

TATA STEEL

TATA DUCTURA
Happiness Guaranteed



DUCTILE IRON PIPE FITTINGS



TATA STEEL LIMITED

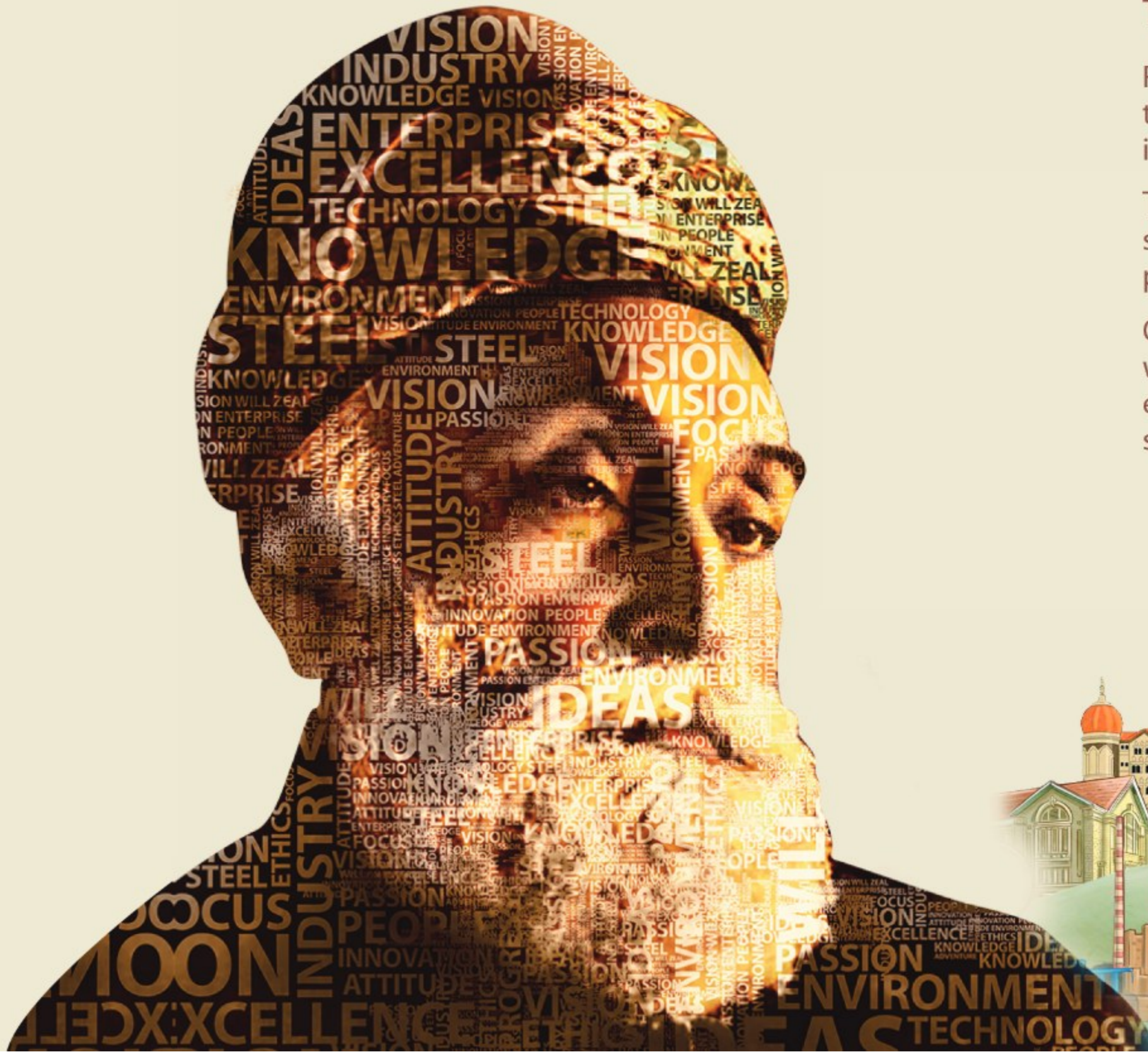
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ABOUT US



Tata Group

Founded by Jamsetji Nusserwanji Tata in 1868, the Tata Group is a global enterprise, headquartered in Mumbai, India, comprising 100+ companies across

The Group has operations in more than 100 countries, spread over six continents, and its companies export products and services to 150 countries.

Over the years, the Tata Group has become synonymous with quality, trust, business leadership, the highest ethical standards, and a profound respect for all stakeholders.



TATA STEEL METALIKS DIVISION - DUCTILE IRON PIPES

The Ductile Iron Pipe business of Tata Steel Metaliks Division operates from its state-of-the-art manufacturing facility situated in Kharagpur, West Bengal, crafting world-class Ductile Iron Pipes.

Started as Tata Metaliks Kubota Pipes Limited in 2007, through a joint venture between Tata Metaliks Limited, Kubota Corporation and Metal one Corporation, the Division transitioned into a wholly owned subsidiary of Tata Metaliks Limited in April 2013. Subsequently, it merged with Tata Metaliks Limited in December 2016.

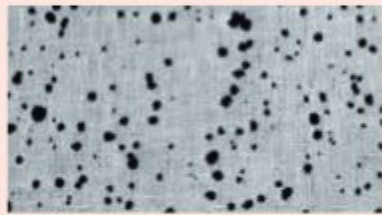
In February 2024, the Company was amalgamated with Tata Steel.

DUCTILE IRON'S SUPERIORITY

Ductile Iron is an improvement to the conventional Grey Cast Iron that has served the water industry with distinction through the centuries. The first Ductile Iron pipe was produced experimentally in 1948. Minor but significant changes in chemistries and processing result in physical differences at the micro-structure level that result in a vastly improved fracture toughness and ductility making Ductile Iron piping products substantially more resistant to damage from impact or concentrated stresses.

Ductile iron's superiority lies in its spheroid graphite microstructure. Since the graphite structure of grey cast iron is linear under severe loading, stress builds up unevenly around the ends of particles and weakens the metal.

However, in ductile iron, since the graphite structure is spherical, similar stress distributes evenly, thereby maintaining strength. Yet, the basic chemical composition of ductile iron is similar to that of grey cast iron, giving it the same excellent anticorrosive properties. Together, these features give ductile iron, excellent resistance to impact, pressure, and corrosion.



Nodular Graphite in Ductile Iron



Flaky Graphite in Grey Cast Iron

Advantages of Ductile Iron

- Very strong with high tensile strength and impact resistance.
- Can withstand very high pressure and surge.
- Good resistance to handling/transportation damage.
- Easy to lay with simple push-on-type jointing system.
- Flexible joint offers considerable joint deflection.
- Back filling with special material not required.
- Low pumping cost due to lower frictional resistance.
- Reliable internal and external corrosion protection.
- Can accommodate ground movement and surge pressure.
- Long service life.
- Higher durability.

Tata Steel - Ductile Iron Pipes Solutions

Having pioneered Ductile Iron Pipes, Tata Steel Metaliks Division. introduces Tata Ductura Ductile Iron Pipe Fittings. This new product line furthers the brand's journey to become the ultimate one-stop solution and fulfill diverse customer requirements. These fittings conform to the stringent standards of IS9523, ISO 2531 and BSEN545/598. Contractors engaged in EPC projects consistently seek dependable partners for material support and Tata Ductura Ductile Iron Pipe Fittings stand ready to offer unwavering support.



Ductile Iron Pipe Fittings - Connectivity to Zero Leakage

Easy Jointing for Socket and Spigot Fittings

These DIP fittings offer effortless jointing through flexible push-on joints, simplifying and expediting the installation process. The flexible joints permit variable degrees of angular deflection.



Ductile Iron Fittings and Accessories

A wide range of fittings and accessories are available, allowing flexibility in design and construction. The DIP fittings are easy to handle on site, facilitating efficient installation and enhancing laying efficiency.



HISTORY OF LOST FOAM CASTING

The first patent for an evaporative-pattern casting process was filed in April 1956, by H.F. Shroyer. He patented the use of foam patterns embedded in traditional green sand for metal casting. In his patent, a pattern was machined from a block of expanded polystyrene (EPS), and supported by bonded sand during pouring. This process is now known as the full mould process.

In 1964, M.C. Flemmings used unbonded sand for the process. The first North American foundry to use evaporative-pattern casting was the Robinson Foundry at Alexander City, Alabama. General Motors' first product using these processes was the 4.3L, V-6 diesel cylinder head, which was made in 1981 at Massena, New York.

A study found in 1997 that evaporative-pattern casting processes accounted for approximately 140,000 tons of aluminum casting in the United States. The same survey forecast that evaporative-pattern casting processes would account for 29% of the aluminum, and 14% of the ferrous casting markets soon. Non-proprietary terms that have been used to describe similar processes include cavity-less casting, evaporative foam casting, foam vaporization casting, lost pattern casting, expanded polystyrene moulding, EPC, Evaporative Pattern Casting, LFT, Lost Foam Technology, Expendable Pattern Casting, Lost Foam etc.

The Lost Foam process is described as best suited for mass production of castings with complicated design features that cannot otherwise be made by other processes. This appears to be true in developed countries such as the United States and several European countries where there exists Lost Foam operations. The Lost Foam process has been successfully utilized to manufacture aluminum engine blocks and heads for automobiles and marine boats in mass production in the United States. Those parts are indeed designed exclusively for the Lost Foam casting process.

COMPARISON WITH GREEN SAND CASTING

PROPERTY	GREEN SAND CASTING	LOST FOAM CASTING
Complex Internal Features and Part Consolidation	Complexity determined by sand core limitations, geometry, strength and cost	Extensive and complex internal features as thin as 3mm, based on detail duplication and pattern assembly in foam
Dimensional Tolerances	± 0.030 is typical depending on part size, complexity and geometry	± 0.030 is typical depending on part size, complexity and geometry
Surface Finish Capabilities	Depends on grain fineness of sand	Depends on bead size and ceramic coating grain fineness
Feature Accuracy	Core movement and shift between mould halves across the parting line limit feature accuracy	No cores or mould halves to shift and degrade feature accuracy
Parting Line and Draft Angles	Parting lines and draft angles are necessary for moulding	No parting lines in the mould and minimal draft on tools
Environmental Costs	Sand recovery requires binder removal	Sand is binder-free, so it can be easily and rapidly recovered at a low cost
Tool Life	Wear on wood and metal tools from sand abrasion	Low wear and long life with aluminum tool
Design Flexibility	Limited	Unlimited, opportunities for an innovative design of components
Casting parting line	Parting line exists	Parting line does not exist

DUCTILE IRON PIPE FITTINGS

Ductile Iron pipe fittings are made of ductile Cast Iron commonly used for potable water transmission and distribution. Ductile Iron used to manufacture the fittings is characterized by the spheroidal or nodular nature of the graphite within the iron.

The fittings are manufactured by using the "Lost Foam Casting" technology, protective internal linings and external coatings are applied to ductile iron pipes to inhibit corrosion, the standard internal lining is cement mortar and standard external coating is water-based paint.

Ductile Iron is the preferred material for water projects. The internal lining also increases the Williams "C" value to 140, which ensures lesser friction loss, and thus enables considerable savings in terms of energy cost as well as reduced pumping cost.



Why Choose

Ductile Iron Pipe Fittings Over Cast Iron Pipe Fittings



Environmental Benefits

Ductile Iron pipe fittings are made from recycled steel and ferric scrap metal. Ductile Iron does not leach harmful chemicals into the potable drinking water.

Factor of Safety

Ductile Iron Pipe Fitting does not fail by bursting and it offers a higher factor of safety.

Close Dimensional Tolerance

Lost Foam Casting is a precise casting technology, hence the fittings are very precise.

Longer Life

The uniform spreading of spheroidal graphite of Ductile Iron makes it less susceptible to deep localized pitting than Cast Iron fittings. Corrosion resistance of Ductile Iron is better than Cast Iron.

Easy Installation

Flexible Push-On fittings make it easier and quicker for installation. Cast Iron fittings are Heavy, costly and vulnerable to impact.

LOST FOAM CASTING PROCESS

Performing

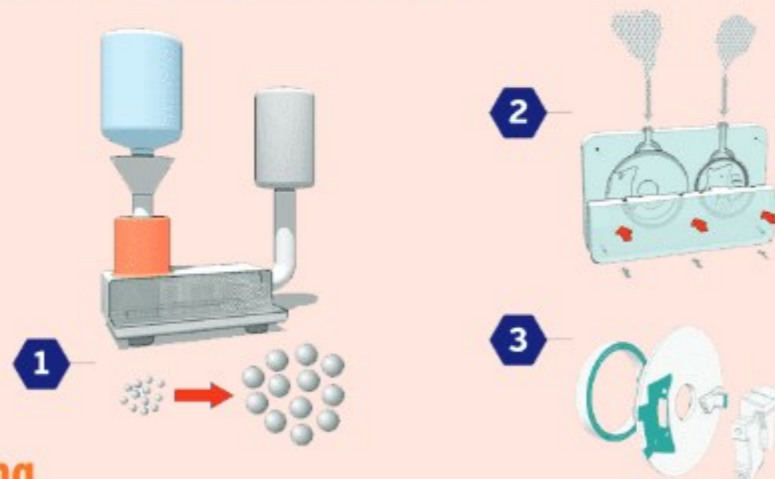
During the pre-expansion, the raw material beads for the pattern are first of all expanded to multi-fold of their original size. This lowers the material density to 18-25 g/l. This low density is necessary in the casting process to ensure that the molten metal added can completely and thoroughly replace the pattern. As the pre-expansion process destabilizes the beads, stability is restored by following pressure equalization process.

Pattern Making

During the moulding process, the individual parts of the final component pattern are produced. Therefore, a moulding tool made of aluminum is filled with the pre-expanded beads. Added steam ensures that the polystyrene beads are welded together. A stable pattern section is formed.

Pattern Assembly

The gluing of simple pattern sections to one complex pattern concludes the production of the raw pattern. This step equips the Lost Foam Casting process with a decisive advantage. As the multi-section pattern can be more complex than a single moulding tool, the LF Casting process enables the burrless production of components with undercuts and fine ducts.

