839	913
1100 × 600	19.2	1250	13.2	825	990	1083
1100 × 800	19.2	1470	15.6	855	1160	1245
1100 × 1000	19.2	1690	18.0	885	1345	1450
1100 × 1100	19.2	1800	19.2	900	1450	1555
1200 × 100	20.4	660	7.0	810	996	1082
1200 × 150	20.4	715	7.8	815	998	1084
1200 × 200	20.4	775	8.4	825	1000	1086
1200 × 300	20.4	890	9.6	840	1004	1160
1200 × 400	20.4	1070	10.8	855	1008	1122
1200 × 500	20.4	1125	12.0	870	1095	1250
1200 × 600	20.4	1290	13.2	885	1178	1312
1200 × 700	20.4	1355	14.4	900	1279	1423
1200 × 800	20.4	1510	15.6	915	1367	1492
1200 × 900	20.4	1585	16.8	930	1427	1662
1200 × 1000	20.4	1730	18.0	945	1570	1714
1200 × 1200	20.4	1950	20.4	975	1806	1970
1400 × 100	22.8	970	7.2	905	1227	1363
1400 × 200	22.8	1085	8.4	920	1231	1367
1400 × 400	22.8	1315	10.8	950	1514	1656
1400 × 600	22.8	1320	13.2	980	1527	1665
1400 × 800	22.8	1540	15.6	1010	1755	1884
1400 × 1000	22.8	1760	18.0	1040	1995	2143
1400 × 1200	22.8	2245	20.4	1070	2262	2431
1400 × 1400	22.8	2200	22.8	1100	2545	2715
1600 × 100	25.2	1020	7.2	1015	1874	2078
1600 × 200	25.2	1135	8.4	1030	7880	2084
1600 × 400	25.2	1370	10.8	1060	2000	2210
1600 × 600	25.2	1380	13.2	1090	2019	2221
1600 × 800	25.2	1600	15.6	1120	2294	2487
1600 × 1000	25.2	1820	18.0	1150	2578	2791
1600 × 1200	25.2	2040	20.4	1180	2888	3122
1600 × 1400	25.2	2260	22.8	1210	3208	3444
1600 × 1600	25.2	2480	25.2	1240	3586	3854

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179


Zinc & Bitumen External Coating acc. at iso 8179

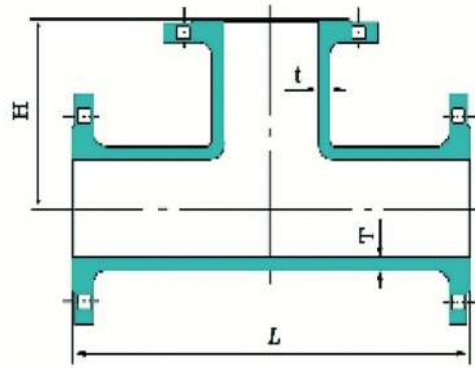
OPTION:

Electro static epoxy powder coating acc. to works standard





All - Flanged Tees :  
 according to iso 2531  
 Ductile iron (nodular iron)  
 T pieces 



All-flanged tee

DN × dn	T	L	t	H	Mass(kg)	
					PN10	PN16
1800 × 100	27.6	1075	7.2	1125	2348	2600
1800 × 200	27.6	1190	8.4	1140	2350	2602
1800 × 400	27.6	1420	10.8	1170	2574	2835
1800 × 600	27.6	1440	13.2	1200	2521	2768
1800 × 800	27.6	1660	15.6	1230	2848	3087
1800 × 1000	27.6	1880	18.0	1260	3184	3442
1800 × 1200	27.6	2100	20.4	1290	3543	3822
1800 × 1400	27.6	2320	22.8	1320	3910	4190
1800 × 1600	27.6	2540	25.2	1350	4328	4641
1800 × 1800	27.6	2760	27.6	1380	4750	5086
2000 × 200	30	1235	8.4	1250	2940	3246
2000 × 400	30	1470	10.8	1280	3002	3314
2000 × 600	30	1500	13.2	1310	3119	3419
2000 × 800	30	1720	15.6	1340	3505	3796
2000 × 1000	30	1940	18.0	1370	3898	4209
2000 × 1200	30	2160	20.4	1400	4314	4644
2000 × 1400	30	2380	22.8	1430	4733	5066
2000 × 1600	30	2600	25.2	1460	5202	5567
2000 × 1800	30	2820	27.6	1490	5668	6055
2000 × 2000	30	3040	30	1520	6185	6599
2200 × 600	32.4	1560	13.2	1420	3975	4334
2200 × 800	32.4	1780	15.6	1450	4298	4654
2200 × 1000	32.4	2000	18	1480	4753	5128
2200 × 1200	32.4	2220	20.4	1510	5026	5413
2200 × 1400	32.4	2440	22.8	1540	5709	6106
2200 × 1600	32.4	2660	25.2	1570	6234	6664
2200 × 1800	32.4	2880	27.6	1600	6474	6934
2200 × 2000	32.4	3100	30	1630	7316	7795
2200 × 2200	32.4	3320	32.4	1660	7954	8464
2400 × 600	34.8	1620	13.2	1530	4418	4849
2400 × 800	34.8	1840	15.6	1560	5200	5671
2400 × 1000	34.8	2060	18	1590	5721	6211
2400 × 1200	34.8	2280	20.4	1620	5963	6432
2400 × 1400	34.8	2500	22.8	1650	6804	7317
2400 × 1600	34.8	2720	25.2	1680	7392	7937
2400 × 1800	34.8	2940	27.6	1710	7614	8145
2400 × 2000	34.8	3160	30	1740	8591	9185
2400 × 2200	34.8	3380	32.4	1770	9275	9901
2400 × 2400	34.8	3600	34.8	1800	10031	10715

Casting Wall Thickness acc. to iso 2531


Cement mortar lining according to iso 4179

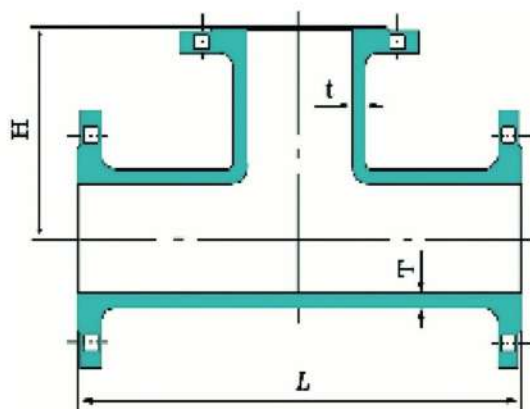
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

Electro static epoxy powder coating acc. to works standard



All - Flanged Tees :  
 according to iso 2531  
 Ductile iron (nodular iron)  
 T pieces 



All-flanged tee

DN × dn	T	L	t	H	Mass(kg)	
					PN10	PN16
2600 × 600	37.2	1680	13.2	1640	5214	5711
2600 × 800	37.2	1900	15.6	1670	6076	6596
2600 × 1000	37.2	2120	18	1770	6673	7213
2600 × 1200	37.2	2340	20.4	1730	7289	7850
2600 × 1400	37.2	2560	22.8	1760	7585	8123
2600 × 1600	37.2	2780	25.2	1790	8564	9159
2600 × 1800	37.2	3000	27.6	1820	9213	9831
2600 × 2000	37.2	3220	30	1850	9505	10128
2600 × 2200	37.2	3440	32.4	1880	10647	11323
2600 × 2400	37.2	3660	34.8	1910	11455	12188
2600 × 2600	37.2	3880	37.2	1940	12230	12988

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

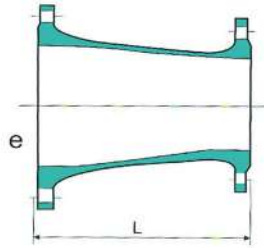
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

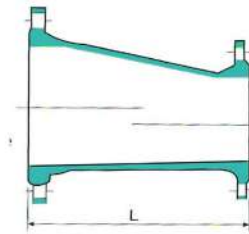
Electro static epoxy powder coating acc. to works standard



Double- Flange Reducer  
according to iso 2531  
Ductile iron (nodular iron)  
FFR Pieces



Concentric



Eccentric

DN × dn	T	t	L	Mass(kg)			
				PN10	PN16	PN25	PN40
100 × 80	7.2	7.0	200	9.4	9.4	9.9	9.9
150 × 80	7.8	7.0	400	16.4	16.4	17.4	16.6
150 × 100	7.8	7.2	300	15.3	15.3	16.8	17.2
200 × 100	8.4	7.2	600	27.5	27.5	30.0	30.0
200 × 150	8.4	7.8	300	22.5	22.0	25.0	28.0
250 × 150	9.0	7.8	600	39.0	39.0	43.5	47.0
250 × 200	9.0	8.4	300	31.0	30.5	36.0	53.0
300 × 100	9.6	7.2	700	50.5	50.5	57.0	61.0
300 × 150	9.6	7.8	650	48.5	48.5	55.0	64.0
300 × 200	9.6	8.4	600	52.0	51.5	59.0	67.0
300 × 250	9.6	9.0	300	41.0	40.0	49.0	81.0
350 × 200	10.2	8.4	650	61.5	64.0	74.0	
350 × 250	10.2	9.0	600	65.5	67.5	79.0	
350 × 300	10.2	9.6	300	50.0	52.5	66.0	
400 × 200	10.8	8.4	700	73.5	77.5	90.5	
400 × 250	10.8	9.0	650	77.0	81.5	96.0	
400 × 300	10.8	9.6	600	80.5	85.0	101	
400 × 350	10.8	10.2	300	60.0	67	86	
450 × 250	11.4	9.0	700	89.5	97	112	
450 × 300	11.4	9.6	650	93.5	101	117	
450 × 350	11.4	10.2	600	95.5	106	125	
450 × 400	11.4	10.8	300	70.5	83	105	
500 × 300	12.0	9.6	700	109	122	138	
500 × 350	12.0	10.2	650	111	127	145	
500 × 400	12.0	10.8	600	113	131	153	
500 × 450	12.0	11.7	300	83	104	126	
600 × 350	13.2	10.2	750	147	174	193	
600 × 400	13.2	10.8	700	150	178	201	

