

ek parçaları

fittings



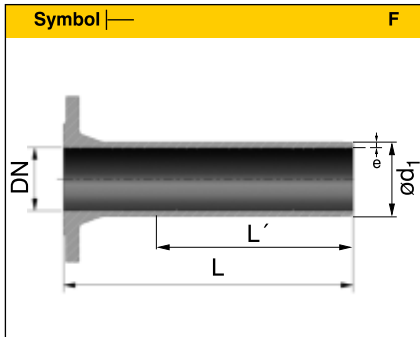
SAMSUN MAKİNA SANAYİ A.Ş.





EK PARÇALARI FITTINGS

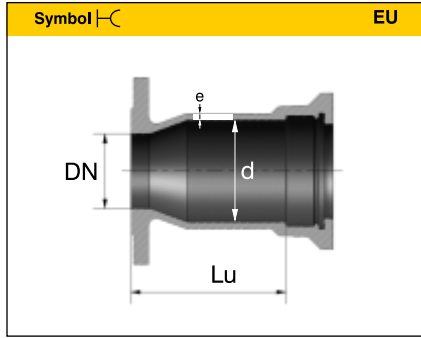
Flanşlı Spigotlar / Flanged Spigots



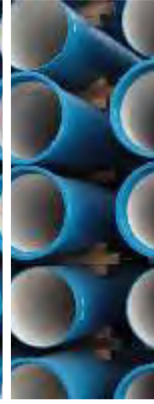
DN	Ød ₁	L	L'	e	W (kg)			
					PN 10	PN 16	PN 25	PN 40
80	98	350	215	7,0	8	8	8	8
100	118	360	215	7,2	10	10	10,5	12
125	144	370	220	7,5	13	13	14	15
150	170	380	225	7,8	16	16	18	19
200	222	400	230	8,4	23	25	27	30
250	274	420	240	9,0	32	35	37	46
300	326	440	250	9,6	44	47	49	63
350	378	460	260	10,2	60	65	68	90
400	429	480	270	10,8	69	74	81	106
450	480	500	280	11,4	84	90	102	140
500	532	520	290	12,0	100	110	125	160
600	635	560	310	13,2	138	159	173	195
700	738	600	330	14,4	188	201	240	—
800	842	600	330	15,6	240	270	310	—
900	945	600	330	16,8	290	305	370	—
1000	1048	600	330	18,0	350	388	460	—
1100	1152	600	330	19,2	420	439	620	—
1200	1255	600	330	20,4	460	530	—	—
1400	1462	710	390	22,8	700	730	—	—
1500	1565	750	410	24	815	890	—	—
1600	1668	780	430	25,2	970	1040	—	—
1800	1875	850	470	27,6	1260	1330	—	—
2000	2082	920	500	30	1600	1700	—	—
2200	2280	990	500	32,4	2050	2160	—	—



Flanşlı Soketler / Flanged Sockets

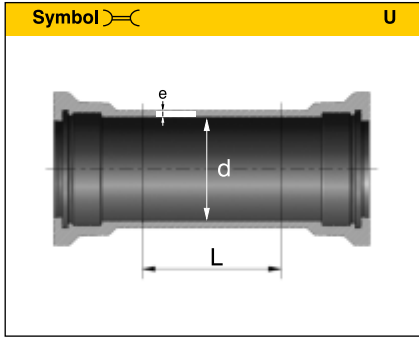


DN	d	Lu		e	W (kg)			
		A	B		PN 10	PN 16	PN 25	PN 40
80	109	130	105	7,0	8,5	8,5	8,5	10
100	130	130	110	7,2	10,5	10,5	11	13
125	156	135	115	7,5	13	13	14	15
150	183	135	120	7,8	16	16	18	19,5
200	235	140	120	8,4	22	22	24	27,5
250	288	145	125	9,0	32	32	35	41,5
300	340	150	130	9,6	43	44	50	54
350	393	155	135	10,2	54	56	60	70
400	445	160	140	10,3	60	64	75	100
450	498	165	145	11,4	72	80	93	112
500	550	170	—	12,0	90	99	115	126
600	655	180	—	13,2	120	144	160	184
700	760	190	—	14,4	175	185	205	—
800	865	200	—	15,6	230	252	270	—
900	970	210	—	16,8	271	290	340	—
1000	1075	220	—	18,0	340	360	440	—
1100	1180	230	—	19,2	400	490	670	—
1200	1285	240	—	20,4	530	600	—	—
1400	1477	310	—	22,8	740	796	—	—
1500	1580	330	—	24,0	930	1050	—	—
1600	1683	330	—	25,0	1070	1144	—	—
1800	1889	350	—	27,0	1250	1400	—	—
2000	2095	370	—	30,0	1440	1700	—	—
2200	2300	390	—	32,0	1800	1910	—	—



EK PARÇALARI FITTINGS

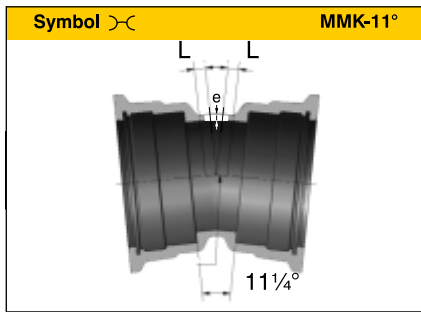
Kayar Manşonlar / Collars



DN	d	L	e	W (kg)
80	109	160	7,0	8,1
100	130	160	7,2	9,9
125	156	165	7,5	12,9
150	183	165	7,8	15,9
200	235	170	8,4	23,5
250	288	175	9,0	31,5
300	340	180	9,6	41
350	393	185	10,2	52
400	445	190	10,3	64
450	498	195	11,4	87
500	550	200	12,0	123
600	655	210	13,2	140
700	760	220	14,4	188
800	865	230	15,6	226
900	970	240	16,8	282
1000	1075	250	18,0	349
1100	1180	260	19,2	430
1200	1285	270	20,4	560
1400	1477	340	22,8	816
1500	1580	350	24,0	900
1600	1683	360	25,0	1094
1800	1889	380	27,0	1214
2000	2095	400	30,0	1570
2200	2300	420	32,0	1907

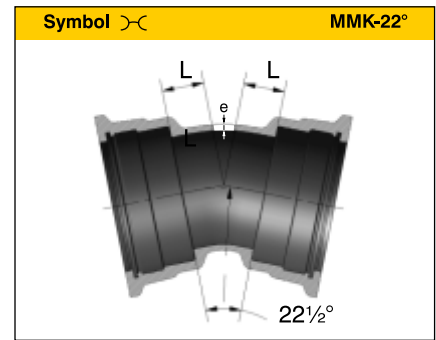


Çift Soketli Dirsekler 11¼°
Double Socket Bends 11¼°

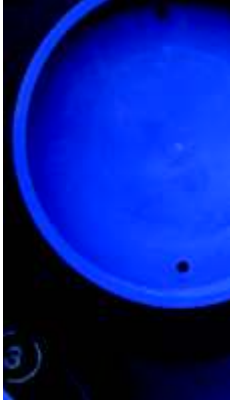


DN	L	e	W (kg)
80	30	7,0	7,5
100	30	7,2	10
125	35	7,5	11,9
150	35	7,8	16
200	40	8,4	24
250	50	9,0	30,5
300	55	9,6	45
350	60	10,2	60
400	65	10,3	73
450	70	11,4	88
500	75	12,0	103
600	85	13,2	144
700	95	14,4	198
800	110	15,6	265
900	120	16,8	363
1000	130	18,0	445
1100	140	19,2	510
1200	150	20,4	588
1400	130	22,8	810
1500	140	24,0	970
1600	140	25,2	1107
1800	155	27,6	1300
2000	165	30,0	1530
2200	190	32,4	1950

Çift Soketli Dirsekler 22½°
Double Socket Bends 22½°

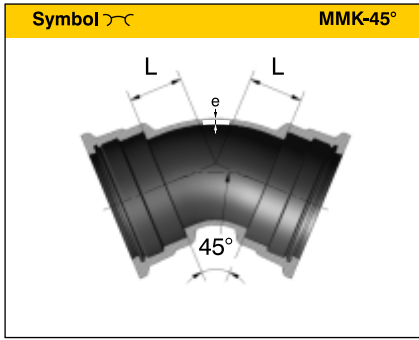


DN	L	e	W (kg)
80	40	7,0	7,7
100	40	7,2	9,9
125	50	7,5	13,5
150	55	7,8	18
200	65	8,4	24
250	75	9,0	33,5
300	85	9,6	50
350	95	10,2	67
400	110	10,3	83
450	120	11,4	91
500	130	12,0	113
600	150	13,2	157
700	175	14,4	227
800	195	15,6	297
900	220	16,8	383
1000	240	18,0	480
1100	260	19,2	598
1200	285	20,4	737
1400	260	22,8	998
1500	270	24,0	1180
1600	280	25,2	1370
1800	305	27,6	1530
2000	330	30,0	1990
2200	355	32,4	2520



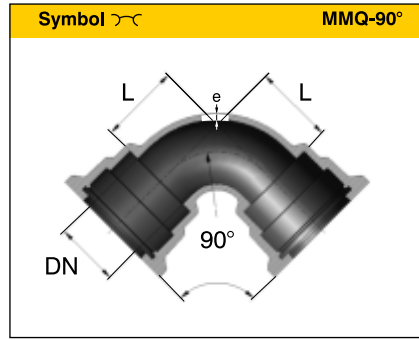
EK PARÇALARI FITTINGS

Çift Soketli Dirsekler 45° Double Socket Bends 45°



DN	L	e	W (kg)
80	55	7,0	8
100	65	7,2	11
125	75	7,5	14,1
150	85	7,8	19
200	110	8,4	31
250	130	9,0	42
300	150	9,6	55
350	175	10,2	81
400	195	10,3	91
450	220	11,4	124
500	240	12,0	146
600	285	13,2	212
700	330	14,4	310
800	370	15,6	410
900	415	16,8	570
1000	460	18,0	714
1100	505	19,2	914
1200	550	20,4	1100
1400	515	22,8	1370
1500	540	24,0	1590
1600	565	25,2	1850
1800	610	27,6	2200
2000	660	30,0	3010
2200	710	32,4	3690

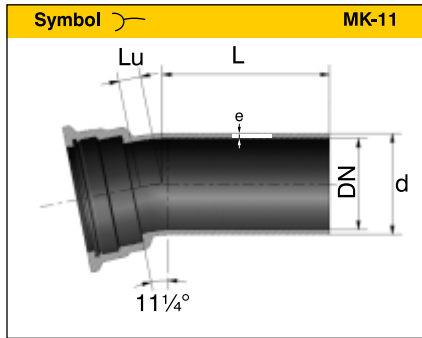
Çift Soketli Dirsekler 90° Double Socket Bends 90°



DN	L	e	W (kg)
80	100	7,0	9
100	120	7,2	11,4
125	145	7,5	16
150	170	7,8	20,5
200	220	8,4	33
250	270	9,0	53
300	320	9,6	71
350	370	10,2	98
400	420	10,3	124
450	470	11,4	168
500	520	12,0	199
600	620	13,2	360
700	720	14,4	449
800	820	15,6	615
900	920	16,8	830
1000	1020	18,0	1170
1100	1120	19,2	1510
1200	1220	20,4	1650
1400	1220	22,8	2100
1500	1250	24,0	2390
1600	1270	25,2	2820
1800	1300	27,6	3200
2000	1320	30,0	4050
2200	1360	32,4	5140

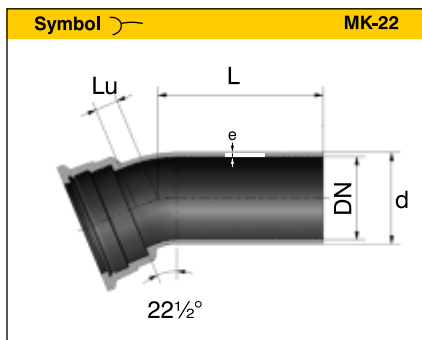


Tek Soketli Dirsekler 11¼° / Single Socket Bends 11¼°



DN	L	Lu	e	d	W (kg)
80	240	30	7,0	98	7,6
100	243	33	7,2	118	9,8
125	261	36	7,5	144	14
150	284	40	7,8	170	18
200	311	46	8,4	222	27
250	255	50	9,0	274	37,8
300	260	60	9,6	326	47
350	235	65	10,2	378	46
400	238	70	10,8	429	66,9
450	240	75	11,4	480	75
500	250	85	12,0	532	83,2
600	287	95	13,2	635	163
700	340	110	14,4	738	249
800	375	125	15,6	842	286

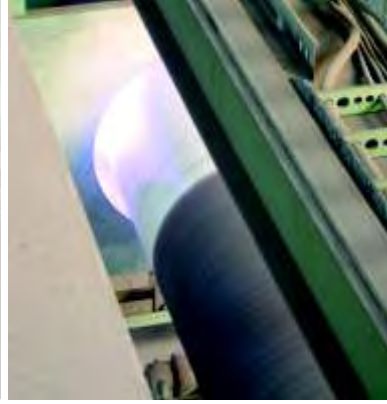
Tek Soketli Dirsekler 22½° / Single Socket Bends 22½°



DN	L	Lu	e	d	W (kg)
80	248	38	7,0	98	8,1
100	253	43	7,2	118	9,7
125	274	49	7,5	144	15,1
150	299	55	7,8	170	18,4
200	331	66	8,4	222	19,2
250	260	75	9,0	274	37,8
300	265	90	9,6	326	50,2
350	270	100	10,2	378	52
400	278	110	10,8	429	76,7
450	290	120	11,4	480	83
500	300	135	12,0	532	97
600	357	155	13,2	635	163
700	420	190	14,4	738	336
800	455	205	15,6	842	460

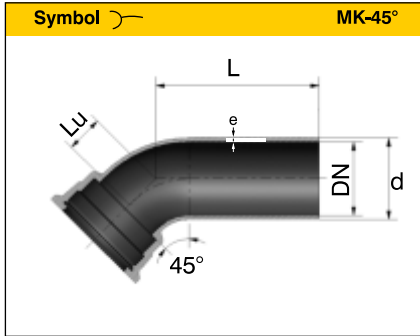






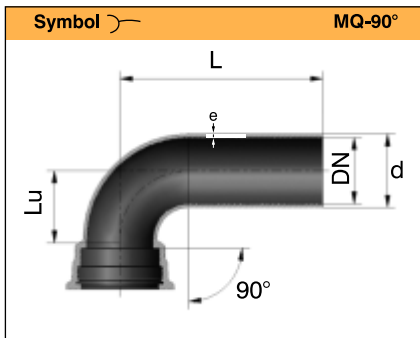
EK PARÇALARI FITTINGS

Tek Soketli Dirsekler 45° / Single Socket Bends 45°

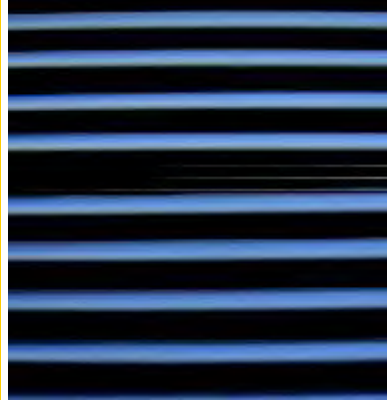


DN	L	Lu	e	d	W (kg)
80	265	55	7,0	98	8,4
100	274	65	7,2	118	10,8
125	301	76	7,5	144	16,2
150	331	87	7,8	170	20,5
200	374	109	8,4	222	33,5
250	300	130	9,0	274	44,3
300	315	155	9,6	326	59,4
350	345	175	10,2	378	68
400	368	200	10,8	429	91
450	420	220	11,4	480	106
500	405	240	12,0	532	187
600	529	285	13,2	635	250,5
700	610	380	14,4	738	441
800	625	375	15,6	842	570

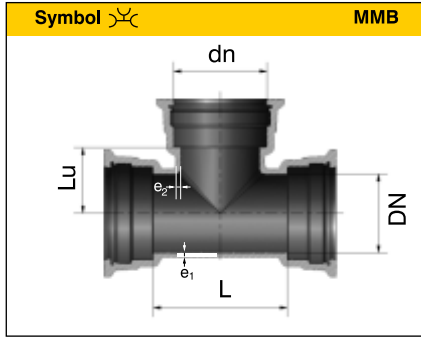
Tek Soketli Dirsekler 90° / Single Socket Bends 90°



