



DINSEN IMPEX CORP



Ductile Iron Pipe & Fittings

INTRODUCTION

Ductile iron, also called spherical graphite iron, is characterized by the presence of graphite in the resultant castings. It differs from flake graphite in that, it has a higher tensile strength, a proof stress and elongation. These characteristics ensure the suitability of ductile iron pipes and fittings for a majority of pipeline applications.

Chemical composition for Steel Pipes

Chemical components	Ductile iron pipe	Steel pipe	Grey cast iron pipe
Carbon	3.5-4.0	0.1-0.2	3.2-3.8
Silicon	1.9-2.6	0.15-0.4	1.4 -2.2
Manganese	0.15-0.45	0.3-0.6	0.4 -0.6
Phosphorus	≤ 0.06	0.02-0.03	≤ 0.3
Sulfur	≤ 0.02	0.02-0.03	≤ 0.1
Magnesium	0.03-0.06	-	-

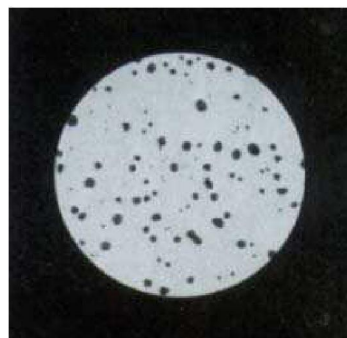
Mechanical Properties for Steel Pipes

	Ductile iron pipe		Grey cast iron pipe	Steel pipe
Tensile strength (N/ mm ²)	≥ 420		150-260	≥ 400
Elongation (%)	DN60-1000 ≥ 10		Neglect	≥ 18
	Dn1100-2600 ≥ 7			
Hardness (HB)	≤ 230		≤ 260	Approx. 140
Hydraulic test (MPa)	\leq DN300	5.0		2.5-3.0
	DN350-600	4.0		
	DN700-1000	3.2		
	DN1100-2000	2.5		
	DN2100-2200	1.8		
Air test (MPa)	≥ 0.3			

During the solidification stage of the casting process, the carbon, sometimes called graphite, comes out of solution and collects in numerous small pools. The shape of these pools of carbon is a major factor in the mechanical properties of the material.



Cast (Gray) Iron Pipe



Ductile Iron Pipe

Normative references

The following standards contain provisions which, through references in this text, constitute provisions of this catalogue.

- ISO 2531** : Ductile iron pipes, fittings, accessories and their joints for water pipelines.
- BSEN 545** : Ductile iron pipes, fittings, accessories and their joints for water pipelines.
- BSEN 598** : Ductile iron pipes, fittings, accessories and their joints for sewerage applications.
- BSEN 681-1** : Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications.
- ISO 6506 - 1** : Metallic materials , Hardness testing , Brinell test , Part1 : Test method.
- ISO 6708** : pipe works components - Definition and selection of DN (nominal size).
- BSEN 1092-2** : circular flanges for pipes, valves, fitting and accessories, PN designated - part2 : cast iron flanges.
- ENV 197-1** : Cement.
- BS 3416** : Specification for bitumen-based coatings for cold application, suitable for use in contact with potable water.
- ISO 7268** : Pipe components - Definition of nominal pressure.
- ISO 8179-2** : Ductile iron pipes - External Zinc coating part 2 (Zinc rich paint with finishing layer).
- ISO 4179** : Ductile iron pipes and fittings for pressure and non-pressure pipelines Cement mortar lining
- ISO 4633** : Rubber seals joint rings for water supply , drainage and sewerage pipelines (specification for materials).

Wall Thickness

The nominal iron wall thickness of pipes and fittings are calculated as a function of the nominal size, DN , by the following formula , with a minimum of 5 mm for centrifugally cast pipe and 7 mm for pipes not centrifugally cast and fittings :

$$e = K (0.5 + 0.001 DN)$$

where **e** is the nominal wall thickness , in millimeters :

DN is the nominal size :

K is a coefficient used for thickness class designation. It is selected from a series of whole numbers :

7,8,9,10,11,12,.....