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

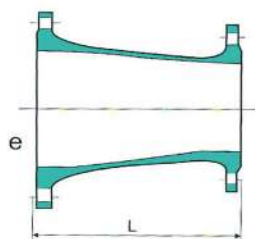
OPTION:

Electro static epoxy powder coating acc. to works standard

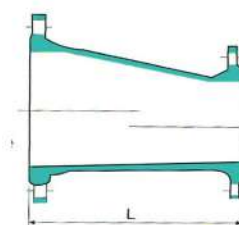




Double- Flange Reducer  
according to iso 2531  
Ductile iron (nodular iron)  
FFR Pieces



Concentric



Eccentric

DN × dn	T	t	L	Mass(kg)		
				PN10	PN16	PN25
600 × 450	13.2	11.4	650	151	183	206
600 × 500	13.2	12.0	600	154	191	214
700 × 400	14.4	10.8	800	196	212	-
700 × 450	14.4	11.4	750	197	217	-
700 × 500	14.4	12.0	700	200	225	358
700 × 600	14.4	13.2	600	204	239	285.4
800 × 450	15.6	11.4	900	263	286	-
800 × 500	15.6	12.0	800	256	284	-
800 × 600	15.6	13.2	700	260	298	477
800 × 700	15.6	14.4	600	263	290	368.3
900 × 500	16.8	12.0	1000	338	370	-
900 × 600	16.8	13.2	800	318	360	-
900 × 700	16.8	14.4	700	321	352	592
900 × 800	16.8	15.6	600	325	358	461.2
1000 × 600	18	13.2	1000	422	480	-
1000 × 700	18	14.4	800	396	442	-
1000 × 800	18	15.6	700	399	448	758
1000 × 900	18	16.8	600	393	446	576.2
1100 × 700	19.2	14.4	1000	515	562	-
1100 × 800	19.2	15.6	800	483	532	-
1100 × 900	19.2	16.8	700	476	530	-
1100 × 1000	19.2	18.0	600	474	543	-
1200 × 700	20.4	14.4	1345	711	777	-
1200 × 800	20.4	15.6	1160	638	758	-
1200 × 900	20.4	16.8	975	652	726	-
1200 × 1000	20.4	18.0	790	614	703	777
1200 × 1100	20.4	19.2	605	566	655	-

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

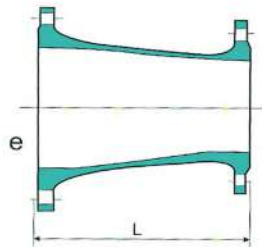
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

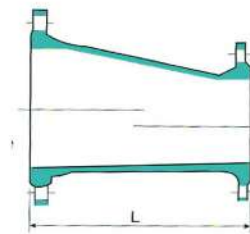
Electro static epoxy powder coating acc. to works standard



Double- Flange Reducer  
according to iso 2531  
Ductile iron (nodular iron)  
FFR Pieces



Concentric



Eccentric

DN × dn	T	t	L	Mass(kg)	
				PN10	PN16
1400 × 800	22.8	15.6	1590	1034	1105
1400 × 900	22.8	16.8	1405	998	1074
1400 × 1000	22.8	18.0	1220	961	1052
1400 × 1100	22.8	19.2	1035	914	1005
1400 × 1200	22.8	20.4	850	859	971
1500 × 900	24.0	16.8	1620	1211	1317
1500 × 1000	24.0	18.0	1435	1174	1297
1500 × 1100	24.0	19.2	1250	1127	1250
1500 × 1200	24.0	20.4	1065	1074	1216
1500 × 1400	24.0	22.8	695	914	1058
1600 × 1000	25.2	18.0	1650	1424	1547
1600 × 1100	25.2	19.2	1465	1377	1502
1600 × 1200	25.2	20.4	1280	1324	1468
1600 × 1400	25.2	22.8	910	1165	1311
1600 × 1500	25.2	24.0	725	1073	1250
1800 × 1100	27.6	19.2	1895	1910	2057
1800 × 1200	27.6	20.4	1710	1858	2024
1800 × 1400	27.6	22.8	1340	1701	1870
1800 × 1500	27.6	24.0	1155	1610	1810
1800 × 1600	27.6	25.2	970	1517	1718
2000 × 1200	30	20.4	2140	2512	2705
2000 × 1400	30	22.8	1770	2358	2553
2000 × 1500	30	24.0	1585	2268	2492
2000 × 1600	30	25.2	1400	2176	2404
2000 × 1800	30	27.6	1030	1903	2153
2200 × 1400	32.4	22.8	2200	3168	3385
2200 × 1500	32.4	24.0	2015	3070	3328
2200 × 1600	32.4	25.2	1830	2980	3240

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

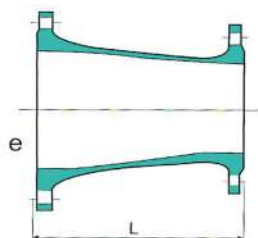
Zinc & Bitumen External Coating acc. at iso 8179

OPTION:

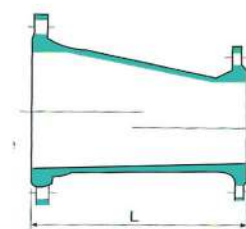
Electro static epoxy powder coating acc. to works standard



Double- Flange Reducer  
 according to iso 2531  
 Ductile iron (nodular iron)  
 FFR Pieces



Concentric



Eccentric

DN × dn	T	t	L	Mass(kg)	
				PN10	PN16
2200 × 1800	32.4	27.6	1460	2712	2994
2200 × 2000	32.4	30.0	1090	2250	2570
2200 × 2100			905	2218	2552
2400 × 1500	34.8	24.0	2445	4006	4322
2400 × 1600	34.8	25.2	2260	3919	4238
2400 × 1800	34.8	27.6	1890	3557	3997
2400 × 2000	34.8	30.0	1520	3338	3704
2400 × 2100			1335	3171	3563
2400 × 2200	34.8	32.4	1150	2765	3134
2600 × 1600	37.2	25.2	2690	4943	5286
2600 × 1800	37.2	27.6	2320	4682	5047
2600 × 2000	37.2	30.0	1950	4364	4755
2600 × 2100			1765	4194	4611
2600 × 2200	37.2	32.4	1580	3996	4419
2600 × 2400	37.2	34.8	1210	3311	3748

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

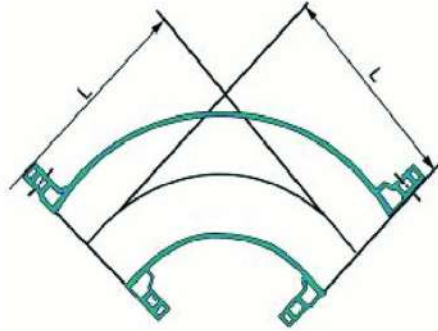
OPTION:

Electro static epoxy powder coating acc. to works standard





90 ° Double- Flanged  
Long Radius Bend  
Ductile iron (nodular iron)



90° Double-flanged long radius bend

DN	L	Mass(kg)		
		PN10	PN16	PN25
80	380	14.5	14.5	14.5
100	400	18.0	18.0	19.0
125	425	23.5	23.5	24.1
150	450	30.5	30.5	32.5
200	500	46.5	46	50
250	550	67	66	73.5
300	600	91	90.5	101
350	650	117	122	138
400	700	149	158	180
450	750	184	200	221
500	800	227	254	275
600	900	332	379	403
700	1000	466	489	–
800	1100	632	661	–
900	1200	816	854	–
1000	1300	1048	1117	–
1100	1400	1315	1385	–
1200	1500	1627	1737	–

**Casting Wall Thickness acc. to iso 2531**

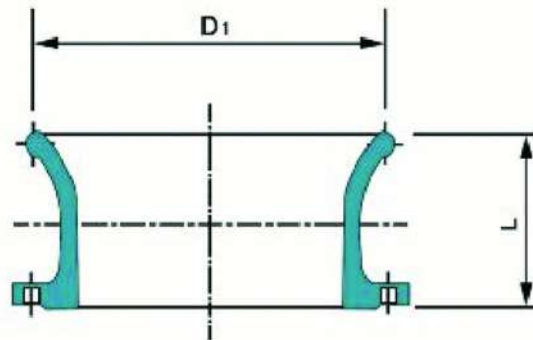
**Cement mortar lining according to iso 4179**

**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**

**Flanged Bell Mouth**  
**according to ISO 2531**  
 Ductile Iron(nodular iron)



Flanged Bell Mouth

DN	D1	L	Mass(kg)		
			PN10	PN16	PN25
80	150	130	5.2	5.2	5.2
100	175	135	6.2	6.2	6.7z
150	230	150	10.1	10.1	11.1
200	290	170	15.0	14.8	16.8
250	345	183	21.0	20.5	24.5
300	405	205	28.5	28.5	33.5
350	460	220	35.5	38.0	46.0
400	520	240	45.0	49.5	60.5
450	575	255	54.0	62.0	73.0
500	635	275	67.0	80.0	91.0
600	750	310	96.5	120	132
700	865	345	135	146	–
800	980	380	182	197	–
900	1095	415	231	250	–
1000	1210	450	297	331	–
1100	1325	485	370	405	–
1200	1440	520	457	512	–
1400	1670	590	646	702	–
1500	1785	625	763	851	–
1600	1900	660	906	995	–
1800	2130	730	1185	1297	–
2000	2360	800	1530	1668	–
2100	2475	835	1753	1918	–
2200	2590	870	1964	2135	–
2400	2820	940	2485	2713	–
2600	3050	1010	2989	3242	–