DN	L	Lu	e	d	W (kg)
80	312	102,4	7,0	98	9
100	333	123	7,2	118	11,2
125	374	148,8	7,5	144	18,4
150	419	174,5	7,8	170	25,4
200	491	226	8,4	222	43,8
250	583	280	9,0	274	76,1
300	660	330	9,6	326	83,2
350	580	410	10,2	378	139
400	625	430	10,8	429	186,3
450	670	490	11,4	480	210
500	715	550	12,0	532	235,4
600	805	645	13,2	635	314
700	900	720	14,4	738	473
800	1080	800	15,6	842	644,5



Tümü Soketli T'ler / All Socket "T"



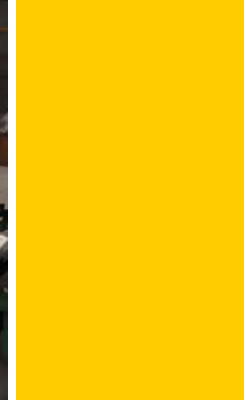
Nominal Çap Nominal Diameter		L	Lu	e ₁	e ₂	W (kg)
DN	dn					
80	80	170	85	7,0	7,0	13,4
100	80	170	95	7,2	7,0	16
	100	190	95	7,2	7,2	17,5
125	80	170	105	7,5	7,0	20,5
	100	195	110	7,5	7,2	21,6
	125	225	110	7,5	7,5	23,2
150	80	170	120	7,8	7,0	23,5
	100	195	120	7,8	7,2	25
	150	255	125	7,8	7,8	30
200	80	175	145	8,4	7,0	34
	100	200	145	8,4	7,2	36
	150	255	150	8,4	7,8	41,5
	200	315	155	8,4	8,4	48,5
250	100	200	170	9,0	7,2	45,5
	150	260	175	9,0	7,8	52,5
	200	315	180	9,0	8,4	60
	250	375	190	9,0	9,0	67,5
300	100	205	195	9,6	7,2	52
	150	260	200	9,6	7,8	59,5
	200	320	205	9,6	8,4	68
	300	435	220	9,6	9,6	84,5
350	100	205	260	10,2	7,2	67,5
	150	325	270	10,2	7,8	81,5
	200	325	270	10,2	8,4	86
	300	440	285	10,2	9,6	104
	350	495	290	10,2	10,2	116
400	100	210	285	10,8	7,2	79
	150	325	295	10,8	7,8	94,5
	200	325	295	10,8	8,4	99
	300	440	310	10,8	9,6	119
	400	560	320	10,8	10,8	144
450	150	330	320	11,4	7,8	110
	200	330	320	11,4	8,4	114
	300	445	335	11,4	9,6	136
	400	560	345	11,4	10,8	163
	450	620	350	11,4	11,4	176
500	150	330	345	12,0	7,8	127
	200	330	345	12,0	8,4	131
	300	450	360	12,0	9,6	156
	400	565	370	12,0	10,8	184
	500	680	380	12,0	12,0	214
600	150	340	395	13,2	7,8	164
	200	340	395	13,2	8,4	167
	300	455	410	13,2	9,6	196
	400	570	420	13,2	10,8	229
	600	800	440	13,2	13,2	298
700	200	345	445	14,4	7,2	235
	300	460	460	14,4	7,8	268
	400	575	470	14,4	8,4	306
	600	810	490	14,4	10,8	385



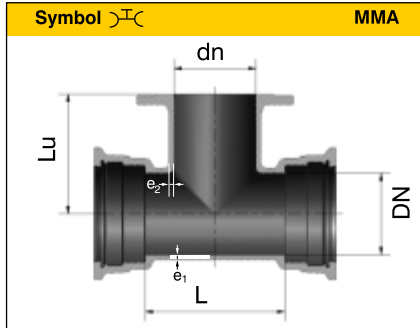
EK PARÇALARI FITTINGS

Tümü Soketli T'ler / All Socket "T"

Nominal Çap Nominal Diameter		L	Lu	e ₁	e ₂	W (kg)
DN	dn					
800	700	925	500	14,4	14,4	437
	200	350	495	15,6	8,4	293
	300	465	510	15,6	9,6	332
	400	580	520	15,6	10,8	376
	600	1045	540	15,6	13,2	531
900	800	1045	585	15,6	15,6	531
	200	355	545	16,8	8,4	362
	400	590	570	16,8	10,8	459
	600	1170	590	16,8	13,2	681
	800	1170	615	16,8	15,6	727
1000	900	1170	625	16,8	16,8	757
	200	360	595	18,0	8,4	440
	400	595	620	18,0	10,8	552
	600	1290	640	18,0	13,2	857
	800	1290	665	18,0	15,6	900
1100	1000	1290	685	18,0	18,0	962
	400	600	670	19,2	10,8	656
	600	830	690	19,2	13,2	785
	800	1065	715	19,2	15,6	940
	1000	1295	735	19,2	18,0	1107
1200	1100	1410	745	19,2	19,2	1202
	400	605	720	20,4	10,8	785
	600	840	740	20,4	13,2	933
	800	1070	765	20,4	15,6	1101
	1000	1300	785	20,4	18,0	1282
1400	1200	1535	805	20,4	20,4	1500
	600	1030	840	22,8	13,2	1406
	800	1260	865	22,8	15,6	1608
	1000	1495	885	22,8	18,0	1826
	1200	1725	905	22,8	20,4	2070
1500	1400	1960	930	22,8	22,8	2363
	600	1035	890	24,0	13,2	1624
	800	1270	915	24,0	15,6	1850
	1000	1500	935	24,0	18,0	2083
	1200	1730	955	24,0	20,4	2344
1600	1400	1965	980	24,0	22,8	2652
	1500	2080	990	24,0	24,0	2822
	600	1040	940	25,2	13,2	1848
	800	1275	965	25,2	15,6	2095
	1000	1505	985	25,2	18,0	2347
1800	1200	1740	1010	25,2	20,4	2635
	1400	1970	1030	25,2	22,8	2953
	1600	2200	1050	25,2	25,2	3312
	600	1055	1040	27,6	13,2	2079
	800	1285	1065	27,6	15,6	2357
2000	1000	1520	1085	27,6	18,0	2658
	1200	1750	1110	27,6	20,4	2957
	1400	1980	1130	27,6	22,8	3291
	1600	2215	1150	27,6	25,2	3644
	1800	2445	1175	27,6	27,6	4041
2200	600	1065	1140	30,0	13,2	2558
	800	1300	1165	30,0	15,6	2894
	1000	1530	1185	30,0	18,0	3238
	1200	1760	1210	30,0	20,4	3584
	1400	1995	1230	30,0	22,8	3971
	1600	2225	1250	30,0	25,2	4361
	1800	2460	1275	30,0	27,6	4800
	2000	2690	1295	30,0	30,0	5268
	800	1310	1265	32,4	15,6	3463
	1000	1540	1285	32,4	18,0	3860
	1200	1775	1310	32,4	20,4	4267
	1400	2005	1330	32,4	22,8	4697
	1600	2240	1350	32,4	25,2	5144
	1800	2470	1375	32,4	27,6	5622
	2000	2700	1395	32,4	30,0	6126
	2200	2935	1415	32,4	32,4	6676



Flanş Branşmanlı Çift Soketli T'ler / Double Socket "T" With Flanged Branch



Nominal Çap Nominal Diameter		L	Lu	e ₁	e ₂	W (kg)		
DN	dn					PN 10	PN 16	PN 25
80	80	170	165	7,0	7,0	14	14	14
80	80	175	165	7,2	7,0	16,7	16,7	16,7
100	100	190	180	7,2	7,2	17,9	17,9	18,4
125	80	170	190	7,5	7,0	18,9	19	21,6
125	100	195	195	7,5	7,2	20,5	21	22,7
125	125	225	200	7,5	7,5	22,1	22,1	24,3
150	80	170	205	7,8	7,0	24,5	24,5	24,5
150	100	195	210	7,8	7,2	26	26	26,5
150	150	255	220	7,8	7,8	31	31	32
200	80	175	235	8,4	7,0	35	35	35
200	100	200	240	8,4	7,2	37	37	37,5
200	150	255	250	8,4	7,8	42,5	42,5	43,5
200	200	315	260	8,4	8,4	48,8	48	50
250	100	200	270	9,0	7,2	45,5	45,5	46
250	150	260	280	9,0	7,8	52,5	52,5	53,5
250	200	315	290	9,0	8,4	58,5	58,5	60,5
250	250	375	300	9,0	9,0	66,5	66,5	70
300	100	205	300	9,6	7,2	52,5	52,5	53
300	150	260	310	9,6	7,8	59,5	59,5	60,5
300	200	320	320	9,6	8,4	67	67	69
300	300	435	340	9,6	9,6	85	85	90,5
350	100	205	330	10,2	7,2	68	68	68,5
350	150	325	350	10,2	7,8	82	82	83
350	200	325	350	10,2	8,4	85	85	87
350	300	440	370	10,2	9,6	105	105	110
350	350	495	380	10,2	10,2	114	117	125
400	100	210	360	10,8	7,2	79,5	79,5	80
400	150	270	370	10,8	7,8	89,5	89,5	90,5
400	200	325	380	10,8	8,4	98,5	98,5	100
400	300	440	400	10,8	9,6	120	120	125
400	400	560	420	10,8	10,8	143	148	159
450	100	215	390	11,4	7,2	93,5	93,5	94
450	150	270	400	11,4	7,8	111	111	112
450	200	330	410	11,4	8,4	114	114	116
450	300	445	430	11,4	9,6	138	138	143
450	400	560	450	11,4	10,8	163	167	178
450	450	620	460	11,4	11,4	176	184	195
500	100	215	420	12,0	7,2	108	108	109
500	150	330	440	12,0	7,8	129	129	130
500	200	330	440	12,0	8,4	132	131	133
500	300	450	460	12,0	9,6	159	158	164
500	400	565	480	12,0	10,8	185	190	201
500	500	680	500	12,0	12,0	216	229	240
600	100	220	480	13,2	7,2	139	139	139
600	150	340	500	13,2	7,8	166	166	167
600	200	340	500	13,2	8,4	169	168	170
600	300	455	520	13,2	9,6	200	200	205
600	400	570	540	13,2	10,8	232	236	247
600	600	800	580	13,2	13,2	307	330	343
700	100	345	525	14,4	7,2	229	229	230
700	150	345	525	14,4	7,8	232	232	233
700	200	345	525	14,4	8,4	235	235	237
700	400	575	555	14,4	10,8	305	309	320

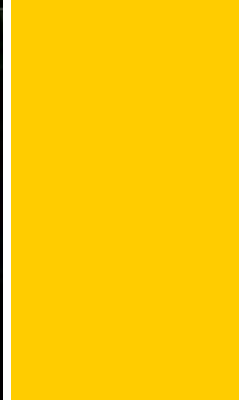


EK PARÇALARI FITTINGS

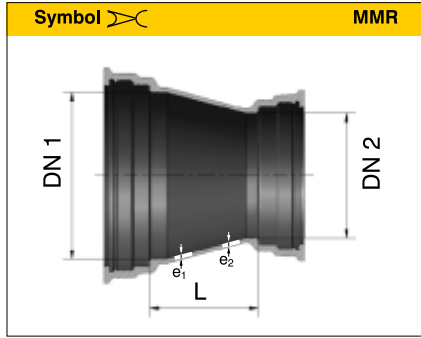
Flanş Branşmanlı Çift Soketli T'ler / Double Socket "T" With Flanged Branch

Nominal Çap Nominal Diameter		L	Lu	e ₁	e ₂	W (kg)		
DN	dn					PN 10	PN 16	PN 25
	600	810	585	14,4	13,2	386	409	422
	700	925	600	14,4	14,4	435	445	480
800	100	350	585	15,6	7,2	288	288	288
	150	350	585	15,6	7,8	291	291	292
	200	350	585	15,6	8,4	294	294	296
	400	580	615	15,6	10,8	376	381	392
	600	1045	645	15,6	13,2	535	558	571
	800	1045	675	15,6	15,6	584	596	645
900	150	355	645	16,8	7,8	361	361	362
	200	355	645	16,8	8,4	364	364	366
	400	590	675	16,8	10,8	462	467	478
	600	1170	705	16,8	13,2	688	710	724
	800	1170	735	16,8	15,6	735	746	796
	900	1170	750	16,8	16,8	760	773	829
1000	150	360	705	18,0	7,8	439	439	440
	200	360	705	18,0	8,4	442	442	444
	400	595	735	18,0	10,8	556	561	572
	600	1290	765	18,0	13,2	867	890	903
	800	1290	795	18,0	15,6	912	924	974
	1000	1290	825	18,0	18,0	972	1004	1077
1100	200	370	765	19,2	8,4	534	534	536
	400	600	795	19,2	10,8	663	667	678
	600	830	825	19,2	13,2	799	821	835
	800	1065	855	19,2	15,6	956	968	1017
	1000	1295	885	19,2	18,0	1124	1156	1229
	1100	1410	900	19,2	19,2	1219	1246	1328
1200	200	375	825	20,4	8,4	647	647	649
	400	605	855	20,4	10,8	794	799	810
	600	840	885	20,4	13,2	950	973	986
	800	1070	915	20,4	15,6	1152	1134	1183
	1000	1300	945	20,4	18,0	1306	1337	1410
	1200	1535	975	20,4	20,4	1522	1568	1652
1400	400	800	950	22,8	10,8	1234	1238	1249
	600	1030	980	22,8	13,2	1424	1447	1460
	800	1260	1010	22,8	15,6	1631	1643	1692
	1000	1495	1040	22,8	18,0	1851	1883	1956
	1200	1725	1070	22,8	20,4	2095	2140	2225
	1400	1960	1100	22,8	22,8	2353	2391	2544
1500	400	805	1005	24,0	10,8	1434	1439	1450
	600	1035	1035	24,0	13,2	1645	1668	1681
	800	1270	1065	24,0	15,6	1877	1889	1938
	1000	1500	1095	24,0	18,0	2113	2144	2218
	1200	1730	1125	24,0	20,4	2375	2420	2505
	1400	1965	1155	24,0	22,8	2648	2686	2839
	1500	2080	1170	24,0	24,0	2802	2873	3026
1600	400	810	1060	25,2	10,8	1638	1642	1653
	600	1040	1090	25,2	13,2	1871	1893	1907
	800	1275	1120	25,2	15,6	2125	2137	2186
	1000	1505	1150	25,2	18,0	2382	2413	2487
	1200	1740	1180	25,2	20,4	2668	2714	2798
	1400	1970	1210	25,2	22,8	2956	2934	3147
	1600	2200	1240	25,2	25,2	3298	3371	3542
1800	600	1055	1200	27,6	13,2	2103	2126	2139
	800	1285	1230	27,6	15,6	2400	2411	2461
	1000	1520	1260	27,6	18,0	2709	2740	2813
	1200	1750	1290	27,6	20,4	3035	3081	3165
	1400	1980	1320	27,6	22,8	3365	3403	3556
	1600	2215	1350	27,6	25,2	3749	3822	3993
	1800	2445	1380	27,6	27,6	4128	4205	4420
2000	600	1065	1310	30,0	13,2	2588	2611	2624
	800	1300	1340	30,0	15,6	2944	2956	3005
	1000	1530	1370	30,0	18,0	3299	3330	3404
	1200	1760	1400	30,0	20,4	3675	3721	3805
	1400	1995	1430	30,0	22,8	4060	4098	4252
	1600	2225	1460	30,0	25,2	4485	4557	4729
	1800	2460	1490	30,0	27,6	4910	4987	5201
2200	2000	2690	1520	30,0	30,0	5374	5475	5825
	800	1310	1450	32,4	15,6	3522	3534	3583
	1000	1540	1480	32,4	18,0	3933	3964	4037
	1200	1775	1510	32,4	20,4	4372	4417	4502
	1400	2005	1540	32,4	22,8	4804	4842	4995
	1600	2240	1570	32,4	25,2	5288	5360	5531
	1800	2470	1600	32,4	27,6	5755	5832	6046
	2000	2700	1630	32,4	30,0	6260	6360	6710
	2200	2935	1660	32,4	32,4	6843	6960	—

Ölçü birimi "mm", ağırlık birimi "kg"dır. / Dimensions "mm", weights "kg"



