



IS:3989-84



Centrifugally Cast Iron **Pipes** and

Fittings

PRODUCT GALLERY



Bengal Iron Corporation

Company Insights

Ever since its inception in 1965, **BIC** has gone from strength to strength in the field of castings manufacturing in India and abroad. The company is headquartered in Kolkata, and is propelled by its state-of-the-art manufacturing unit at Howrah. The company's operations are carried out according to strict professional ethics, always bringing the consumers into sharp focus.

It is one of the few companies in this field that has a separate Research & Development wing which is continually engaged in upgrading and developing new products relevant to the markets it serves.

Also, the company's team of dedicated professionals works 24x7 to monitor production, quality control and marketing networks, ensuring the entire process from in-house inspection of raw materials to production of finished products and final delivery are carried out as per the strict guidelines set by the company.





BIC manufactures :

1. Centrifugally Cast Iron Pipes and Fittings, ISI Marked, IS:3989

2. Cast Iron Soil Pipes and Fittings, ISI Marked, IS:1729

3. Cast Iron Manhole Covers and Frames ISI Marked, ISI 1726

The company also undertakes the production and delivery of customized products requiring higher technical specifications.

BIC products are approved by various government departments, architects and private agencies. The products are widely available across India through the company's strong network of dealers and wholesalers.





Manufacturing Process

M A N



We use good quality Pig Iron, Hard Coke and Limestone which are melted through Cupola to get good quality molten metal. The molten metal is checked in the Carbon, Silicon Analyser Machine to get the right Chemical Composition. The Chemical Composition of the molten metal is given below :

CE : 4.30%

C : 3.50%

Si : 2.20%

In the Centrifugal Pipe casting process, water cooled metal mold is rotated on a horizontal axis during the interval of time, it receives a pre-measured quality of molten iron. The Centrifugal force created by this rotation causes the liquid

iron to spread uniformly onto mold's inner surface, thereby forming upon solidification a cylindrical pipe conforming to the inside dimensions of the mold.

After the pipe is cast, it is allowed to solidify in the still rotating mold and finally the pipe is removed from the mold. The pipe casted under this water cooled process increases the hardness, therefore, the pipes are stress relieved at above 800°C in the annealing furnace, thereby, reducing the hardness.

After the Stress relieving, the pipes are tested to ensure it is leak proof and then painted with red primer on the outer surface and black bitumen in the inner surface.



U F A C T U R I N G P R O C E S S





Bengal Iron Corporation

Product Usage

1. Discharge of soil and waste
2. Discharge of Rainwater
3. Ventilation

Product Advantage

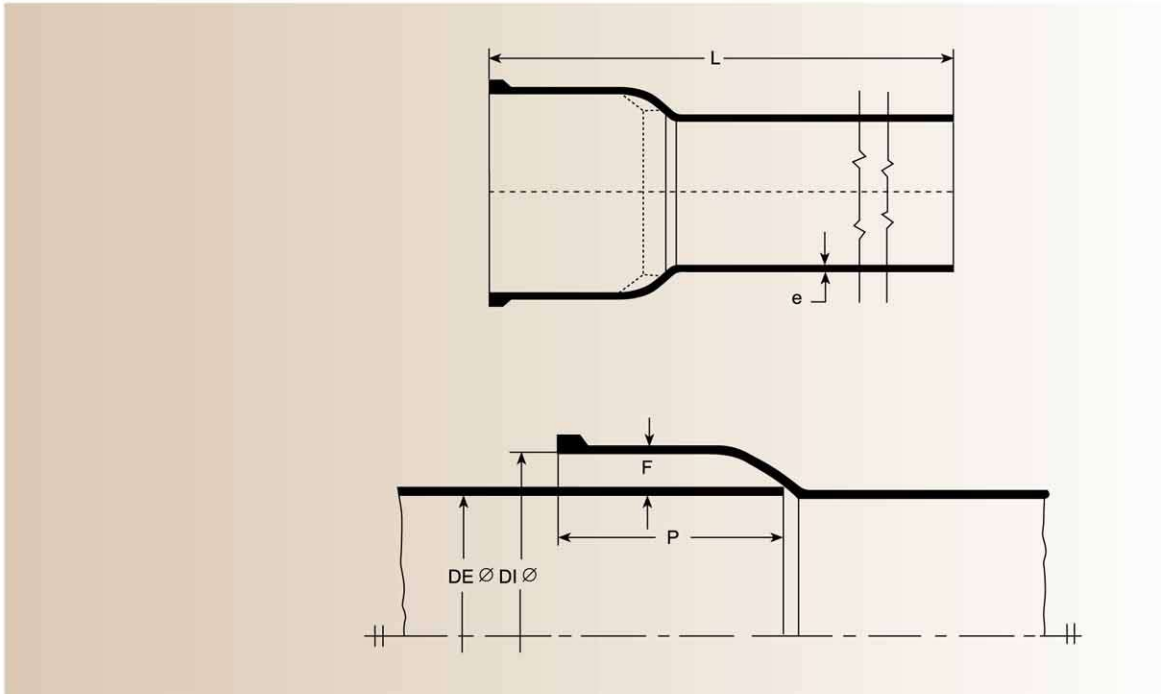
1. Durability
2. Smooth Surface Finish
3. Resistant to Corrosion
4. Uniform Thickness
5. Fire Resistant
6. Environment Friendly
7. Recyclable