**Casting Wall Thickness acc. to iso 2531**

**Cement mortar lining according to iso 4179**

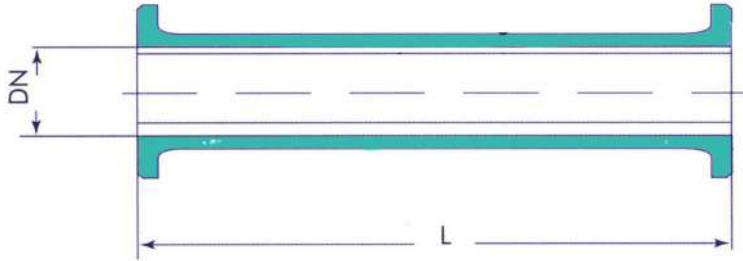
**Zinc & Bitumen External Coating acc. at iso 8179**

**OPTION:**

**Electro static epoxy powder coating acc. to works standard**



Double -Flange Pipes  
according to iso 2531  
Ductile iron (nodular iron)  
Integrated Flange



DN	C (mm)	WEIGHT OF DOUBLE FLANGE WELDED PIPE (kg)								
		1m			1.5m			2m		
		PN10	PN16	PN25	PN10	PN16	PN25	PN10	PN16	PN25
80	7.0	21.1	21.1	21.1	28.2	28.2	28.2	35.2	35.2	35.2
100	7.2	25.7	25.7	26.7	33.5	33.5	35.6	42.4	42.4	44.4
125	7.5	32.7	32.7	33.9	44.1	44.1	45.3	55.4	55.4	56.6
150	7.8	40.2	40.2	42.2	54.2	54.2	56.2	66.2	66.2	70.2
200	8.4	56.7	56.3	60.5	76.6	76.2	80.4	96.4	96.0	100.2
250	9.0	76.4	75.6	83.4	102.8	102.0	109.8	129.2	128.4	136.2
300	9.6	98.5	97.7	108.9	132.3	130.5	141.7	165.8	165.0	176.2
350	10.2	118.3	124.3	141.1	159.9	166.1	182.7	201.4	207.6	224.2
400	10.8	141.0	152.2	174.8	191.0	202.2	224.8	241.0	252.2	274.8
500	12.0	193.4	223.8	247.2	262.5	292.9	316.3	331.6	362.0	385.4
600	13.2	258.6	311.6	340.0	349.5	402.5	430.9	440.4	493.4	521.8
700	14.4	331.2	361.4	-	377.4	476.8	-	562.0	592.2	-
800	15.6	418.9	457.3	-	561.7	600.0	-	704.0	745.8	-
900	16.8	502.8	550.6	-	675.5	723.3	-	848.2	896.0	-
1000	18.0	607.8	690.8	-	813.1	896.1	-	1018.4	1101.4	-
1200	20.4	846.2	974.8	-	1125.1	1253.7	-	1404.0	1532.6	-
1400	22.8	1083.2	1219.4	-	1491.6	1582.0	-	1810.0	1946.2	-
1600	25.2	1406.3	1610.3	-	1864.8	2068.8	-	2323.2	2526.8	-
1800	27.6	1696.3	1948.1	-	2261.0	2512.8	-	2825.6	3077.4	-
2000	30.0	2036.2	2341.8	-	2717.9	3023.5	-	3399.6	3705.2	-
2200	32.4	2445.0	2777.6	-	3254.3	3587.7	-	4063.6	4347.0	-
2400	34.2	2852.2	3256.8	-	3800.3	4204.9	-	4748.4	5153.0	-
2600	37.2	3252.8	3723.0	-	4350.6	4820.6	-	5448.4	5918.6	-

Casting Wall Thickness acc. to iso 2531

Cement mortar lining according to iso 4179

Zinc & Bitumen External Coating acc. at iso 8179

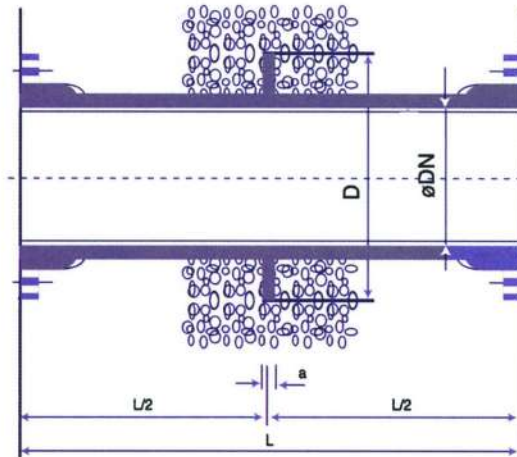
OPTION:

Electro static epoxy powder coating acc. to works standard





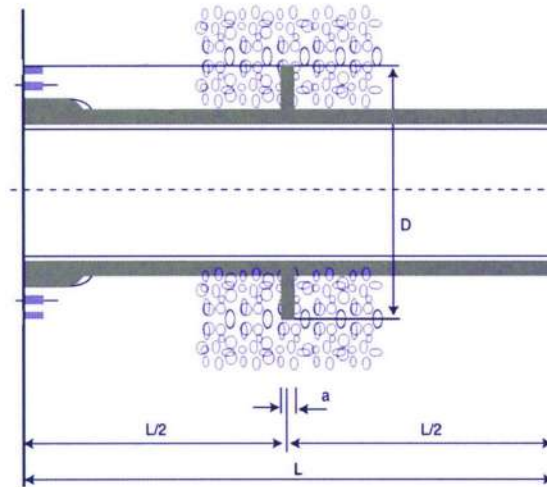
## (Double Flange with puddle).



DN	C (mm)	WEIGHT OF DOUBLE FLANGE WITH PUDDLE PIPE (kg)								
		1m			1.5m			2m		
		PN10	PN16	PN25	PN10	PN16	PN25	PN10	PN16	PN25
80	7.0	24.6	24.6	24.6	31.7	31.7	31.7	38.7	38.7	38.7
100	7.2	29.7	29.7	31.2	37.5	37.5	40.1	46.4	46.4	48.9
150	7.5	37.7	37.7	39.5	49.1	49.1	50.9	59.4	59.4	62.1
200	8.4	62.8	62.4	66.6	82.7	82.3	87.5	102.5	102.1	107.3
250	4.0	88.2	89.0	98.7	114.6	113.4	125.1	141.0	139.8	151.5
300	9.6	114.1	112.9	129.7	147.9	145.7	162.5	181.4	180.2	197.0
350	10.2	135.9	145.0	170.1	177.5	186.8	211.7	219.0	228.3	253.2
400	10.8	161.5	178.3	212.2	211.5	228.3	262.2	261.5	278.3	312.2
500	12.0	227.0	226.6	301.7	290.1	335.7	370.8	359.2	404.8	439.9
600	18.2	297.0	376.5	419.1	300.9	357.8	395.4	478.8	558.3	600.9
700	14.4	381.4	426.7	-	427.6	542.1	-	612.2	657.5	-
800	15.6	485.6	543.2	-	628.4	686.0	-	790.3	828.7	-
900	16.8	581.5	658.2	-	754.2	825.9	-	926.9	998.6	-
1000	18.0	706.4	830.9	-	411.7	1036.2	-	1117.0	1241.5	-
1200	20.4	990.4	1183.3	-	1269.3	1462.2	-	1548.2	1740.1	-
1400	22.8	1261.4	1483.7	-	1669.8	1847.1	-	1988.2	2192.5	-
1600	25.2	1651.0	1957.0	-	2109.5	2414.7	-	2567.9	2873.5	-
1800	27.6	1979.8	2357.5	-	2544.5	2922.2	-	3109.1	3486.8	-
2000	30.0	2372.6	2831.0	-	3054.3	3526.7	-	3736.0	4194.4	-
2200	32.4	2858.8	3357.5	-	3667.5	4167.6	-	4476.8	4976.9	-
2400	34.8	3330.2	3937.1	-	4278.3	4885.2	-	5226.4	5833.3	-
2600	37.2	3781.4	4486.7	-	4879.2	5584.0	-	5977.0	6682.3	-