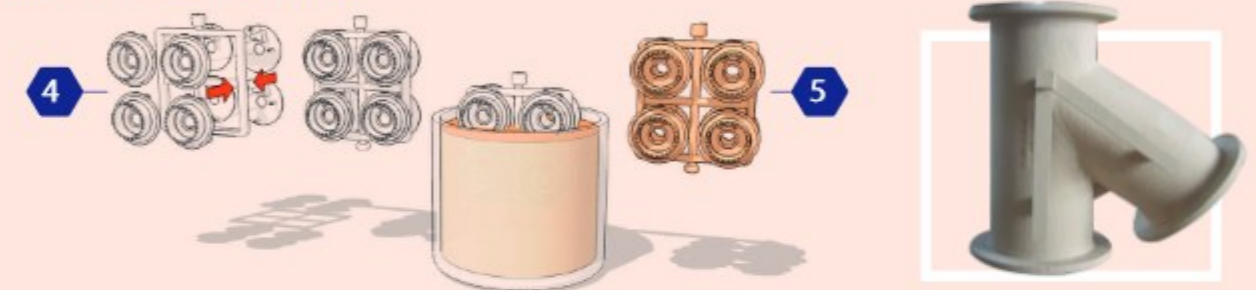


Tree Making

The Cluster or a tree is formed by the mounting of several patterns on a gating system. In that way, several components at once can be produced in only one casting process.

Slurry Coating

A refractory, gas-permeable coating is applied to the cluster by dipping. This stabilizes the cluster and enables the evaporation of the combusted pattern during the casting process. A hard shell and supportive outer mass is formed around the pattern. This 'coating' is very much like the one seen in lost wax casting and manufacturers will make use of various 'coating' materials, depending on the requirements of the final product and more particularly, the desired finish.



Tree Investment

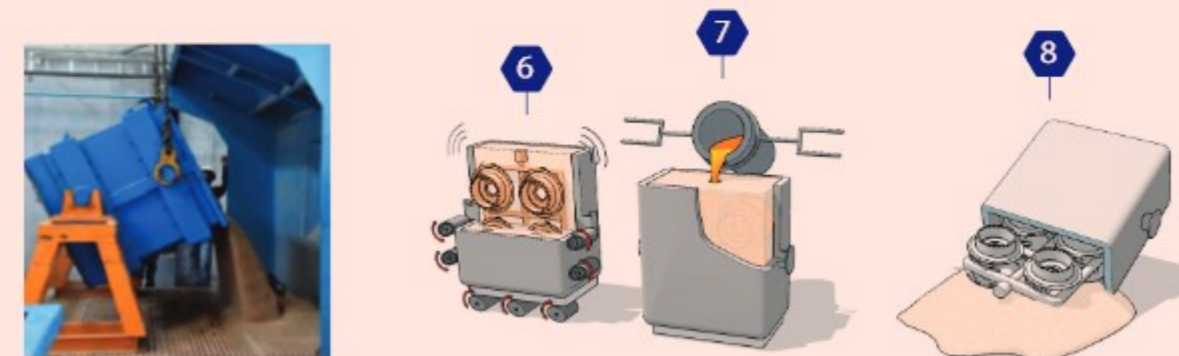
This dried and coated cluster is now invested in a foundry flask with loose, unbounded sand which is vibrated to provide a tight compaction, leaving behind the pattern/shape in the sand. Vibrations ensure that the material is compacted and cavities and undercuts are filled.

Metal Pouring

During the casting process, the molten metal added through the gating system decomposes the polymer foam pattern and replaces it down to the last detail.

Knockout

The separation of the resulting components from the moulding material, and the demoulding is especially simple in the LF Casting process. The moulding material is dumped from the flask and thus reveals the ready-cast parts. Once the mould has been filled, it is left for the molten material to solidify.



OUR PRODUCTS



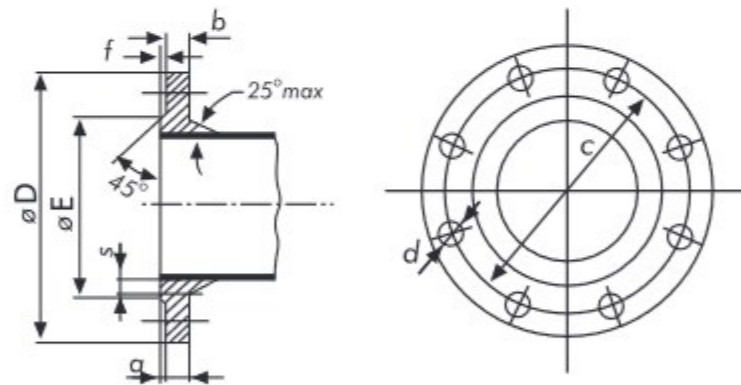
- FLANGE FITTING PN 10
- FLANGE FITTING PN 16
- FLANGE FITTING PN 25
- FLANGE FITTING PN 40
- DOUBLE SOCKET BEND 90°
- DOUBLE SOCKET BEND 45°
- DOUBLE SOCKET BEND 22.5°
- DOUBLE SOCKET BEND 11.25°
- DUCKFOOT DOUBLE SOCKET 90° BEND
- DOUBLE SOCKET CONCENTRIC TAPERS
- ALL SOCKET, FLANGE ON DOUBLE SOCKET TEES
- COLLARS
- FLANGED SOCKET
- FLANGED SPIGOT
- DOUBLE FLANGED BEND 90°
- DOUBLE SOCKET BEND 45°
- DUCKFOOT DOUBLE FLANGED BEND 90°
- DOUBLE FLANGED CONCENTRIC TAPERS
- ALL FLANGED TEES

FLANGE FITTING PN 10

PN 10	DIMENSIONS									
DN	D	E	c	b	f	a	s	Holes	Hole Dia	Bolt Size
80	200	132	160	16	3	19	15	4	19	M16
100	220	156	180	16	3	19	15	8	19	M16
150	285	211	240	16	3	19	15	8	23	M20
200	340	266	295	17	3	20	15	8	23	M20
250	395	319	350	19	3	22	16	12	23	M20
300	445	370	400	20.5	4	24.5	17.5	12	23	M20
350	505	429	460	20.5	4	24.5	19.5	16	23	M20
400	565	480	515	20.5	4	24.5	19.5	16	28	M24
450	615	530	563	21	4	25.5	20	20	28	M24
500	670	582	620	22.5	4	26.5	21	20	28	M24
600	780	682	725	25	5	30	24	20	31	M27

All Dimensions are in mm

Dimensions 'a' and 's' are for guidance only

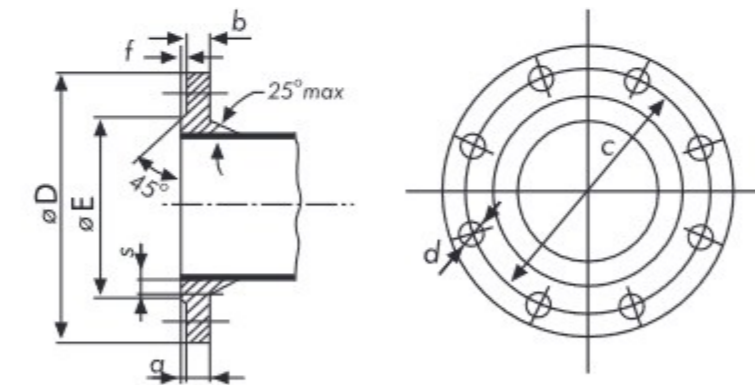


FLANGE FITTING PN 16

PN 16	DIMENSIONS									
DN	D	E	c	b	f	a	s	Holes	Hole Dia	Bolt Size
80	200	132	160	16	3	19	15	8	19	M16
100	220	156	180	16	3	19	15	8	19	M16
150	285	211	240	16	3	19	15	8	23	M20
200	340	266	295	17	3	20	16	12	23	M20
250	400	319	355	19	3	22	17.5	12	28	M24
300	455	370	410	20.5	4	24.5	1.5	12	28	M24
350	520	429	470	22.5	4	26.5	21	16	28	M24
400	580	480	525	24	4	28	22.5	16	31	M27
450	640	548	585	26	4	30	24	20	31	M27
500	715	609	650	27.5	4	31.5	25	20	34	M30
600	840	720	770	31	5	36	27	20	37	M33

All Dimensions are in mm

Dimensions 'a' and 's' are for guidance only

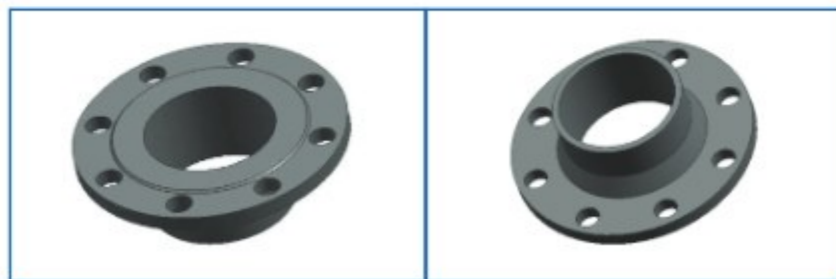
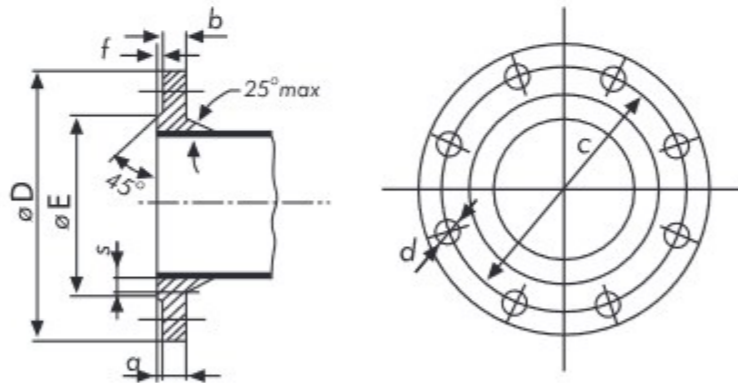


FLANGE FITTING PN 25

PN 25	DIMENSIONS									
DN	D	E	c	b	f	a	s	Holes	Hole Dia	Bolt Size
80	200	132	160	16	3	19	15	8	19	M16
100	235	156	190	16	3	19	15	8	23	M20
150	300	211	250	17	3	20	16	8	28	M24
200	360	274	310	19	3	22	17.5	12	28	M24
250	425	330	370	21.5	3	24.5	19.5	12	31	M27
300	485	389	430	23.5	4	27.5	22	16	31	M27
350	555	448	490	26	4	30	24	16	34	M30
400	620	503	550	28	4	32	25.5	16	37	M33
450	670	548	600	30.5	4	34.5	27.5	20	37	M33
500	730	609	660	32.5	4	36.5	29	20	37	M33
600	845	720	770	37	5	42	33.5	20	40	M36

All Dimensions are in mm

Dimensions 'a' and 's' are for guidance only

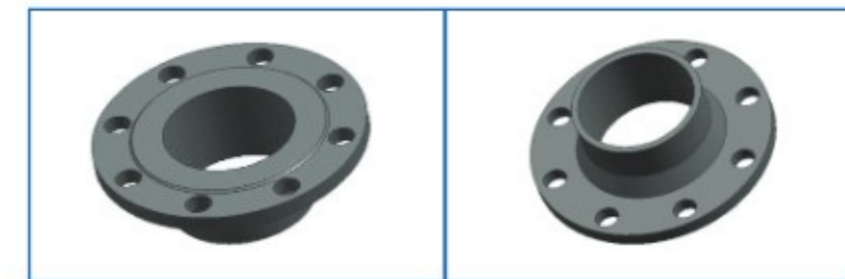
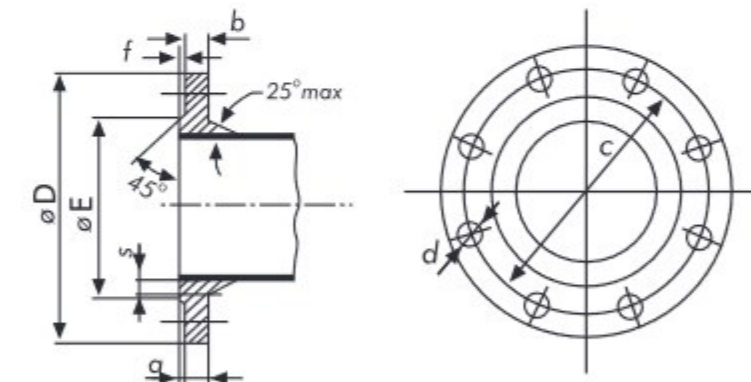


FLANGE FITTING PN 40

PN 40	DIMENSIONS									
DN	D	E	c	b	f	a	s	Holes	Hole Dia	Bolt Size
80	200	132	160	16	3	19	15	8	19	M16
100	235	166	190	16	3	19	15	8	23	M20
150	300	211	250	23	3	26	18	8	28	M24
200	375	284	320	27	3	30	21	12	31	M27
250	450	345	385	31.5	3	34.5	24	12	34	M30
300	515	409	450	35.5	4	39.5	27.5	16	34	M30
350	580	465	510	40	4	44	31	16	37	M33
400	660	535	585	44	4	48	33.5	16	40	M36
450	685	560	610	46	4	50	35	20	40	M36
500	755	615	670	48	4	52	36.5	20	43	M39
600	890	735	795	53	5	58	40.5	20	49	M45

All Dimensions are in mm

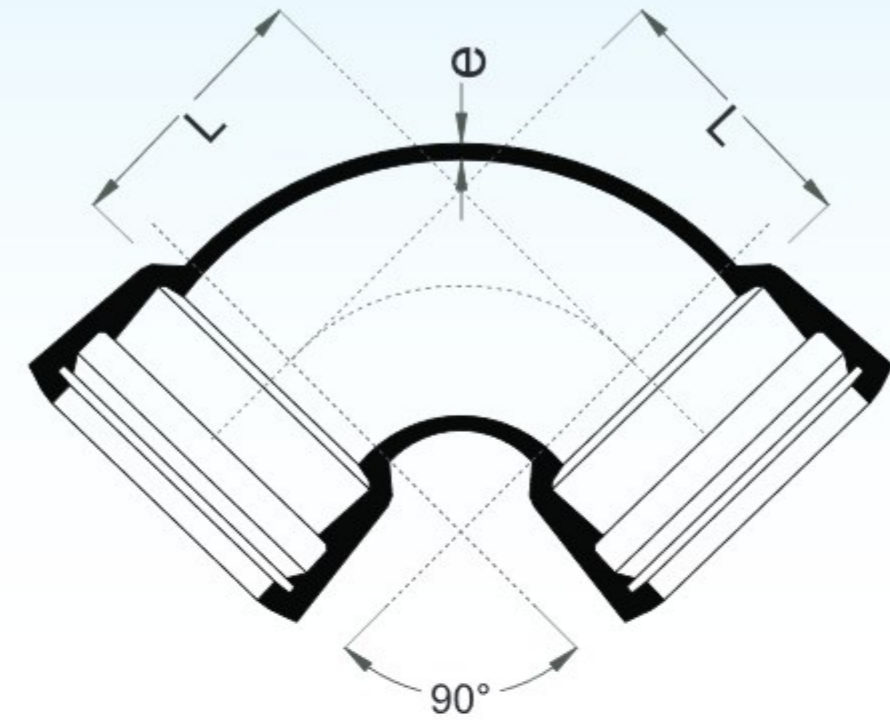
Dimensions 'a' and 's' are for guidance only