Product Features

1. The Cast Iron material grade FG 150 as per IS : 210 is used for the manufacture of Pipes and Fittings.
2. The pipes and fittings are produced as per IS: 3989 specification
3. Produced in 75mm, 100mm and 150mm nominal diameter
4. The pipes are manufactured in the standard length of 3 meters
5. The pipes and fittings are internally coated by Black Bitumen paint and externally by red primer paint
6. The Pipes and Fittings have the "BIC" marked, nominal diameter and IS symbol with IS number.

Tolerances

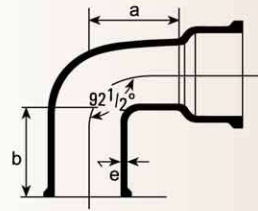
SR. No.	Type of Casting	Dimension	Tolerance (mm)
1.	External diameter of barrel (mm) DN 75 100 150	DE	±3.00
		DE	±3.00
		DE	±3.50
2.	Internal diameter of socket (All diameters)	DI	±3.00
3.	Wall thickness	e	-15%
4.	Mass	Kg	-10%
5.	Length of pipes	L	±20
6.	Depth of socket (All diameters)	P	±10
7.	Bend pipes	a	+25 -10
		b	+20 -10
8.	Branches with equal branch pipe	a	+25 -10
		b	+25 -10
9.	Branches with unequal branch pipe	L	+30 -20
10.	S-shape castings	L	+50 -10
11.	Taper collars	L	+25 -10
12.	Others	L	+20 -10

CENTRIFUGALLY CAST (SPUN) IRON PIPES

MASS & DIMENSIONS OF SOCKETS AND SPIGOT OF PIPES

Nominal Diameter DN	Barrel		Socket		Joint Thickness F	Approximate Weight of Pipes (Kg)			
	e	DE	DI	P		Single Socket		Double Socket	
						3000 mm	1800 mm	3000 mm	1800 mm
75	3.5	83	99	65	8.0	20.00	12.5	24.00	17.00
100	4.0	109	126	70	8.5	30.00	18.8	34.00	21.00
150	5.0	161	179	75	9.0	56.00	34.9	58.00	29.00

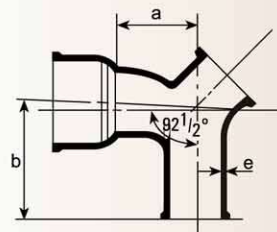


Plain Bend



Nominal Diameter DN	Dimensions			Approximate Weight Kg
	e	a	b	
75	3.5	78	140	2.40
100	4.0	91	157	3.80
150	5.0	117	186	7.90

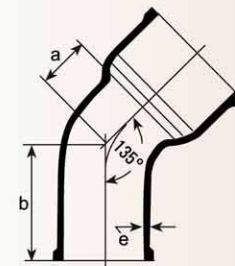
Door Bend



Nominal Diameter DN	Dimensions			Approximate Weight Kg
	e	a	b	
75	3.5	78	140	2.80
*100	4.0	91	157	4.40
150	5.0	117	186	8.70