## Anchoring Pipes ( Flange spigot with puddle )



DN	C (mm)	WEIGHT OF FLANGE SPIGOT WITH PUDDLE PIPE (kg)								
		1m			1.5m			2m		
		PN10	PN16	PN25	PN10	PN16	PN25	PN10	PN16	PN25
80	7.0	21.1	21.1	21.1	28.2	28.2	28.2	35.2	35.2	35.2
100	7.2	25.7	25.7	26.7	33.5	33.5	35.6	42.4	42.4	44.4
125	7.5	32.7	32.7	33.9	44.1	44.1	45.3	55.4	55.4	56.6
150	7.8	40.2	40.2	42.2	54.2	54.2	56.2	66.2	66.2	70.2
200	8.4	56.7	56.3	60.5	76.6	76.2	80.4	96.4	96.0	100.2
250	9.0	76.4	75.6	83.4	102.8	102.0	109.8	129.2	128.4	136.2
300	9.6	98.5	97.7	108.9	132.3	130.5	141.7	165.8	165.0	176.2
350	10.2	118.3	124.3	141.1	159.9	166.1	182.7	201.1	207.6	224.2
400	1.8	141.0	152.2	174.8	191.0	202.2	224.8	241.0	252.2	274.8
500	12.0	193.4	223.8	247.2	262.5	292.9	316.3	331.6	362.0	385.4
600	13.2	258.6	311.6	340.0	349.5	402.5	430.9	440.4	493.4	521.8
700	14.4	331.2	361.4	-	377.4	476.8	-	562.0	592.2	-
800	15.6	418.9	457.3	-	561.7	600.1	-	704.0	745.8	-
900	16.8	502.8	550.6	-	675.5	723.3	-	848.2	896.0	-
1000	18.0	607.8	690.8	-	813.1	896.1	-	1018.4	1101.4	-
1200	20.4	846.2	974.8	-	1125.1	1253.7	-	1404.0	1532.6	-
1400	22.8	1083.2	1219.4	-	1491.6	1582.0	-	1810.0	1946.2	-
1600	25.2	1406.3	1610.3	-	1864.8	2068.0	-	2323.2	2526.8	-
1800	27.6	1696.3	1948.1	-	2261.0	2512.8	-	2825.6	3077.4	-
2000	30.0	2036.2	2341.8	-	2717.9	3023.5	-	3399.6	3705.2	-
2200	32.4	2445.0	2777.6	-	3254.3	3587.7	-	4063.6	4347.0	-
2400	34.2	2852.2	3256.8	-	3800.3	4204.9	-	4748.4	5153.0	-
2600	37.2	3252.8	3723.0	-	4350.6	4820.6	-	5448.4	5918.6	-



## Section 2

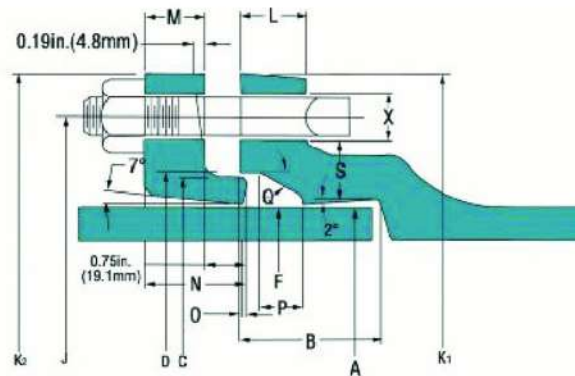
**Standards :**

**ANSI/AWWA C110**





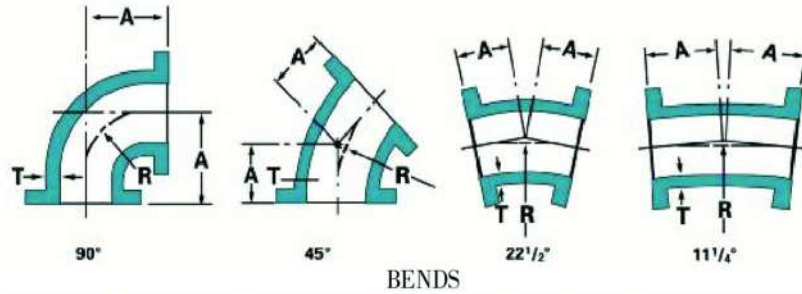
Mechanical Joint  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



MECHANICAL JOINT DIMENSIONS

SIZE	A	B	C	D	F	J	K <sub>2</sub>	K <sub>1</sub>	L	X	BOLTS		
											NO	Size	Length
3	3.96	2.50	4.84	4.94	4.06	6.19	7.69	7.62	0.58	3/4	4	5/8	3
4	4.80	2.50	5.92	6.02	4.90	7.50	9.12	9.06	0.60	7/8	4	3/4	3 1/2
6	6.90	2.50	8.02	8.12	7.00	9.50	11.12	11.06	0.63	7/8	6	3/4	3 1/2
8	9.05	2.50	10.17	10.27	9.15	11.75	13.37	13.31	0.66	7/8	6	3/4	3 1/2
10	11.10	2.50	12.22	12.34	11.20	14.00	15.62	15.62	0.70	7/8	8	3/4	4
12	13.20	2.50	14.32	14.44	13.30	16.25	17.88	17.88	0.73	7/8	8	3/4	4
14	15.30	3.50	16.40	16.54	15.44	18.75	20.25	20.25	0.79	7/8	10	3/4	4 1/2
16	17.40	3.50	18.50	18.64	17.54	21.00	22.50	22.50	0.85	7/8	12	3/4	4 1/2
18	19.50	3.50	20.60	20.74	19.64	23.25	24.83	24.75	1.00	7/8	12	3/4	4 1/2
20	21.60	3.50	22.70	22.84	21.74	25.50	27.08	27.00	1.02	7/8	14	3/4	4 1/2
24	25.80	3.50	26.90	27.04	25.94	30.00	31.58	31.50	1.02	7/8	16	3/4	5
30	32.00	4.00	33.29	33.46	32.17	36.88	39.12	39.12	1.31	1 1/8	20	1	6
36	38.30	4.00	39.59	39.76	38.47	43.75	46.00	46.00	1.45	1 1/8	24	1	6
42	44.50	4.00	45.79	45.96	44.67	50.62	53.12	53.12	1.45	1 3/8	28	1 1/4	6 1/2
48	50.80	4.00	52.09	52.26	50.97	57.50	60.00	60.00	1.45	1 3/8	32	1 1/4	6 1/2

Flanged Bends  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



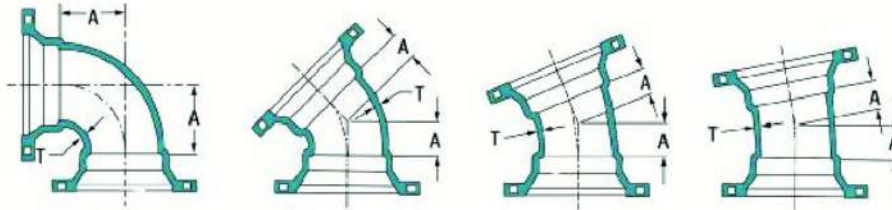
BENDS

SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		PRESSURE RATING T	CLASS DUCTILE IRON	WEIGHT			
	A	R	A	R	A	R	A	R			90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3 80	5.5 140	4.0 102	3.0 76	3.62 92	3.0 73	7.56 192	3.0 76	15.25 387	.48 12	250	25 11	20 9	20 9	20 9
4 100	6.5 165	4.5 114	4.0 102	4.81 122	4.0 102	10.06 255	46 102	20.31 516	.52 13	250	45 20	40 18	40 18	40 18
5 130	7.5 190	5.5 139	4.5 114	6.04 153					.52 13	250	52 23	45 20		
6 150	8.0 203	6.0 152	5.0 127	7.25 184	5.0 127	15.06 382	5.0 127	30.50 775	.55 14	250	65 29	55 25	55 25	55 25
8 200	9.0 229	7.0 178	5.5 140	8.44 214	5.5 140	17.62 447	5.5 140	35.50 902	.60 15	250	105 48	90 41	90 41	90 41
10 250	11.0 279	9.0 229	6.5 165	10.88 276	6.5 165	22.62 574	6.5 165	75.69 1160	0.68 17	250	165 75	130 59	135 61	135 61
12 300	12.0 309	10.0 254	7.5 190	13.25 366	7.5 190	27.62 701	7.5 190	55.81 1417	0.75 19	250	235 106	195 88	205 93	205 93
14 350	14.0 356	11.5 292	7.5 190	12.06 306	7.5 190	25.12 638	7.5 190	50.75 1289	.66 17	250	290 131	220 100	225 102	225 102
16 400	15.0 381	12.5 317	8.0 203	13.25 336	8.0 203	27.62 701	8.0 203	55.81 1417	.70 18	250	370 368	280 127	285 129	285 129
18 450	16.5 419	14.0 356	8.5 216	14.50 368	8.5 216	30.19 767	8.5 216	60.94 1548	.75 19	250	450 204.9	325 147	335 152	335 152
20 500	18.0 457	15.5 394	9.5 241	16.88 429	9.5 241	35.19 894	9.5 241	71.06 1805	.80 20	250	580 233	430 195	435 197	435 197
24 600	22.0 559	18.5 470	11.0 279	18.12 460	11.0 279	37.69 957	11.0 279	76.12 1933	.89 23	250	900 408	630 286	640 290	640 292
30 750	25.0 635	21.5 546	15.0 381	27.75 705	15.0 381	75.81 1468	15.0 381	116.75 2965	1.03 26	250	1430 649	1120 508	1135 515	1150 522
36 900	28.0 711	24.5 622	18.0 457	35.00 889	18.0 457	72.88 1851	18.0 457	147.25 3740	1.15 29	250	2135 968	1755 796	1790 812	1805 819
42 1000	31.0 787	27.5 698	21.0 533	42.25 1073	21.0 533	88.0 2235	21.0 533	177.69 4513	1.28 32	250	3055 1386	2600 1179	2665 1209	2680 1216
48 1200	34.0 864	30.5 775	24.0 610	49.50 1257	24.0 610	103.06 2618	24.0 610	208.12 5286	1.42 36	250	4095 1857	3580 1624	3665 1662	3695 1676