Çift Soketli Redüksiyonlar / Double Socket Tapers



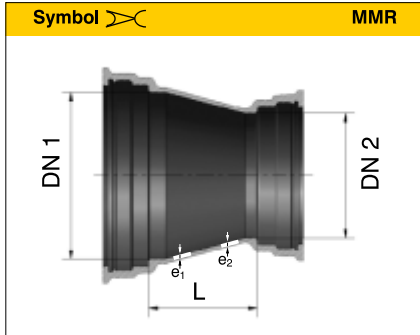
DN 1	DN 2	L	e ₁	e ₂	W (kg)
80	65	80	7,0	7,0	8
100	65	120	7,2	7,0	9,3
	80	90	7,2	7,0	9,2
125	65	180	7,5	7,0	12
	80	140	7,5	7,0	11,3
	100	100	7,5	7,2	11,8
150	80	190	7,8	7,0	16,5
	100	150	7,8	7,2	15,7
	125	100	7,8	7,5	15,7
200	80	280	8,4	7,0	22,7
	100	250	8,4	7,2	20,5
	125	200	8,4	7,5	22,7
	150	150	8,4	7,8	22,1
250	80	300	9,0	7,0	33
	100	300	9,0	7,2	30
	125	300	9,0	7,5	31,3
	150	250	9,0	7,8	34,6
	200	150	9,0	8,4	34,6
300	100	350	9,6	7,2	43
	150	350	9,6	7,8	44
	200	250	9,6	8,4	43,2
	250	150	9,6	9,0	41
350	150	360	10,2	7,8	67
	200	360	10,2	8,4	59
	250	260	10,2	9,0	57
	300	160	10,2	9,6	53
400	200	400	10,8	8,4	75
	250	360	10,8	9,0	68
	300	260	10,8	9,6	61
	350	160	10,8	10,2	57





EK PARÇALARI FITTINGS

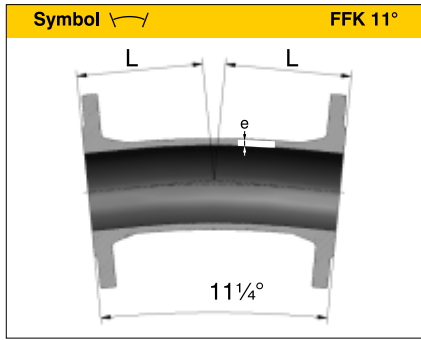
Çift Soketli Redüksiyonlar / Double Socket Tapers



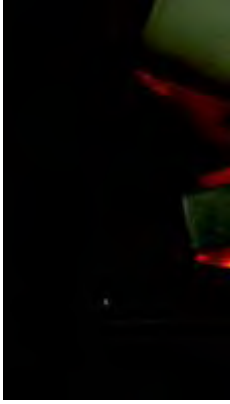
DN 1	DN 2	L	e ₁	e ₂	W (kg)
450	300	360	11,4	9,6	88
	350	260	11,4	10,2	83
	400	160	11,4	10,8	78
500	250	460	12,0	9,0	127,4
	300	460	12,0	9,6	124
	350	360	12,0	10,2	102
	400	260	12,0	10,8	96
	450	160	12,0	12,0	91
600	300	500	13,2	9,6	157
	350	500	13,2	10,2	149
	400	460	13,2	10,8	143
	500	260	13,2	12,0	130
700	400	500	14,4	10,8	235
	500	480	14,4	12,0	200
	600	280	14,4	13,2	179
800	500	680	15,6	12,0	301
	600	480	15,6	13,2	276
	700	280	15,6	14,4	247
900	700	480	16,8	14,4	363
	800	280	16,8	15,6	340
1000	800	480	18,0	15,6	450
	900	280	18,0	16,8	410
1100	1000	280	19,2	18,0	440
1200	1000	480	20,4	20,4	630
1400	1200	360	22,8	22,8	750
1500	1400	260	24,0	22,8	890
1600	1400	360	25,2	18,0	1010
1800	1600	360	27,6	25,2	1200
2000	1800	360	30,0	27,6	1430
2200	2000	360	32,4	30,0	1745



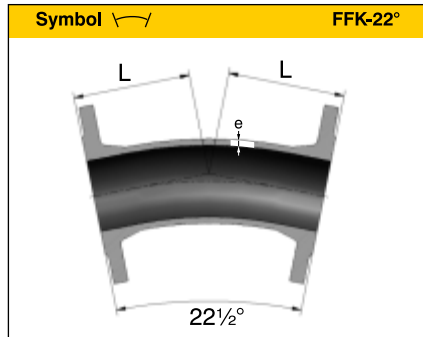
Çift Flanşlı Dirsekler 11¼° / Double Flanged Bends 11¼°



DN	L	e	W (kg)		
			PN 10	PN 16	PN 25
80	110	7,0	9	9	9
100	115	7,2	11	11	12
125	120	7,5	15	15	16,7
150	130	7,8	19	19	21
200	145	8,4	28	28	32
250	165	9,0	39	39	46
300	175	9,6	52	52	64
350	190	10,2	62	68	83
400	205	10,8	77	86	108
450	210	11,4	100	115	140
500	220	12,0	111	139	161
600	235	13,2	162	210	239
700	250	14,4	210	235	310
800	265	15,6	280	305	405
900	280	16,8	340	367	495
1000	310	18,0	440	505	653
1100	325	19,2	540	610	772
1200	345	20,4	720	810	985
1400	345	22,8	910	1000	—
1500	345	24,0	1106	1250	—
1600	345	25,2	1250	1410	—
1800	345	27,6	1550	1706	—
2000	375	30,0	1700	1910	—
2200	405	32,4	2180	2450	—



Çift Flanşlı Dirsekler 22½° / Double Flanged Bends 22½°



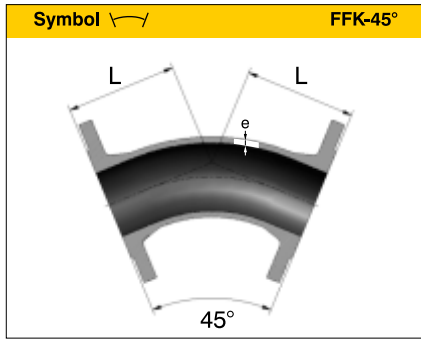
DN	L	e	W (kg)		
			PN 10	PN 16	PN 25
80	120	7,0	9,4	9,4	9,4
100	130	7,2	11	11	12,5
125	140	7,5	15,5	15,5	16,7
150	150	7,8	19,7	19,7	21
200	170	8,4	28	29	32
250	190	9,0	42	42	50
300	210	9,6	56	56	67
350	230	10,2	69	74	90
400	250	10,8	95	104	121
450	260	11,4	125	150	165
500	270	12,0	145	179	190
600	290	13,2	185	235	253
700	310	14,4	238	262	334
800	330	15,6	320	349	450
900	350	16,8	395	424	546
1000	370	18,0	494	561	711
1100	390	19,2	610	670	840
1200	410	20,4	739	842	1020
1400	430	22,8	985	1074	—
1500	450	24,0	1147	1295	—
1600	470	25,2	1360	1530	—
1800	480	27,6	1640	1800	—
2000	500	30,0	2000	2205	—
2200	520	32,4	2600	2830	—







Çift Flanşlı Dirsekler 45° / Double Flanged Bends 45°

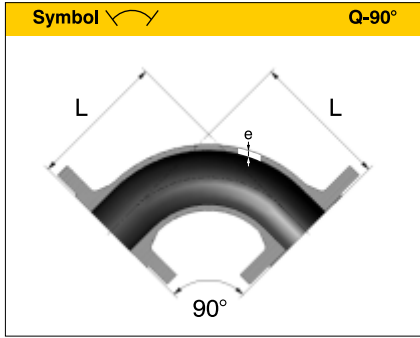


DN	L	e	W (kg)		
			PN 10	PN 16	PN 25
80	130	7,0	10	10,3	10,3
100	140	7,2	12,6	12,6	12,6
125	150	7,5	17,5	17,5	19
150	160	7,8	21,6	21,6	23
200	180	8,4	28	29	31
250	350	9,0	57	59	62
300	400	9,6	78	80	88
350	298	10,2	82	89	98
400	324	10,8	102	111	129
450	350	11,4	128	136	158
500	375	12,0	150	175	198
600	426	13,2	236	263	294
700	478	14,4	310	335	404
800	529	15,6	415	442	536
900	581	16,8	531	567	671
1000	632	18,0	688	751	890
1100	694	19,2	860	920	1075
1200	750	20,4	1070	1178	1350
1400	775	22,8	1435	1510	—
1500	810	24,0	1700	1850	—
1600	845	25,2	2270	2400	—
1800	910	27,6	2650	2820	—
2000	980	30,0	3250	3450	—
2200	980	32,4	3950	4300	—



EK PARÇALARI FITTINGS

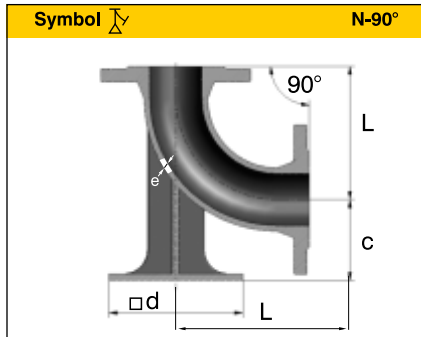
Çift Flanşlı Dirsekler 90° / Double Flanged Bends 90°



DN	L	e	W (kg)		
			PN 10	PN 16	PN 25
80	165	7,0	10,2	10,2	11
100	180	7,2	13	13	13,5
125	200	7,5	19	21	22
150	220	7,8	24	24	27
200	260	8,4	31	32	34,5
250	350	9,0	50	53	57
300	400	9,6	70	74	81
350	450	10,2	95	111	123
400	500	10,8	136	147	191
450	550	11,4	174	185	209
500	600	12,0	206	220	235
600	700	13,2	277	325	353
700	800	14,4	395	416	480
800	900	15,6	545	572	670
900	1000	16,8	710	745	850
1000	1100	18,0	970	1130	1240
1100	1200	19,2	1170	1230	1380
1200	1300	20,4	1453	1562	1720
1400	1350	22,8	2000	2100	—
1500	1400	24,0	2280	2430	—
1600	1450	25,2	2660	2810	—
1800	1500	27,6	3350	3500	—
2000	1550	30,0	4150	4370	—
2200	1600	32,4	5200	5500	—



Çift Flanşlı Ayaklı Dirsekler 90° / Duckfoot Bends 90°

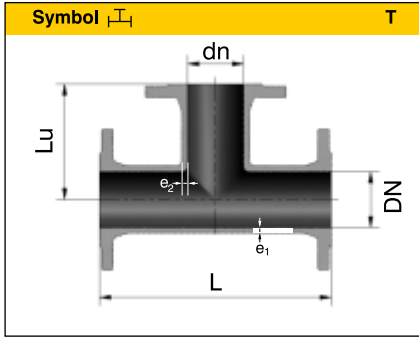


DN	L	e	c	d	W (kg)		
					PN 10	PN 16	PN 25
80	165	7,0	110	180	15	15	15
100	180	7,2	125	200	19	19	19
125	200	7,5	140	225	27	27	29
150	220	7,8	160	250	34	34	36
200	260	8,4	190	300	52	52	56
250	350	9,0	225	350	84	85	90
300	400	9,6	255	400	116	118	122
350	450	10,2	290	450	139	145	162
400	500	10,8	320	500	199	205	225
450	550	11,4	355	550	245	261	283
500	600	12,0	385	600	310	336	360
600	700	13,2	450	700	475	520	546
700	800	14,4	515	800	684	710	775
800	900	15,6	580	900	950	972	1071
900	1000	16,8	645	1000	1250	1280	1390
1000	1100	18,0	710	1100	1630	1700	1850
1100	1200	19,2	775	1200	2100	2150	2300
1200	1300	20,4	840	1300	2600	2700	2860



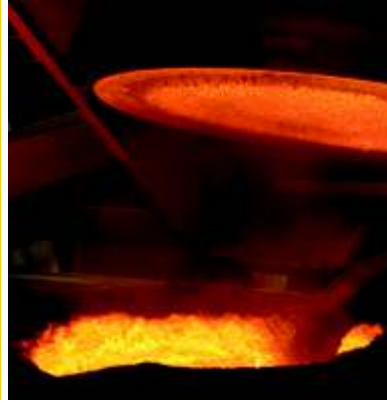
EK PARÇALARI FITTINGS

Tümü Flanşlı T'ler / All Flanged "T"



Nominal Çap Nominal Diameter		L	Lu	e ₁	e ₂	W (kg)		
DN	dn					PN 10	PN 16	PN 25
80	80	330	165	7,0	7,0	14,9	14,9	14,9
100	80	360	175	7,2	7,0	17,4	17,4	18,4
	100	360	180	7,2	7,2	18,2	18,2	19,7
125	80	400	190	7,5	7,0	25,4	25,4	30
	100	400	195	7,5	7,2	27	27	26
	125	400	200	7,5	7,5	28,1	28,1	32,5
150	80	440	205	7,8	7,0	27	27	29
	100	440	210	7,8	7,2	28	28	30,5
	150	440	220	7,8	7,8	31	31	34
200	80	520	235	8,4	7,0	39,5	39	43
	100	520	240	8,4	7,2	40,5	40	44,5
	150	520	250	8,4	7,8	43,5	43	48
	200	520	260	8,4	8,4	47	46,5	52,5
250	100	700	275	9,0	7,2	62,5	62	69,5
	150	700	325	9,0	7,8	67	66	74,5
	200	700	325	9,0	8,4	70,5	69,5	79
	250	700	350	9,0	9,0	76,5	75,5	86
300	100	800	300	9,6	7,2	85,5	84,5	96
	150	800	350	9,6	7,8	89,5	89	101
	200	800	350	9,6	8,4	93	92,5	105
	300	800	400	9,6	9,6	106	105	121
350	100	850	325	10,2	7,2	106	111	127
	150	850	325	10,2	7,8	109	114	131
	200	850	325	10,2	8,4	111	117	134
	300	850	425	10,2	9,6	126	131	153
	350	850	425	10,2	10,2	131	139	162
400	100	900	350	10,8	7,2	131	140	163
	150	900	350	10,8	7,8	134	143	166
	200	900	350	10,8	8,4	137	146	170
	300	900	450	10,8	9,6	152	160	188
	400	900	450	10,8	10,8	162	175	208
450	100	950	375	11,4	7,2	159	174	197
	150	950	375	11,4	7,8	161	177	200
	200	950	375	11,4	8,4	164	180	204
	300	950	475	11,4	9,6	179	194	222
	400	950	475	11,4	10,8	189	209	242
	450	950	475	11,4	11,4	194	218	250
500	100	1000	400	12,0	7,2	193	220	241
	150	1000	400	12,0	7,8	195	222	244
	200	1000	400	12,0	8,4	198	225	248
	300	1000	500	12,0	9,6	213	239	266
	400	1000	500	12,0	10,8	222	254	286
	500	1000	500	12,0	12,0	235	275	307
600	150	1100	450	13,2	7,8	275	320	348
	200	1100	450	13,2	8,4	278	323	352
	300	1100	550	13,2	9,6	292	338	370
	400	1100	550	13,2	10,8	301	351	389
	600	1100	550	13,2	13,2	328	396	436
700	200	650	525	14,4	8,4	255	276	347
	300	760	540	14,4	9,6	289	310	385
	400	870	555	14,4	10,8	323	348	429
	600	1200	585	14,4	13,2	426	469	552
	700	1200	600	14,4	14,4	448	479	584

Ölçü birimi "mm", ağırlık birimi "kg"dır. / Dimensions "mm", weights "kg"



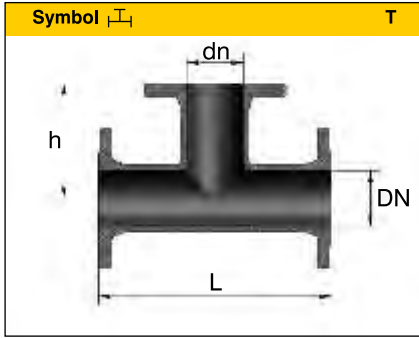
Tümü Flanşlı T'ler / All Flanged "T"