Operating Pressure

Nominal Size DN	Mean External Diameter	Nominal Wall Thickness K-Class		Nominal Wall Thickness C-Class			
		K9	PFA	C25	C30	C40	PFA
				mm	mm	mm	bar
80	98	6.0	64			4.4	40
100	118	6.0	64			4.4	40
150	170	6.0	64			4.7	40
200	222	6.3	62			4.7	40
250	274	6.8	54			5.5	40
300	326	7.2	49			6.2	40
350	378	7.7	45		6.3		30
400	429	8.1	42		6.5		30
450	480	8.6	40		6.9		30
500	532	9.0	38		7.5		30
600	635	9.9	36		8.7		30
700	738	10.8	34	8.8			25
800	842	11.7	32	9.6			25
900	945	12.6	31	10.6			25
1000	1048	13.5	30	11.6			25
1100	1144	14.4	29	12.6			25
1200	1255	15.3	28	13.6			25
1400	1462	17.1	28	15.7			25
1600	1668	18.9	27	17.7			25
1800	1875	20.7	26	19.7			25
2000	2082	22.5	26	21.8			25

Operation Temperature

It is suitable for fluid temperatures between 0°C and 50°C, excluding frost.

Straightness of Pipes

Pipes have a maximum deviation of 0.125% of the pipe length.

Angular Deflection for Flexible Joints (Tyton joint, Push-In joint)

The allowable angular deflection is listed below

- 5° for DN80 to DN300
- 4° for DN350 to DN800
- 2° for DN900 to DN1600

Coating

The following coatings may be supplied or by agreed between manufacturer and purchaser. Upon special request, other types of coating and lining also may be applied.

a) External Coatings:

- zinc rich paint coating with finishing layer (bituminous);
- epoxy paint / fusion Bond epoxy;
- thicker metallic zinc coating with finishing layer;
- polyethylene sleeving (as a supplement to the zinc coating with finishing layer);
- Zinc-aluminium coating with finishing layer
- extruded polypropylene coating;
- polyurethane coating;
- fiber reinforced cement mortar coating;
- adhesive tapes.

b) Internal Coatings (Lining):

- sulphate-resistant cement mortar lining;
- high alumina cement mortar lining;
- epoxy paint / fusion Bond epoxy;
- bituminous paint lining;
- Portland cement mortar with seal coat;
- polyurethane lining.

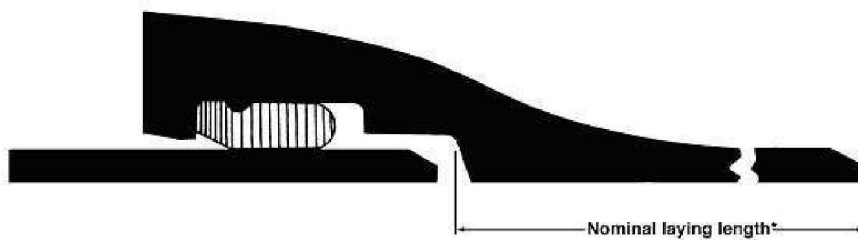
c) Coating of joint area:

- epoxy;
- bituminous paint.

Joining

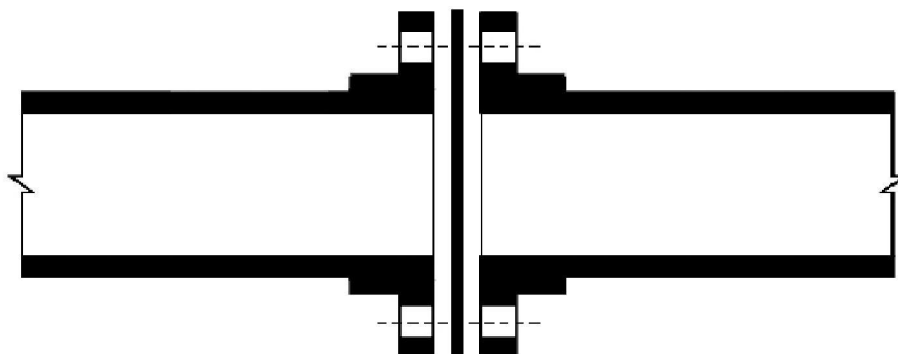
a) Push-In Joints

The most popular, quickest, and easiest-to-assemble joint for Ductile Iron pipe and fittings in underground applications is the push-on joint. This joint consists of a single rubber gasket placed in a groove inside the socket at the bell end of the pipe. After lubricating the joint in accordance with the manufacturer's instructions, the beveled end of the pipe is pushed past the gasket, compressing it and forming a pressure-tight and dependable seal.