DOUBLE SOCKET BEND 90°

NOMINAL SIZE	WALL THICKNESS	90°
DN	e	L
80	7.0	100
100	7.2	120
150	7.8	170
200	8.4	220
250	9.0	270
300	9.6	320
350	10.2	370
400	10.8	420
450	11.4	470
500	12.0	520
600	13.2	620

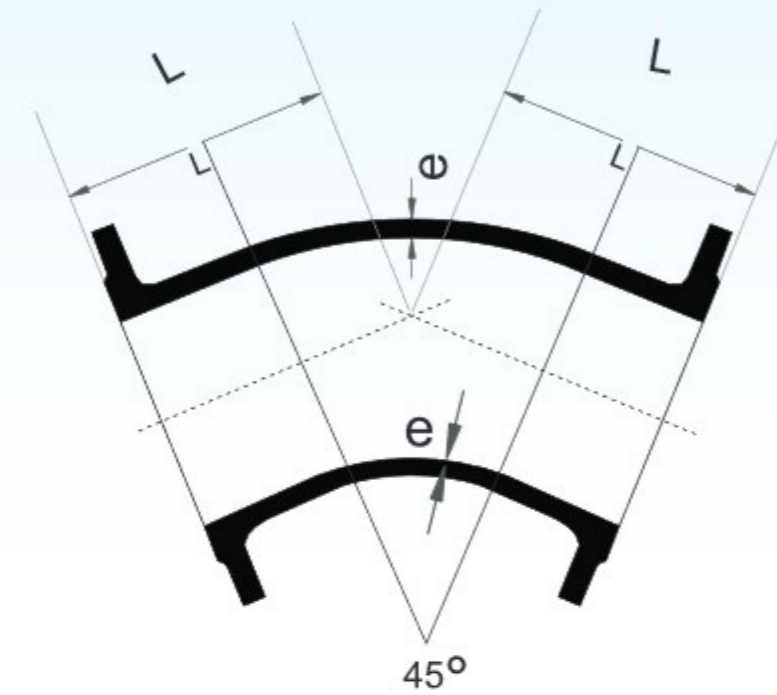
All Dimensions are in mm



DOUBLE SOCKET BEND 45°

NOMINAL SIZE	WALL THICKNESS	45°
DN	e	L
80	7.0	55
100	7.2	65
150	7.8	85
200	8.4	110
250	9.0	130
300	9.6	150
350	10.2	175
400	10.8	195
450	11.4	220
500	12.0	240
600	13.2	285

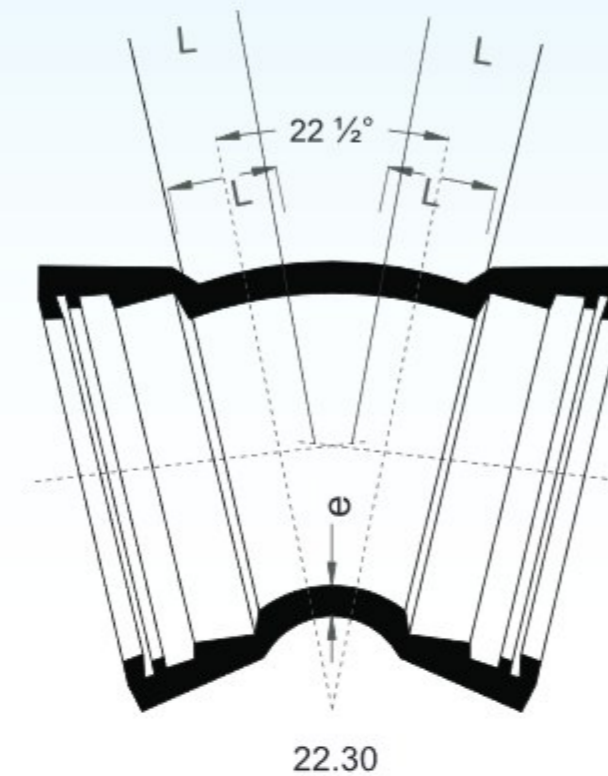
All Dimensions are in mm



DOUBLE SOCKET BEND 22.5°

NOMINAL SIZE	WALL THICKNESS	22.5°
DN	e	L
80	7.0	40
100	7.2	40
150	7.8	55
200	8.4	65
250	9.0	75
300	9.6	85
350	10.2	95
400	10.8	110
450	11.4	120
500	12.0	130
600	13.2	150

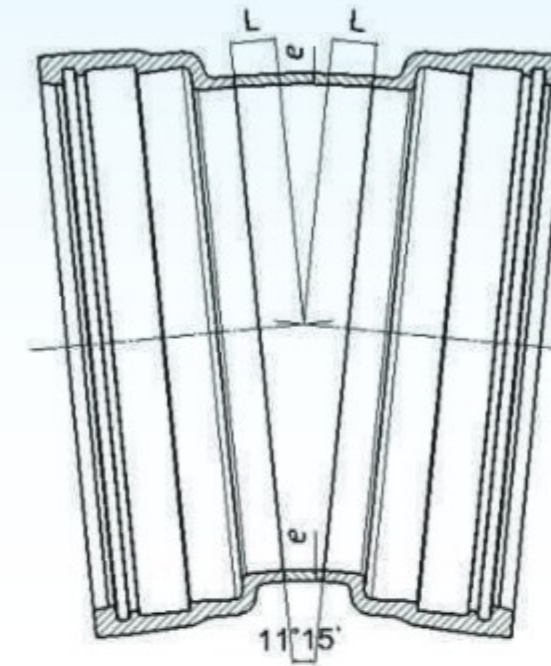
All Dimensions are in mm



DOUBLE SOCKET BEND 11.25°

NOMINAL SIZE	WALL THICKNESS	11.25°
DN	e	L
80	7.0	30
100	7.2	30
150	7.8	35
200	8.4	40
250	9.0	50
300	9.6	55
350	10.2	60
400	10.8	65
450	11.4	70
500	12.0	75
600	13.2	85

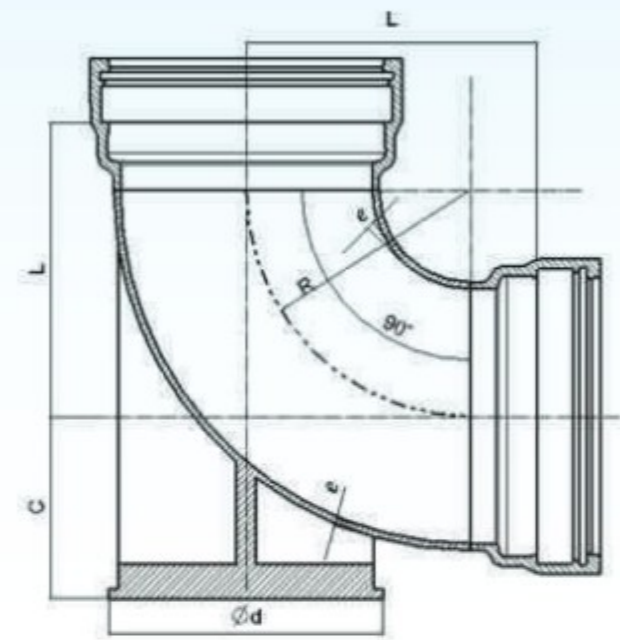
All Dimensions are in mm



DUCKFOOT DOUBLE SOCKET 90° BEND

NOMINAL SIZE	DIMENSIONS			
	e	L	c	d
DN 80	7.0	110	110	180
100	7.2	130	125	200
150	7.8	180	160	250
200	8.4	230	190	300
250	9.0	280	225	350
300	9.6	325	255	400
350	10.2	380	290	450
400	10.8	430	320	500
450	11.4	480	355	550
500	12.0	530	385	600
600	13.2	630	450	700

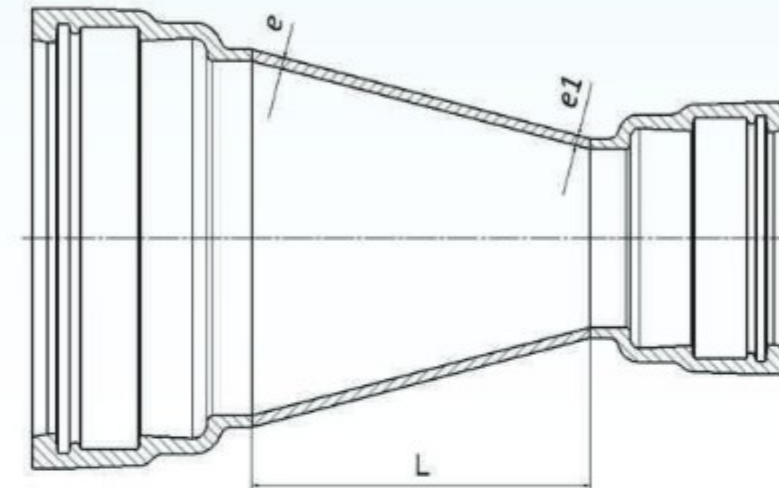
All Dimensions are in mm



DOUBLE SOCKET CONCENTRIC TAPERS

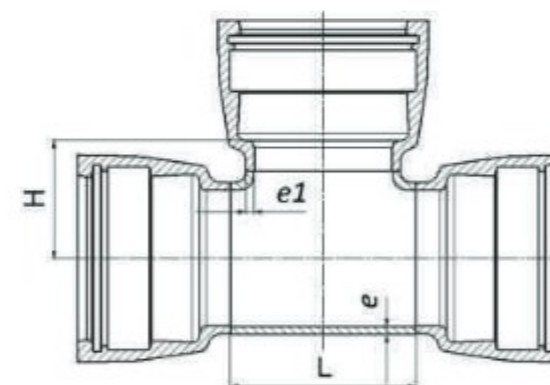
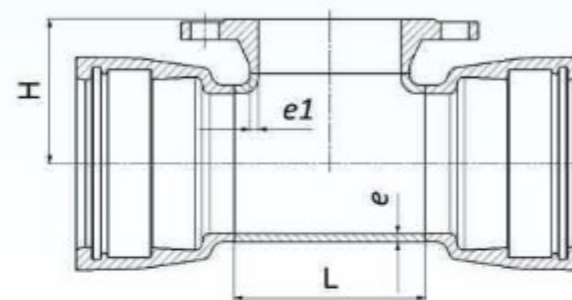
NOMINAL SIZE	DIMENSIONS		
	DN	e	e ₁
100 X 80	7.2	7	90
150 X 80	7.8	7	190
150 X 100	7.8	7.2	150
200 X 100	8.4	7.2	250
200 X 150	8.4	7.8	150
250 X 200	9.0	7.8	250
300 X 150	9.0	8.4	150
300 X 200	9.6	7.8	350
300 X 250	9.6	8.4	250
300 X 200	9.6	9.0	150
350 X 200	10.2	8.4	360
350 X 250	10.2	9.0	260
350 X 300	10.2	9.6	160
400 X 250	10.8	9.0	360
400 X 300	10.8	9.6	260
400 X 350	10.8	10.2	160
450 X 350	11.4	10.2	260
450 X 400	11.4	10.8	160
500 X 350	12	10.2	360
500 X 400	12	10.8	260
600 X 400	13.2	10.8	460
600 X 500	13.2	12.0	260

All Dimensions are in mm



ALL SOCKET, FLANGE ON DOUBLE SOCKET TEES

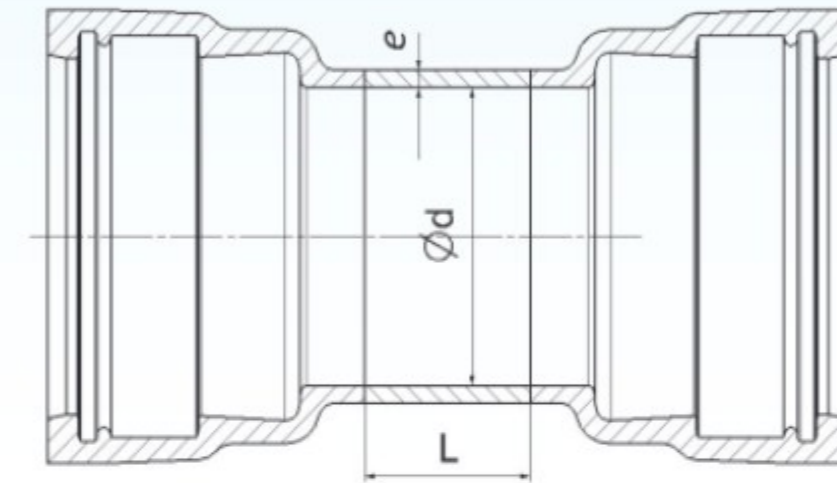
NOMINAL DIAMETER		DIMENSIONS				
DN BODY	DN BRANCH	e	e ₁	L	D/S/H, B/F/H	ALL SOCKET H
80	80	7	7	170	165	85
100	80	7.2	7	170	175	95
100	100	7.2	7.2	190	180	95
150	100	7.8	7.2	195	210	120
150	150	7.8	7.8	255	220	125
200	100	8.4	7.2	200	240	145
200	150	8.4	7.8	255	250	150
200	200	8.4	8.4	315	260	155
250	100	9	7.2	200	270	170
250	150	9	7.8	260	280	175
250	200	9	8.4	315	290	180
250	250	9	9	375	300	190
300	100	9.6	7.2	210	300	220
300	200	9.6	8.4	325	320	220
300	300	9.6	9.6	440	340	220
350	100	10.2	7.2	205	330	238
350	200	10.2	8.4	325	350	247
350	350	10.2	10.2	495	380	270
400	100	10.8	7.2	210	360	268
400	150	10.8	7.8	270	370	275
400	200	10.8	8.4	325	380	277
400	300	10.8	9.6	440	400	290
400	400	10.8	10.8	560	420	310
450	100	11.4	7.2	215	390	298
450	250	11.4	9	390	420	315
450	450	11.4	11.4	620	460	340
500	100	12	7.2	215	420	328
500	200	12	8.4	330	440	337
500	400	12	10.8	565	480	370
500	500	12	10	680	500	380
600	200	13.2	8.4	340	500	397
600	400	13.2	10.8	570	540	430
600	600	13.2	13.2	800	580	430