Nominal Çap Nominal Diameter		L	Lu	e ₁	e ₂	W (kg)		
DN	dn					PN 10	PN 16	PN 25
800	200	690	585	15,6	8,4	335	358	459
	300	800	600	15,6	9,6	375	398	502
	400	910	615	15,6	10,8	415	443	552
	600	1350	645	15,6	13,2	566	612	724
	800	1350	675	15,6	15,6	615	651	798
900	200	730	645	16,8	8,4	412	438	554
	400	950	675	16,8	10,8	506	536	661
	600	1500	705	16,8	13,2	721	770	897
	800	1500	735	16,8	15,6	768	806	968
	900	1500	750	16,8	16,8	793	832	1002
1000	200	770	705	18,0	8,4	517	580	729
	400	990	735	18,0	10,8	625	692	850
	600	1650	765	18,0	13,2	921	1007	1167
	800	1650	795	18,0	15,6	967	1041	1237
	1000	1650	825	18,0	18,0	1027	1121	1341
1100	400	980	795	19,2	10,8	756	814	988
	600	1210	825	19,2	13,2	887	963	1139
	800	1470	855	19,2	15,6	1037	1103	1315
	1000	1690	885	19,2	18,0	1200	1286	1522
	1100	1800	900	19,2	19,2	1293	1374	1618
1200	400	1070	855	20,4	10,8	908	1005	1184
	600	1240	885	20,4	13,2	1056	1170	1352
	800	1470	915	20,4	15,6	1222	1326	1544
	1000	1700	945	20,4	18,0	1400	1523	1765
	1200	1950	975	20,4	20,4	1609	1746	1999
1400	600	1550	980	22,8	13,2	1537	1636	1955
	800	1760	1010	22,8	15,6	1737	1825	2180
	1000	2015	1040	22,8	18,0	1946	2054	2433
	1200	2215	1070	22,8	20,4	2182	2304	2695
	1400	2435	1100	22,8	22,8	2430	2544	3003
1500	600	1575	1035	24,0	13,2	1759	1926	2245
	800	1805	1065	24,0	15,6	1979	2134	2489
	1000	2040	1095	24,0	18,0	2207	2382	2761
	1200	2245	1125	24,0	20,4	2460	2650	3040
	1400	2465	1155	24,0	22,8	2721	2903	3362
1600	1500	2575	1170	24,0	24,0	2871	3086	3545
	600	1600	1090	25,2	13,2	2023	2191	2547
	800	1835	1120	25,2	15,6	2263	2420	2812
	1000	2065	1150	25,2	18,0	2511	2688	3104
	1200	2300	1180	25,2	20,4	2784	2975	3402
1800	1400	2495	1210	25,2	22,8	3063	3246	3742
	1600	2715	1240	25,2	25,2	3396	3613	4128
	600	1655	1200	27,6	13,2	2516	2693	3135
	800	1885	1230	27,6	15,6	2801	2967	3445
	1000	2120	1260	27,6	18,0	3093	3279	3781
2000	1200	2350	1290	27,6	20,4	3408	3608	4121
	1400	2555	1320	27,6	22,8	3727	3919	4501
	1600	2775	1350	27,6	25,2	4094	4321	4921
	1800	2995	1380	27,6	27,6	4462	4693	5337
	600	1705	1310	30,0	13,2	3101	3325	4038
2200	800	1955	1340	30,0	15,6	3437	3650	4399
	1000	2170	1370	30,0	18,0	3778	4011	4784
	1200	2395	1400	30,0	20,4	4140	4388	5171
	1400	2635	1430	30,0	22,8	4505	4745	5597
	1600	2835	1460	30,0	25,2	4916	5190	6061
	1800	3055	1490	30,0	27,6	5320	5599	6513
	2000	3275	1520	30,0	30,0	5771	6074	7123
	800	1780	1450	32,4	15,6	3823	4069	—
	1000	2000	1480	32,4	18,0	4218	4483	—
	1200	2220	1510	32,4	20,4	4632	4912	—
	1400	2440	1540	32,4	22,8	5048	5320	—
	1600	2660	1570	32,4	25,2	5508	5814	—
	1800	2880	1600	32,4	27,6	5959	6270	—
	2000	3100	1630	32,4	30,0	6448	6783	—
	2200	3320	1660	32,4	32,4	7007	7358	—



EK PARÇALARI FITTINGS

Tümü Flanşlı T'ler (Kısa) / All Flanged "T" (short pattern)



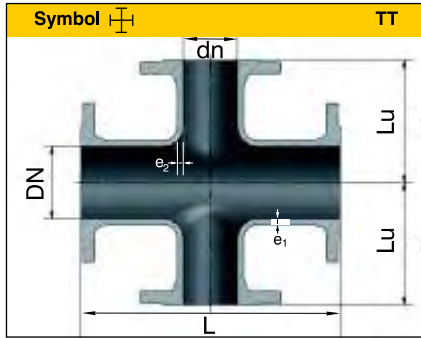
DN	dn	L	h	W (kg)		
				PN 10	PN 16	PN 25
250	80	405	265	47	47	54
	100	425	270	51	51	59
	150	485	280	57	57	65
	200	540	290	64	64	73
300	250	600	300	73	72	84
	80	425	295	61	61	70
	100	450	300	66	66	77
	150	505	310	74	74	85
350	200	565	320	82	82	94
	250	620	330	93	93	105
	300	680	340	102	102	117
	100	470	330	80	86	103
400	150	530	340	88	94	112
	200	585	350	98	104	122
	250	645	360	110	117	138
	350	760	380	129	138	163
450	100	490	360	96	107	130
	150	550	370	106	117	141
	200	610	380	116	127	152
	250	665	390	128	137	164
500	300	725	400	140	158	186
	100	515	390	115	135	164
	150	570	400	128	147	173
	200	630	410	141	168	183
600	250	690	420	156	175	194
	300	745	430	169	188	205
	400	860	450	194	204	228
	100	535	420	137	167	191
600	200	650	440	161	192	217
	400	885	480	218	254	289
	200	700	500	223	276	307
	400	930	540	292	350	390
600	600	1165	580	360	380	410





EK PARÇALARI FITTINGS

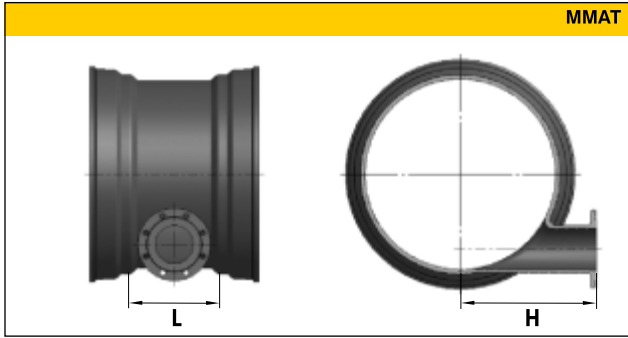
Tümü Flanşlı TT'ler / All Flanged Cross "TT"



DN	dn	L	Lu	e ₁	e ₂	W (kg)	
						PN 10	PN 16
100	100	360	180	7,2	7,2	28,6	28,6
125	100	400	195	7,5	7,2	35,5	35,5
	125	400	200	7,5	7,5	36,7	36,7
150	100	440	210	7,8	7,2	40,5	40,5
	125	440	215	7,8	7,5	43	43
	150	440	220	7,8	7,8	48,6	48,6
200	100	520	240	8,4	7,2	54	54
	150	520	250	8,4	7,8	62,1	62,1
	200	520	260	8,4	8,4	71,3	71,3
250	100	700	275	9,0	7,2	104	104
	125	700	275	9,0	7,5	107	107
	150	700	300	9,0	7,8	111	111
	200	700	325	9,0	8,4	124,5	124,5
	250	700	350	9,0	9,0	119,3	119,3
300	100	800	300	9,6	7,2	148	148
	150	800	325	9,6	7,8	152	152
	200	800	350	9,6	8,4	177	164
	250	800	375	9,6	9,0	174	174
	300	800	400	9,6	9,6	203	203
350	100	850	325	10,2	7,2	136,5	142,5
	300	850	425	10,2	9,6	184	190
	350	850	425	10,2	10,2	209	203
400	100	900	350	10,8	7,2	168	178
	150	900	350	10,8	7,8	173	183
	200	900	350	10,8	8,4	177,5	188
	250	900	350	10,8	9,0	197,5	193
	300	900	450	10,8	9,6	212	225
	350	900	450	10,8	10,2	234	247
	400	900	450	10,8	10,8	268	273
450	150	950	375	11,4	7,8	306	324
	450	950	375	11,4	11,4	314	341
500	150	1000	400	12,0	7,8	355	383
	200	1000	400	12,0	8,4	358	386
	250	1000	400	12,0	9,0	362	390
	300	1000	500	12,0	9,6	392	420
	400	1000	500	12,0	10,8	397	430
	500	1000	500	12,0	12,0	365	450
600	200	1100	450	13,2	8,4	334	384
	250	1100	450	13,2	9,0	339	389
	300	1100	550	13,2	9,6	397	447
	350	1100	550	13,2	10,2	401	453
	400	1100	550	13,2	10,8	406	469
	500	1100	550	13,2	12,0	440	503
	600	1100	550	13,2	13,2	555	572
700	500	1200	600	14,4	12,0	640	655
	700	1200	600	14,4	14,4	691	729
800	600	1350	675	15,6	13,2	710	763
	800	1350	675	15,6	15,6	745	795



Soketli T Tahliye Branşmanlı / Double Socket "T" with Flanged Discharge

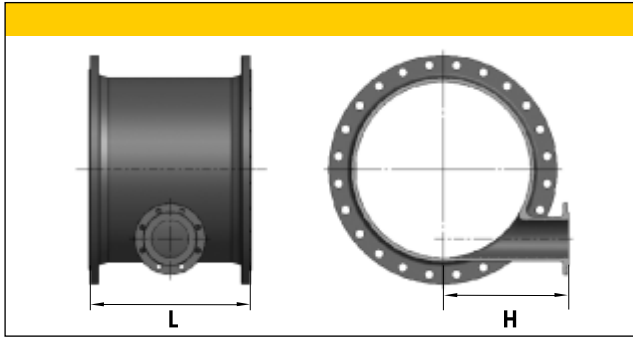


DN	dn	L	H	W (kg)		
				PN 10	PN 16	PN 25
200	80	175	250	37,5	37,5	37,5
250	80	180	275	47	47	47
300	80	205	300	59	59	59
350	100	325	325	78,5	78,5	79
400	100	270	350	92,5	92,5	93
450	100	285	375	129	129	137
500	100	330	400	158	158	177
600	100	340	450	189	189	194
700	150	345	500	255	255	271
800	150	350	550	316	316	325
900	150	355	600	453	459	474
1000	200	360	650	482	481	483
1100	200	440	700	578	578	580
1200	200	445	750	699	698	700
1400	250	800	950	1230	1234	1245
1500	250	805	1005	1415	1417	1425
1600	300	810	1060	1611	1613	1619
1800	400	1055	1200	2010	2016	2022
2000	600	1065	1310	2595	2619	2634
2200	600	1310	1450	3470	3483	3500



EK PARÇALARI FITTINGS

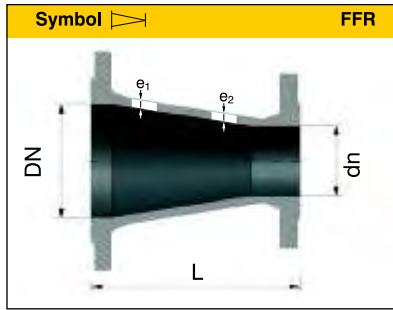
Flanşlı T Tahliye Branşmanlı / All Flanged Discharge "T"



DN	dn	L	H	W (kg)		
				PN 10	PN 16	PN 25
200	80	520	250	40,5	42	44
250	80	405	275	62	62	69
300	80	425	300	85	85	96
350	100	470	325	107	113	129
400	100	490	350	133	142	165
450	100	515	375	161	177	199
500	100	535	400	195	222	244
600	100	700	450	223	276	307
700	150	650	500	340	370	—
800	150	690	550	428	439	—
900	150	730	600	476	484	—
1000	200	770	650	546	629	—
1200	200	850	750	779	871	—



Çift Flanşlı Redüksiyonlar / Double Flanged Tapers

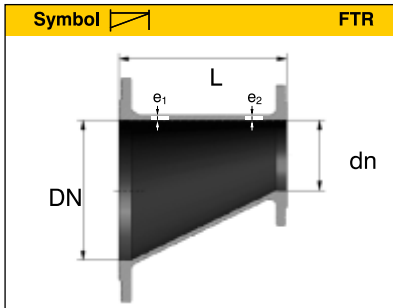


DN	dn	L	e ₁	e ₂	W (kg)		
					PN 10	PN 16	PN 25
80	65	200	7,0	7,0	9,5	9,5	10,3
100	80	200	7,2	7,0	11,5	11,5	13,5
125	80	200	7,5	7,0	12,5	12,9	19,4
	100	200	7,5	7,2	13,6	13,6	18,5
150	80	200	7,8	7,0	15	15,4	16,2
	100	200	7,8	7,2	16	16,4	16,4
	125	200	7,8	7,5	17	17	19
200	100	300	8,4	7,2	23,7	23,7	27
	125	300	8,4	7,5	24,5	24,5	25
	150	300	8,4	7,8	26,5	26,5	36,2
250	100	300	9,0	7,2	30	30	48
	125	300	9,0	7,5	33,5	33,5	34
	150	300	9,0	7,8	35,6	35,6	41
	200	300	9,0	8,4	34	34	44
300	100	300	9,6	7,2	37	38	40
	125	300	9,6	7,5	36	36	41
	150	300	9,6	7,8	36,7	36,7	45
	200	300	9,6	8,4	40	40	47,5
	250	300	9,6	9,0	46	46	88
350	150	300	10,2	7,8	47	51	60
	200	300	10,2	8,4	51	69	74
	250	300	10,2	9,0	55,6	51,6	77
	300	300	10,2	9,6	56	63,2	72
400	200	300	10,8	8,4	54,5	65	72
	250	300	10,8	9,0	62	75	86,4
	300	300	10,8	9,6	62,6	64,8	86
	350	300	10,8	10,2	74	75,6	106,5
450	350	300	11,4	10,2	96	99	104
	400	300	11,4	10,8	93	104	118
500	250	600	12,0	9,0	120	138,3	168
	300	600	12,0	9,6	135	159,3	190
	350	600	12,0	10,2	149,6	176	210
	400	600	12,0	10,8	143	173	215
600	300	600	13,2	9,6	175	201	217
	350	600	13,2	10,2	162	207	221
	400	600	13,2	10,8	203	230	240
	500	600	13,2	12,0	197	235	249
700	350	600	14,4	10,2	251,6	255	261
	400	600	14,4	10,8	263	281	287
	500	600	14,4	12,0	285	308	322
	600	600	14,4	13,2	315	346	399
800	400	600	15,6	10,8	264,5	275	285
	500	600	15,6	12,0	356,4	389	399
	600	600	15,6	13,2	361,3	416	475
	700	600	15,6	14,4	413	447	500
900	500	600	16,8	12,0	320	398	410
	600	600	16,8	13,2	357	410	432
	700	600	16,8	14,4	374	390	424
	800	600	16,8	15,6	392	432	536
1000	600	600	18,0	13,2	372	421	520
	700	600	18,0	14,4	375	427	540
	800	600	18,0	15,6	545	583	704
	900	600	18,0	16,8	550	612	730
1200	1000	790	20,4	18,0	690	717	870

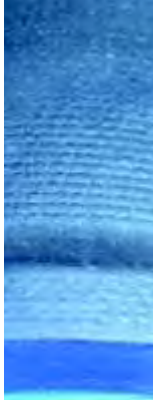


EK PARÇALARI FITTINGS

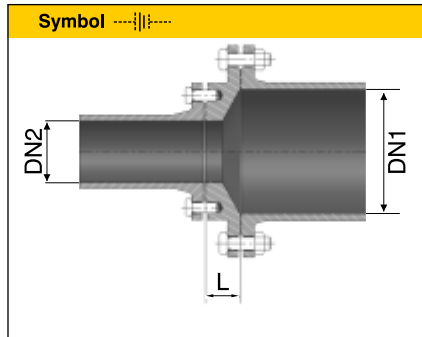
Çift Flanşlı Eksantrik Redüksiyonlar / Double Flanged Eccentric Tapers



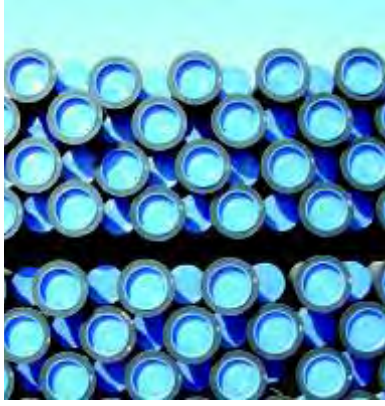
DN	dn	L	e ₁	e ₂	W (kg)	
					PN 10	PN 16
125	100	200	7,5	7,2	16,5	16,5
150	100	300	7,8	7,2	20	20
200	150	300	8,4	7,8	30	30
250	200	300	9,0	8,4	42	43
300	200	300	9,6	8,4	53	55
300	250	300	9,6	9,0	55	58
350	250	300	10,2	9,0	83	90
400	300	300	10,8	9,6	105	115
450	400	300	11,4	10,8	143	165
500	400	600	12,0	10,8	182	197
600	500	600	13,2	12,0	266	277
700	600	600	14,4	13,2	310	322
800	600	600	15,6	13,2	370	396
900	700	600	16,8	14,4	470	494
1000	800	600	18,0	15,6	530	564