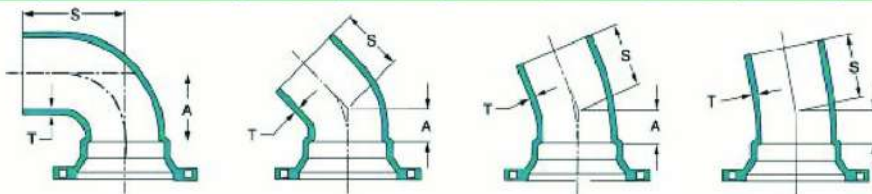


Flange Bends  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



MJ X MJ BENDS

SIZE	T	MJ90° BEND		MJ45° BEND		MJ22.5° BEND		MJ11.25° BEND	
		A	WT	A	WT	A	WT	A	WT
3	0.33	3.50	23	1.50	21	1.00	16	1.00	14
4	0.34	4.00	27	2.00	23	1.50	18	1.25	16
6	0.36	5.00	39	3.00	32	2.00	32	1.50	30
8	0.38	6.50	57	3.50	46	2.50	46	1.75	42
10	0.40	7.50	89	4.50	70	3.00	64	2.00	58
12	0.42	9.00	108	5.50	86	3.50	84	2.25	74
14	0.47	11.50	210	5.00	164	3.75	148	2.50	130
16	0.50	12.50	264	5.50	202	3.75	178	2.50	158
18	0.54	14.00	335	6.00	250	4.50	255	3.00	205
20	0.57	15.00	400	7.00	305	4.50	310	3.00	245
24	0.61	18.75	565	7.50	405	4.50	412	3.00	315
*30	0.66	21.50	1005	10.50	798	6.75	665	4.75	606
*36	0.74	24.50	1562	11.50	1164	7.75	960	5.00	840
*42	0.82	29.25	2506	14.00	1792	9.00	1350	6.00	1319
*48	0.90	33.25	3045	15.00	2390	10.00	1886	6.50	1700

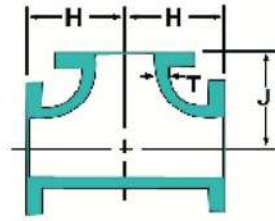


MJ X PE BENDS

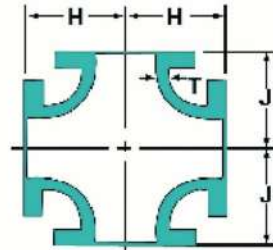
SIZE	T	MJ90° BEND			MJ45° BEND			MJ22.5° BEND			MJ11.25° BEND		
		A	S	Wt	A	S	Wt	A	S	Wt	A	S	Wt
3	0.33	3.25	8.50	16	1.50	7.00	13	1.00	6.50	12	1.00	6.50	12
4	0.34	4.00	9.50	22	2.00	7.50	19	1.50	7.00	18	1.25	6.25	17
6	0.36	5.00	11.50	41	3.00	8.50	34	2.00	7.50	29	1.50	7.00	27
8	0.38	6.50	12.50	61	3.50	9.00	49	2.50	8.00	43	1.75	7.25	39
10	0.40	7.50	13.00	83	4.50	10.00	72	3.00	8.50	61	2.00	7.50	52
12	0.42	9.00	14.50	114	5.50	11.00	98	3.50	9.00	81	2.25	7.75	70
14	0.47	11.50	19.50	197	5.00	13.00	148	3.75	11.25	133	2.50	10.50	122
16	0.50	12.50	20.50	248	5.50	13.50	184	3.75	11.75	166	2.50	10.50	148
18	0.54	14.00	21.00	325	6.00	13.00	235	6.00	13.00	235	6.00	13.00	235
20	0.57	15.00	22.50	390	7.00	14.00	290	7.00	14.00	300	7.00	14.00	300
24	0.61	17.00	25.00	575	7.50	14.50	390	7.50	14.50	395	7.50	14.50	400
*30	0.66	22.50	30.50	865	10.50	19.50	715	6.75	15.75	600	4.75	13.75	535



All Flanged Tees  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



All-Flange tee

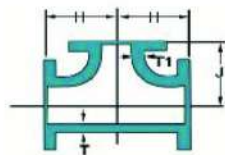


All-Flange cross

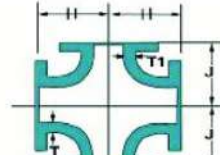
SIZE	H	J	PRES- SURE T	RATING CLASS DUCTIL E IRON	TEE	WEIGHT CROSS
3	5.5	5.5	.48	250	40	50
80	140	140	12		18	23
4	6.5	6.5	.52	250	65	80
100	165	165	13		29	36
5	7.5	7.5	.52	250	85	105
130	190	190	13		38	47
6	8.0	8.0	.55	250	95	120
150	203	206	14		43	54
8	9.0	9.0	.60	250	155	195
200	229	229	15		70	88
10	11.0	11.0	0.68	250	270	330
250	279	279	17		122	150
12	12.0	12.0	0.75	250	385	460
300	305	305	19		175	209
14	14.0	14.0	.66	250	435	530
350	356	356	17		197	240
16	15.0	15.0	.70	250	550	665
400	381	381	18		249	302
18	16.5	16.5	.75	250	665	795
450	419	419	19		302	361
20	18.0	18.0	.80	250	855	1015
500	457	457	20		388	460
24	22.0	22.0	.89	250	1330	1570
600	559	559	23		603	712
30	25.0	25.0	1.03	250	2150	2500
750	635	635	26		975	1134
36	28.0	28.0	1.15	250	3160	3620
900	711	711	29		1433	1642
42	31.0	31.0	1.28	250	4470	5065
1000	787	787	32		2027	2297
48	34.0	34.0	1.42	250	5900	6570
1200	864	864	36		2676	1134



All Flanged Tees  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



All-Flange tee

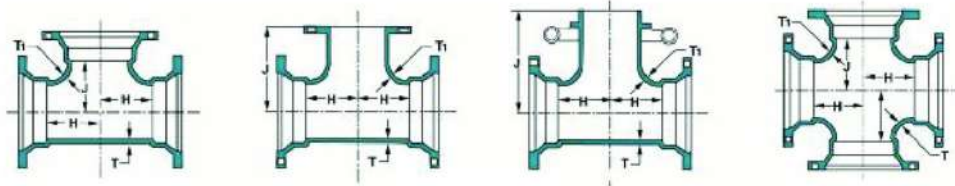


All-Flange cross

SIZE	PRES-SURE H	TAT-ING J	TAT-ING T	T1	DUCTILE IRON	TEE	WEIGH T CROSS	SIZE	PRES-SURE H	TAT-ING J	TAT-ING T	T1	DUCTILE IRON	TEE	WEIG HT CROSS
3 x 2	5.5	5.5	.48	.31	250	35	45	18 x 6	13.0	15.5	.75	.55	250	480	505
80 x 50	139	139	12	7	16	20		450 x 150	330	394	19	14	218	299	
4 x 2	6.5	6.5	.52	.31	50	60		18 x 8	13.0	15.5	.75	.60	250	495	535
100 x 50	165	165	13	7	22	27		450 x 200	330	394	19	15	224	243	
4 x 2-1/2	6.5	6.5	.52	.31	55	25		18 x 10	13.0	15.5	.75	.68	250	510	560
100 x 65	165	165	13	7	25			450 x 250	330	394	19	17	231	254	
4 x 3	6.5	6.5	.52	.48	60	70		18 x 12	13.0	15.5	.75	.75	250	535	610
100 x 80	165	165	13	12	27	32		450 x 300	330	394	19	19	243	277	
6 x 2	8.0	8.0	.55	.31	85	38		18 x 14	13.0	16.5	.75	.66	250	630	720
150 x 50	203	203	14	7	38			450 x 350	419	419	19	17	286	326	
6 x 3	8.0	8.0	.55	.48	85	95		18 x 16	16.5	16.5	.75	.70	250	650	765
150 x 60	203	203	14	12	38	43		450 x 400	419	419	19	18	295	347	
6 x 4	8.0	8.0	.55	.52	90	110		20 x 6	14.0	17.0	.80	.55	250	610	635
150 x 100	203	203	14	13	41	50		500 x 150	356	432	20	14	277	288	
8 x 4	9.0	9.0	.60	.52	140	155		20 x 8	14.0	17.0	.80	.60	250	620	665
200 x 100	229	229	15	13	63	70		500 x 200	356	432	20	15	261	302	
8 x 6	9.0	9.0	.90	.55	145	160		20 x 10	14.0	17.0	.80	.68	250	635	685
200 x 150	229	229	229	14	66	75		500 x 250	356	432	20	17	288	311	
10 x 4	11.0	11.0	.68	.52	205	220		20 x 142	14.0	17.0	.80	.75	250	660	735
250 x 100	279	279	17	13	93	100		500 x 300	356	432	20	19	299	333	
10 x 6	11.0	11.0	.68	.55	215	240		20 x 14	14.0	17.0	.80	.66	250	665	745
250 x 150	279	279	17	14	97	109		500 x 350	356	432	20	17	302	338	
10 x 8	11.0	11.0	.68	.60	225	265		20 x 16	18.0	18.0	.80	.70	250	810	915
250 x 200	279	279	17	15	102	120		500 x 400	457	457	20	18	357	415	
12 x 4	12.0	12.0	.75	.52	290	310		20 x 18	18.0	18.0	.80	.75	250	820	945
300 x 100	305	305	19	13	131	141		500 x 450	457	457	20	19	372	429	
12 x 6	12.0	12.0	.75	.55	295	320		24 x 16	15.0	19.0	.89	.55	250	845	875
300 x 150	305	305	19	14	134	145		600 x 150	381	483	23	14	383	397	
12 x 8	12.0	12.0	.75	.60	310	345		24 x 8	15.0	19.0	.89	.60	250	860	895
300 x 200	305	305	19	15	141	156		600 x 200	381	483	23	15	390	406	
12 x 10	12.0	12.0	.87	.80	360	415		24 x 10	15.0	19.0	.89	.68	250	880	930
300 x 250	305	305	22	20	163	188		600 x 250	381	483	23	17	399	422	
14 x 6	14.0	14.0	.66	.55	375	400		24 x 12	15.0	19.0	.89	.75	250	890	960
350 x 150	356	356	17	14	170	181		600 x 300	381	483	23	19	404	435	
14 x 8	14.0	14.0	.66	.60	390	425		24 x 14	15.0	19.0	.89	.66	250	900	975
350 x 200	356	356	17	15	177	193		600 x 350	391	483	23	17	408	442	
14 x 10	14.0	14.0	.66	.68	400	460		24 x 16	15.0	19.0	.89	.70	250	915	1010
350 x 250	356	356	17	17	181	209		600 x 400	391	483	23	18	415	458	
14 x 12	14.0	14.0	.66	.75	425	505		24 x 18	22.0	22.0	.89	.75	250	1220	1365
350 x 300	356	356	17	19	193	229		600 x 450	559	559	23	19	553	619	
16 x 6	15.0	15.0	.70	.55	465	490		24 x 20	22.0	22.0	.89	.80	250	1255	1430
400 x 150	381	381	18	14	211	222		600 x 500	559	559	23	20	569	649	
16 x 8	15.0	15.0	.70	.60	476	520		30 x 12	18.00	23.0	1.03	.75	250	1490	1565
400 x 200	381	381	18	15	215	236		750 x 300	457	584	26	19	676	710	
16 x 10	15.0	15.0	.70	.68	495	555		30 x 14	18.00	23.0	1.03	.66	250	1490	1570
400 x 250	381	381	18	17	224	252		750 x 350	457	584	26	17	676	712	
16 x 12	15.0	15.0	.70	.75	520	605		30 x 16	18.00	23.0	1.03	.70	250	1505	1605
400 x 300	381	381	18	19	236	274		750 x 400	457	584	26	18	683	728	
16 x 14	15.0	15.0	.70	.66	530	620		30 x 18	18.00	23.0	1.03	.75	250	1515	1615
400 x 350	381	381	18	17	240	281		750 x 450	457	584	26	19	687	732	
								30 x 20	18.00	23.0	1.03	.80	250	1540	1670
								750 x 500	457	584	26	20	698	757	
								30 x 24	25.0	25.0	1.03	.89	250	2025	2245
								750 x 600	635	635	26	23	918	1018	