All Dimensions are in mm

COLLARS

NOMINAL SIZE	DIMENSIONS		
	e	L	d
DN 80	7.0	160	109
100	7.2	160	130
150	7.8	165	183
200	8.4	170	235
250	9.0	175	288
300	9.6	180	340
350	10.2	185	393
400	10.8	190	445
450	11.4	195	498
500	12.0	200	550
600	13.2	210	655

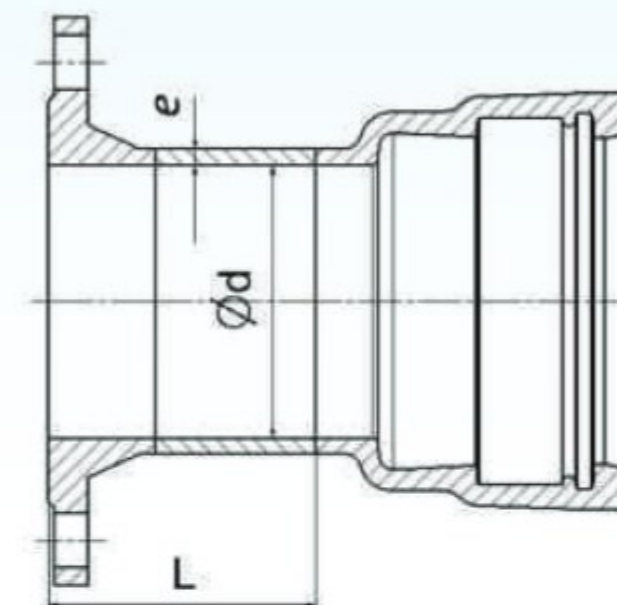


All Dimensions are in mm

FLANGED SOCKET

NOMINAL SIZE	DIMENSIONS		
	e	L	d
DN 80	7.0	130	109
100	7.2	130	130
150	7.8	135	183
200	8.4	140	235
250	9.0	145	288
300	9.6	150	340
350	10.2	155	393
400	10.8	160	445
450	11.4	165	498
500	12.0	170	550
600	13.2	180	655

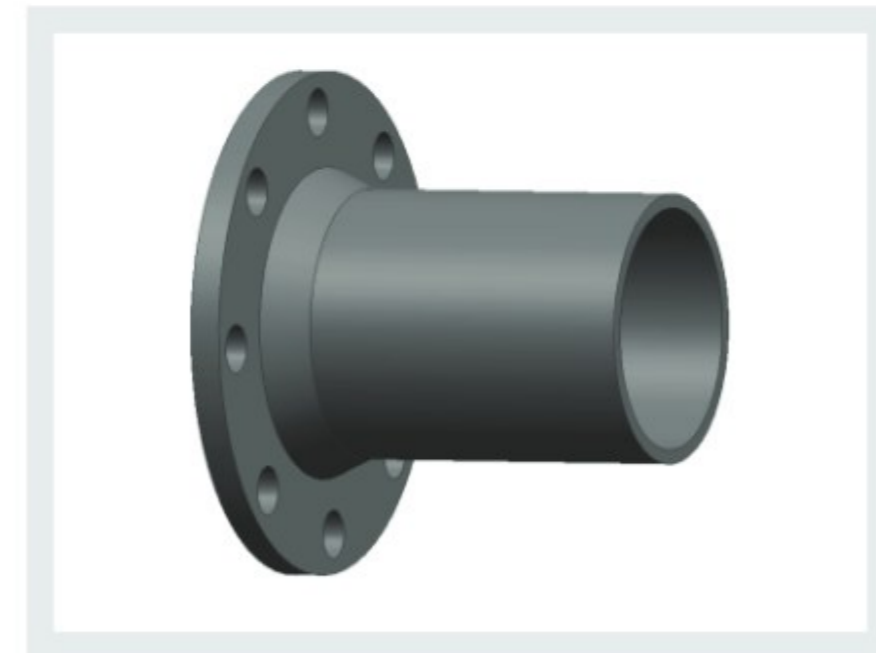
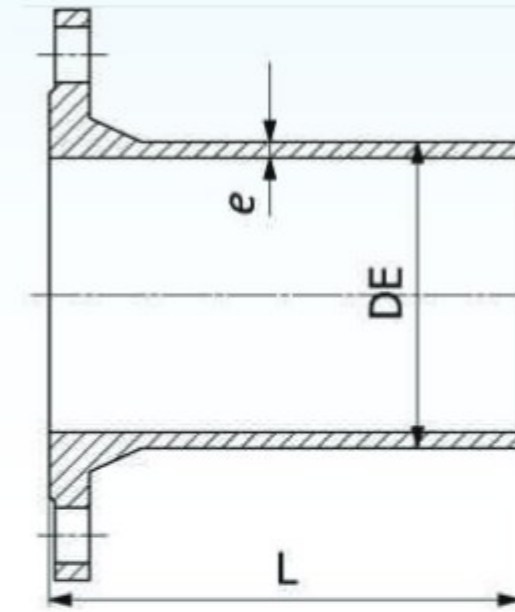
All Dimensions are in mm



FLANGED SPIGOT

NOMINAL SIZE		DIMENSIONS	
DN	DE	e	L
80	98	7.0	350
100	118	7.2	360
150	170	7.8	380
200	222	8.4	400
250	274	9.0	420
300	326	9.6	440
350	378	10.2	460
400	429	10.8	480
450	480	11.4	500
500	532	12.0	520
600	635	13.2	560

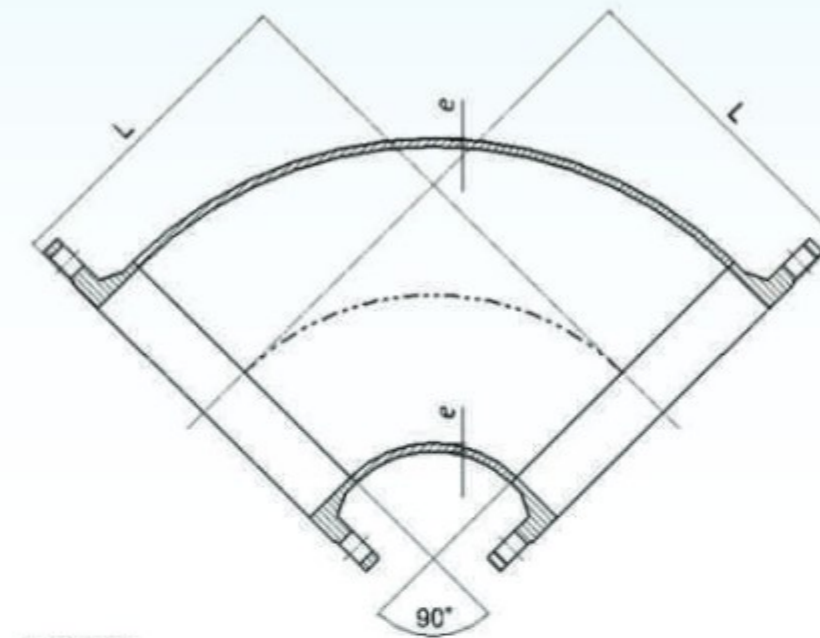
All Dimensions are in mm



DOUBLE FLANGED BEND 90°

NOMINAL SIZE	WALL THICKNESS	90°
DN	e	L
80	7.0	165
100	7.2	180
150	7.8	220
200	8.4	260
250	9.0	350
300	9.6	400
350	10.2	450
400	10.8	500
450	11.4	550
500	12.0	600
600	13.2	700

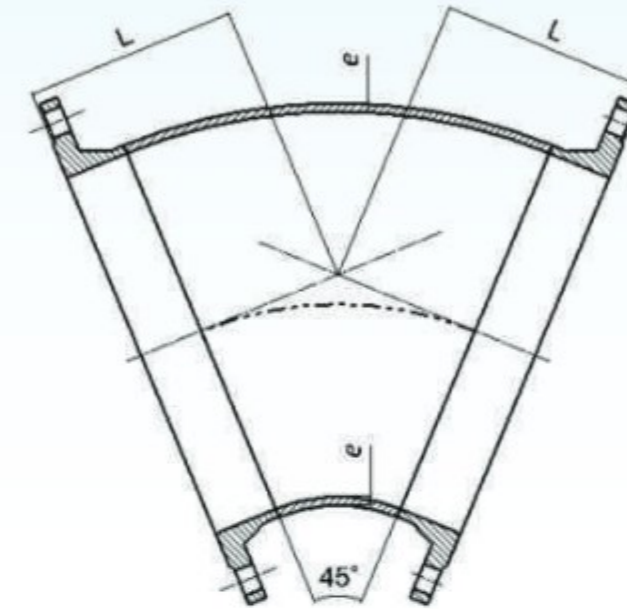
All Dimensions are in mm



DOUBLE SOCKET BEND 45°

NOMINAL SIZE	WALL THICKNESS	45°
DN	e	L
80	7.0	130
100	7.2	140
150	7.8	160
200	8.4	180
250	9.0	350
300	9.6	400
350	10.2	298
400	10.8	324
450	11.4	350
500	12.0	375
600	13.2	426

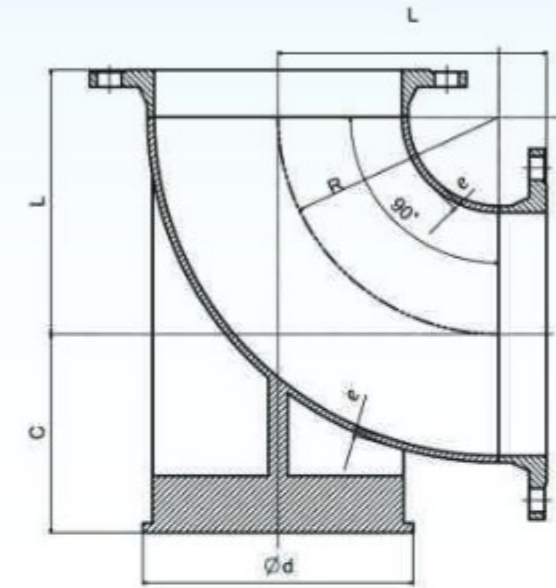
All Dimensions are in mm



DUCKFOOT DOUBLE FLANGED BEND 90°

NOMINAL SIZE	DIMENSIONS			
	e	L	c	d
DN 80	7.0	155	110	180
100	7.2	175	125	200
150	7.8	230	160	250
200	8.4	280	190	300
250	9.0	335	225	350
300	9.6	385	255	400
350	10.2	440	290	450
400	10.8	495	320	500
450	11.4	545	355	550
500	12.0	600	385	600
600	13.2	705	450	700

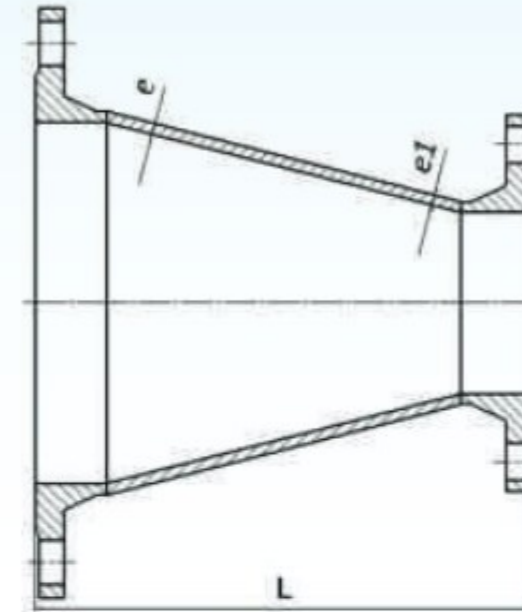
All Dimensions are in mm



DOUBLE FLANGED CONCENTRIC TAPERS

NOMINAL SIZE	DIMENSIONS		
	DN	e	e ₁
100 X 80	7.2	7	200
200 X 150	8.4	7.8	300
250 X 200	9.0	8.4	300
300 X 250	9.6	9.0	300
350 X 300	10.2	9.6	300
400 X 350	10.8	10.2	300
450 X 400	11.4	10.8	300
500 X 400	12	10.8	600
600 X 500	13.2	12.0	600

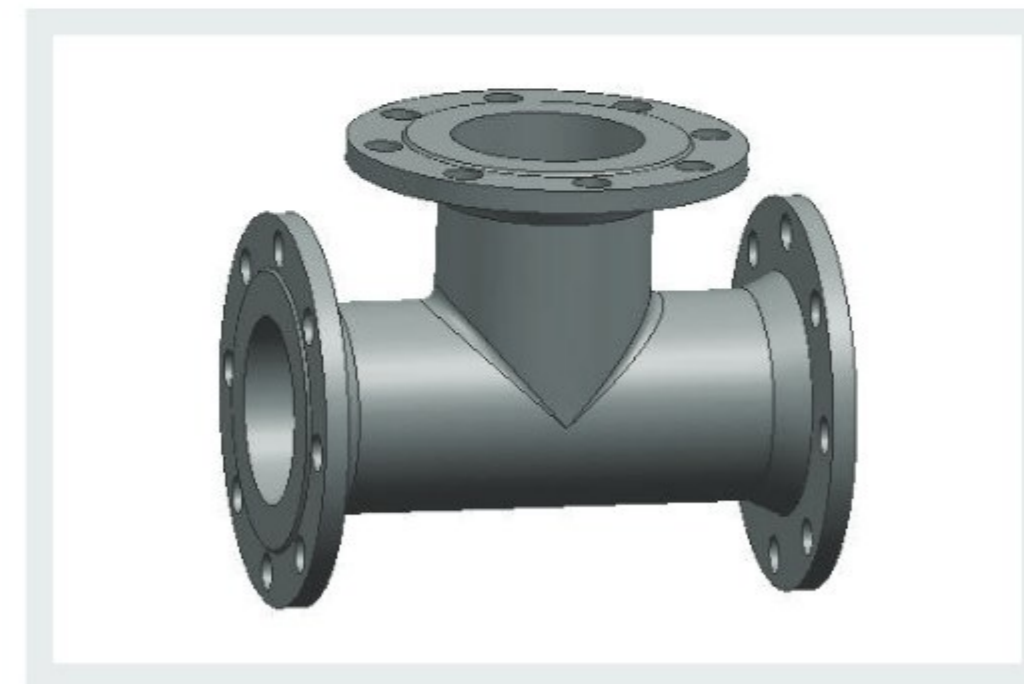
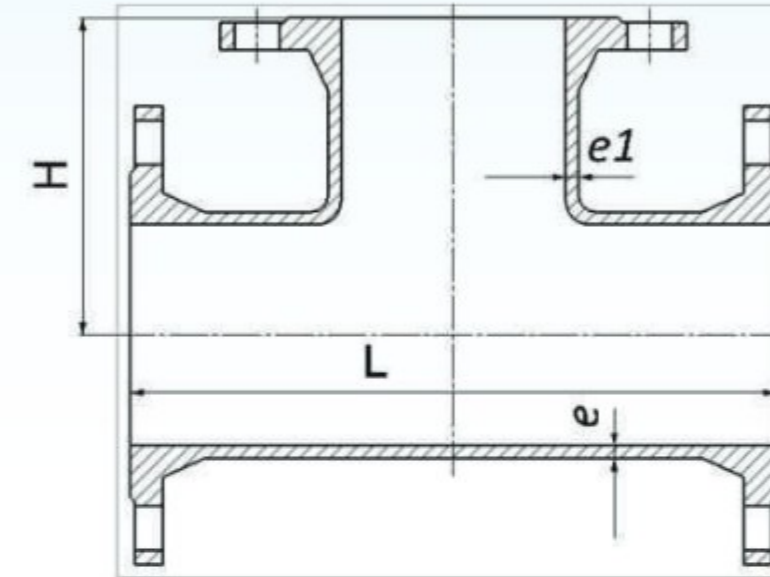
All Dimensions are in mm