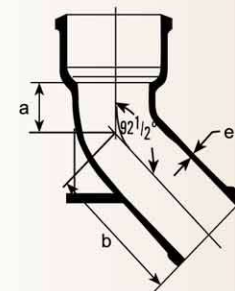
*Available in Right and Left Hand

Half Plain Bend



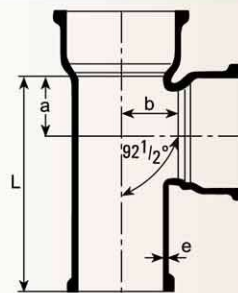
Nominal Diameter DN	Dimensions			Approximate Weight Kg
	e	a	b	
75	3.5	47	104	2.10
100	4.0	53	114	3.30
150	5.0	65	129	6.50

Heel Rest Bend



Nominal Diameter DN	Dimensions			Approximate Weight Kg
	e	a	b	
75	3.5	78	140	2.70
100	4.0	91	157	4.30
150	5.0	117	186	8.70

Plain Tee

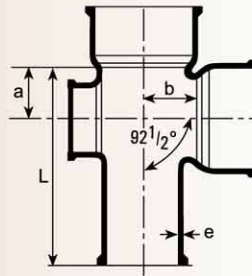


Nominal Diameter DN	Dimensions				Approximate Weight Kg
	e	L	a	b	
75	3.5	207	52	52	3.60
100	4.0	238	66	66	5.70
150	5.0	294	93	93	11.40



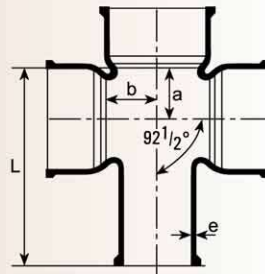
Nominal Diameter DN	Dimensions				Approximate Weight Kg
	<i>e</i>	<i>L</i>	<i>a</i>	<i>b</i>	
75	3.5	207	52	52	4.00
*100	4.0	238	66	66	6.30
150	5.0	294	93	93	12.20

* Available in Right and Left Hand



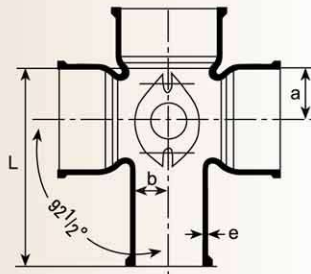
Door Tee

Nominal Diameter DN	Dimensions				Approximate Weight Kg
	<i>e</i>	<i>L</i>	<i>a</i>	<i>b</i>	
75	3.5	207	52	52	4.60
100	4.0	238	66	66	7.20
150	5.0	294	93	93	14.30



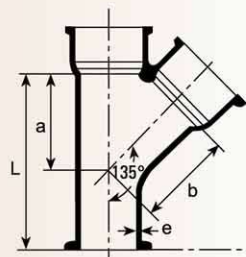
Double Plain Tee

Nominal Diameter DN	Dimensions				Approximate Weight Kg
	<i>e</i>	<i>L</i>	<i>a</i>	<i>b</i>	
75	3.5	207	52	52	5.00
100	4.0	238	66	66	7.60
150	5.0	294	93	93	15.10



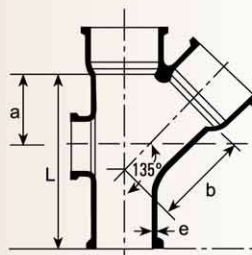
Double Door Tee

Nominal Diameter DN	Dimensions				Approximate Weight Kg
	<i>e</i>	<i>L</i>	<i>a</i>	<i>b</i>	
75	3.5	233	119	119	4.10
100	4.0	276	152	152	6.60
150	5.0	355	216	216	14.00