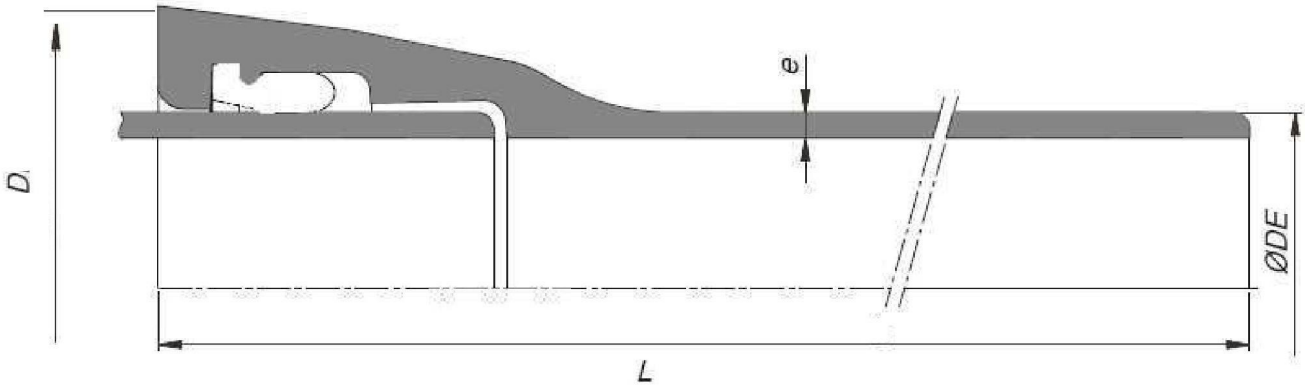


b) Flange Joint

Flanged pipe is generally specified for above ground service for air, water, sewerage, oil and other liquids where rigid, restrained joints are needed. It is widely used in industrial piping systems, water treatment plants and sewerage treatment plants, and for other interior piping. The flanges have a machined raised face and drilled holes. They can be attached by screw-on, cast-on or welding.



PIPES WITH TYTON SOCKET JOINTS – K & C-Class

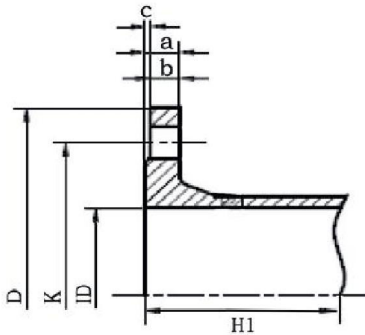


Dimensions in mm

DN	DE	D	L	K-Class	C-Class		
	mm	mm		K9 (Kg)	C25	C30	C40
80	98	140	6000	77			58
100	118	163	6000	95			71
150	170	217	6000	144			106
200	222	278	6000	194			146
250	274	336	6000	255			210
300	326	393	6000	323		236	282
350	378	448	6000	403		335	374
400	429	500	6000	482		394	466
450	480	540	6000	575		472	577
500	532	604	6000	669		565	689
600	635	713	6000	882	693	784	
700	738	824	6000	1123	932	1037	
800	842	943	6000	1394	1165	1328	
900	945	1052	6000	1691	1446	1655	
1000	1048	1158	6000	2017	1759	2004	
1100	1152	1270	6000	2372	2103		
1200	1255	1378	6000	2758	2481		
1400	1462	1600	6000	3669	3403		
1600	1668	1821	6000	4668	4408		
1800	1875	2043	6000	5803	5559		
2000	2082	2262	6000	7043	6854		

PN16 Flange

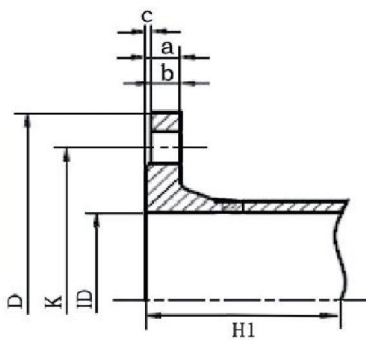
Dimensions in mm



DN	D	K	ID	H1	a	b	c	BOLT	
								Size	No.
80	200	160	85	30	19.0	16.0	3	M16	8
100	220	180	108	30	19.0	16.0	3	M16	8
150	285	240	158	35	19.0	16.0	3	M20	8
200	340	295	208	38	20.0	17.0	3	M20	12
250	400	355	260	45	22.0	19.0	3	M24	12
300	455	410	313	50	24.5	20.5	4	M24	12
350	520	470	362	55	26.5	22.5	4	M24	16
400	580	525	414	60	28.0	24.0	4	M27	16
450	640	585	470	62	30.0	26.0	4	M27	20
500	715	650	524	64	31.5	27.5	4	M30	20
600	840	770	627	71	36.0	31.0	5	M33	20

PN25 Flange

Dimensions in mm



DN	D	K	ID	H1	a	b	c	BOLT	
								Size	No.
80	200	160	85	30	19.0	16.0	3	M16	8
100	235	190	108	30	19.0	16.0	3	M20	8
150	300	250	158	35	20.0	17.0	3	M24	8
200	360	310	208	38	22.0	19.0	3	M24	12
250	425	370	260	45	24.5	21.5	3	M27	12
300	485	430	313	50	27.5	23.5	4	M27	12
350	555	490	362	55	30.0	26.0	4	M30	16
400	620	550	414	60	32.0	28.0	4	M33	16
450	670	600	470	62	34.5	30.5	4	M33	20
500	730	660	524	64	36.5	32.5	4	M33	20
600	845	770	627	71	42.0	37.0	5	M36	20