ALL FLANGED TEES

NOMINAL SIZE		DIMENSIONS			
DN BRANCH	DN BRANCH	e	e ₁	L	H
80	80	7	7	330	165
100	80	7.2	7	360	175
100	100	7.2	7.2	360	180
150	80	7.8	7	440	205
150	100	7.8	7.2	440	210
150	150	7.8	7.8	440	220
200	80	8.4	7	520	235
200	100	8.4	7.2	520	240
200	150	8.4	7.8	520	250
200	200	8.4	8.4	520	260
250	100	9.0	7.2	700	275
250	200	9.0	8.4	700	325
250	250	9.0	9.0	700	350
300	100	9.6	7.2	800	300
300	200	9.6	8.4	800	350
300	300	9.6	9.6	800	400
350	100	10.2	7.2	850	325
350	200	10.2	8.4	850	325
350	350	10.2	10.2	850	425
400	100	10.8	7.2	900	350
400	200	10.8	8.4	900	350
400	400	10.8	10.8	900	450
450	100	11.4	7.2	950	375
450	200	11.4	8.4	950	375
450	450	11.4	11.4	950	475
500	100	12.0	7.2	1000	400
500	200	12.0	8.4	1000	400
500	400	12.0	10.8	1000	500
500	500	12.0	12.0	1000	500
600	200	13.2	8.4	1100	450
600	400	13.2	10.8	1100	550
600	600	13.2	13.2	1100	550

All Dimensions are in mm





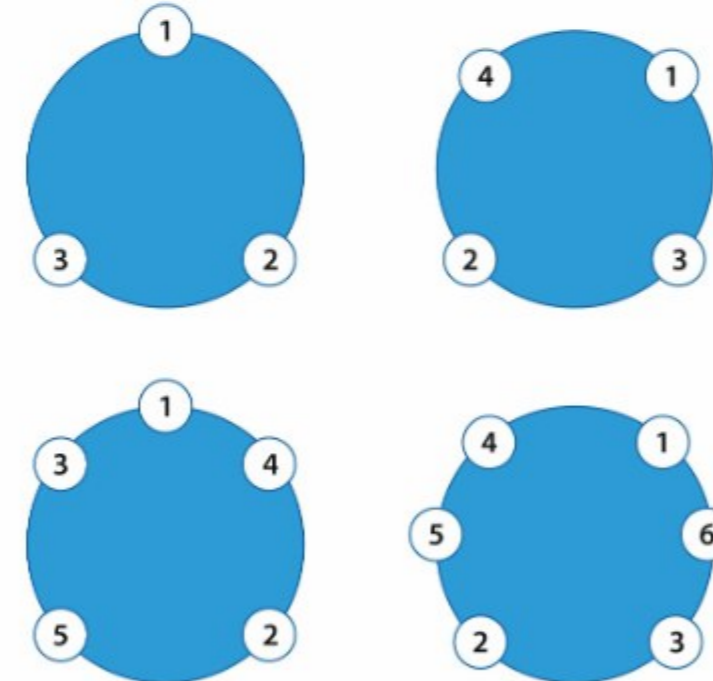
JOINTING PROCEDURE OF FLANGE FITTINGS

Flange fittings are joined through nuts, bolts, and washers with the support of a flat EPDM rubber gasket.

Bolts should be tightened in the correct sequence and a sufficient number of circuits to be undertaken, to ensure that the specified bolt torques are achieved.

It is recommended that sufficient complete tight circuits are carried out in sequence to ensure all bolts have attended the specified torque.

For sizes having 12 or more bolts, it is recommended that two jointers work simultaneously on diametrically opposite bolts. Each jointer tightens the first nut in the first quadrant, then the first nut in the second quadrant returns to the second nut in the first quadrant, and so on.





JOINTING PROCEDURE OF SOCKET FITTINGS

Joint Preparation

Ensure the spigot is properly chamfered, if it is a cut pipe it is essential to remake the chamfer and ensure that there is a radius to prevent the spigot from displacing the gasket.

Before cutting ensure that the diameter is within tolerance at the cut position.

Thoroughly clean the spigot and the interior of the socket.

Clean the gasket and insert it into the socket with the square section gasket heel in the retaining groove and the gasket fishtail towards the back of the socket.

The insertion of gaskets is facilitated by folding the gasket and looping it into a heart shape with the gasket fishtail towards the back of the socket.

Check that the gasket is located correctly around its entire circumference with the retaining heel firmly embedded in its seating.

Where fittings are supplied with pre-fitted gaskets, care should be taken to ensure that the socket and gasket are clean and free of debris.

Apply a thin film of lubricant on the inside surface of the gasket and the outside surface of the spigot for a distance of 50 mm for pipe sizes up to and including DN 600, and 120 mm for pipe sizes DN 700 and above.

Support the pipe or fitting just clear of the trench bottom and enter the spigot into the socket until contact is made.

Recommended spigot insertion depths are given and are also marked on the page.

Above shall ensure that the joint assembly is good enough to have no leakage.

DIMENSION, TOLERANCE AND PRESSURE

Tolerances on the External Diameter D and E

All dimensions are in millimeters.

DN	80	100	125	150	200	250	300	350	400	450	500	600
Tolerance on D	± 4.5			+5.5, -2.5				+ 6.5, -3.5				
Tolerance on E	± 4.0			± 4.5				± 5.0				
DN	700	750	800	900	1000	1100	1200	1400	1600	1800	2000	
Tolerance on D	+ 7.5, -4				+8.5, -4		+10, -5		+12, -6			
Tolerance on E	± 5.5				± 5.5		± 6.0		± 6.0			

Tolerances on Raised Face Height (f)

All dimensions are in millimeters.

Height of Raised Face (f) (1)	Tolerance (2)
3	+1.5, -2.0
4	+2, -3.0
5	+2.5, -4.0

Tolerances on Thickness of Flange

All dimensions are in millimeters.

Type of Flange (1)	Tolerance (2)
Integrally cast flanges	± (3 + 0.05 b)
Welded and screwed on flanges	± (2 + 0.05 b)

Tolerances on Flange Drilling

All dimensions are in millimeters.

Dimension (1)	Bolt Hole Diameter		
	Dia 19 to dia 28 (2)	Dia 31 to dia 56 (3)	Above dia 62 (4)
Bolt hole diameter, d	+2,-0	+3,-0	+4,-0
Pitch circle diameter, C	±2	±2.8	±4.8
Centre-to-centre of adjacent bolt holes	±2	±2.8	±4.8

Deviation on Lengths of Fittings

Types of Fittings	Nominal Diameter DN (mm)	Deviation in L and H (mm)
Flanged sockets	80 to 1200	±25
Flanged spigots	1400 to 2000	±35
Collars, tapers		
Tees	80 to 1200 1400 to 2000	+50/-25 +75/-35
Bends 90° (1/4)	80 to 2000	± (15 + 0.03 DN)
Bends 45° (1/8)	80 to 2000	± (10 + 0.025 DN)
Bends 22° 30' and 11° 15' (1/16 and 1/32)	80 to 1200 1400 to 2000	± (10 + 0.02 DN) ± (10 + 0.025 DN)

HYDROSTATIC TESTING

Tata Ductura Ductile Iron Fittings are 100% Hydrostatic Tested, ensuring no body leakage.

Hydrostatic Test Pressure for Fittings

Size Range	Work Test Pressure Kgf/cm ²
DN 80- DN 300	25
DN 350 - DN 600	16
DN 700 - DN 2200	10

- The fittings are kept under pressure for 10 seconds.
- The test sample should withstand the pressure without showing any sign of leakage, sweating, or any other kind of defect.
- The test is conducted after Zinc Coating.



WE ALSO MAKE MJ COLLAR COUPLING,
DOUBLE FLANGE PIPE,
PUDDLE FLANGED PIPES WITH FLANGES,
END CAP AND BLANK FLANGES AS PER
REQUIREMENT (RANGE 80-600 MM)

**WE PROVIDE GASKETS AND
NUT BOLTS FOR PIPE FITTINGS
AS PER REQUIREMENTS**

References : Technical information contained in this catalogue has been derived from the following specifications for Ductile Iron Pipe Fittings

ISO : 2531 : 2009
IS 9523 : 2000
BS EN : 545 : 2006

Disclaimer : The information and data contained in this literature is for reference and understanding only. The data and technical specifications present in this catalog are to the best of our knowledge according to BIS.

Double Socket Bend

Double Socket 90° Bend	
Product Description	TSL Product Code
Double Socket 90° Bend 80mm	DIFESIS9523000001
Double Socket 90° Bend 100mm	DIFESIS9523000002
Double Socket 90° Bend 150mm	DIFESIS9523000003
Double Socket 90° Bend 200mm	DIFESIS9523000004
Double Socket 90° Bend 250mm	DIFESIS9523000005
Double Socket 90° Bend 300mm	DIFESIS9523000006
Double Socket 90° Bend 350mm	DIFESIS9523000007
Double Socket 90° Bend 400mm	DIFESIS9523000008
Double Socket 90° Bend 450mm	DIFESIS9523000009
Double Socket 90° Bend 500mm	DIFESIS9523000010
Double Socket 90° Bend 600mm	DIFESIS9523000011

Double Socket 45° Bend	
Product Description	TSL Product Code
Double Socket 45° Bend 80mm	DIFESIS9523000012
Double Socket 45° Bend 100mm	DIFESIS9523000013
Double Socket 45° Bend 150mm	DIFESIS9523000014
Double Socket 45° Bend 200mm	DIFESIS9523000015
Double Socket 45° Bend 250mm	DIFESIS9523000016
Double Socket 45° Bend 300mm	DIFESIS9523000017
Double Socket 45° Bend 350mm	DIFESIS9523000018
Double Socket 45° Bend 400mm	DIFESIS9523000019
Double Socket 45° Bend 450mm	DIFESIS9523000020
Double Socket 45° Bend 500mm	DIFESIS9523000021
Double Socket 45° Bend 600mm	DIFESIS9523000022

Double Socket Duckfoot Bend

Double Socket 90° Bend	
Product Description	TSL Product Code
Double Socket Duckfoot Bend 80x90mm	DIFESIS9523000045
Double Socket Duckfoot Bend 100x90mm	DIFESIS9523000046
Double Socket Duckfoot Bend 150x90mm	DIFESIS9523000047
Double Socket Duckfoot Bend 200x90mm	DIFESIS9523000048
Double Socket Duckfoot Bend 250x90mm	DIFESIS9523000049
Double Socket Duckfoot Bend 300x90mm	DIFESIS9523000050
Double Socket Duckfoot Bend 350x90mm	DIFESIS9523000051
Double Socket Duckfoot Bend 400x90mm	DIFESIS9523000052
Double Socket Duckfoot Bend 450x90mm	DIFESIS9523000053
Double Socket Duckfoot Bend 500x90mm	DIFESIS9523000054
Double Socket Duckfoot Bend 600x90mm	DIFESIS9523000055

Double Socket 22.5° Bend	
Product Description	TSL Product Code
Double Socket 22.5° Bend 80mm	DIFESIS9523000023
Double Socket 22.5° Bend 100mm	DIFESIS9523000024
Double Socket 22.5° Bend 150mm	DIFESIS9523000025
Double Socket 22.5° Bend 200mm	DIFESIS9523000026
Double Socket 22.5° Bend 250mm	DIFESIS9523000027
Double Socket 22.5° Bend 300mm	DIFESIS9523000028
Double Socket 22.5° Bend 350mm	DIFESIS9523000029
Double Socket 22.5° Bend 400mm	DIFESIS9523000030
Double Socket 22.5° Bend 450mm	DIFESIS9523000031
Double Socket 22.5° Bend 500mm	DIFESIS9523000032
Double Socket 22.5° Bend 600mm	DIFESIS9523000033

Double Socket 11.25° Bend	
Product Description	TSL Product Code
Double Socket 11.25° Bend 80mm	DIFESIS9523000034
Double Socket 11.25° Bend 100mm	DIFESIS9523000035
Double Socket 11.25° Bend 150mm	DIFESIS9523000036
Double Socket 11.25° Bend 200mm	DIFESIS9523000037
Double Socket 11.25° Bend 250mm	DIFESIS9523000038
Double Socket 11.25° Bend 300mm	DIFESIS9523000039
Double Socket 11.25° Bend 350mm	DIFESIS9523000040
Double Socket 11.25° Bend 400mm	DIFESIS9523000041
Double Socket 11.25° Bend 450mm	DIFESIS9523000042
Double Socket 11.25° Bend 500mm	DIFESIS9523000043
Double Socket 11.25° Bend 600mm	DIFESIS9523000044

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.