Plain Y

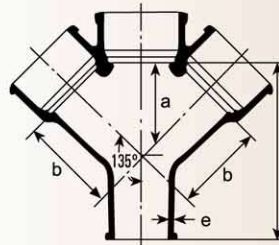
Nominal Diameter DN	Dimensions				Approximate Weight Kg
	<i>e</i>	<i>L</i>	<i>a</i>	<i>b</i>	
75	3.5	233	119	119	4.50
100	4.0	276	152	152	7.20
150	5.0	355	216	216	14.80



Door Y

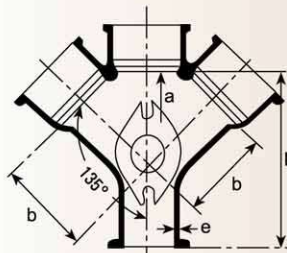


Double Plain Y



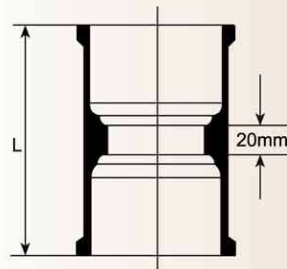
Nominal Diameter DN	Dimensions				Approximate Weight Kg
	e	L	a	b	
75	3.5	233	119	119	5.30
100	4.0	276	152	152	8.60
150	5.0	355	216	216	17.20

Double Door Y



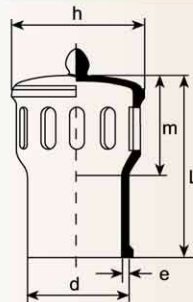
Nominal Diameter DN	Dimensions				Approximate Weight Kg
	e	L	a	b	
75	3.5	233	119	119	5.70
100	4.0	276	152	152	9.40
150	5.0	355	216	216	18.00

Socket



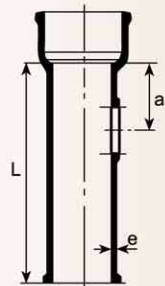
Nominal Diameter DN	Dimensions	Approximate Weight Kg
	L	
75	150	2.30
100	160	3.40
150	170	6.40

Cowel



Nominal Diameter DN	Dimensions					Approximate Weight Kg
	e	L	d	m	h	
75	3.5	175	82	95	115	1.50
100	4.0	200	109	110	145	2.70
150	5.0	210	161	110	195	5.80

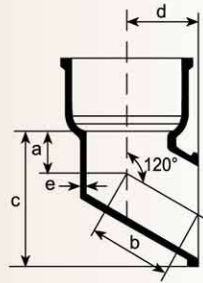
Handhole Pipe



Nominal Diameter DN	Dimensions			Approximate Weight Kg
	e	L	a	
75	3.5	272	80	4.00
100	4.0	292	100	6.40
150	5.0	338	135	13.00

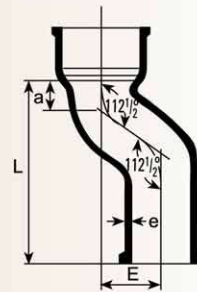


Nominal Diameter DN	Dimensions					Approximate Weight Kg
	e	a	b	c	d	
75	3.5	38	75	117	64	2.00
100	4.0	52	92	161	80	2.80
150	5.0	55	123	200	105	4.50



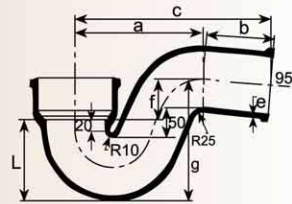
Shoe

Offset E	Nominal Diameter DN	Dimensions			Approximate Weight Kg
		e	L	a	
75	75	3.5	225	45	2.70
	100	4.0	250	55	4.30
	150	5.0	275	75	8.40
150	75	3.5	225	45	3.10
	100	4.0	250	55	4.80
	150	5.0	300	75	9.50



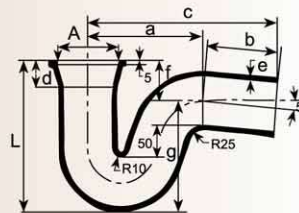
Offset

Nominal Diameter DN	Dimensions							Approximate Weight Kg
	e	L	a	b	c	f	g	
75	3.5	110	170	105	275	55	165	4.30
100	4.0	135	214	116	330	71	206	7.00
150	5.0	186	285	140	425	98	284	10.50