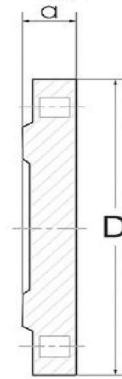
Blank Flange

DN	D	a	b	c
80	200	19.0	16.0	3
100	220	19.0	16.0	3
150	285	19.0	16.0	3
200	340	20.0	17.0	3
250	400	22.0	19.0	3
300	455	24.5	20.5	4
350 (Dome Shape)	520	26.5	22.5	4
400 (Dome Shape)	580	28.0	24.0	4
450 (Dome Shape)	640	30.0	26.0	4
500 (Dome Shape)	715	31.5	27.5	4
600 (Dome Shape)	840	36.0	31.0	5

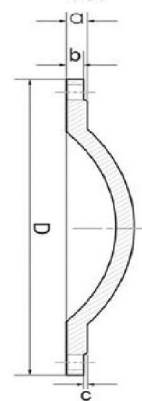
* PN25 are available for blank flange

* Plain shape for DN80-300;
Dome shape for DN350 or above

DN 80 to DN 300

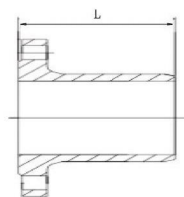


DN 300 to DN 1200



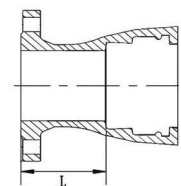
Flanged Spigot

DN	L
80	350
100	360
150	380
200	400
250	420
300	440
350	460
400	480
450	500
500	520
600	560
700	600
800	600
900	600
1000	600
1200	600



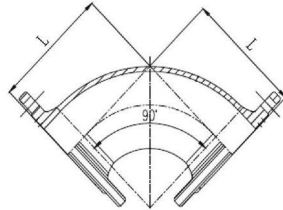
Flanged Socket

DN	L
80	130
100	130
150	135
200	140
250	145
300	150
350	155
400	160
450	165
500	170
600	180
700	190
800	200
900	210
1000	220
1200	240



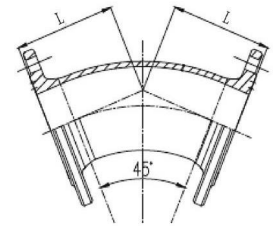
Double Flanged 90° Bend

DN	L
80	165
100	180
150	220
200	260
250	350
300	400
350	450
400	500
450	550
500	600
600	700
700	800
800	900
900	1000
1000	1100
1200	1300



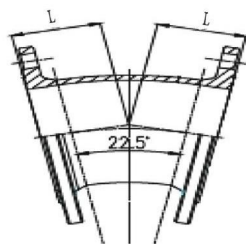
Double Flanged 45° Bend

DN	L
80	130
100	140
150	160
200	180
250	350
300	400
350	298
400	324
450	349
500	375
600	426
700	478
800	529
900	581
1000	632
1200	735



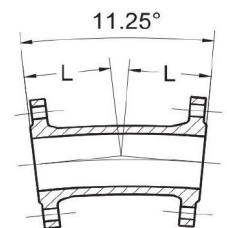
Double Flanged 22½° Bend

DN	L
80	130
100	140
150	160
200	180
250	350
300	400
350	300
400	324
450	350
500	375
600	425
700	480
800	530
900	580
1000	630
1200	750



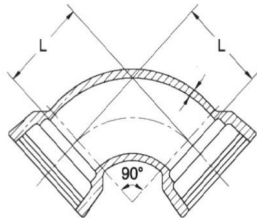
Double Flanged 11¼° Bend

DN	L
80	130
100	140
150	160
200	180
250	350
300	400
350	300
400	324
450	350
500	375
600	425
700	480
800	530
900	580
1000	630
1200	750



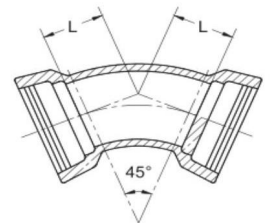
All Socket 90° Bend

DN	L
80	100
100	120
150	170
200	220
250	270
300	320
350	370
400	420
450	470
500	520
600	620
700	720
800	820
900	920
1000	1020
1200	1220