Double Socket Concentric Taper/Reducer

Product Description	TSL Product Code
Double Socket Concentric Taper / Reducer 100x80mm	DIFESIS9523000056
Double Socket Concentric Taper / Reducer 150x80mm	DIFESIS9523000057
Double Socket Concentric Taper / Reducer 150x100mm	DIFESIS9523000058
Double Socket Concentric Taper / Reducer 200x80mm	DIFESIS9523000059
Double Socket Concentric Taper / Reducer 200x100mm	DIFESIS9523000060
Double Socket Concentric Taper / Reducer 200x150mm	DIFESIS9523000061
Double Socket Concentric Taper / Reducer 250x80mm	DIFESIS9523000062
Double Socket Concentric Taper / Reducer 250x100mm	DIFESIS9523000063
Double Socket Concentric Taper / Reducer 250x150mm	DIFESIS9523000064
Double Socket Concentric Taper / Reducer 250x200mm	DIFESIS9523000065
Double Socket Concentric Taper / Reducer 300x80mm	DIFESIS9523000066
Double Socket Concentric Taper / Reducer 300x100mm	DIFESIS9523000067
Double Socket Concentric Taper / Reducer 300x150mm	DIFESIS9523000068
Double Socket Concentric Taper / Reducer 300x200mm	DIFESIS9523000069
Double Socket Concentric Taper / Reducer 300x250mm	DIFESIS9523000070
Double Socket Concentric Taper / Reducer 350x80mm	DIFESIS9523000071
Double Socket Concentric Taper / Reducer 350x100mm	DIFESIS9523000072
Double Socket Concentric Taper / Reducer 350x150mm	DIFESIS9523000073
Double Socket Concentric Taper / Reducer 350x200mm	DIFESIS9523000074
Double Socket Concentric Taper / Reducer 350x250mm	DIFESIS9523000075
Double Socket Concentric Taper / Reducer 350x300mm	DIFESIS9523000076
Double Socket Concentric Taper / Reducer 400x80mm	DIFESIS9523000077
Double Socket Concentric Taper / Reducer 400x100mm	DIFESIS9523000078
Double Socket Concentric Taper / Reducer 400x150mm	DIFESIS9523000079
Double Socket Concentric Taper / Reducer 400x200mm	DIFESIS9523000080
Double Socket Concentric Taper / Reducer 400x250mm	DIFESIS9523000081
Double Socket Concentric Taper / Reducer 400x300mm	DIFESIS9523000082

Product Description	TSL Product Code
Double Socket Concentric Taper / Reducer 400x350mm	DIFESIS9523000083
Double Socket Concentric Taper / Reducer 450x80mm	DIFESIS9523000084
Double Socket Concentric Taper / Reducer 450x100mm	DIFESIS9523000085
Double Socket Concentric Taper / Reducer 450x150mm	DIFESIS9523000086
Double Socket Concentric Taper / Reducer 450x200mm	DIFESIS9523000087
Double Socket Concentric Taper / Reducer 450x250mm	DIFESIS9523000088
Double Socket Concentric Taper / Reducer 450x300mm	DIFESIS9523000089
Double Socket Concentric Taper / Reducer 450x350mm	DIFESIS9523000090
Double Socket Concentric Taper / Reducer 450x400mm	DIFESIS9523000091
Double Socket Concentric Taper / Reducer 500x80mm	DIFESIS9523000092
Double Socket Concentric Taper / Reducer 500x100mm	DIFESIS9523000093
Double Socket Concentric Taper / Reducer 500x150mm	DIFESIS9523000094
Double Socket Concentric Taper / Reducer 500x200mm	DIFESIS9523000095
Double Socket Concentric Taper / Reducer 500x250mm	DIFESIS9523000096
Double Socket Concentric Taper / Reducer 500x300mm	DIFESIS9523000097
Double Socket Concentric Taper / Reducer 500x350mm	DIFESIS9523000098
Double Socket Concentric Taper / Reducer 500x400mm	DIFESIS9523000099
Double Socket Concentric Taper / Reducer 500x450mm	DIFESIS9523000100
Double Socket Concentric Taper / Reducer 600x80mm	DIFESIS9523000101
Double Socket Concentric Taper / Reducer 600x100mm	DIFESIS9523000102
Double Socket Concentric Taper / Reducer 600x150mm	DIFESIS9523000103
Double Socket Concentric Taper / Reducer 600x200mm	DIFESIS9523000104
Double Socket Concentric Taper / Reducer 600x250mm	DIFESIS9523000105
Double Socket Concentric Taper / Reducer 600x300mm	DIFESIS9523000106
Double Socket Concentric Taper / Reducer 600x350mm	DIFESIS9523000107
Double Socket Concentric Taper / Reducer 600x400mm	DIFESIS9523000108
Double Socket Concentric Taper / Reducer 600x450mm	DIFESIS9523000109
Double Socket Concentric Taper / Reducer 600x500mm	DIFESIS9523000110

All Socket Tee

Product Description	TSL Product Code
All Socket Tee 80x80mm	DIFESIS95230000111
All Socket Tee 100x80mm	DIFESIS95230000112
All Socket Tee 100x100mm	DIFESIS95230000113
All Socket Tee 150x80mm	DIFESIS95230000114
All Socket Tee 150x100mm	DIFESIS95230000115
All Socket Tee 150x150mm	DIFESIS95230000116
All Socket Tee 200x80mm	DIFESIS95230000117
All Socket Tee 200x100mm	DIFESIS95230000118
All Socket Tee 200x150mm	DIFESIS95230000119
All Socket Tee 200x200mm	DIFESIS95230000120
All Socket Tee 250x80mm	DIFESIS95230000121
All Socket Tee 250x100mm	DIFESIS95230000122
All Socket Tee 250x150mm	DIFESIS95230000123
All Socket Tee 250x200mm	DIFESIS95230000124
All Socket Tee 250x250mm	DIFESIS95230000125
All Socket Tee 300x80mm	DIFESIS95230000126
All Socket Tee 300x100mm	DIFESIS95230000127
All Socket Tee 300x150mm	DIFESIS95230000128
All Socket Tee 300x200mm	DIFESIS95230000129
All Socket Tee 300x250mm	DIFESIS95230000130
All Socket Tee 300x300mm	DIFESIS95230000131
All Socket Tee 350x80mm	DIFESIS95230000132
All Socket Tee 350x100mm	DIFESIS95230000133
All Socket Tee 350x150mm	DIFESIS95230000134
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All Socket Tee 350x250mm	DIFESIS95230000136
All Socket Tee 350x300mm	DIFESIS95230000137
All Socket Tee 350x350mm	DIFESIS95230000138
All Socket Tee 400x80mm	DIFESIS95230000139
All Socket Tee 400x100mm	DIFESIS95230000140
All Socket Tee 400x150mm	DIFESIS95230000141
All Socket Tee 400x200mm	DIFESIS95230000142

Product Description	TSL Product Code
All Socket Tee 400x250mm	DIFESIS95230000143
All Socket Tee 400x300mm	DIFESIS95230000144
All Socket Tee 400x350mm	DIFESIS95230000145
All Socket Tee 400x400mm	DIFESIS95230000146
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All Socket Tee 450x450mm	DIFESIS95230000155
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All Socket Tee 500x100mm	DIFESIS95230000157
All Socket Tee 500x150mm	DIFESIS95230000158
All Socket Tee 500x200mm	DIFESIS95230000159
All Socket Tee 500x250mm	DIFESIS95230000160
All Socket Tee 500x300mm	DIFESIS95230000161
All Socket Tee 500x350mm	DIFESIS95230000162
All Socket Tee 500x400mm	DIFESIS95230000163
All Socket Tee 500x450mm	DIFESIS95230000164
All Socket Tee 500x500mm	DIFESIS95230000165
All Socket Tee 600x80mm	DIFESIS95230000166
All Socket Tee 600x100mm	DIFESIS95230000167
All Socket Tee 600x150mm	DIFESIS95230000168
All Socket Tee 600x200mm	DIFESIS95230000169
All Socket Tee 600x250mm	DIFESIS95230000170
All Socket Tee 600x300mm	DIFESIS95230000171
All Socket Tee 600x350mm	DIFESIS95230000172
All Socket Tee 600x400mm	DIFESIS95230000173
All Socket Tee 600x450mm	DIFESIS95230000174
All Socket Tee 600x500mm	DIFESIS95230000175
All Socket Tee 600x600mm	DIFESIS95230000176

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.

Collar

Socketed Collar

Product Description	TSL Product Code
Collar 100mm	DIFESIS95230000254
Collar 150mm	DIFESIS95230000255
Collar 200mm	DIFESIS95230000256
Collar 250mm	DIFESIS95230000257
Collar 300mm	DIFESIS95230000258
Collar 350mm	DIFESIS95230000259
Collar 400mm	DIFESIS95230000260
Collar 450mm	DIFESIS95230000261
Collar 500mm	DIFESIS95230000262
Collar 600mm	DIFESIS95230000263

Mechanical Joint Collar (Standard Length)

Product Description	TSL Product Code
MJ COLLAR (Standard Length) 100mm	DIFESIS95230000465
MJ COLLAR (Standard Length) 150mm	DIFESIS95230000466
MJ COLLAR (Standard Length) 200mm	DIFESIS95230000467
MJ COLLAR (Standard Length) 250mm	DIFESIS95230000468
MJ COLLAR (Standard Length) 300mm	DIFESIS95230000469
MJ COLLAR (Standard Length) 350mm	DIFESIS95230000470
MJ COLLAR (Standard Length) 400mm	DIFESIS95230000471
MJ COLLAR (Standard Length) 450mm	DIFESIS95230000472
MJ COLLAR (Standard Length) 500mm	DIFESIS95230000473
MJ COLLAR (Standard Length) 600mm	DIFESIS95230000474

Mechanical Joint Collar (Short Length)

Product Description	TSL Product Code
M.J. COLLAR (Short Length) 100mm	DIFESIS95230000475
M.J. COLLAR (Short Length) 150mm	DIFESIS95230000476
M.J. COLLAR (Short Length) 200mm	DIFESIS95230000477
M.J. COLLAR (Short Length) 250mm	DIFESIS95230000478
M.J. COLLAR (Short Length) 300mm	DIFESIS95230000479

Flanged Socket

PN 10

Product Description	TSL Product Code
PN 10 - Flanged Socket 80mm	DIFESIS95230000264
PN 10 - Flanged Socket 100mm	DIFESIS95230000265
PN 10 - Flanged Socket 150mm	DIFESIS95230000266
PN 10 - Flanged Socket 200mm	DIFESIS95230000267
PN 10 - Flanged Socket 250mm	DIFESIS95230000268
PN 10 - Flanged Socket 300mm	DIFESIS95230000269
PN 10 - Flanged Socket 350mm	DIFESIS95230000270
PN 10 - Flanged Socket 400mm	DIFESIS95230000271
PN 10 - Flanged Socket 450mm	DIFESIS95230000272
PN 10 - Flanged Socket 500mm	DIFESIS95230000273
PN 10 - Flanged Socket 600mm	DIFESIS95230000274

PN 16

Product Description	TSL Product Code
PN 16 - Flanged Socket 80mm	DIFESIS95230000624
PN 16 - Flanged Socket 100mm	DIFESIS95230000625
PN 16 - Flanged Socket 150mm	DIFESIS95230000626
PN 16 - Flanged Socket 200mm	DIFESIS95230000627
PN 16 - Flanged Socket 250mm	DIFESIS95230000628
PN 16 - Flanged Socket 300mm	DIFESIS95230000629
PN 16 - Flanged Socket 350mm	DIFESIS95230000630
PN 16 - Flanged Socket 400mm	DIFESIS95230000631
PN 16 - Flanged Socket 450mm	DIFESIS95230000632
PN 16 - Flanged Socket 500mm	DIFESIS95230000633
PN 16 - Flanged Socket 600mm	DIFESIS95230000634

Flanged Spigot

PN 10

Product Description	TSL Product Code
PN 10 - Flanged Spigot 50mm	DIFESIS95230000275
PN 10 - Flanged Spigot 80mm	DIFESIS95230000276
PN 10 - Flanged Spigot 100mm	DIFESIS95230000277
PN 10 - Flanged Spigot 150mm	DIFESIS95230000278
PN 10 - Flanged Spigot 200mm	DIFESIS95230000279
PN 10 - Flanged Spigot 250mm	DIFESIS95230000280
PN 10 - Flanged Spigot 300mm	DIFESIS95230000281
PN 10 - Flanged Spigot 350mm	DIFESIS95230000282
PN 10 - Flanged Spigot 400mm	DIFESIS95230000283
PN 10 - Flanged Spigot 450mm	DIFESIS95230000284
PN 10 - Flanged Spigot 500mm	DIFESIS95230000285
PN 10 - Flanged Spigot 600mm	DIFESIS95230000286

PN 16

Product Description	TSL Product Code
PN 16 - Flanged Spigot 80mm	DIFESIS95230000635
PN 16 - Flanged Spigot 100mm	DIFESIS95230000636
PN 16 - Flanged Spigot 150mm	DIFESIS95230000637
PN 16 - Flanged Spigot 200mm	DIFESIS95230000638
PN 16 - Flanged Spigot 250mm	DIFESIS95230000639
PN 16 - Flanged Spigot 300mm	DIFESIS95230000640
PN 16 - Flanged Spigot 350mm	DIFESIS95230000641
PN 16 - Flanged Spigot 400mm	DIFESIS95230000642
PN 16 - Flanged Spigot 450mm	DIFESIS95230000643
PN 16 - Flanged Spigot 500mm	DIFESIS95230000644
PN 16 - Flanged Spigot 600mm	DIFESIS95230000645

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.