Redüksiyon Flanşları / Reducing Flanges

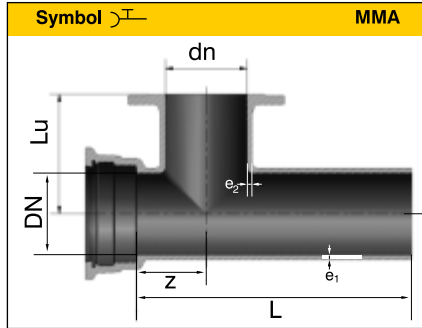


DN 1	DN 2	L	W (kg)	
			PN 10	PN 16
150	100	30	12	12
	100	40	12	12
200	150	40	11,5	11,5
	100	42	25	25
250	150	42	22	22
	200	42	19	19
300	150	46	29	29
	200	46	27	27
350	100	48	57	57
	150	48	55	55
400	200	48	50	50
	100	38	54	54
450	150	38	50	50
	200	38	48	48
500	250	50	46	46
	300	50	44	44
600	100	47	75	75
	150	47	79	79
700	200	47	83	83
	250	50	89	89
800	300	50	94	94
	400	50	103	103
900	150	47	93	93
	200	47	90	90
1000	300	47	86	86
	400	47	71	71
1100	150	45	145	145
	300	45	124	124
1200	400	45	118	118
	500	56	103	103
1300	700	63	240	240
	800	68	252	252



EK PARÇALARI FITTINGS

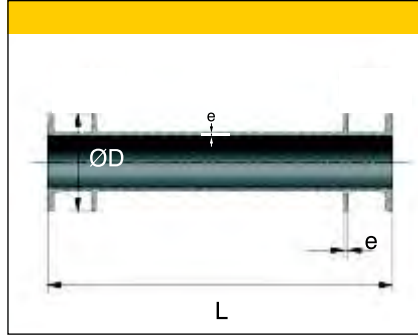
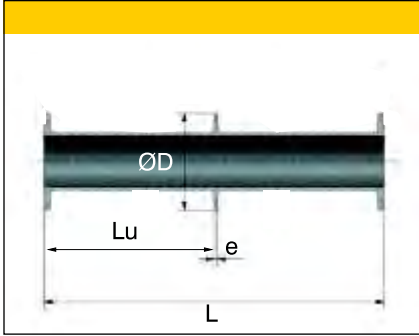
Flanş Branşmanlı Tek Soketli T'ler / Single Socket "T" With Flanged Branch



Nominal Çap Nominal Diameter		L	Lu	z	e ₁	e ₂	W (kg)
DN	dn						
80	80	400	180	106	7,0	7,0	15,7
100	80	400	200	120	7,2	7,0	18,4
	100	400	200	120	7,2	7,2	18,8
125	80	425	190	112	7,5	7,0	22,5
	100	425	195	112	7,5	7,2	23,5
	125	425	200	112	7,5	7,5	26
150	100	450	210	128	7,8	7,2	29,2
	125	450	210	128	7,8	7,5	28,5
	150	450	210	128	7,8	7,8	30,4
200	100	600	250	190	8,4	7,2	51
	150	600	275	240	8,4	7,8	58
300	100	800	300	260	9,6	7,2	79
	150	800	300	260	9,6	7,8	83
	200	800	350	260	9,6	8,4	93
400	100	800	350	260	10,8	7,2	110
	150	800	375	260	10,8	7,8	113
	200	800	400	260	10,8	8,4	122
450	100	600	390	108	11,4	7,2	125
	150	600	400	135	11,4	7,8	138
	200	600	410	165	11,4	8,4	147
	250	600	420	195	11,4	9	158
	300	600	430	223	11,4	9,6	165
	400	600	450	280	11,4	10,8	185
	450	600	460	310	11,4	11,4	195



Duvar Geçiş Boruları / Anchoring Pipes



Flanş boru parçaları K9, K10 flanş boru gövdesine kaynaklanmıştır.
Flange pipe pieces with welded on flanges pipe body K9, K10.

Flanş boru parçaları K12, flanş boru gövdesi ile dökülmüştür.
Flange pipe pieces with cast on flanges pipe body K12.

Nominal Çap Nominal Diameter	Boru Gövdesi / Pipe Body						Flanşlı / Flanges W (kg)			
	K=9		K=10		K=12					
DN	e	kg/m	e	kg/m	e	kg/m	PN 10	PN 16	PN 25	PN 40
80	6,0	12,2	6,0	12,2	7,0	14,1	3	3	3,5	3,5
100	6,0	15,1	6,1	15,1	7,2	17,7	3,6	3,6	4	4,5
150	6,0	22,8	6,5	23,5	7,8	28,0	5,5	5,5	6	9,2
200	6,4	30,6	7,0	33,3	8,4	39,7	7,5	7,5	10	15,7
250	6,8	40,2	7,5	44,3	9,0	52,8	10	10	15	25,4
300	7,2	50,8	8,0	56,3	9,6	67,3	13	13	20	36,3
350	7,7	63,2	8,5	69,6	10,2	83,1	15	17,5	29	—
400	8,1	75,5	9,0	83,7	10,8	100	18	23	37	—
500	9,0	10,5	10,0	116	12,0	138,2	25	38	55	—
600	9,9	137	11,0	152	13,2	182	34	56	79	—
700	10,8	174	12,0	193	14,4	231	47	58	91	—
800	11,7	215	13,0	239	15,6	286	64	75	124	—
900	12,6	260	14,0	289	16,8	346	74	87	143	—
1000	13,5	310	15,0	344	18,0	411	93	125	198	—
1100	14,4	363	16,0	402	19,2	482	114	140	221	—
1200	15,3	420	17,0	466	20,4	558	138	185	270	—
1400	17,1	547	19,0	607	22,8	727	175	215	367	—
1500	18,0	617	20,0	683	24,0	819	201	273	427	—
1600	18,9	690	21,0	766	25,2	917	245	320	488	—
1800	20,7	850	23,0	943	27,6	1129	291	370	—	—
2000	22,5	1026	25,0	1139	30,0	1363	340	445	—	—
2200	24,3	1209	27,0	1345	32,4	1613	425	542	—	—

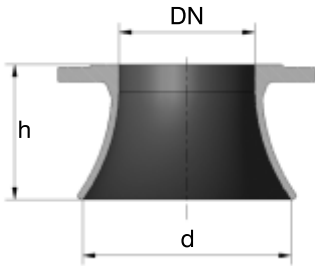
* L ve Lu müşteri tarafından tanımlanır. / L & Lu mentioned by customer.



EK PARÇALARI FITTINGS

Flanşlı Emme Çanları / Flanged Bell Mouths

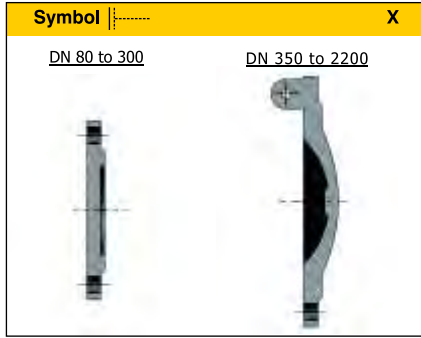
Symbol Δ



DN	d	h	W (kg)	
			PN 10	PN 16
80	150	130	5,2	5,2
100	175	135	6,2	6,2
125	200	145	8,6	8,6
150	230	150	10,1	10,1
200	290	170	15	14,8
250	345	185	21	20,5
300	405	205	28,5	28,5
350	460	220	35,5	35,5
400	520	240	45	45
450	575	255	54	54
500	635	275	67	67
600	750	310	96,5	120
700	865	345	135	146
800	980	380	182	197
900	1095	415	231	250
1000	1210	450	297	331
1100	1325	485	370	397
1200	1440	520	457	512
1400	1670	590	646	702
1500	1785	625	763	851
1600	1900	660	906	995



Kör Flanşlar / Blank Flanges



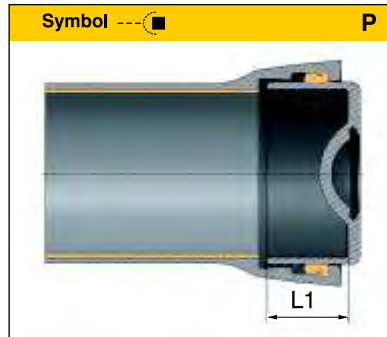
Nominal Çap Nominal Diameter	W (kg)		
DN	PN 10	PN 16	PN 25
80	4	4	4,5
100	4,6	4,6	5,7
125	6	6	6,5
150	7,6	7,6	9
200	11	11	14
250	17	18	21
300	25	25	31
350	32,5	37	46,5
400	40,5	48,5	63
450	50	63,5	79
500	62	83	100
600	94	130	154
700	136	169	220
800	189	235	309
900	244	307	402
1000	319	413	539
1100	405	518	674
1200	504	659	842
1400	687	904	1192
1500	808	1092	1417
1600	955	1280	1664
1800	1240	1687	2223
2000	1630	2226	2986
2200	2014	2782	—

Flanş bağlantı çapları DIN EN 1092-2'ye göre yapılmaktadır. / Flange connection dimensions according to DIN EN 1092-2.



EK PARÇALARI FITTINGS

Son Kapama / Cap



DN	L	O / W (kg)	L1	P / W (kg)
80	82	6	95	2,5
100	88	7	100	3
125	88	9	100	5,5
150	88	14	105	6
200	90	22	110	9
250	96	28	117	14,5
300	104	37	119	22
350	—	—	120	30
400	—	—	130	43
450	—	—	140	55
500	—	—	170	67,5
600	—	—	180	90

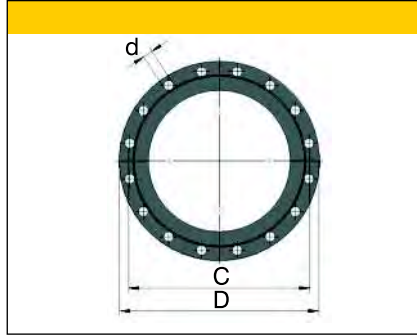
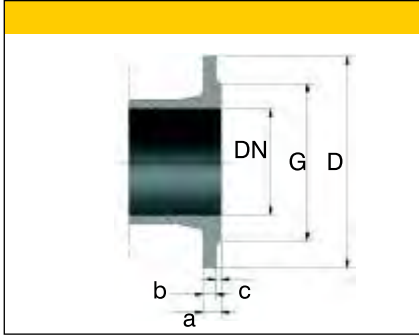






Flanş Boyut Detayları / Flange Dimensions

PN 10



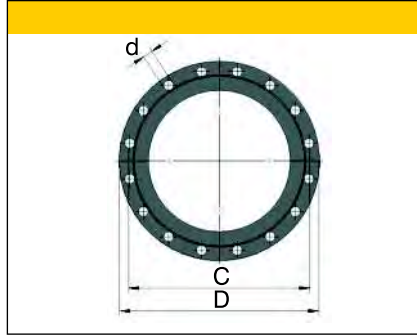
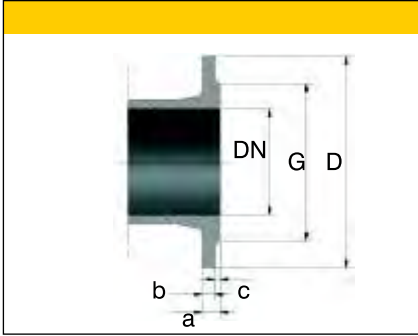
DN	D	C	G	Kalınlık / Thickness			Cıvata / Bolts			W (kg)
				a	b	c	Adet Number	d	Ölçü Dimension	
			PN 10							
80	200	160	132	19	16	3	8	19	M 16	3
100	220	180	156	19	16	3	8	19	M 16	3,6
125	250	210	184	19	16	3	8	19	M 16	4,5
150	285	240	211	19	16	3	8	23	M 20	5,5
200	340	295	266	20	17	3	8	23	M 20	7,5
250	400	350	319	22	19	3	12	23	M 20	10
300	455	400	370	24,5	20,5	4	12	23	M 20	13
350	505	460	429	24,5	20,5	4	16	23	M 20	15
400	565	515	480	24,5	20,5	4	16	28	M 24	18
450	615	565	530	25,5	21,5	4	20	28	M 24	21
500	670	620	582	26,5	22,5	4	20	28	M 24	25
600	780	725	682	30	25	5	20	31	M 27	34
700	895	840	794	32,5	27,5	5	24	31	M 27	47
800	1015	950	901	35	30	5	24	34	M 30	64
900	1115	1050	1001	37,5	32,5	5	28	34	M 30	74
1000	1230	1160	1112	40	35	5	28	37	M 33	93
1100	1340	1270	1218	42,5	37,5	5	32	37	M 33	114
1200	1455	1380	1328	45	40	5	32	40	M 36	138
1400	1675	1590	1530	46	41	5	36	43	M 39	175
1500	1785	1700	1640	47,5	42,5	5	36	43	M 39	201
1600	1915	1820	1750	49	44	5	40	49	M 45	245
1800	2115	2020	1950	52	47	5	44	49	M 45	291
2000	2325	2230	2150	55	50	5	48	49	M 45	340
2200	2550	2440	2370	57,5	51,5	6	52	56	M 52	425



EK PARÇALARI FITTINGS

Flanş Boyut Detayları / Flange Dimensions

PN 16

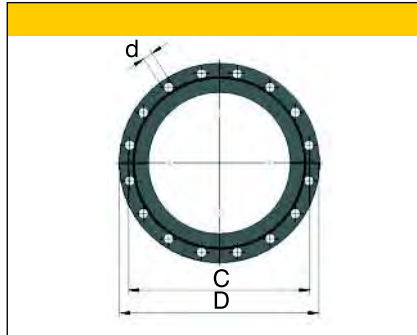
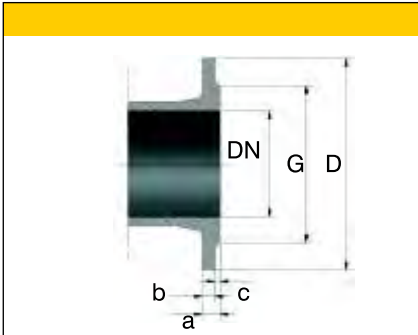


DN	D	C	G	Kalınlık / Thickness			Cıvata / Bolts			
				a	b	c	Adet Number	d	Ölçü Dimension	W (kg)
PN 16										
80	200	160	132	19	16	3	8	19	M 16	3
100	220	180	156	19	16	3	8	19	M 16	3,6
125	250	210	184	19	16	3	8	19	M 16	4,5
150	285	240	211	19	16	3	8	23	M 20	5,5
200	340	295	266	20	17	3	12	23	M 20	7,5
250	400	355	319	22	19	3	12	28	M 24	10
300	455	410	370	24,5	20,5	4	12	28	M 24	13
350	520	470	429	26,5	22,5	4	16	28	M 24	17,5
400	580	525	480	28	24	4	16	31	M 27	23
450	640	585	548	30	26	4	20	31	M 27	30
500	715	650	609	31,5	27,5	4	20	34	M 30	38
600	840	770	720	36	31	5	20	37	M 33	56
700	910	840	794	39,5	34,5	5	24	37	M 33	58
800	1025	950	901	43	38	5	24	40	M 36	75
900	1125	1050	1001	46,5	41,5	5	28	40	M 36	87
1000	1255	1170	1112	50	45	5	28	43	M 39	125
1100	1355	1270	1218	53,5	48,5	5	32	43	M 39	140
1200	1485	1390	1328	57	52	5	32	49	M 45	185
1400	1685	1590	1530	60	55	5	36	49	M 45	215
1500	1820	1710	1640	62,5	57,5	5	36	56	M 52	273
1600	1930	1820	1750	65	60	5	40	56	M 52	320
1800	2130	2020	1950	70	65	5	44	56	M 52	370
2000	2345	2230	2150	75	70	5	48	62	M 56	445
2200	2555	2440	2370	81	75	6	52	62	M 56	542