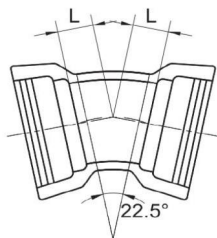
All Socket 45° Bend

DN	L
80	55
100	65
150	85
200	110
250	130
300	150
350	170
400	195
450	220
500	240
600	285
700	330
800	370
900	415
1000	460
1200	550



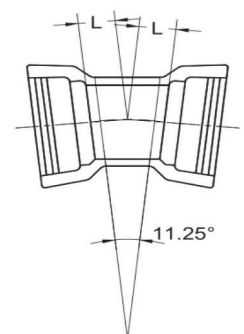
Double Socket 22½° Bend

DN	L
80	40
100	40
150	55
200	65
250	75
300	85
350	95
400	110
450	120
500	130
600	150
700	175
800	195
900	220
1000	240
1200	285



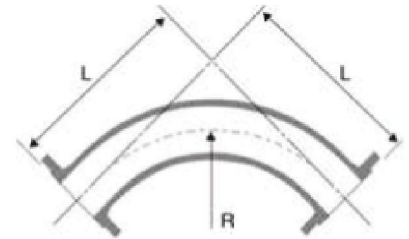
Double Socket 11¼° Bend

DN	L
80	30
100	30
150	35
200	40
250	50
300	55
350	60
400	65
450	70
500	75
600	85
700	95
800	110
900	120
1000	130
1200	150



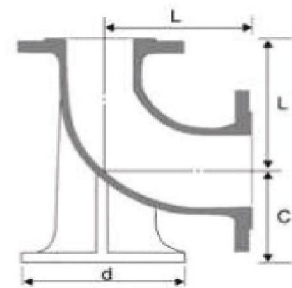
Double Flanged 90° Long Radius Bend

DN	L	R
80	380	330
100	400	340
150	450	385
200	500	430
250	550	475
300	600	515
350	650	560
400	700	605
450	750	650
500	800	690
600	900	780
700	1000	—
800	1100	—
900	1200	—
1000	1300	—
1200	1500	—



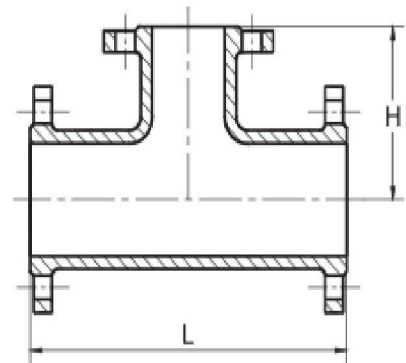
Double Flanged 90° Duckfoot Bend

DN	L	c	d
100	180	125	200
150	220	160	250
200	260	190	300
250	350	225	350
300	400	255	400
350	450	290	450
400	500	320	500
450	550	355	550
500	600	385	600
600	700	450	700
700	800	515	800
800	900	580	900
900	1000	645	1000
1000	1100	710	1100
1200	1300	840	1300



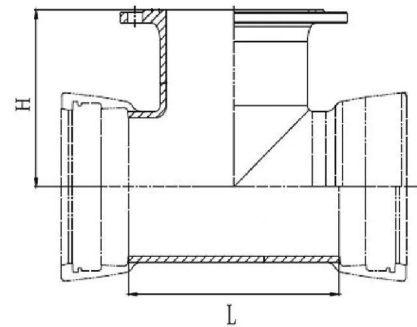
All Flanged Tee

Body DN	Branch dn	L	H	Body DN	Branch dn	L	H
80	50	330	160	600	100	1100	450
	65	330	165		150	1100	450
	80	330	165		200	1100	450
100	80	360	175		250	1100	450
	100	360	180		300	1100	550
150	80	440	205		350	1100	550
	100	440	210		400	1100	550
	150	440	220		450	1100	550
200	80	520	235		500	1100	550
	100	520	240		600	1100	550
	150	520	250		800	100	580
250	200	520	260			150	635
	80	700	265	200		690	585
	100	700	275	250		745	593
	150	700	300	300		800	600
	200	700	325	350		855	608
	250	700	350	400		900	615
300	100	800	300	450		965	623
	150	800	325	500		1020	630
	200	800	350	600		1350	645
	250	800	375	700		1350	660
350	300	800	400	800		1350	675
	100	850	325	100	660	690	
	150	850	325	150	715	700	
	200	850	325	200	770	705	
	250	850	325	250	825	715	
	300	850	425	300	880	720	
400	350	850	425	350	935	730	
	100	900	350	400	990	735	
	150	900	350	450	1045	745	
	200	900	350	500	1100	750	
	250	900	350	600	1650	765	
	300	900	450	700	1650	780	
	350	900	450	800	1650	795	
	400	900	450	900	1650	810	
450	100	950	375	1000	1650	825	
	150	950	375	100	660	810	
	200	950	375	150	715	820	
	250	950	375	200	775	825	
	300	950	475	250	830	835	
	350	950	475	300	890	840	
	400	950	475	350	950	850	
	450	950	475	400	1005	855	
500	100	1000	400	450	1065	865	
	150	1000	400	500	1120	870	
	200	1000	400	600	1240	885	
	250	1000	400	700	1355	900	
	300	1000	500	800	1470	915	
	350	1000	500	900	1585	930	
	400	1000	500	1000	1700	945	
	450	1000	500	1100	1820	960	
	500	1000	500	1200	1935	975	