Blank Flange

PN 10	
Product Description	TSL Product Code
PN 10 - Blank Flange 50mm	DIFESIS95230000287
PN 10 - Blank Flange 80mm	DIFESIS95230000288
PN 10 - Blank Flange 100mm	DIFESIS95230000289
PN 10 - Blank Flange 150mm	DIFESIS95230000290
PN 10 - Blank Flange 200mm	DIFESIS95230000291
PN 10 - Blank Flange 250mm	DIFESIS95230000292
PN 10 - Blank Flange 300mm	DIFESIS95230000293
PN 10 - Blank Flange 350mm	DIFESIS95230000294
PN 10 - Blank Flange 400mm	DIFESIS95230000295
PN 10 - Blank Flange 450mm	DIFESIS95230000296
PN 10 - Blank Flange 500mm	DIFESIS95230000297
PN 10 - Blank Flange 600mm	DIFESIS95230000298

PN 16	
Product Description	TSL Product Code
PN 16 - Blank Flange 80mm	DIFESIS95230000646
PN 16 - Blank Flange 100mm	DIFESIS95230000647
PN 16 - Blank Flange 150mm	DIFESIS95230000648
PN 16 - Blank Flange 200mm	DIFESIS95230000649
PN 16 - Blank Flange 250mm	DIFESIS95230000650
PN 16 - Blank Flange 300mm	DIFESIS95230000651
PN 16 - Blank Flange 350mm	DIFESIS95230000652
PN 16 - Blank Flange 400mm	DIFESIS95230000653
PN 16 - Blank Flange 450mm	DIFESIS95230000654
PN 16 - Blank Flange 500mm	DIFESIS95230000655
PN 16 - Blank Flange 600mm	DIFESIS95230000656

Double Flange Bend

Double Flange 90° Bend

PN 10	
Product Description	TSL Product Code
PN 10 - Double Flange 90° Bend 80mm	DIFESIS95230000299
PN 10 - Double Flange 90° Bend 100mm	DIFESIS95230000300
PN 10 - Double Flange 90° Bend 150mm	DIFESIS95230000301
PN 10 - Double Flange 90° Bend 200mm	DIFESIS95230000302
PN 10 - Double Flange 90° Bend 250mm	DIFESIS95230000303
PN 10 - Double Flange 90° Bend 300mm	DIFESIS95230000304
PN 10 - Double Flange 90° Bend 350mm	DIFESIS95230000305
PN 10 - Double Flange 90° Bend 400mm	DIFESIS95230000306
PN 10 - Double Flange 90° Bend 450mm	DIFESIS95230000307
PN 10 - Double Flange 90° Bend 500mm	DIFESIS95230000308
PN 10 - Double Flange 90° Bend 600mm	DIFESIS95230000309

Double Flange 45° Bend

PN 10	
Product Description	TSL Product Code
PN 10 - Double Flange 45° Bend 80mm	DIFESIS95230000310
PN 10 - Double Flange 45° Bend 100mm	DIFESIS95230000311
PN 10 - Double Flange 45° Bend 150mm	DIFESIS95230000312
PN 10 - Double Flange 45° Bend 200mm	DIFESIS95230000313
PN 10 - Double Flange 45° Bend 250mm	DIFESIS95230000314
PN 10 - Double Flange 45° Bend 300mm	DIFESIS95230000315
PN 10 - Double Flange 45° Bend 350mm	DIFESIS95230000316
PN 10 - Double Flange 45° Bend 400mm	DIFESIS95230000317
PN 10 - Double Flange 45° Bend 450mm	DIFESIS95230000318
PN 10 - Double Flange 45° Bend 500mm	DIFESIS95230000319
PN 10 - Double Flange 45° Bend 600mm	DIFESIS95230000320

Double Flange Bend

Double Flange 90° Bend

PN 16	
Product Description	TSL Product Code
PN 16 - Double Flange 90° Bend 80mm	DIFESIS95230000657
PN 16 - Double Flange 90° Bend 100mm	DIFESIS95230000658
PN 16 - Double Flange 90° Bend 150mm	DIFESIS95230000659
PN 16 - Double Flange 90° Bend 200mm	DIFESIS95230000660
PN 16 - Double Flange 90° Bend 250mm	DIFESIS95230000661
PN 16 - Double Flange 90° Bend 300mm	DIFESIS95230000662
PN 16 - Double Flange 90° Bend 350mm	DIFESIS95230000663
PN 16 - Double Flange 90° Bend 400mm	DIFESIS95230000664
PN 16 - Double Flange 90° Bend 450mm	DIFESIS95230000665
PN 16 - Double Flange 90° Bend 500mm	DIFESIS95230000666
PN 16 - Double Flange 90° Bend 600mm	DIFESIS95230000667

Double Flange 45° Bend

PN 16	
Product Description	TSL Product Code
PN 16 - Double Flange 45° Bend 80mm	DIFESIS95230000668
PN 16 - Double Flange 45° Bend 100mm	DIFESIS95230000669
PN 16 - Double Flange 45° Bend 150mm	DIFESIS95230000670
PN 16 - Double Flange 45° Bend 200mm	DIFESIS95230000671
PN 16 - Double Flange 45° Bend 250mm	DIFESIS95230000672
PN 16 - Double Flange 45° Bend 300mm	DIFESIS95230000673
PN 16 - Double Flange 45° Bend 350mm	DIFESIS95230000674
PN 16 - Double Flange 45° Bend 400mm	DIFESIS95230000675
PN 16 - Double Flange 45° Bend 450mm	DIFESIS95230000676
PN 16 - Double Flange 45° Bend 500mm	DIFESIS95230000677
PN 16 - Double Flange 45° Bend 600mm	DIFESIS95230000678

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.

Double Flange Bend

Double Flange 11.25° Bend

PN 10	
Product Description	TSL Product Code
PN 10 - Double Flanged Bend 11.25° 80mm	DIFESIS95230000480
PN 10 - Double Flanged Bend 11.25° 100mm	DIFESIS95230000481
PN 10 - Double Flanged Bend 11.25° 150mm	DIFESIS95230000482
PN 10 - Double Flanged Bend 11.25° 200mm	DIFESIS95230000483
PN 10 - Double Flanged Bend 11.25° 250mm	DIFESIS95230000484
PN 10 - Double Flanged Bend 11.25° 300mm	DIFESIS95230000485
PN 10 - Double Flanged Bend 11.25° 350mm	DIFESIS95230000486
PN 10 - Double Flanged Bend 11.25° 400mm	DIFESIS95230000487
PN 10 - Double Flanged Bend 11.25° 450mm	DIFESIS95230000488
PN 10 - Double Flanged Bend 11.25° 500mm	DIFESIS95230000489
PN 10 - Double Flanged Bend 11.25° 600mm	DIFESIS95230000490

Double Flanged 22.5° Bend

PN 10	
Product Description	TSL Product Code
PN 10 - Double Flanged Bend 22.5° 80mm	DIFESIS95230000491
PN 10 - Double Flanged Bend 22.5° 100mm	DIFESIS95230000492
PN 10 - Double Flanged Bend 22.5° 150mm	DIFESIS95230000493
PN 10 - Double Flanged Bend 22.5° 200mm	DIFESIS95230000494
PN 10 - Double Flanged Bend 22.5° 250mm	DIFESIS95230000495
PN 10 - Double Flanged Bend 22.5° 300mm	DIFESIS95230000496
PN 10 - Double Flanged Bend 22.5° 350mm	DIFESIS95230000497
PN 10 - Double Flanged Bend 22.5° 400mm	DIFESIS95230000498
PN 10 - Double Flanged Bend 22.5° 450mm	DIFESIS95230000499
PN 10 - Double Flanged Bend 22.5° 500mm	DIFESIS95230000500
PN 10 - Double Flanged Bend 22.5° 600mm	DIFESIS95230000501

Double Flange Bend

Double Flange 11.25° Bend

PN 16	
Product Description	TSL Product Code
PN 16 - Double Flange 11.25° Bend 80mm	DIFESIS95230000811
PN 16 - Double Flange 11.25° Bend 100mm	DIFESIS95230000812
PN 16 - Double Flange 11.25° Bend 150mm	DIFESIS95230000813
PN 16 - Double Flange 11.25° Bend 200mm	DIFESIS95230000814
PN 16 - Double Flange 11.25° Bend 250mm	DIFESIS95230000815
PN 16 - Double Flange 11.25° Bend 300mm	DIFESIS95230000816
PN 16 - Double Flange 11.25° Bend 350mm	DIFESIS95230000817
PN 16 - Double Flange 11.25° Bend 400mm	DIFESIS95230000818
PN 16 - Double Flange 11.25° Bend 450mm	DIFESIS95230000819
PN 16 - Double Flange 11.25° Bend 500mm	DIFESIS95230000820
PN 16 - Double Flange 11.25° Bend 600mm	DIFESIS95230000821

Double Flange 22.50° Bend

PN 16	
Product Description	TSL Product Code
PN 16 - Double Flange 22.50° Bend 80mm	DIFESIS95230000491
PN 16 - Double Flange 22.50° Bend 100mm	DIFESIS95230000492
PN 16 - Double Flange 22.50° Bend 150mm	DIFESIS95230000493
PN 16 - Double Flange 22.50° Bend 200mm	DIFESIS95230000494
PN 16 - Double Flange 22.50° Bend 250mm	DIFESIS95230000495
PN 16 - Double Flange 22.50° Bend 300mm	DIFESIS95230000496
PN 16 - Double Flange 22.50° Bend 350mm	DIFESIS95230000497
PN 16 - Double Flange 22.50° Bend 400mm	DIFESIS95230000498
PN 16 - Double Flange 22.50° Bend 450mm	DIFESIS95230000499
PN 16 - Double Flange 22.50° Bend 500mm	DIFESIS95230000500
PN 16 - Double Flange 22.50° Bend 600mm	DIFESIS95230000501

Double Flange Duckfoot 90° Bend

PN 10

Product Description	TSL Product Code
PN 10 - Double Flange Duckfoot 90° Bend 80x90mm	DIFESIS95230000321
PN 10 - Double Flange Duckfoot 90° Bend 100x90mm	DIFESIS95230000322
PN 10 - Double Flange Duckfoot 90° Bend 150x90mm	DIFESIS95230000323
PN 10 - Double Flange Duckfoot 90° Bend 200x90mm	DIFESIS95230000324
PN 10 - Double Flange Duckfoot 90° Bend 250x90mm	DIFESIS95230000325
PN 10 - Double Flange Duckfoot 90° Bend 300x90mm	DIFESIS95230000326
PN 10 - Double Flange Duckfoot 90° Bend 350x90mm	DIFESIS95230000327
PN 10 - Double Flange Duckfoot 90° Bend 400x90mm	DIFESIS95230000328
PN 10 - Double Flange Duckfoot 90° Bend 450x90mm	DIFESIS95230000329
PN 10 - Double Flange Duckfoot 90° Bend 500x90mm	DIFESIS95230000330
PN 10 - Double Flange Duckfoot 90° Bend 600x90mm	DIFESIS95230000331

PN 16

Product Description	TSL Product Code
PN 16 - Double Flange Duckfoot 90° Bend 80x90mm	DIFESIS95230000679
PN 16 - Double Flange Duckfoot 90° Bend 100x90mm	DIFESIS95230000680
PN 16 - Double Flange Duckfoot 90° Bend 150x90mm	DIFESIS95230000681
PN 16 - Double Flange Duckfoot 90° Bend 200x90mm	DIFESIS95230000682
PN 16 - Double Flange Duckfoot 90° Bend 250x90mm	DIFESIS95230000683
PN 16 - Double Flange Duckfoot 90° Bend 300x90mm	DIFESIS95230000684
PN 16 - Double Flange Duckfoot 90° Bend 350x90mm	DIFESIS95230000685
PN 16 - Double Flange Duckfoot 90° Bend 400x90mm	DIFESIS95230000686
PN 16 - Double Flange Duckfoot 90° Bend 450x90mm	DIFESIS95230000687
PN 16 - Double Flange Duckfoot 90° Bend 500x90mm	DIFESIS95230000688
PN 16 - Double Flange Duckfoot 90° Bend 600x90mm	DIFESIS95230000689

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.

All Flange Tee

PN 10	
Product Description	TSL Product Code
PN 10 - All Flange Tee 50x50mm	DIFESIS95230000332
PN 10 - All Flange Tee 80x50mm	DIFESIS95230000333
PN 10 - All Flange Tee 80x80mm	DIFESIS95230000334
PN 10 - All Flange Tee 100x50mm	DIFESIS95230000335
PN 10 - All Flange Tee 100x80mm	DIFESIS95230000336
PN 10 - All Flange Tee 100x100mm	DIFESIS95230000337
PN 10 - All Flange Tee 150x50mm	DIFESIS95230000338
PN 10 - All Flange Tee 150x80mm	DIFESIS95230000339
PN 10 - All Flange Tee 150x100mm	DIFESIS95230000340
PN 10 - All Flange Tee 150x150mm	DIFESIS95230000341
PN 10 - All Flange Tee 200x50mm	DIFESIS95230000342
PN 10 - All Flange Tee 200x80mm	DIFESIS95230000343
PN 10 - All Flange Tee 200x100mm	DIFESIS95230000344
PN 10 - All Flange Tee 200x150mm	DIFESIS95230000345
PN 10 - All Flange Tee 200x200mm	DIFESIS95230000346
PN 10 - All Flange Tee 250x50mm	DIFESIS95230000347
PN 10 - All Flange Tee 250x80mm	DIFESIS95230000348
PN 10 - All Flange Tee 250x100mm	DIFESIS95230000349
PN 10 - All Flange Tee 250x150mm	DIFESIS95230000350
PN 10 - All Flange Tee 250x200mm	DIFESIS95230000351
PN 10 - All Flange Tee 250x250mm	DIFESIS95230000352
PN 10 - All Flange Tee 300x50mm	DIFESIS95230000353
PN 10 - All Flange Tee 300x80mm	DIFESIS95230000354
PN 10 - All Flange Tee 300x100mm	DIFESIS95230000355
PN 10 - All Flange Tee 300x150mm	DIFESIS95230000356
PN 10 - All Flange Tee 300x200mm	DIFESIS95230000357
PN 10 - All Flange Tee 300x250mm	DIFESIS95230000358
PN 10 - All Flange Tee 300x300mm	DIFESIS95230000359
PN 10 - All Flange Tee 350x50mm	DIFESIS95230000360
PN 10 - All Flange Tee 350x80mm	DIFESIS95230000361
PN 10 - All Flange Tee 350x100mm	DIFESIS95230000362
PN 10 - All Flange Tee 350x150mm	DIFESIS95230000363
PN 10 - All Flange Tee 350x200mm	DIFESIS95230000364
PN 10 - All Flange Tee 350x250mm	DIFESIS95230000365
PN 10 - All Flange Tee 350x300mm	DIFESIS95230000366
PN 10 - All Flange Tee 350x350mm	DIFESIS95230000367
PN 10 - All Flange Tee 400x50mm	DIFESIS95230000368
PN 10 - All Flange Tee 600x400mm	DIFESIS95230000406
PN 10 - All Flange Tee 600x450mm	DIFESIS95230000407