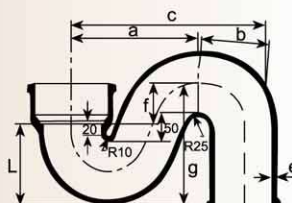
P Trap

Nominal Diameter DN	Dimensions									Approximate Weight Kg
	e	L	A	a	b	c	d	f	g	
75	3.5	225	100	170	105	275	40	60	165	4.80
100	4.0	296	200	214	116	330	60	90	206	7.50



Floor Trap

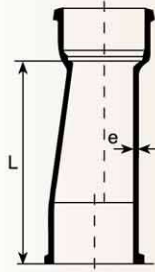
Nominal Diameter DN	Dimensions							Approximate Weight Kg
	e	L	a	b	c	f	g	
75	3.5	110	170	159	231	55	165	4.30
100	4.0	135	214	184	291	71	206	7.00



S Trap

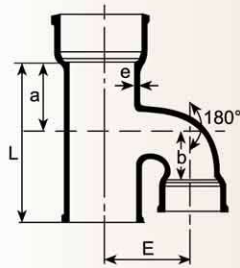


Reducer



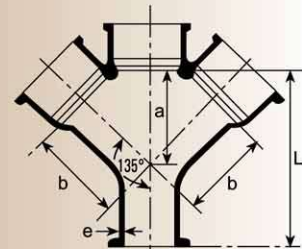
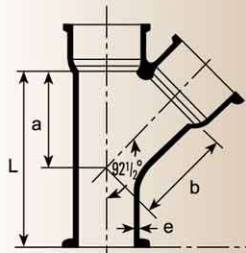
Nominal Diameter		Dimensions		Approximate Weight Kg
Spigot DN	Socket dn	e	L	
75	50	3.5	200	1.90
100	50	4.0	200	2.30
100	75	4.0	200	2.90
150	100	5.0	200	4.80

Antysiphone



Nominal Diameter		Dimensions					Approximate Weight Kg
Body DN	Branches dn	e	L	a	b	E	
100	50	4.0	210	70	90	140	5.00

Unequal branches with and without access door

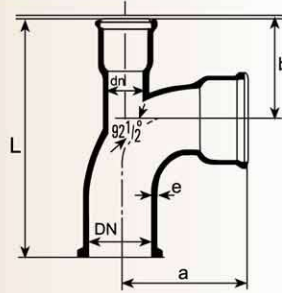


Nominal Diameter		Dimensions				Approximate Weight of Single Branch		Approximate Weight of Double Branch	
Body DN	Branch Pipe dn	e	L	a	b	Plain kg	With Door kg	Plain kg	With Door kg
75	50	3.5	181	39	51	3.10	3.50	3.80	4.20
100	50	3.5	190	40	63	4.20	4.80	4.80	5.40
100	75	4.0	211	52	65	4.90	5.50	6.00	6.60
150	100	5.0	242	67	92	9.10	9.90	10.50	11.30
75	50	3.5	197	101	106	3.30	3.70	4.00	4.40
100	50	3.5	210	115	125	4.30	4.90	5.20	5.80
100	75	4.0	239	133	139	5.50	6.10	6.40	7.00
150	100	5.0	283	179	190	10.60	11.40	12.30	13.10



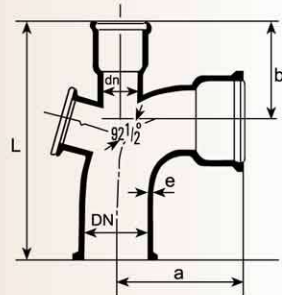
NON-ISI

Nominal Diameter DN x dn	Dimensions				Approximate Weight Kg
	e	L	a	b	
100 x 50	5.0	280	180	120	6.00



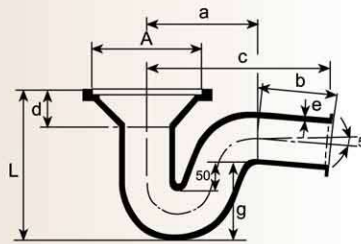
Horn Plain Bend

Nominal Diameter DN x dn	Dimensions				Approximate Weight Kg
	e	L	a	b	
100 x 50	5.0	280	180	120	6.50