Flanged Fittings  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



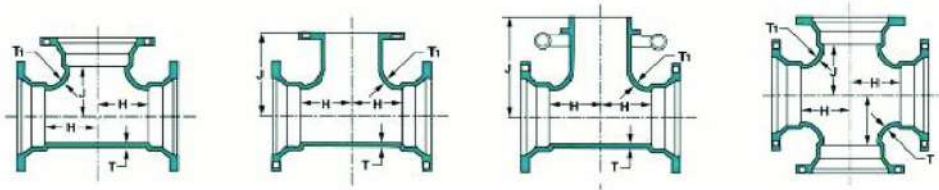
MJ X MJ. MJ X FLANGE. MJ X ST & CROSSES

SIZE	T	T1	MJ X MJ			MJ X FE*			MJ X ST*			CROSS		
			H	J	Wt	H	J	Wt	H	J	Wt	H	J	Wt
2 x 2	0.30	0.30	3.00	3.00	16	-	-	-	-	-	-	-	-	-
3 x 3	0.33	0.33	3.00	3.00	28	3.00	5.50	30	-	-	-	3.00	3.00	40
4 x 2	0.34	0.30	3.00	4.00	29	-	-	-	-	-	-	-	-	-
4 x 3	0.34	0.33	3.50	4.00	35	3.50	6.50	34	-	-	-	*3.50	4.00	49
4 x 4	0.34	0.34	4.00	4.00	32	4.00	6.50	40	-	-	-	4.00	4.00	42
6 x 3	0.36	0.33	3.50	5.00	42	3.50	8.00	51	-	-	-	3.50	5.00	60
6 x 4	0.36	0.34	4.00	5.00	46	4.00	8.00	65	-	-	-	*4.00	5.00	68
*6 x 4 x 6	0.36	0.36	*5.00	5.00	60	-	-	-	-	-	-	-	-	-
6 x 6	0.36	0.36	5.00	5.00	56	5.00	8.00	62	5.00	10.25	66	5.00	5.00	80
*6 x 6 x 8	0.36	0.38	*6.50	6.50	75	-	-	-	-	-	-	-	-	-
*8 x 3	0.38	0.33	*4.00	6.50	52	-	-	-	-	-	-	-	-	-
8 x 4	0.38	0.34	4.00	6.50	60	4.50	9.00	79	-	-	-	*4.00	6.00	100
*8 x 6	0.38	0.36	5.00	6.50	72	5.50	9.00	80	5.00	11.25	86	*5.00	6.00	105
*8 x 6 x 6	0.38	0.38	*5.00	6.50	75	-	-	-	-	-	-	-	-	-
*8 x 6 x 8	0.38	0.38	*6.00	6.50	85	-	-	-	-	-	-	-	-	-
8 x 8	0.38	0.38	6.50	6.50	86	6.50	9.00	90	6.50	11.50	105	6.00	6.00	110
*10 x 3	0.40	0.33	*4.00	7.50	75	-	-	-	-	-	-	3.00	7.00	115
10 x 4	0.40	0.34	4.00	7.50	78	4.00	11.00	90	-	-	-	*4.00	7.00	120
10 x 6	0.40	0.36	5.00	7.50	90	5.00	11.00	110	5.00	12.75	110	*5.00	7.00	125
10 x 8	0.40	0.38	6.50	7.50	105	6.50	11.00	115	6.50	12.75	120	*6.50	7.00	130
10 x 10	0.40	0.40	7.50	7.50	120	7.50	11.00	130	-	-	-	7.00	7.00	145
*12 x 3	0.42	0.33	*4.00	8.75	90	-	-	-	-	-	-	-	-	-
12 x 4	0.42	0.34	4.00	8.75	94	4.50	12.00	118	-	-	-	*4.00	8.50	123
12 x 6	0.42	0.36	5.00	8.75	110	5.50	12.00	133	5.00	13.75	128	*5.00	8.50	140
12 x 8	0.42	0.38	6.50	8.75	125	6.50	12.00	135	6.50	13.75	130	*6.00	8.50	157
12 x 10	0.42	0.40	7.50	8.75	140	7.50	12.00	150	-	-	-	*7.50	8.50	189
12 x 12	0.42	0.42	8.75	8.75	160	8.75	12.00	170	-	-	-	8.50	8.50	215
14 x 6	0.47	0.36	6.50	10.50	182	6.50	14.00	185	6.50	15.00	211	*6.50	10.50	210
14 x 8	0.47	0.38	7.50	10.50	206	-	-	-	-	-	-	*7.50	10.50	231
14 x 10	0.47	0.40	8.50	10.50	228	8.50	14.00	244	-	-	-	*8.50	10.50	255
14 x 12	0.47	0.42	9.50	10.50	234	9.50	14.00	284	-	-	-	*9.50	10.50	270
14 x 14	0.47	0.47	10.50	10.50	280	10.50	14.00	305	-	-	-	10.50	10.50	336
16 x 6	0.50	0.36	6.50	11.50	228	6.50	15.00	210	6.50	16.00	280	*6.50	11.50	250
16 x 8	0.50	0.38	7.50	11.50	248	7.50	15.00	260	-	-	-	*7.50	11.50	264
16 x 10	0.50	0.40	8.50	11.50	264	8.50	15.00	287	-	-	-	*8.50	11.50	286
16 x 12	0.50	0.42	9.50	11.50	280	9.50	15.00	312	-	-	-	*9.50	11.50	310
16 x 14	0.50	0.47	10.50	11.50	316	10.50	15.00	348	-	-	-	-	-	-
16 x 16	0.50	0.50	11.50	11.50	322	11.50	15.00	374	-	-	-	11.50	11.50	390
18 x 6	0.54	0.36	6.50	12.50	287	6.50	15.50	325	6.50	18.00	280	-	-	-
18 x 8	0.54	0.38	7.50	12.50	295	7.50	15.50	352	-	-	-	-	-	-
18 x 10	0.54	0.40	8.50	12.50	325	-	-	-	-	-	-	-	-	-
18 x 12	0.54	0.42	9.50	12.50	340	9.50	15.50	360	-	-	-	*9.50	12.50	437
18 x 14	0.54	0.47	10.50	12.50	380	-	-	-	-	-	-	-	-	-
18 x 16	0.54	0.50	11.50	12.50	425	-	-	-	-	-	-	-	-	-
18 x 18	0.57	0.54	12.50	12.50	450	-	-	-	-	-	-	12.50	12.50	657
20 x 6	0.57	0.36	6.50	14.00	320	6.50	17.00	406	6.50	18.50	360	-	-	-
20 x 8	0.57	0.38	8.00	14.00	366	8.00	17.00	339	-	-	-	*8.00	14.00	440
20 x 10	0.57	0.40	9.00	14.00	370	-	-	-	-	-	-	-	-	-
20 x 12	0.57	0.42	10.00	14.00	395	-	-	-	-	-	-	*10.00	14.00	558
20 x 14	0.57	0.47	11.00	14.00	475	-	-	-	-	-	-	-	-	-
20 x 16	0.57	0.50	12.00	14.00	505	-	-	-	-	-	-	-	-	-





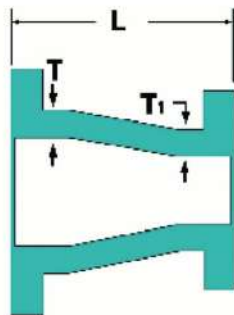
Flanged Fittings  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