Flanş Boyut Detayları / Flange Dimensions

PN 25

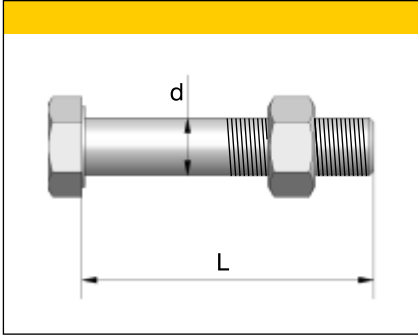


DN	D	C	G	Kalınlık / Thickness			Cıvata / Bolts			W (kg)
				a	b	c	Adet Number	d	Ölçü Dimension	
PN 25										
80	200	160	132	19	16	3	8	19	M 16	3,5
100	235	190	156	19	16	3	8	23	M 20	4
125	270	220	184	19	16	3	8	28	M 24	5
150	300	250	211	20	17	3	8	28	M 24	6
200	360	310	274	22	19	3	12	28	M 24	10
250	425	370	330	24,5	21,5	3	12	31	M 27	15
300	485	430	389	27,5	23,5	4	16	31	M 27	20
350	555	490	448	30	26	4	16	34	M 30	29
400	620	550	503	32	28	4	16	37	M 33	37
450	670	600	548	34,5	30,5	4	20	37	M 33	45
500	730	660	609	36,5	32,5	4	20	37	M 33	55
600	845	770	720	42	37	5	20	40	M 36	79
700	960	875	820	46,5	41,5	5	24	43	M 39	91
800	1085	990	928	51	46	5	24	49	M 45	124
900	1185	1090	1028	55,5	50,5	5	28	49	M 45	143
1000	1320	1210	1140	60	55	5	28	56	M 52	198
1100	1420	1310	1240	64,5	59,5	5	32	56	M 52	221
1200	1530	1420	1350	69	64	5	32	56	M 52	270
1400	1755	1640	1560	74	69	5	36	62	M 56	367
1500	1865	1750	1670	77,5	72,5	5	36	62	M 56	427
1600	1975	1860	1780	81	76	5	40	62	M 56	488
1800	2195	2070	1985	88	83	5	44	70	M64	750
2000	2425	2300	2210	95	90	5	48	70	M64	890
2200	2625	2500	2400	110	104	6	52	70	M64	1150



EK PARÇALARI FITTINGS

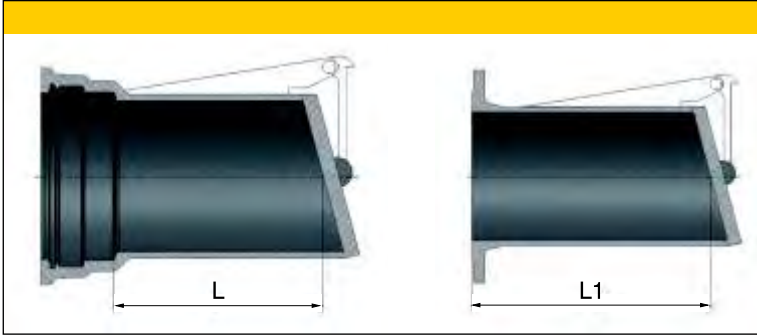
Civata ve Somunlar / Bolts & Nuts



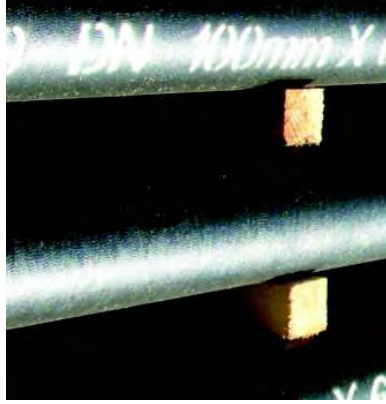
DN	PN 10		PN 16		PN 25	
	dxL	Civata (adet) Bolt (pcs)	dxL	Civata (adet) Bolt (pcs)	dxL	Civata (adet) Bolt (pcs)
80	M 16 x 65	8	M 16 x 65	8	M 16 x 65	8
100	M 16 x 65	8	M 16 x 65	8	M 20 x 70	8
125	M 16 x 65	8	M 16 x 65	8	M 24 x 75	8
150	M 20 x 70	8	M 20 x 70	8	M 24 x 75	8
200	M 20 x 70	8	M 20 x 70	12	M 24 x 80	12
250	M 20 x 80	12	M 24 x 85	12	M 27 x 90	12
300	M 20 x 80	12	M 24 x 85	12	M 27 x 95	16
350	M 20 x 80	16	M 24 x 90	16	M 30 x 110	16
400	M 24 x 85	16	M 27 x 100	16	M 33 x 120	16
450	M 24 x 90	20	M 27 x 100	20	M 33 x 120	20
500	M 24 x 85	20	M 30 x 110	20	M 33 x 120	20
600	M 27 x 100	20	M 33 x 120	20	M 36 x 140	20
700	M 27 x 100	24	M 33 x 130	24	M 39 x 150	24
800	M 30 x 110	24	M 36 x 140	24	M 45 x 170	24
900	M 30 x 120	28	M 36 x 150	28	M 45 x 170	28
1000	M 33 x 130	28	M 39 x 160	28	M 52 x 190	28
1100	M 33 x 130	32	M 39 x 170	32	M 52 x 210	32
1200	M 36 x 140	32	M 45 x 180	32	M 52 x 210	32
1400	M 39 x 150	36	M 45 x 190	36	M 56 x 220	36
1500	M 39 x 150	36	M 52 x 200	36	M 56 x 230	36
1600	M 45 x 160	40	M 52 x 200	40	M 56 x 240	40
1800	M 45 x 170	44	M 52 x 210	44	M 64 x 260	44
2000	M 45 x 180	48	M 56 x 230	48	M 64 x 280	48
2200	M 52 x 190	52	M 56 x 240	52	M 64 x 375	52



Kurbağalık / Flap Valve



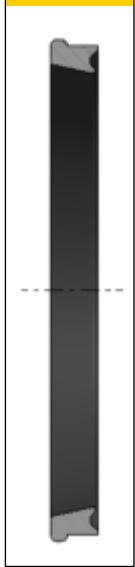
DN	L	T Tip / T Type W (kg)	L1	Flanşlı / Flange W(kg)
80	130	7,5	210	9,5
100	160	8	250	13
125	160	15	250	16,5
150	190	18,5	280	22
200	200	31	300	35
250	250	56	350	60
300	260	76	360	70
350	280	94	390	92
400	280	118	390	117



EK PARÇALARI FITTINGS

Standart Tip Contalar / Standard Type Gaskets

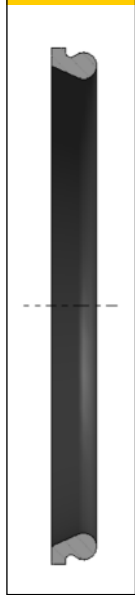
DN 80 ila 2200



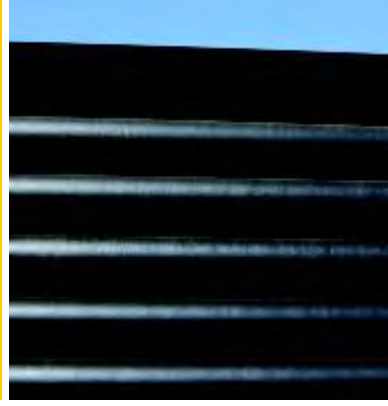
DN	Standard W (kg)
80	0,160
100	0,195
125	0,240
150	0,285
200	0,380
250	0,515
300	0,745
350	0,950
400	1,150
450	1,350
500	1,610
600	2,130
700	2,835
800	3,640
900	4,550
1000	5,665
1100	8,800
1200	9,500
1400	16,500
1500	20,450
1600	22,000
1800	27,000
2000	31,600
2200	35,300

T Tip Contalar / T Type Gaskets

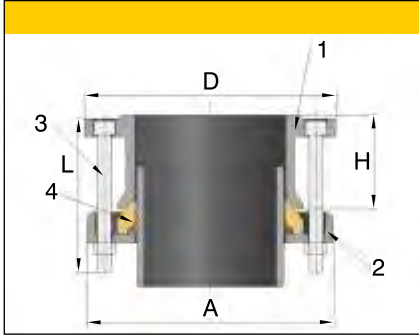
DN 80 ila 1600



DN	Tyton W (kg)
80	0,140
100	0,165
125	0,200
150	0,235
200	0,390
250	0,510
300	0,720
350	0,830
400	1,150
450	1,520
500	1,700
600	2,100
700	3,500
800	4,900
900	6,200
1000	7,800
1200	9,270
1400	17,600
1600	24,600

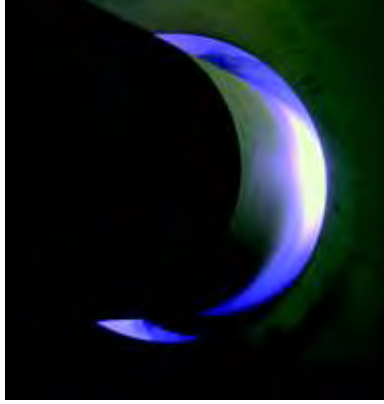


Düktil/CTP/Çelik Borulara Uygun Geniş Toleranslı Flanş Adaptörü Universal Flange Adaptor for DI/Steel /GRP Pipes



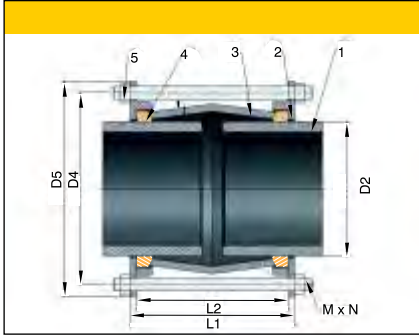
No.	Referans / Reference	Malzeme / Material	Standart Standard
1	Gövde / Body	Düktül Demir / Ductile Iron GGG400-10	EN 1563
2	Son Halka / And Ring	Düktül Demir / Ductile Iron GGG400-10	EN 1563
3	Cıvata ve Somun / Bolt and Nut	Çelik 8x8 Çinko/Dacro / Steel 8x8 Zinced/Dacro	—
4	Conta / Gasket	EPDM / NBR	EN 681
	Kaplama / Coating	Füzyon Bağlamalı Epoksi / Fusion Bonded Epoxy	—

DN	Aralık Range	PN 10 - 16					
		Cıvata / Bolt		A	D	H	W (kg)
		L	adet/pcs				
50	59-72	125	2	165	195	78	3,5
65	72-85	125	2	185	190	78	3,9
80	88-103	125	4	185	216	78	4,5
100	109-128	125	4	218	225	78	6
125	132-146	125	4	150	288	78	7
150	159-182	125	4	272	288	78	7,8
175	192-210	125	4	312	345	78	11,6
200	218-235	130	4	335	345	78	12
250	272-289	130	6	405	455	85	14,5
300	315-332	130	6	460	455	85	18,5
350	374-391	130	8	510	520	108	41,5
400	400-429	150	8	489	580	108	49,5
400	418-435	160	8	580	580	108	51,2
400	425-442	160	8	580	580	108	52,8
450	455-472	160	10	620	640	108	57,2
450	476-493	160	10	640	640	108	61,6
500	500-532	160	10	683	715	114	67,1
500	527-544	180	10	690	715	114	68,2
500	555-572	180	10	715	715	114	69,5
500	566-583	180	10	715	715	150	70,5
500	582-599	200	10	715	715	150	71,5
600	600-630	200	10	790	840	114	82,5
600	630-647	180	10	820	840	114	84,7
600	645-662	180	10	830	840	114	85,8
600	662-679	200	10	840	840	150	86,9
600	675-692	200	10	840	840	150	90,2



EK PARÇALARI FITTINGS

Düktil Demir Borular için Esnek Kaplin / Flexible Coupling for Ductile Iron Pipe

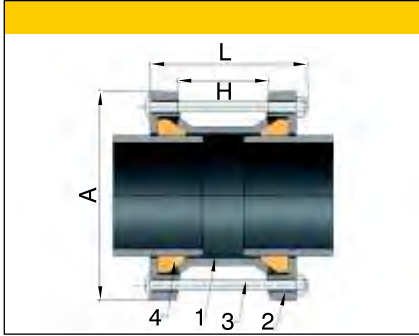


No.	Parça İsmi / Part Name	Malzeme / Material
1	Boru / Pipe	Düktil Demir / Ductile Iron GGG400-10
2	Tutucu / Retainer	Düktil Demir / Ductile Iron GGG400-10
3	Gövde / Body	Düktil Demir / Ductile Iron GGG400-10
4	Halka / Ring	EPDM / NBR
5	Saplama / Stud	Galvanizli Çelik / Steel Galvanized

DN	D2	D4	D5	L1	L2	t	M	N	W (kg)
80	98	169	198	178	102	7,0	12	4	6,4
100	118	189	218	178	102	7,5	12	4	7,0
125	144	215	244	178	102	7,5	12	4	9,1
150	170	241	270	178	102	8,0	12	4	11,2
200	222	293	322	178	102	8,5	12	6	15,0
250	274	345	374	178	102	9,0	12	6	21,5
300	326	397	426	178	102	10,0	12	8	23,1
350	378	458	491	262	152	10,5	16	8	36,4
400	429	509	542	262	152	11,0	16	8	42,4
450	480	556	589	262	152	11,5	16	10	50,7
500	532	608	641	262	152	12,0	16	10	54,6
600	635	711	744	262	152	13,5	16	12	74,1
700	738	814	847	262	152	14,5	16	12	97,5
800	842	918	951	262	152	16,0	16	12	105
900	945	1031	1084	278	178	17,0	16	14	147
1000	1048	1134	1167	278	178	18,0	16	14	157,5
1100	1152	1245	1278	290	178	19,5	16	16	272
1200	1255	1348	1381	290	178	20,5	16	18	301
1400	1462	1565	1588	290	178	23,0	16	20	406
1500	1565	1658	1691	290	178	24,0	16	20	443,2
1600	1668	1761	1794	290	178	25,5	16	24	480
1800	1875	1974	2007	437	254	28,0	16	32	640
2000	2082	2187	2220	437	254	30,0	16	36	860

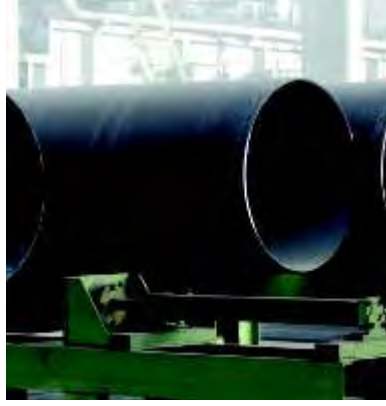


Düktil/CTP/ Çelik Borulara Uygun Geniş Toleranslı Kaplin
Universal Coupling for DI/Steel /GRP Pipes



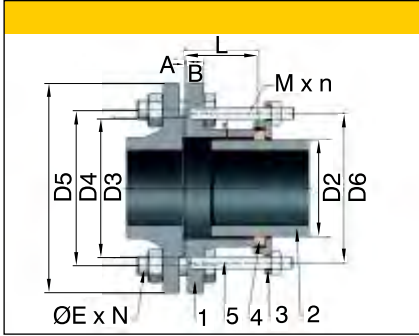
No.	Referans / Reference	Malzeme / Material	Standart Standard
1	Gömlek / Sleeve	Çelik-Düktil Demir / Steel-Ductile Iron	—
2	Son Halka / And Ring	Düktil Demir / Ductile Iron GGG400-10	EN 1563
3	Cıvata ve Somun / Bolt and Nut	Çelik 8x8 Galvanizli / Steel 8x8 Galvanized	—
4	Conta / Gasket	EPDM / NBR	EN 681
	Kaplama / Coating	Füzyon Bağlamalı Epoksi / Fusion Bonded Epoxy	—

DN	Aralık Range	Cıvata / Bolt		A	H	W (kg)
		L	adet/pcs			
50	59-72	M 12 x 180	2	165	98	3
65	72-85	M 12 x 180	2	185	98	4
80	88-103	M 12 x 180	4	185	98	4,1
100	109-128	M 12 x 180	4	218	98	4,8
125	132-146	M 12 x 200	4	250	98	6,3
150	159-182	M 12 x 200	4	272	98	7,2
175	192-210	M 12 x 220	4	312	135	12
200	218-235	M 12 x 220	4	335	135	12,5
250	272-289	M 12 x 220	6	405	135	19
300	315-332	M 12 x 200	8	460	135	22
300	322-339	M 12 x 240	6	435	102	10,4
300	340-360	M 12 x 240	6	455	102	22
300	357-368	M 12 x 240	8	510	130	31,9
350	374-391	M 12 x 240	8	510	130	33
400	400-429	M 12 x 240	8	589	130	38,5
400	418-435	M 12 x 240	8	580	130	39,6
400	425-442	M 12 x 240	8	580	130	40,7
450	455-472	M 12 x 240	10	715	130	45,1
450	476-493	M 12 x 240	10	640	130	47,3
500	527-544	M 12 x 240	10	690	130	53,9
500	555-572	M 12 x 240	10	715	130	55
500	566-583	M 12 x 240	10	715	130	55
500	582-599	M 12 x 240	10	715	130	57,2
600	600-630	M 12 x 260	10	790	130	71,5
600	662-679	M 12 x 260	10	840	130	77