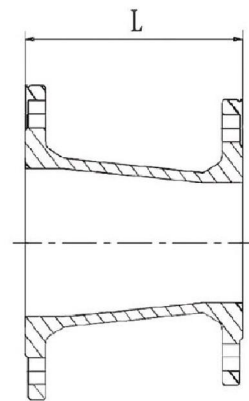
Double Socket Tee with Flanged Branch

Body DN	Branch dn	L	H	Body DN	Branch dn	L	H
80	80	170	160	800	100	270	570
	100	80	170		175	150	330
100		190	180		200	380	585
150	80	170	205		250	410	595
	100	195	210		300	465	600
	150	255	220		350	525	610
200	80	175	235		400	580	615
	100	200	240		450	640	625
	150	255	250		500	700	630
	200	315	260		600	815	645
250	80	175	265		700	930	660
	100	200	270		800	1045	675
	150	260	280	100	280	690	
	200	315	290	150	335	700	
300	250	375	300	200	360	705	
	100	200	300	250	420	715	
	150	260	310	300	480	720	
	200	320	320	350	535	730	
350	250	375	330	400	595	735	
	300	435	340	450	650	745	
	100	205	330	500	710	750	
	150	265	340	600	825	765	
400	200	320	350	700	940	780	
	250	380	360	800	1060	795	
	300	435	370	900	1175	810	
	350	495	380	1000	1290	825	
450	100	210	360	100	280	810	
	150	265	370	150	335	820	
	200	325	380	200	375	825	
	250	380	390	250	430	835	
	300	440	400	300	490	840	
	350	500	410	350	550	848	
	400	555	420	400	605	855	
	450	615	460	450	665	865	
500	100	215	420	500	720	870	
	150	270	430	600	840	885	
	200	330	440	700	955	900	
	250	390	450	800	1070	915	
	300	445	460	900	1185	930	
	350	505	470	1000	1300	945	
	400	565	480	1100	1420	960	
	450	620	490	1200	1535	975	
600	500	680	500				
	100	220	480				
	150	280	490				
	200	340	500				
	250	395	510				
	300	450	520				
	350	510	530				
	400	570	540				
450	625	550					
500	685	560					
600	800	580					



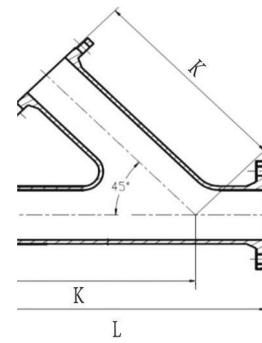
Double Flanged Taper

DN	dn	L	DN	dn	L
80	50	200	700	400	800
100	80	200		450	750
150	80	400		500	600
	100	300		600	300
200	80	600	800	450	850
	100	600		500	800
	150	300		600	700
250	100	600	900	700	600
	150	600		450	950
	200	300		500	900
300	100	600	1000	600	800
	150	600		700	700
	200	600		800	600
	250	300		500	1000
350	100	750	1200	600	900
	150	700		700	800
	200	600		800	700
	250	600		900	600
	300	300		700	1345
400	100	800	800	1160	
	150	750	900	975	
	200	600	1000	790	
	250	600	1100	605	
	300	600			
	350	300			
450	100	900			
	150	800			
	200	750			
	250	600			
	300	600			
	350	600			
	400	300			
	100	950			
500	150	900			
	200	800			
	250	700			
	300	600			
	350	600			
	400	600			
	450	300			
	100	1050			
600	150	1000			
	250	900			
	300	800			
	350	700			
	400	600			
	450	600			
500	600				