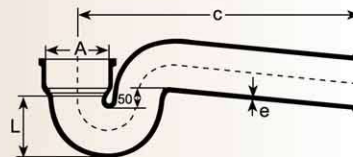
Horn Door Bend

Nominal Diameter DN x dn	Dimensions								Approximate Weight Kg
	e	L	A	a	b	c	d	g	
200 x 100	4.0	296	204	214	116	340	60	206	8.50



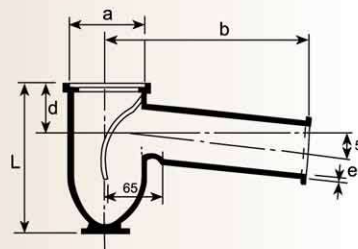
Gully Trap

Nominal Diameter DN	Dimensions				Approximate Weight Kg
	e	L	A	c	
100	4.0	130	128	615	10.00
100	4.0	130	128	450	8.00



Long P Trap

Nominal Diameter DN x dn	Dimensions					Approximate Weight Kg
	e	L	a	b	d	
100 x 75	4.0	220	110	305	110	6.00



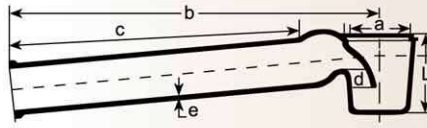
Bottle Nahani Trap



Bengal Iron Corporation

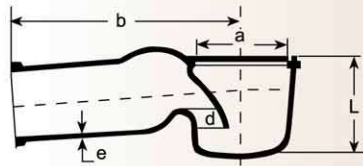
NON-ISI

Long Nahani Trap



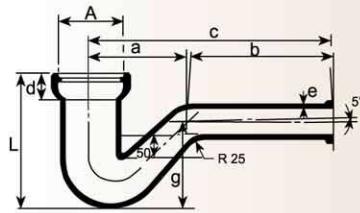
Nominal Diameter DN x dn	Dimensions						Approximate Weight Kg
	e	L	a	b	c	d	
100 x 100 x 300	4.0	100	115	450	300	25	6.00
100 x 100 x 450	4.0	100	115	600	400	25	7.50
100 x 75 x 300	4.0	100	115	450	300	25	6.00
100 x 75 x 450	4.0	100	115	600	450	25	6.50

Standard Nahani Trap



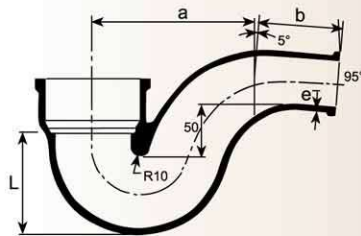
Nominal Diameter DN	Dimensions					Approximate Weight Kg
	e	L	a	b	d	
100 x 100	4.0	110	115	250	25	4.40
100 x 75	4.0	100	110	235	25	4.00

Long Floor Trap



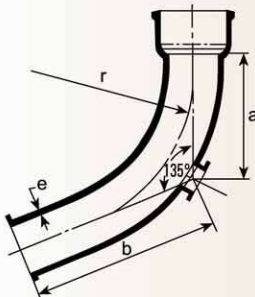
Nominal Diameter DN	Dimensions								Approximate Weight Kg
	e	A	a	b	c	d	g	L	
75 x 75	4.0	130	160	290	450	40	145	230	7.20
100 x 75	4.0	130	160	440	600	40	145	230	8.00
100 x 100	4.0	130	160	290	450	40	145	230	8.20
100 x 100	4.0	130	160	440	600	40	145	230	9.50

Belmouth Trap



Nominal Diameter DN x dn	Dimensions				Approximate Weight Kg
	e	L	a	b	
100 x 75	5.0	110	188	120	6.00

Long Door Blend



Nominal Diameter DN x dn	Dimensions				Approximate Weight Kg
	e	a	b	r	
100	4.0	160	290	325	8.20



Approved By



H.S.C.C.

DG MAP



List of Customers



LARSEN & TOUBRO



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WORKS :

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Phone : (033) 2657-2342

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