PN 10	
Product Description	TSL Product Code
PN 10 - All Flange Tee 600x500mm	DIFESIS95230000408
PN 10 - All Flange Tee 600x600mm	DIFESIS95230000409
PN 10 - All Flange Tee 400x80mm	DIFESIS95230000369
PN 10 - All Flange Tee 400x100mm	DIFESIS95230000370
PN 10 - All Flange Tee 400x150mm	DIFESIS95230000371
PN 10 - All Flange Tee 400x200mm	DIFESIS95230000372
PN 10 - All Flange Tee 400x250mm	DIFESIS95230000373
PN 10 - All Flange Tee 400x300mm	DIFESIS95230000374
PN 10 - All Flange Tee 400x350mm	DIFESIS95230000375
PN 10 - All Flange Tee 400x400mm	DIFESIS95230000376
PN 10 - All Flange Tee 450x50mm	DIFESIS95230000377
PN 10 - All Flange Tee 450x80mm	DIFESIS95230000378
PN 10 - All Flange Tee 450x100mm	DIFESIS95230000379
PN 10 - All Flange Tee 450x150mm	DIFESIS95230000380
PN 10 - All Flange Tee 450x200mm	DIFESIS95230000381
PN 10 - All Flange Tee 450x250mm	DIFESIS95230000382
PN 10 - All Flange Tee 450x300mm	DIFESIS95230000383
PN 10 - All Flange Tee 450x350mm	DIFESIS95230000384
PN 10 - All Flange Tee 450x400mm	DIFESIS95230000385
PN 10 - All Flange Tee 450x450mm	DIFESIS95230000386
PN 10 - All Flange Tee 500x50mm	DIFESIS95230000387
PN 10 - All Flange Tee 500x80mm	DIFESIS95230000388
PN 10 - All Flange Tee 500x100mm	DIFESIS95230000389
PN 10 - All Flange Tee 500x150mm	DIFESIS95230000390
PN 10 - All Flange Tee 500x200mm	DIFESIS95230000391
PN 10 - All Flange Tee 500x250mm	DIFESIS95230000392
PN 10 - All Flange Tee 500x300mm	DIFESIS95230000393
PN 10 - All Flange Tee 500x350mm	DIFESIS95230000394
PN 10 - All Flange Tee 500x400mm	DIFESIS95230000395
PN 10 - All Flange Tee 500x450mm	DIFESIS95230000396
PN 10 - All Flange Tee 500x500mm	DIFESIS95230000397
PN 10 - All Flange Tee 600x50mm	DIFESIS95230000398
PN 10 - All Flange Tee 600x80mm	DIFESIS95230000399
PN 10 - All Flange Tee 600x100mm	DIFESIS95230000400
PN 10 - All Flange Tee 600x150mm	DIFESIS95230000401
PN 10 - All Flange Tee 600x200mm	DIFESIS95230000402
PN 10 - All Flange Tee 600x250mm	DIFESIS95230000403
PN 10 - All Flange Tee 600x300mm	DIFESIS95230000404
PN 10 - All Flange Tee 600x350mm	DIFESIS95230000405

All Flange Tee

PN 16	
Product Description	TSL Product Code
PN 16 - All Flange Tee 80x80mm	DIFESIS95230000690
PN 16 - All Flange Tee 100x80mm	DIFESIS95230000691
PN 16 - All Flange Tee 100x100mm	DIFESIS95230000692
PN 16 - All Flange Tee 150x80mm	DIFESIS95230000693
PN 16 - All Flange Tee 150x100mm	DIFESIS95230000694
PN 16 - All Flange Tee 150x150mm	DIFESIS95230000695
PN 16 - All Flange Tee 200x80mm	DIFESIS95230000696
PN 16 - All Flange Tee 200x100mm	DIFESIS95230000697
PN 16 - All Flange Tee 200x150mm	DIFESIS95230000698
PN 16 - All Flange Tee 200x200mm	DIFESIS95230000699
PN 16 - All Flange Tee 250x80mm	DIFESIS95230000700
PN 16 - All Flange Tee 250x100mm	DIFESIS95230000701
PN 16 - All Flange Tee 250x150mm	DIFESIS95230000702
PN 16 - All Flange Tee 250x200mm	DIFESIS95230000703
PN 16 - All Flange Tee 250x250mm	DIFESIS95230000704
PN 16 - All Flange Tee 300x80mm	DIFESIS95230000705
PN 16 - All Flange Tee 300x100mm	DIFESIS95230000706
PN 16 - All Flange Tee 300x150mm	DIFESIS95230000707
PN 16 - All Flange Tee 300x200mm	DIFESIS95230000708
PN 16 - All Flange Tee 300x250mm	DIFESIS95230000709
PN 16 - All Flange Tee 300x300mm	DIFESIS95230000710
PN 16 - All Flange Tee 350x80mm	DIFESIS95230000711
PN 16 - All Flange Tee 350x100mm	DIFESIS95230000712
PN 16 - All Flange Tee 350x150mm	DIFESIS95230000713
PN 16 - All Flange Tee 350x200mm	DIFESIS95230000714
PN 16 - All Flange Tee 350x250mm	DIFESIS95230000715
PN 16 - All Flange Tee 350x300mm	DIFESIS95230000716
PN 16 - All Flange Tee 350x350mm	DIFESIS95230000717
PN 16 - All Flange Tee 400x80mm	DIFESIS95230000718
PN 16 - All Flange Tee 400x100mm	DIFESIS95230000719
PN 16 - All Flange Tee 400x150mm	DIFESIS95230000720
PN 16 - All Flange Tee 400x200mm	DIFESIS95230000721
PN 16 - All Flange Tee 400x250mm	DIFESIS95230000722

PN 16	
Product Description	TSL Product Code
PN 16 - All Flange Tee 400x300mm	DIFESIS95230000723
PN 16 - All Flange Tee 400x350mm	DIFESIS95230000724
PN 16 - All Flange Tee 400x400mm	DIFESIS95230000725
PN 16 - All Flange Tee 450x80mm	DIFESIS95230000726
PN 16 - All Flange Tee 450x100mm	DIFESIS95230000727
PN 16 - All Flange Tee 450x150mm	DIFESIS95230000728
PN 16 - All Flange Tee 450x200mm	DIFESIS95230000729
PN 16 - All Flange Tee 450x250mm	DIFESIS95230000730
PN 16 - All Flange Tee 450x300mm	DIFESIS95230000731
PN 16 - All Flange Tee 450x350mm	DIFESIS95230000732
PN 16 - All Flange Tee 450x400mm	DIFESIS95230000733
PN 16 - All Flange Tee 450x450mm	DIFESIS95230000734
PN 16 - All Flange Tee 500x80mm	DIFESIS95230000735
PN 16 - All Flange Tee 500x100mm	DIFESIS95230000736
PN 16 - All Flange Tee 500x150mm	DIFESIS95230000737
PN 16 - All Flange Tee 500x200mm	DIFESIS95230000738
PN 16 - All Flange Tee 500x250mm	DIFESIS95230000739
PN 16 - All Flange Tee 500x300mm	DIFESIS95230000740
PN 16 - All Flange Tee 500x350mm	DIFESIS95230000741
PN 16 - All Flange Tee 500x400mm	DIFESIS95230000742
PN 16 - All Flange Tee 500x450mm	DIFESIS95230000743
PN 16 - All Flange Tee 500x500mm	DIFESIS95230000744
PN 16 - All Flange Tee 600x80mm	DIFESIS95230000745
PN 16 - All Flange Tee 600x100mm	DIFESIS95230000746
PN 16 - All Flange Tee 600x150mm	DIFESIS95230000747
PN 16 - All Flange Tee 600x200mm	DIFESIS95230000748
PN 16 - All Flange Tee 600x250mm	DIFESIS95230000749
PN 16 - All Flange Tee 600x300mm	DIFESIS95230000750
PN 16 - All Flange Tee 600x350mm	DIFESIS95230000751
PN 16 - All Flange Tee 600x400mm	DIFESIS95230000752
PN 16 - All Flange Tee 600x450mm	DIFESIS95230000753
PN 16 - All Flange Tee 600x500mm	DIFESIS95230000754
PN 16 - All Flange Tee 600x600mm	DIFESIS95230000755

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.

End Cap

Product Description	TSL Product Code
End Cap 80mm	DIFESIS95230000502
End Cap 100mm	DIFESIS95230000503
End Cap 150mm	DIFESIS95230000504
End Cap 200mm	DIFESIS95230000505
End Cap 250mm	DIFESIS95230000506
End Cap 300mm	DIFESIS95230000507
End Cap 350mm	DIFESIS95230000508
End Cap 400mm	DIFESIS95230000509
End Cap 450mm	DIFESIS95230000510
End Cap 500mm	DIFESIS95230000511
End Cap 600mm	DIFESIS95230000512

All Socket Cross

Product Description	TSL Product Code
All Socket Cross 80mm	DIFESIS95230000513
All Socket Cross 100mm	DIFESIS95230000514
All Socket Cross 150mm	DIFESIS95230000515
All Socket Cross 200mm	DIFESIS95230000516
All Socket Cross 250mm	DIFESIS95230000517
All Socket Cross 300mm	DIFESIS95230000518
All Socket Cross 350mm	DIFESIS95230000519
All Socket Cross 400mm	DIFESIS95230000520
All Socket Cross 450mm	DIFESIS95230000521
All Socket Cross 500mm	DIFESIS95230000522
All Socket Cross 600mm	DIFESIS95230000523

Mechanical Joint/Flanged Adaptors

PN 10	
Product Description	TSL Product Code
PN 10 - MJ Adaptors / Flanged Adaptors 100mm	DIFESIS95230000535
PN 10 - MJ Adaptors / Flanged Adaptors 150mm	DIFESIS95230000536
PN 10 - MJ Adaptors / Flanged Adaptors 200mm	DIFESIS95230000537
PN 10 - MJ Adaptors / Flanged Adaptors 250mm	DIFESIS95230000538
PN 10 - MJ Adaptors / Flanged Adaptors 300mm	DIFESIS95230000539
PN 10 - MJ Adaptors / Flanged Adaptors 350mm	DIFESIS95230000540
PN 10 - MJ Adaptors / Flanged Adaptors 400mm	DIFESIS95230000541
PN 10 - MJ Adaptors / Flanged Adaptors 450mm	DIFESIS95230000542
PN 10 - MJ Adaptors / Flanged Adaptors 500mm	DIFESIS95230000543
PN 10 - MJ Adaptors / Flanged Adaptors 600mm	DIFESIS95230000544

PN 16	
Product Description	TSL Product Code
PN 16 - MJ Adaptors / Flanged Adaptors 100mm	DIFESIS95230000844
PN 16 - MJ Adaptors / Flanged Adaptors 150mm	DIFESIS95230000845
PN 16 - MJ Adaptors / Flanged Adaptors 200mm	DIFESIS95230000846
PN 16 - MJ Adaptors / Flanged Adaptors 250mm	DIFESIS95230000847
PN 16 - MJ Adaptors / Flanged Adaptors 300mm	DIFESIS95230000848
PN 16 - MJ Adaptors / Flanged Adaptors 350mm	DIFESIS95230000849
PN 16 - MJ Adaptors / Flanged Adaptors 400mm	DIFESIS95230000850
PN 16 - MJ Adaptors / Flanged Adaptors 450mm	DIFESIS95230000851
PN 16 - MJ Adaptors / Flanged Adaptors 500mm	DIFESIS95230000852
PN 16 - MJ Adaptors / Flanged Adaptors 600mm	DIFESIS95230000853

All Flange Cross

PN 10	
Product Description	TSL Product Code
PN 10 - All Flange Cross 80mm	DIFESIS95230000524
PN 10 - All Flange Cross 100mm	DIFESIS95230000525
PN 10 - All Flange Cross 150mm	DIFESIS95230000526
PN 10 - All Flange Cross 200mm	DIFESIS95230000527
PN 10 - All Flange Cross 250mm	DIFESIS95230000528
PN 10 - All Flange Cross 300mm	DIFESIS95230000529
PN 10 - All Flange Cross 350mm	DIFESIS95230000530
PN 10 - All Flange Cross 400mm	DIFESIS95230000531
PN 10 - All Flange Cross 450mm	DIFESIS95230000532
PN 10 - All Flange Cross 500mm	DIFESIS95230000533
PN 10 - All Flange Cross 600mm	DIFESIS95230000534

PN 16	
Product Description	TSL Product Code
PN 16 - All Flange Cross 80mm	DIFESIS95230000833
PN 16 - All Flange Cross 100mm	DIFESIS95230000834
PN 16 - All Flange Cross 150mm	DIFESIS95230000835
PN 16 - All Flange Cross 200mm	DIFESIS95230000836
PN 16 - All Flange Cross 250mm	DIFESIS95230000837
PN 16 - All Flange Cross 300mm	DIFESIS95230000838
PN 16 - All Flange Cross 350mm	DIFESIS95230000839
PN 16 - All Flange Cross 400mm	DIFESIS95230000840
PN 16 - All Flange Cross 450mm	DIFESIS95230000841
PN 16 - All Flange Cross 500mm	DIFESIS95230000842
PN 16 - All Flange Cross 600mm	DIFESIS95230000843

Dismantling Joint

PN 10	
Product Description	TSL Product Code
PN 10 - Dismantling Joint 100mm	DIFESIS95230000545
PN 10 - Dismantling Joint 150mm	DIFESIS95230000546
PN 10 - Dismantling Joint 200mm	DIFESIS95230000547
PN 10 - Dismantling Joint 250mm	DIFESIS95230000548
PN 10 - Dismantling Joint 300mm	DIFESIS95230000549
PN 10 - Dismantling Joint 350mm	DIFESIS95230000550
PN 10 - Dismantling Joint 400mm	DIFESIS95230000551
PN 10 - Dismantling Joint 450mm	DIFESIS95230000552
PN 10 - Dismantling Joint 500mm	DIFESIS95230000553
PN 10 - Dismantling Joint 600mm	DIFESIS95230000554

PN 16	
Product Description	TSL Product Code
PN 16 - Dismantling Joint 100mm	DIFESIS95230000854
PN 16 - Dismantling Joint 150mm	DIFESIS95230000855

Mechanical Joint Coupling

Product Description	TSL Product Code
MJ Coupling 100mm	DIFESIS95230000555
MJ Coupling 150mm	DIFESIS95230000556
MJ Coupling 200mm	DIFESIS95230000557
MJ Coupling 250mm	DIFESIS95230000558
MJ Coupling 300mm	DIFESIS95230000559

Technical Specifications: Ductile Iron Fittings as per IS 9523 : 2000, K-12 (HSN Code : 73071120). Ductile Iron Fittings are ISI marked with Internal Cement Mortar Lining and External Zinc Rich Primer and Black Bitumen Paint as per standards.