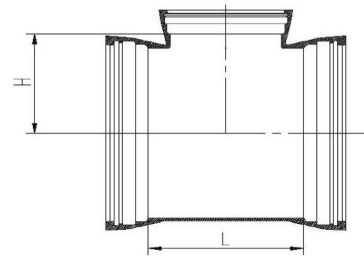
All Flanged 45° Branch

Body DN	Branch dn	L	K	Body DN	Branch dn	L	K	
80	80	500	375	400	100	760	710	
100	80	500	390		150	815	740	
	100	540	405		200	865	760	
150	80	590	480		250	970	820	
	100	640	480		300	970	870	
	150	640	480		350	970	870	
200	80	635	535		400	970	870	
	100	635	535		450	100	740	710
	150	735	560			150	840	760
200	735	560	200			890	790	
250	80	660	585	250		990	820	
	100	710	610	300		1040	900	
	150	830	640	350		1060	950	
	200	830	640	400		1060	950	
	250	830	640	450		1060	950	
300	80	685	610	500		150	790	765
	100	685	610			200	890	810
	150	790	660		250	940	840	
	200	865	685		300	990	865	
	250	930	715		350	1065	950	
	300	930	715		400	1140	1025	
350	100	685	635		450	1140	1025	
	150	740	660		500	1140	1025	
	200	840	710		600	150	890	840
	250	880	740			200	940	890
	300	880	790	250		990	915	
	350	880	790	300		1090	965	
				350		1160	1000	
			400	1230		1035		
			450	1295		1070		
			500	1310		1180		
			600	1310		1180		



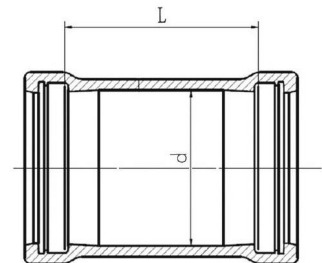
All Socket Tee

Body DN	Branch dn	L	H	Body DN	Branch dn	L	H	
80	80	170	85	600	80	195	340	
	100	80	170		95	100	220	345
100		190	95		150	280	350	
150	80	170	120		200	335	355	
	100	195	120		250	395	360	
	150	255	125		300	450	365	
200	80	175	145		350	510	370	
	100	200	145		400	570	375	
	150	255	150		450	625	380	
	200	315	155		500	685	390	
250	80	175	165		600	800	400	
	100	200	165		800	100	270	460
	150	260	175			150	330	460
	200	315	180			200	380	460
250	375	185	250			410	465	
300	80	180	190			300	465	470
	100	200	195	350		525	475	
	150	260	200	400		580	480	
	200	320	205	450		640	485	
	250	375	210	500	700	500		
350	300	435	215	600	815	645		
	80	180	215	700	930	510		
	100	205	220	800	1045	525		
	150	265	225	1000	100	280	555	
	200	320	230		150	335	555	
	250	380	235		200	360	555	
	300	435	240		250	420	565	
350	495	245	300		480	570		
400	80	185	240		350	535	575	
	100	210	245		400	595	580	
	150	265	240		450	650	585	
	200	325	255	500	710	590		
	250	380	260	600	825	600		
	300	440	265	700	940	610		
	350	500	270	1200	800	1060	625	
350	555	275	900		1175	635		
450	80	185	265		1000	1290	645	
	100	210	270		100	280	660	
	150	270	275		150	335	660	
	200	325	280		200	375	665	
	250	385	285		250	430	665	
	300	445	290		300	490	670	
	350	500	295	350	550	675		
	400	560	300	400	605	665		
500	450	615	305	450	665	610		
	80	190	290	500	720	690		
	100	215	295	600	840	700		
	150	270	300	700	955	720		
	200	330	305	800	1070	725		
	250	390	310	900	1185	735		
	300	445	315	1000	1300	745		
	350	505	320	1100	1420	755		
	400	560	325	1200	1535	770		
450	620	330						
500	680	340						



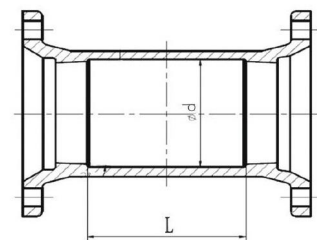
Collar T-Type

DN	d	L
80	109	160
100	130	160
150	183	165
200	235	170
250	288	175
300	340	180
350	393	185
400	445	190
450	498	195
500	550	200
600	655	210
700	760	220
800	865	230
900	970	240
1000	1075	250
1200	1285	270



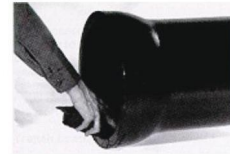
Collar K-Type

DN	d	L
80	109	160
100	130	160
150	183	165
200	235	170
250	288	175
300	340	180
350	393	185
400	445	190
450	498	195
500	550	200
600	655	210

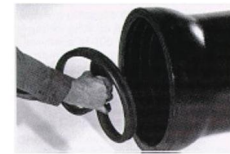


TYTON JOINT PIPE
ASSEMBLY INSTRUCTION (1)

1. All foreign matter in the socket must be removed, i.e., mud, sand, cinders, gravel, pebbles, trash, frozen material, etc. The gasket seat should be thoroughly inspected to be certain it is clean. Foreign matter in the gasket seat may cause a leak. Do not lubricate the inside of the bell.