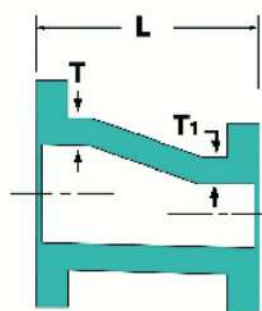
MJ X MJ. MJ X FLANGE. MJ X ST & CROSSES

SIZE	T	T1	MJ X MJ			MJ X FE*			MJ X ST*			CROSS		
			H	J	Wt	H	J	Wt	H	J	Wt	H	J	Wt
20 x 18	0.57	0.54	13.00	14.00	505	-	-	-	-	-	-	13.00	14.00	698
20 x 20	0.57	0.57	14.00	14.00	550	-	-	-	-	-	-	*14.00	14.00	798
24 x 6	0.61	0.36	7.00	16.00	415	7.00	19.00	408	7.00	19.00	465	-	-	-
24 x 8	0.61	0.38	8.00	16.00	445	8.50	19.00	418	-	-	-	*8.00	16.00	500
24 x 10	0.61	0.40	9.00	16.00	470	-	-	-	-	-	-	-	-	-
24 x 12	0.61	0.42	10.00	16.00	500	10.00	19.00	580	-	-	-	10.00	16.00	620
24 x 14	0.61	0.47	11.00	16.00	550	-	-	-	-	-	-	-	-	-
24 x 16	0.61	0.50	12.00	16.00	580	12.00	19.00	745	-	-	-	*12.00	16.00	720
24 x 18	0.61	0.54	13.00	16.00	625	-	-	-	-	-	-	-	-	-
24 x 20	0.61	0.57	14.00	16.00	660	-	-	-	-	-	-	-	-	-
24 x 24	0.61	0.61	16.00*	16.00	720	-	-	-	-	-	-	16.00	16.00	1038
*30 x 6	0.66	0.36	8.00	20.00	742	8.00	23.00	805	-	-	-	-	-	-
*30 x 8	0.66	0.38	8.50	20.00	755	-	-	-	-	-	-	-	-	-
*30 x 12	0.66	0.42	10.00	20.00	830	-	-	-	-	-	-	-	-	-
*30 x 16	0.66	0.50	12.50	20.00	959	-	-	-	-	-	-	-	-	-
*30 x 18	0.66	0.54	*14.00	20.00	1085	-	-	-	-	-	-	-	-	-
*30 x 24	0.66	0.61	16.00	20.00	1389	-	-	-	-	-	-	*16.00	20.00	1640
*30 x 30	0.66	0.66	20.00	20.00	1323	-	-	-	-	-	-	22.00	22.00	1840
*36 x 6	0.74	0.36	-	-	-	8.00	26.00	1175	-	-	-	-	-	-
*36 x 8	0.74	0.38	9.00	23.50	1050	-	-	-	-	-	-	-	-	-
*36 x 16	0.74	0.50	*12.50	23.50	1167	-	-	-	-	-	-	-	-	-
*36 x 24	0.74	0.61	16.00	23.50	1498	-	-	-	-	-	-	-	-	-
*36 x 30	0.74	0.66	20.00	23.50	2381	-	-	-	-	-	-	-	-	-
*36 x 36	0.74	0.74	23.50	23.50	2072	-	-	-	-	-	-	26.00	26.00	2655
*42 x 18	0.82	0.54	*16.00	27.50	2190	-	-	-	-	-	-	-	-	-
*42 x 24	0.82	0.61	20.00	27.50	2270	-	-	-	-	-	-	-	-	-
*42 x 30	0.82	0.66	22.00	29.50	2608	-	-	-	-	-	-	-	-	-
*42 x 36	0.82	0.74	30.00	30.00	300	-	-	-	-	-	-	-	-	-
*42 x 42	0.82	0.82	30.00	30.00	3185	-	-	-	-	-	-	30.00	30.00	3725
*48 x 6	0.90	0.36	*10.00	32.00	2155	-	-	-	-	-	-	-	-	-
*48 x 16	0.90	0.50	*13.00	32.00	2650	-	-	-	-	-	-	-	-	-
*48 x 24	0.90	0.61	23.00	32.00	2870	-	-	-	-	-	-	-	-	-
*48 x 30	0.90	0.66	23.00	32.00	3050	-	-	-	-	-	-	-	-	-
*48 x 36	0.90	0.74	33.50	32.25	3900	-	-	-	-	-	-	-	-	-
*48 x 42	0.90	0.82	33.50	33.50	4100	-	-	-	-	-	-	-	-	-
*48 x 48	0.90	0.90	33.50	33.50	4250	-	-	-	-	-	-	33.50	33.50	4955

Flanged Reducers  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



CONCENTRIC



ECCENTRIC REDUCERS

SIZE	L	T	T1	PRESSURE RATING CLSAA DUCTILE IRON	WEIGHT
3 × 2 80 × 50	6 152	.48 12	.31 7	250	16 7
3 × 2-1/2 80 × 65	6 152	.48 12	.31 7	250	20 9
4 × 2 100 × 50	7 178	.52 13	.31 7	250	25 11
4 × 2-1/2 100 × 65	7 178	.52 13	.31 7	250	28 12
4 × 3 100 × 80	7 178	.52 13	.48 12	250	30 14
6 × 2 × 150 × 50	9 229	.55 14	.31 7	250	35 16
6 × 2-1/2 150 × 65	9 229	.55 14	.31 7	250	38 17
6 × 3 150 × 80	9 229	.55 14	.48 12	250	40 18
6 × 4 150 × 100	9 229	.55 14	.52 13	250	45 20
6 × 5 150 × 130	9 229	.55 14	.52 13	250	50 22
8 × 4 200 × 100	11 279	.60 15	.52 13	250	65 29
8 × 5 200 × 130	11 279	.60 15	.52 13	250	70 31
8 × 6 200 × 150	11 279	.60 15	.55 14	250	75 34
10 × 4 250 × 100	12 305	.68 17	.52 13	250	85 38
10 × 6 250 × 150	12 305	.68 17	.55 14	250	90 41
10 × 8 250 × 200	12 305	.68 17	.60 15	250	110 50
12 × 4 300 × 100	14 356	.75 19	.52 13	250	120 54
12 × 6 300 × 150	14 356	.75 19	.55 14	250	130 59
12 × 8 300 × 200	14 356	.75 19	.60 15	250	145 66
12 × 10 300 × 250	14 356	.75 19	.68 17	250	170 77
14 × 6 350 × 150	16 406	.66 17	.55 14	250	155 70
14 × 8 350 × 200	16 406	.66 17	.60 15	250	175 79
14 × 10 350 × 250	16 406	.66 17	.68 17	250	190 86



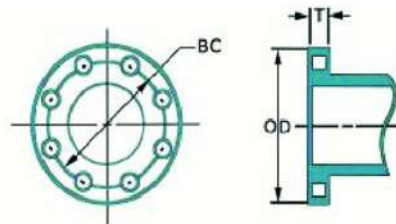


Flanged Reducers  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)

SIZE	L	T	T1	DUCTILE IRON	WEIGHT	SIZE	L	T	T1	DUCTILE IRON	WEIGHT
14 × 12 350 × 300	16 406	.66 17	.75 19	250	200 100	30 × 24 750 × 600	30 726	1.03 26	.89 23	250	970 440
16 × 6 400 × 150	18 457	.70 18	.55 14	250	190 86	36 × 20 900 × 500	36 914	1.15 29	.80 20	250	1230 558
16 × 8 400 × 200	18 457	.70 18	.60 15	250	210 95	36 × 24 900 × 600	36 914	1.15 29	.89 23	250	1345 610
16 × 10 400 × 250	18 457	.70 18	.68 17	250	235 106	36 × 30 900 × 750	36 914	1.15 29	1.03 26	250	1555 705
16 × 12 400 × 300	18 457	.70 18	.75 19	250	265 120	42 × 24 1000 × 600	42 1067	1.28 32	.89 23	250	1820 825
16 × 14 400 × 350	18 457	.70 18	.66 14	250	280 127	42 × 30 1000 × 750	42 1067	1.28 32	1.03 26	250	2060 935
18 × 8 450 × 200	19 483	.75 19	.60 15	250	240 109	42 × 36 1000 × 900	42 1067	1.28 32	1.15 29	250	2345 1064
18 × 10 450 × 250	19 483	.75 19	.68 17	250	265 120	48 × 30 1200 × 750	48 1219	1.42 36	1.03 26	250	2625 1191
18 × 12 450 × 300	19 483	.75 19	.75 19	250	295 134	48 × 36 1200 × 900	48 1219	1.42 36	1.15 29	250	2950 1338
18 × 14 450 × 350	19 483	.75 19	.66 17	250	310 141	48 × 42 1200 × 1000	48 1219	1.42 36	1.28 32	250	3320 1506
18 × 16 450 × 400	19 483	.75 19	.70 18	250	340 154						
20 × 10 500 × 250	20 508	.80 20	.68 17	250	310 141						
20 × 12 500 × 300	20 508	.80 20	.75 19	250	345 156						
20 × 14 500 × 350	20 508	.80 20	.66 17	250	355 161						
20 × 16 500 × 400	20 508	.80 20	.70 18	250	390 177						
20 × 18 500 × 450	20 508	.80 20	.75 19	250	410 186						
24 × 12 600 × 300	24 610	.89 23	.75 19	250	480 218						
24 × 14 600 × 350	24 610	.89 23	.66 17	250	490 222						
24 × 16 600 × 400	24 610	.89 23	.70 18	250	525 238						
24 × 18 600 × 450	24 610	.89 23	.75 19	250	550 249						
24 × 20 600 × 500	24 610	.89 23	.80 20	250	590 268						
30 × 18 750 × 450	30 762	1.03 26	.75 19	250	810 367						
30 × 20 750 × 500	30 762	1.03 26	.80 20	250	870 395						