EK PARÇALARI FITTINGS

Düktıl Demır Borular için Flanş Adaptörü / Flange Adaptor for Ductile Iron Pipe

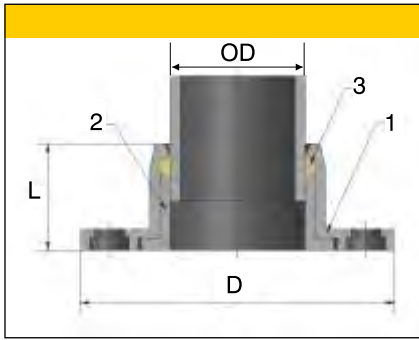


No.	Parça İsmi / Part Name	Malzeme / Material
1	Gövde / Body	Düktıl Demır / Ductile Iron GGG400-10
2	Boru / Pipe	Düktıl Demır / Ductile Iron GGG400-10
3	Tutucu / Retainer	Düktıl Demır / Ductile Iron GGG400-10
4	Halka / Ring	EPDM / NBR
5	Saplama / Stud	Galvanizli Çelik / Steel Galvanized

DN	D2	D3	D4	D5	D6	L	t	A	B	ØE	N	M	n	W (kg)
80	98	132	160	200	166	73	7,0	3	16,0	19	8	12	4	7,5
100	118	156	180	220	187	76	7,5	3	16,0	19	8	12	4	8,3
125	144	584	210	250	210	76	7,5	3	16,0	19	8	12	4	11,7
150	170	211	240	285	240	76	8,0	3	16,0	23	8	12	4	13,9
200	222	266	295	340	295	76	8,5	3	17,0	23	12	12	6	19,5
250	274	319	355	400	355	90	9,0	3	19,0	28	12	12	6	26,9
300	326	370	410	455	410	90	10,0	4	20,5	28	12	12	6	31,9
350	378	429	470	520	470	110	10,5	4	22,5	28	16	16	8	45,2
400	429	480	525	580	525	110	11,0	4	24,0	31	16	16	8	56,6
450	480	544	585	640	585	110	11,5	4	26,0	31	20	16	10	71,5
500	532	609	650	715	650	115	12,0	4	27,5	34	20	16	10	81,3
600	635	720	770	840	770	115	13,5	5	31,0	37	20	16	10	97,5
700	738	794	840	910	840	115	14,5	5	34,5	37	24	16	12	126
800	842	901	950	1025	950	115	16,0	5	38,0	40	24	16	12	142,5
900	945	1001	1050	1125	1050	115	17,0	5	41,5	40	28	16	14	183
1000	1048	1112	1170	1255	1170	115	18,0	5	45,0	43	28	16	14	204
1100	1152	1215	1270	1355	1270	130	19,5	5	48,5	43	32	16	16	253,5
1200	1255	1328	1390	1485	1390	130	20,5	5	52,0	49	32	16	16	303,8
1400	1462	1530	1590	1685	1590	130	23,0	5	55,0	49	36	20	18	432
1500	1565	1640	1710	1820	1710	130	24,0	5	57,5	56	36	20	18	634,5
1600	1668	1750	1820	1930	1820	190	25,5	5	60,0	56	40	20	40	837
1800	1875	1950	2020	2130	2020	190	28,0	5	65,0	56	44	20	44	936
2000	2082	2150	2230	2345	2230	190	30,0	5	70,0	62	48	20	48	1044



PE / PVC Borular için Kilitli Tip Flanş Bağlantısı / Restrained Flange Adaptor for PE / PVC Pipe



No.	Parça İsmi / Part Name	Malzeme / Material
1	Gövde / Body	Düktil Demir / Ductile Iron
2	Halka / Ring	Pirinç / Brass
3	Kauçuk / Rubber	EPDM / NBR

PN 10 - 16				
DN	OD	L	D	W (kg)
50	63	55	183	2,42
60	75	58	183	3,08
65	75	58	183	3,08
80	90	60	200	3,96
100	110	68	220	4,40
125	125	70	250	5,17
125	140	75	250	5,28
150	160	80	283	7,59
200	200	93	340	10,56
250	250	75	340	12,65
300	315	100	455	15,07
400	400	120	565	26,40

Flanş bağlantısı PVC/PE borularda kullanılır. Contası ve kilitli tip pirinç halkası vardır. Boru bağlantı gövdesine konulup cıvatalar sıkıldığında pirinç halka boruyu çıkmasını önleyecek şekilde sıkılır. (Sabitler)

Gövde GGG40 düktil demir malzemeden yapılmıştır conta EPDM olup içme suyuna uygundur. Gövde 250 mikron metreden daha fazla Rilsan ve Reçine epoksi ile kaplanabilir.

Flange adaptor is used in PVC/PE pipe. It has a gasket and a restrained brass rings. When you put the pipe in the adaptor body and fasten the bolts, the brass ring will fix the pipe to avoid to pull out.

The body is made by GGG40 ductile iron material. The gasket is EPDM and suitable for drink water. The body can be Rilsan and Resin epoxy coated with 250 micrometer up.





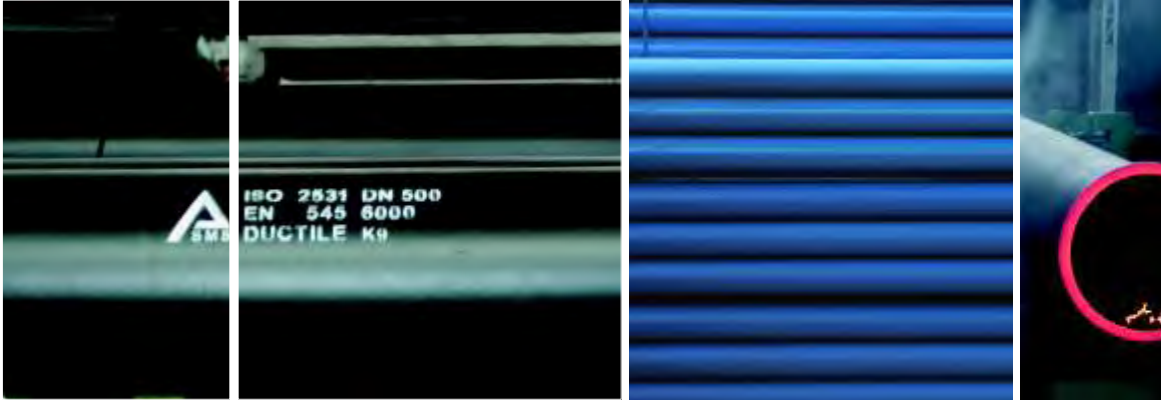
baęlantı ve montaj

joint and assembly



SAMSUN MAKİNA SANAYİ A.Ş.





BAĞLANTI VE MONTAJ

JOINT AND ASSEMBLY

T Tip ve Standart Tip bağlantılar su endüstrisinde kauçuk bilezik bağlantılı sistemler için mihenk taşı olarak kabul edilmektedir. Eşsiz tasarım bütün koşullar altında çabuk ve efektif montaj sunmaktadır.

The T-Type and Standard Type joints are considered as the most important point for the rubber ring jointing systems in the water systems. By its unique design quick and effective assembly under all conditions is possible.

Muflu bağlantılı Boru ve Fitingler için Bağlantı Talimatları / Jointing Instructions for Socket-Spigot Pipe and Fittings (Push-On Type)

Contanın Takılması / Gasket Insertion

Conta temizlenmeli, resimde görüldüğü gibi bükülmeli ve mufa yerleştirilmelidir. DN 600'den büyük contalar yerleştirilirken iki yerde bükme gereklidir. Contadaki yiv muftaki tutucu ökçe üzerine yerleştirilmelidir. Contanın tutucu topuğu yerine sıkıca yerleşmeli ve borunun ağzından contanın topuğu taşmamalıdır.

The gasket must be cleaned, flexed as shown and then placed into the socket. When placing gaskets over DN 600 flexing in two places is necessary. The groove in the gasket should be placed on the retaining bead in the socket. The retaining heel of the gasket must be firmly bedded in its seat and the heel of the gasket should not poured out of the mouth of the pipe.

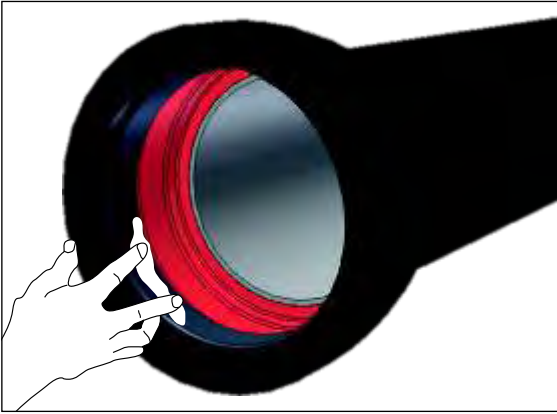




Kayganlaştırıcı Sıvı / Lubricant

Kayganlaştırıcı sıvı mufla temasta olacak conta yüzeyinin içine, muf kanalına ve borunun mufa giren kısmının 50 mm'sine ince bir film tabakası halinde uygulanmalıdır. Kullanılacak sıvı sadece boru imalatçısının temin ettiği olmalıdır. Boru mufunun yağlandıktan sonra toprağa veya kanal kenarına değmesine izin verilmemelidir.

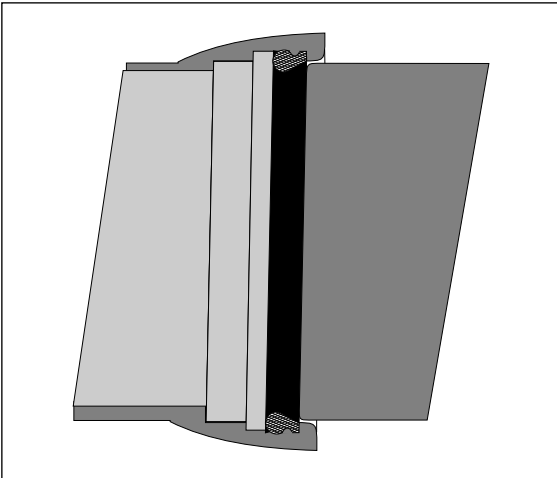
The lubricant must be applied as a thin film layer to the inner surface of the gasket where it will contact with the entering spigot, to chamfer and to the 50 mm part of the pipe entering into the socket. Only the lubricant supplied by the pipe manufacturer must be used. The pipe spigot should not be allowed to touch the ground or trench after it is lubricated.



Borunun Hizalanması / Pipe Alignment

Bağlantı yapılacak boru diğer borunun mufuna hizalanmalı ve conta ile temas edene kadar sokulmalıdır. Bağlantının nihai montajı bu pozisyonda yapılmalıdır.

The spigot of the pipe to be jointed must be aligned and inserted into the adjacent socket till it contacts with the gasket. Final assembly of the joint must be finalized at this position.





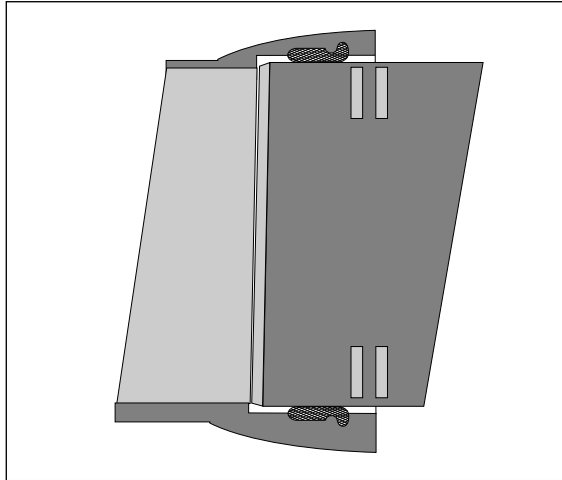
Komple Monte Edilmiş Bağlantı / Completely Assembled Joint

Boruların uç kısmında 2 adet beyaz şerit bulunmaktadır. Borunun muflu kısmı, boru ucundaki şerit ile ikinci şeritin ortasına kadar itilerek sokulması sonucunda montaj tamamlanmış olur.

Bağlantı montajında zorlanılması durumunda muf çıkartılmalı ve ikinci kez denemeden önce 90° döndürülmelidir. Hala zorluk devam ediyorsa muf çıkartılarak contanın durumu gözden geçirilmelidir.

There are two white stripes at the end of the pipes. The assembly is completed by inserting spigot part of the pipe until the half of the second stripe.

While joint assembly if difficulty is encountered, the spigot must be removed and rotated 90° before second attempt. If the difficulty still continues the spigot should be removed and the position of the gasket should be examined.



Sapma / Deflection

Bağlantılar DN 300'e kadar olan borular için her yöne 5°'e kadar, DN 350 - 800 arası için 4°'e kadar, DN 900 - 1600 arası için 3°'e kadar ve DN 1800 - 2200 arası için 2°'e kadar saptırılabilir. Bütün muflar oluklu olmalıdır. Bir bağlantı yaparken borular aynı hizada olmalı ve gerekirse sapma bağlantıdan sonra yapılmalıdır.

The joints could be deflected in any direction up to 5° for pipes up to DN 300, up to 4° for DN 350 - 800, up to 3° for DN 900 - 1600 and up to 2° for DN 1800 - 2200 pipes. All spigots must be chamfered. While making a joint, pipes should always be in line and if necessary, deflection is to be made after the joint.



MUFLU BAĞLANTILI BORU VE FİTİNGLER İÇİN MONTAJ METOTLARI / ASSEMBLY METHODS FOR SOCKET-SPIGOT PIPE AND FITTINGS (PUSH-ON TYPE)

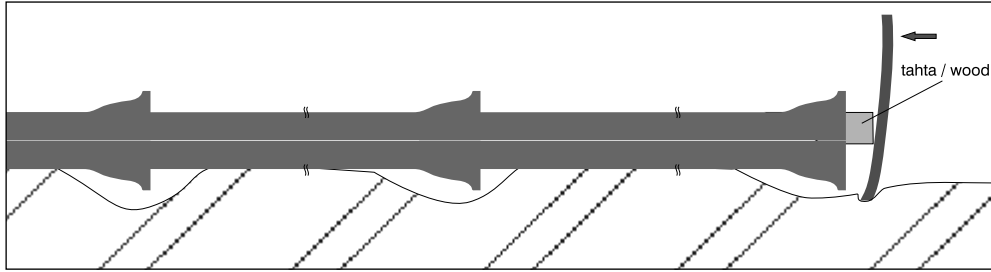
Bağlantının montajı çabuk ve basit olup boyut ve yerel koşullara bağlı olarak aşağıdaki metotların herhangi birisi ile yapılabilir:

Assembly of the joint is quick and simple and due to the size and local conditions, the assembly could be carried out by using any of the following methods:

Manivela Metodu / Crowbar Method

Mufun boru ucuna tam olarak girmesi bir manivela veya uygun bir levye ile borunun ucunun mufun içine doğru itilmesi ile sağlanır.

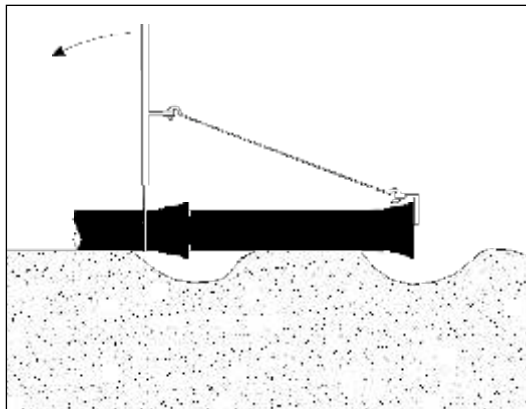
The complete entry of the spigot into the socket could be obtained by shoving with a crowbar or suitable lever against the face of the socket of the entering pipe.



Çatal Alet Metodu / Fork Tool Method

DN 100 ila DN 150 boru bağlantıları için montaj amaçlı olarak çatal tip alet kullanılabilir. Çatal, döşenen son borunun üzerindeki mufun arkasına yerleştirilir. Bir tarafında delik, diğer tarafında kanca olan tel halat şeklinde gösterildiği gibi bağlanarak diğer borunun mufuna tutturulur. Çatal tutamağı ok yönüne çekilir ve muf borunun içine girer. Bu sırada makul bir kuvvet uygulanmalıdır.

Fork type tool could be used for assembly of DN 100 to DN 150 pipe joints. The fork is placed over and behind the socket of the last laid pipe. A wire rope, with an eye at one end and a hook at the other end, is connected to the socket of the pipe to be jointed as shown in the picture. The fork handle is pulled in the arrow direction and the spigot enters into the socket. Reasonable force must be applied in this action.