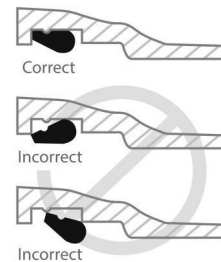
2. The gasket must be wiped clean with a clean cloth, flexed, and then placed into the socket with the rounded bulb end entering first. Looping the gasket in the initial insertion will facilitate seating the gasket heel evenly around the retainer seat. Smaller sizes require only one loop. With larger sizes it will be helpful to loop the gasket at the 12 o'clock and 6 o'clock positions. When installing TYTON JOINT pipe in subfreezing weather, the gaskets, prior to their use, must be kept at a temperature of at least 40°F by suitable means, such as storing in a heated area or keeping immersed in a tank of warm water. If the gaskets are kept in warm water, they should be dried before placing in the pipe socket.



3. The seating of the gasket may be facilitated by flexing the gasket on one or two points depending on size and then pressing the bulge or bulges out.



4. The inner edge of the retaining heel must not protrude from the retaining bead of the socket.

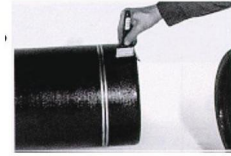


5. A thin film of pipe joint lubricant should be applied to the inside surface of gasket which will come in contact with plain end of the pipe.

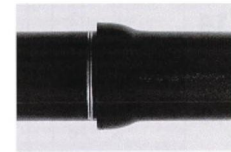


TYTON JOINT PIPE
ASSEMBLY INSTRUCTION (2)

6. Be sure that the plain end is beveled; square or sharp edges may damage or dislodge the gasket and cause a leak. The plain end of the pipe must be cleaned of all foreign matter on the outside from the end to the stripes. Frozen materials may cling to the pipe in cold weather and must be removed. In all cases, it is desirable to apply a thin film of lubricant to the outside of the plain end for about 3" back from the end. Do not allow the plain end to touch the ground or trench side after lubricating since foreign matter may adhere to the plain end and cause a leak. Lubricant other than that furnished with the pipe should not be used.



7. The plain end of the pipe should be in reasonably straight alignment and carefully entered into the socket until it just makes contact with the gasket. This is the starting position for the final assembly of the joint. Note the two painted stripes near plain end.



8. Joint assembly should then be completed by forcing the plain end of the entering pipe past the gasket (which is thereby compressed) until the plain end makes contact with the bottom of the socket. Note that the first painted stripe will have disappeared into the socket and the front edge of the second stripe will be approximately flush with the bell face. If assembly is not accomplished with the application of reasonable force by the methods indicated, the plain end of the pipe should be removed to check for the proper positioning of the gasket, adequate lubrication, and removal of foreign matter in the joint.



9. For joint assemblies 8" and smaller, socketing of the plain end may be accomplished in some cases by pushing against the face of the bell of the entering pipe with a crowbar or spade. Large sizes require a more powerful means.



FIELD-CUT

The plain end of TYTON JOINT pipe is furnished beveled to ease its "sliding fit" with the gasket when the joint is assembled. When necessary to field-cut pipe, the cut end may be easily conditioned to readily accept the next joint.



Simply taper the outside cut-end of TYTON JOINT pipe at least 1/4" back, at an angle approximately 20 degrees with the center line of pipe. This can be done with a coarse file or portable grinder. The operation removes sharp or rough edges which could injure the gasket, and assures proper assembly.

FLANGE JOINT PIPE & FITTINGS

For quick reference, the highlights of the best installation practices are as below:

1. Make sure that the sealing surfaces are clean, dry and free of grease.
 - Check the quality of flange and gasket, ensure to remove any dust and grime.
 - Line up the flange pipes.
 - Leave a space between two flanges for placing gasket.



2. Position the gasket so that it is centered on the flange.
 - Slide the gasket into the gap between flanges, place all bolts, and fit its position with a rubber bend.
 - The gasket should be aligned and centered between the raised face.



3. Lubricate the cable ties. Be sure to lubricate bolts, nuts and washers of all bearing surfaces.



4. Assemble bolts, washers and nuts on the flange. Tightening bolts follow one direction and as below position. Preferably using a torque wrench for required torque.