Flanges  
according to ANSI/AWWA C110  
Ductile iron (nodular iron)



FLANGE DETAILS

SIZE	OD	BC	T	BOLT HOLE DIAMETER	BOLT DIAMETER AND LENGTH	NO.OF BOL TS
3 80	7.50 190	6.00 152	.75 19	.75 19	5/8 × 2-1/2 16 × 63	4
4 100	9.00 229	7.50 190	.94 24	.75 19	5/8 × 3 16 × 76	8
5 130	10.00 254	8.50 215	.94 23	.88 22	3/4 × 2 19 × 76	8
6 150	11.00 279	9.50 241	1.00 25	.87 22	3/4 × 3-1/4 19 × 82	8
8 200	13.50 343	11.75 298	1.12 28	.87 22	3/4 × 3-1/2 19 × 89	8
10 250	16.00 406	14.25 362	1.19 30	1.00 25	7/8 × 3-3/4 19 × 95	12
12 300	19.00 483	17.00 432	1.25 32	1.00 25	7/8 × 3-3/4 19 × 95	12
14 350	21.00 533	18.75 476	1.38 35	1.12 28	1 × 4-1/4 25 × 108	12
16 400	23.50 597	21.25 540	1.44 36	1.12 28	1 × 4-1/2 25 × 114	16
18 450	25.00 635	22.75 578	1.56 40	1.25 32	1-1/8 × 4-3/4 28 × 121	16
20 500	27.50 698	25.00 635	1.69 43	1.25 32	1-1/8 × 5 28 × 127	20
24 600	32.00 813	29.50 749	1.88 48	1.37 35	1-1/4 × 5-1/2 32 × 140	20
30 750	38.75 984	36.00 914	2.12 54	1.37 35	1-1/4 × 6-1/4 32 × 155	28
36 900	46.00 1168	42.75 1086	2.38 60	1.62 41	1-1/2 × 7 38 × 179	32
42 1000	53.00 1346	49.50 1257	2.62 66	1.62 41	1-1/2 × 7-1/2 38 × 190	36
48 1200	59.50 1511	56.00 1422	2.75 70	1.62 41	1-1/2 × 7-3/4 38 × 197	44



# Section 3

## UPVC PIPE FITTINGS



## Double socket Reducer



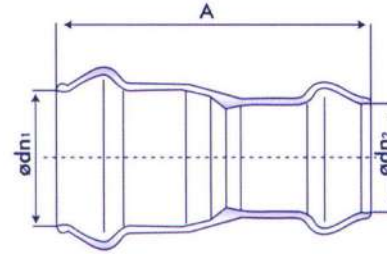




## Double socket Reducer

**Material :** Ductile iron GGG50.

**Coating :** Fusion bonded epoxy powder 250 micron Working pressure: PN16 bar



Dimensions	ødn1 ødn2	A	Weight Kg
MMR-KS 65/50	75/63	213	3.7
MMR-KS 80/50	90/63	233	4.7
MMR-KS 80/65	90/75	230	4.9
MMR-KS 100/50	110/63	238	5.6
MMR-KS 100/65	110/75	250	6.0
MMR-KS 100/80	110/90	260	6.6
MMR-KS 125/80	140/90	287	9.1
MMR-KS 125/100	140/110	288	9.9
MMR-KS 150/80	160/90	305	10.8
MMR-KS 150/100	160/110	303	11.0
MMR-KS 150/125	160/140	305	12.4
MMR-KS 200/80	200/90	361	13.3
MMR-KS 200/100	200/110	350	12.8
MMR-KS 200/150	200/160	370	19.2
MMR-KS 200/100	225/110	370	17.7
MMR-KS 200/125	225/140	390	20.7
MMR-KS 200/150	225/160	372	21.4
MMR-KS 250/150	250/160	407	22.1
MMR-KS 250/200	250/200	428	25.2
MMR-KS 250/100	280/110	420	29.1
MMR-KS 250/150	280/160	445	32.0
MMR-KS 250/200	280/225	457	34.2
MMR-KS 400/300	400/315	560	56.0



**ALL SOCKET TEE**

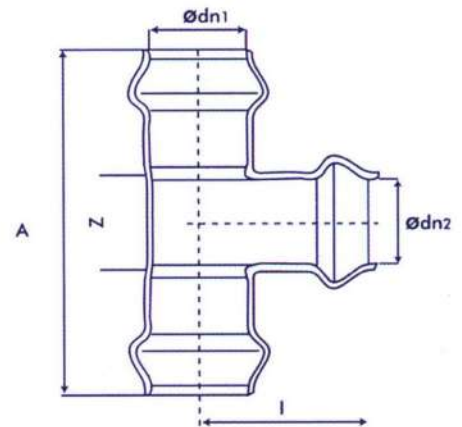




## ALL SOCKET TEE FOR UPVC PIPES

**Material :** Ductile cast iron GGG 50.

**Coating :** Fusion bonded epoxy powder.



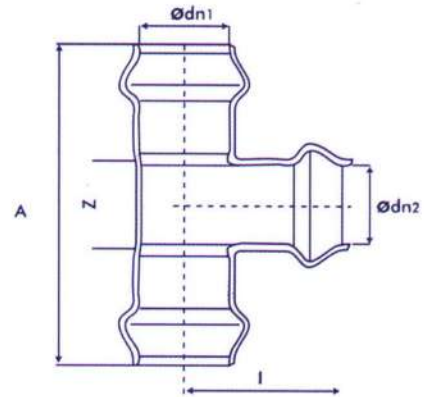
Items	Ø dn1/ Ø dn2	Dimensions in mm			KG Mass
		Z	A	I	
MMB-KS 80/80	90/90	101	317	164	9.0
MMB-KS 100/50	110/63	81	307	150	9.5
MMB-KS 100/65	110/75	92	322	156	9.7
MMB-KS 100/80	110/90	106	327	156	12.2
MMB-KS 100/100	110/110	124	362	180	13.7
MMB-KS 125/50	140/63	87	363	169	13.5
MMB-KS 125/65	140/75	89	363	177	13.9
MMB-KS 125/80	140/90	112	366	181	14.9
MMB-KS 125/100	140/110	130	381	184	18.6
MMB-KS 125/125	140/140	157	415	206	18.6
MMB-KS 150/65	160/75	104	392	188	17.4
MMB-KS 150/80	160/90	118	394	191	19.9
MMB-KS 150/100	160/110	136	413	197	19.5
MMB-KS 150/125	160/140	163	435	217	21.7
MMB-KS 150/150	160/160	181	453	228	24.8



## ALL SOCKET TEE FOR UPVC PIPES

**Material :** Ductile cast iron GGG 50.

**Coating :** Fusion bonded epoxy powder.



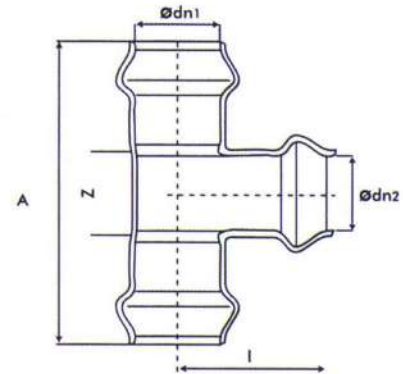
Items	Ø dn1/ Ø dn2	Dimensions in mm			KG Mass
		Z	A	T	
MMB-KS 200/80	200/90	95	396	216	26.4
MMB-KS 200/100	200/110	112	418	220	28.8
MMB-KS 200/150	200/160	160	460	253	34.0
MMB-KS 200/200	200/200	210	510	255	38.1
MMB-KS 200/80	225/90	130	449	222	28.0
MMB-KS 200/100	225/110	148	468	226	32.1
MMB-KS 200/150	225/160	193	520	256	36.1
MMB-KS 200/200	225/225	252	570	284	56.2
MMB-KS 250/80	225/90	180	542	234	45.0
MMB-KS 250/150	250/160	205	584	266	74.1
MMB-KS 250/200	250/200	250	634	268	53.2
MMB-KS 250/250	250/250	280	665	332	64.4
MMB-KS 250/80	280/90	142	547	256	48.2
MMB-KS 250/100	280/110	180	547	269	49.8
MMB-KS 250/150	280/160	205	688	295	64.4
MMB-KS 250/200	280/225	304	688	325	69.5
MMB-KS 250/250	280/280	314	688	359	81.6



## ALL SOCKET TEE FOR UPVC PIPES

**Material :** Ductile cast iron GGG 50.

**Coating :** Fusion bonded epoxy powder.



Items	Ø dn1/ Ø dn2	Dimensions in mm			KG Mass
		Z	A	T	
MMB-KS 300/80	315/90	154	642	277	71.2
MMB-KS 300/100	315/110	172	642	288	71.8
MMB-KS 300/150	315/160	217	642	308	72.0
MMB-KS 300/200	315/225	270	677	331	63.2
MMB-KS 300/250	315/280	310	727	362	101.3
MMB-KS 300/300	315/315	350	756	379	79.8
MMB-KS 400/200	400/225	404	812	368	94.2
MMB-KS 400/300	400/315	485	893	416	108.3
MMB-KS 400/400	400/400	489	937	469	219.0



## Double Socket tee with flanged branch







## FLANGED SOCKET





## مصنع جدف لمسبوكات الدكتايل

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