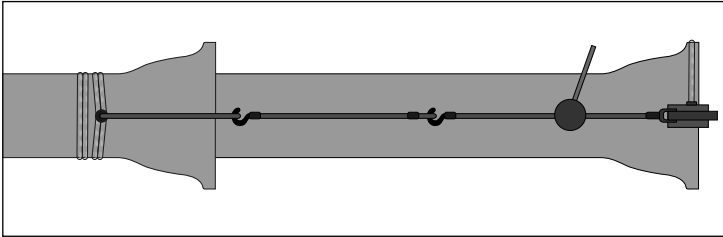
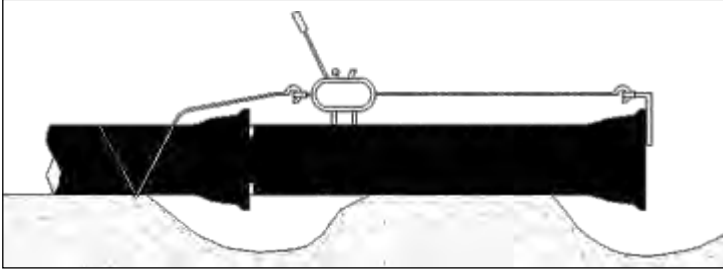




Tirfor veya Gel-Beri Metodu / Tirfor or Come-Along Method

DN 150'den büyük bağlantılar için tel halat veya zincirli gergi şemada gösterildiği gibi kullanılabilir. Bu gergiler piyasadan satın alınabilir.

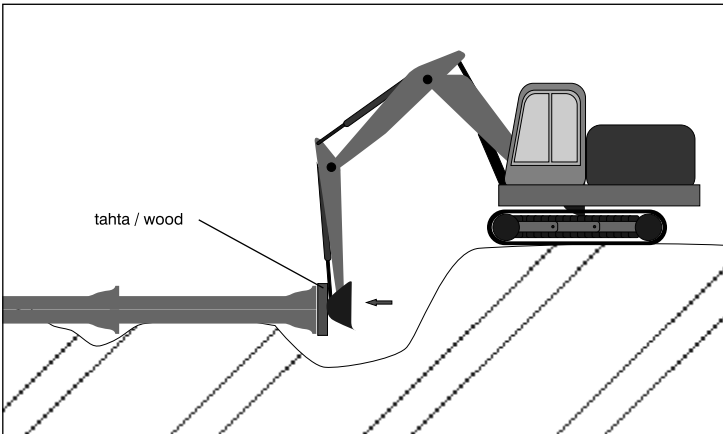
A wire rope or chain puller could be used for joints over DN 150, as given in the figure. Those pullers could be purchased from hardware stores.



Ekskavatör Metodu / Excavator Method

Kanalın beko veya ekskavatör ile hazırlandığı yerlerde her iki makine de mufu yerine yerleştirmek için kullanılabilir. Bu sistem temel olarak büyük çaplı boruda kullanılır ve boruya hasar vermeyi önlemek için boru ile ekskavatör kovası arasında ağaç takoz yerleştirmek gereklidir.

Where a backhoe or excavator excavates the trench, either machine could be used to shove the spigot to its place. This system is basically used on larger diameter pipes and in order to prevent damage to the pipe a timber header must be placed between the pipe and the bucket.

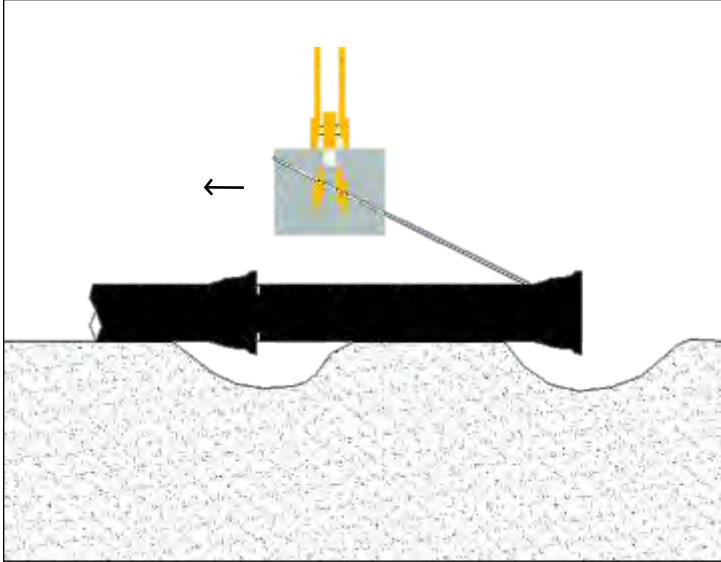




Ekskavatör veya Beko ile Çekme Metodu / Excavator or Backhoe Slewing Method

Bu metotta boru önce bağlantı için muf boru ağzına gelecek şekilde pozisyonlandırılır. Boru çevresine elastik halat sarılır ve beko kovaına bağlanır. Kova daha sonra boruyu mufa doğru çeker.

In this method the pipe is first placed for jointing, with the spigot in the socket entrance. A sheathed webbing sling is encircled the pipe and connected to the excavator or backhoe bucket. Then the bucket is pulled back, drawing the pipe into the socket.

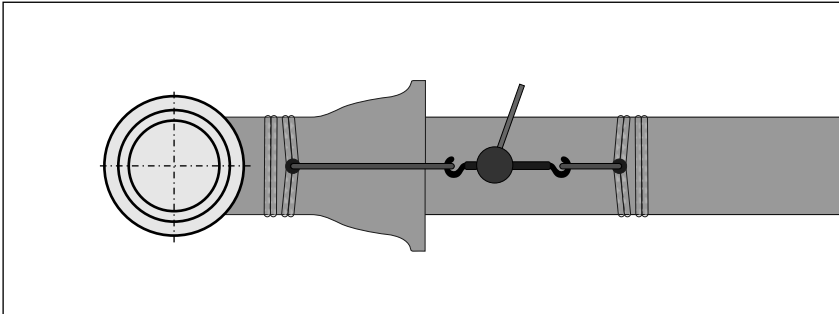
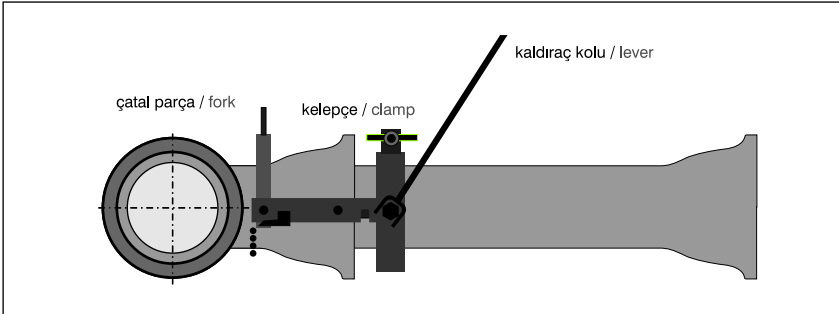
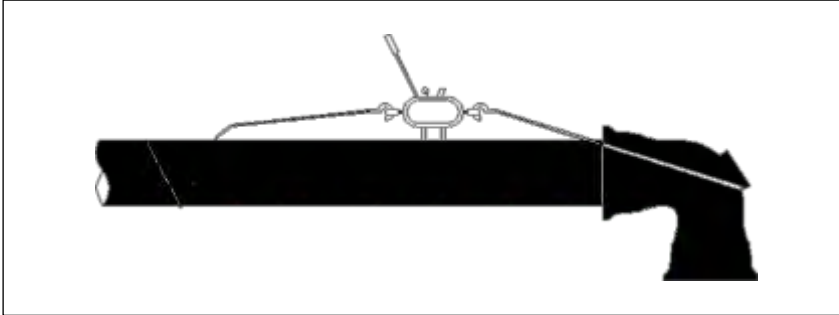




Fitingler / Fittings

Fitingler aşağıdaki şekillerde belirtildiği gibi monte edilebilirler. Boru montajında kullanılan ekipmanlar, fittinglerde de kullanılır.

Fittings could be assembled given in the following diagrams. Equipment used in pipe assembly are also used in fittings.





T-LOK TİP BAĞLANTILI BORU VE FİTINGLER İÇİN BAĞLANTI TALİMATLARI / JOINTING INSTRUCTIONS FOR T-LOCK TYPE PIPE AND FITTINGS

Tanımlama / Identification

T-Lok kilitli bağlantının tanımlanmasını sağlamak için boru imalatçıları kimlik bandının kullanılmasını tavsiye etmektedir. Bu, T-Lok bağlantısı yapılan ek yerleri üzerine;

1. PVC bant kullanarak boruya (veya kullanıldığı yerde gömleğe) işaret koymak
2. Ek yeri üzerine primer boya ile dolgu öncesi işaretleme yapmak ile sağlanır.

In order to provide the identification of the T-Lock restraining joint the pipe manufacturers recommend the use of the identification tape. This should be located over the T-Lock joints by;

1. Marking the pipe (or sleeving where used) using PVC tape
2. Marking over joint with primary paint before back fill.

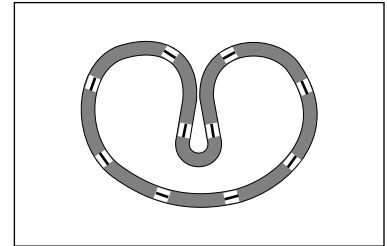
Contanın Yerleştirilmesi / Gasket Insertion

Contanın yerleştirilmesinden önce muftaki bütün çamur, kum, çakıl gibi yabancı maddeler temizlenmelidir. Conta yatağının temiz olmasına dikkat edilmelidir. Yataktaki yabancı maddeler sızıntıya yol açabilir.

Conta temiz bir bezle silinmeli, bükülmeli ve mufa yumru önde olacak şekilde yerleştirilmelidir. Bu şekilde conta muf içinde topuğu tutucu oluğa oturacak şekilde düzgün bir biçimde yerleşir.

Before the insertion of the gasket all foreign materials inside the socket (mud, sand, gravel and like) should be removed. The gasket seat should be clean. Foreign materials in the gasket seat may lead to leaks.

The gasket must be wiped with a clean cloth, flexed and then set in the socket. By this way the gasket is seated evenly around the inside of the socket with the heel of the gasket fitting snugly in the retaining groove.



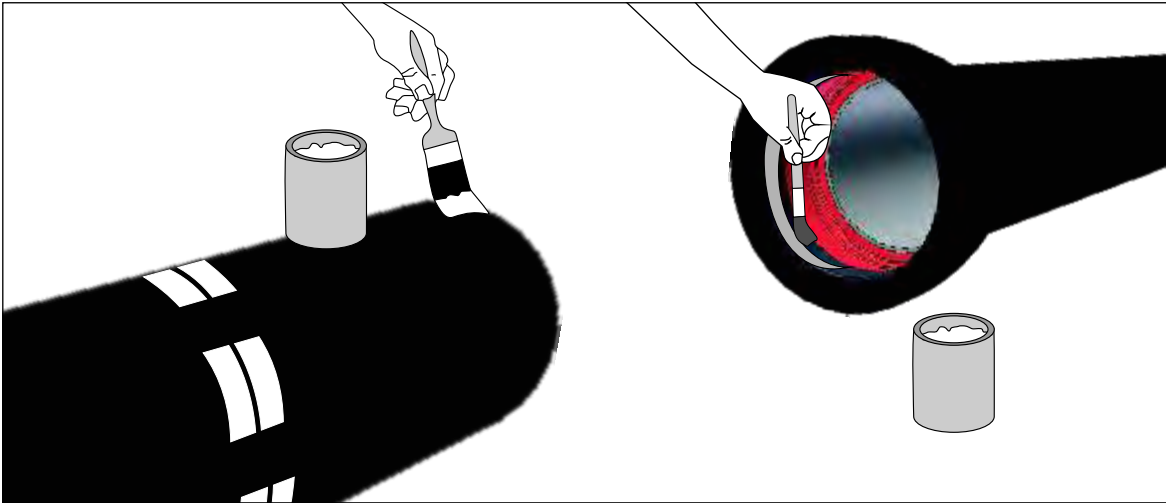


BAĞLANTI VE MONTAJ JOINT AND ASSEMBLY

Kayganlaştırıcı Sıvının Uygulanması / Application of Lubricant

Mufun ön 150 mm'si tam olarak temizlenmelidir. Kayganlaştırıcı sıvı mufla temasta olacak conta yüzeyinin içine, muf kanalına ve borunun mufa giren kısmının 50 mm'sine bir fırça ile ince bir film tabakası halinde uygulanmalıdır. Kullanılacak sıvı sadece boru imalatçısının temin ettiği olmalıdır. Boru mufunun yağlandıktan sonra toprağa veya kanal kenarına değmesine izin verilmemelidir.

The front 150 mm of the socket must be cleaned thoroughly. The lubricant must be applied with a brush to the exposed surface of the gasket, which would contact with the entering pipe spigot, to the socket channel and spigot end of the pipe for about 50 mm as a thin film layer. The lubricant to be used must be the one supplied by the pipe manufacturer. The pipe spigot should not be allowed to touch the ground or the trench after it is lubricated.

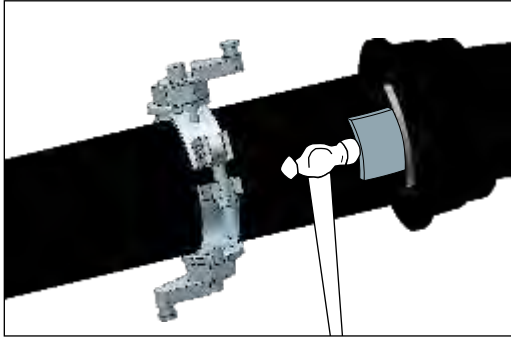
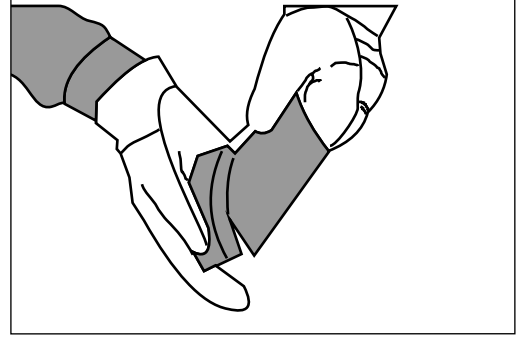




DN 80 - 400 T-Lok Conta Sisteminin Demontajı / Dismantle of DN 80 - 400 T-Lock Gasket System

- 1.) Elleri korumak için eldiven giyerken taşıyıcı örse (yivli ve eğik çelik blok) bir dış şim geçirin ve şimin ön tarafını yağlayın. Bağlantının altından başlayarak ve örse vurarak şimi contanın altına sürün. Örsü şimden sökün ve yeni bir şim sokun.

While wearing protective gloves, insert an extractor shim into the carrying anvil -slotted and curved steel block- and apply lubricant over the leading edge of the shim. Starting from the bottom of the joint, drive the shim under the gasket by striking the anvil. Remove the anvil from the shim and insert a new shim.

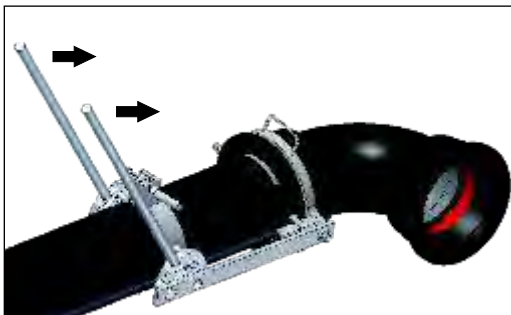


- 2.) Bağlantının tüm çevresinde conta altında şimleri sürmeye devam edin. Şimler arasındaki boşluğun minimum olmasına dikkat edin. Nihai şimi her iki taraftaki şimlerin üstüne çıkacak şekilde sokun.

Continue driving shims under the gasket around the whole circumference of the joint. Keep the gap in between the Shims to be minimum. Insert the final shim so that it is overlapped by the shims on either side.

- 3.) Resimde belirtildiği gibi halka ve boru kelepçelerini, somun kolları soket yüzünden uzak olacak şekilde pozisyonlandırın.

As given in the figure, attach the yoke and the pipe clamp, positioning the crank nut arms pointing away from the socket face.



- 4.) Döndürme tutamaklarını çevirerek mufu borudan çıkartın. Bağlantı demonte olana kadar tutamakları hafifçe itin. Contanın tekrar kullanılması tavsiye olunmaz.

Push the spigot out of the socket by turning the crank nuts with the crank handles. Push the handles lightly till the joint is dismantled. Re-use of the gasket is not recommended.









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This gray cast iron pipeline was in services for more than 330 years. Today such pipes are manufactured from ductile iron. Ductile iron possesses all excellent properties of gray cast iron. Furthermore it has much better mechanical properties

(Picture taken from Ductile Iron Pipe News Spring - Summer 2003; Publication of DUCTILE IRON PIPE RESEARCH ASSOCIATION)