



HUBLESS CENTRIFUGALLY CAST (SPUN) IRON PIPES
FITTINGS AND ACCESSORIES



BINAY UDYOG PVT. LTD.

ESTD. 1983

Manufacturer & Exporter of C.I. Centrifugally Casted Hub
& Hubless Spun Pipes, Fittings & Manhole Covers

HEPCO - Reliable Choice for your DWV System



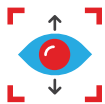
Company Profile

Since 1983, Binay Udyog Private Limited (BPL) has been a consistent leader in the industry. We are premier and one of the oldest manufacturers of Cast Iron Products viz. Pipes, Fittings, Manhole Covers, Grates, Industrial and Customised Castings, having a total production capacity of 12500 MT per annum, the company is ISO 9001:2015 certified.

Manufacturing “HEPCO” brand products, we are the 1st manufacturers of Centrifugal Soil Pipes for IS 3989 in Eastern India and our name has evolved as a mark of quality and our products find warm acceptance in domestic as well as International market.

We are committed to produce Cast Iron Centrifugally Casted Hub [IS:3989], Hub less [IS:15905] Spun Pipes and Fittings and Manhole Covers and Grates [IS:1726 and customised]. Our export range includes Cast Iron Pipes as per ASTM A 888, ASTM A 74, EN 877 and CISPI 301; international standard manhole covers and pipe fittings to cater the need of international market. The company also manufactures double flanged pipes, fittings, earthing pipes and other industrial castings as per customers requirement. Our plant is UPC approved to manufacture ASTM A 888 and CISPI 301 products.

BPL has its registered office in Kolkata and foundry in Howrah with in house facility for casting, machining, testing, finishing, painting, thereby ensuring strict control over the entire process, which has resulted in



Vision

To be the **NUMBER ONE** value creator in Indian and Global market by consistently achieving breakthroughs and setting new benchmarks by providing the entire range (all possible fittings and fixtures) in sanitary and other industrial castings in its repertoire; to expand horizons and push boundaries both in our existing and future endeavours.

its products penetrating not only in all parts of India, but also has international presence in South-East Asia, United States and is expanding its reach every day. Our brand is approved and well recognised by major departments and architects all over the country.



The company is a member of the Indian Foundry Association, Engineering Export Promotion Council of India, Indian Plumbing Association. Alongside the company is within the Board of Indian Plumbing Skills Council (IPSC) which under Skill India supports and ensures to train the workforce to the best of their capabilities.

We make products that are time tested and are also reusable, recyclable and resaleable, the reason we are in the cast iron industry. **CI IS OLD CI IS GOLD.**



Mission

BPL's performance-driven culture celebrates collaboration, creativity and continuous learning as keys to achievement. Through continuous improvement, we strive to be the preferred partner that consistently delivers exceptional quality, service and value-added solutions to our customers and provide a safe work environment for our employees.



Values



Quality



Skill Development



Teamwork



Committed



Fidelity



Innovation & Improvement



Sustainability



Social Responsibility



Quality Policy

The foundation of maintaining and improving of BPL work quality is as follows:

- Right quality to meet customers need
- Maintaining delivery schedule
- Error free product right at the beginning
- Maintaining quality in all functions
- Constant upgradation of quality

We at BPL are committed to operate under ISO 9001:2015 Quality Management System.

Quality is the best business plan.



Sustainable Product

Today, being eco-friendly can apply to all sorts of avenues in our everyday lives—from the clothes we wear to the food we eat. But what some people may not consider is how the piping systems in our homes can affect the environment.

HEPCO products are environmentally safe choice for all your DWV solution as it is durable, recyclable, reusable and resaleable.

"I have found the iron to be my greatest friend. It never freaks out on me, never runs. Friends may come and go. But two hundred pounds is always two hundred pounds."

– Henry Rollins

Go Green



Our Process

The centrifugal casting process is used to produce pipe, while static casting is used to produce fittings, manhole covers and others castings. Centrifugal casting and modern static casting provide rigid production control and yields high quality pipe, fittings and manhole covers of uniform dimensions cast to exacting specifications.

Centrifugal Casting in horizontal moulds is used to make long, concentric, hollow castings. In the centrifugal pipe casting process, a water-cooled metal mould is rotated on a horizontal axis during the interval of time that it receives a pre-measured quantity of molten iron. The centrifugal force created by this rotation causes the liquid iron to spread uniformly onto the mould's inner surface, thereby forming upon solidification a cylindrical pipe conforming to the inside dimensions of the mould. After the pipe is cast, it is allowed to solidify in the still rotating mould. Finally, the pipe is removed from the mould and is conveyed to the foundry's cleaning and finishing department.



Static Sand Casting uses sand cores surrounded by green-sand moulds into which molten iron is poured to form castings. The sand is termed "green" because of its moisture content rather than its colour. The sand-casting process involves pattern making, moulding, core making and pouring after which the product is conveyed to the foundry's cleaning and finishing department.



Cleaning and Finishing Operations include the following steps and procedures:

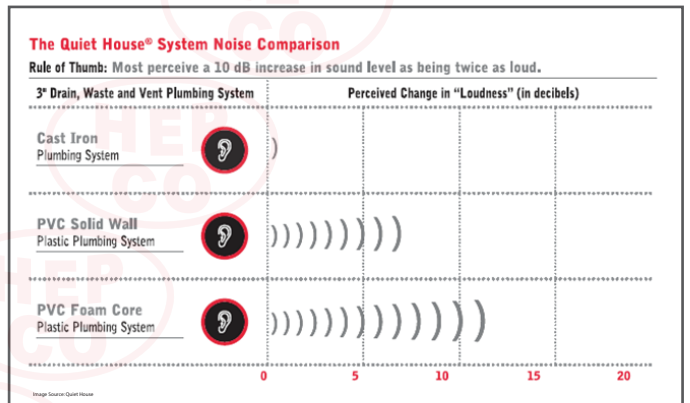
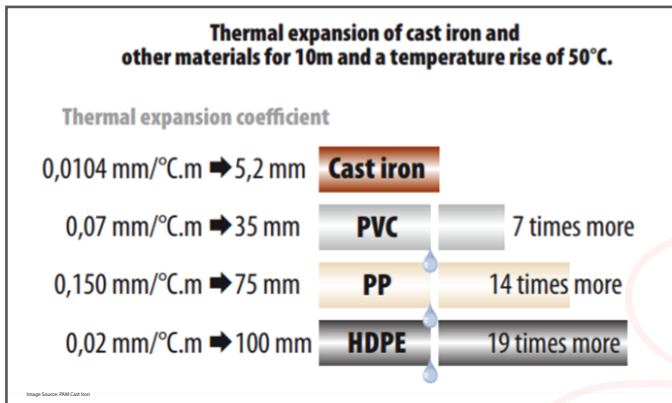
- **Brushing and Fettling:** After the newly cast pipe, fittings and manhole covers have been removed from their moulds and allowed to cool, they must be properly cleaned to remove moulding sand, core sand, gates, fins, and risers.
- **Technical Inspection:** After the castings have been cleaned, they are inspected and tested for strict conformance to all standards and specifications under the Bureau of Indian Standard. In the laboratory, test samples undergo more exacting physical testing and chemical analyses.



- **Coating:** After inspection and testing, pipe, fittings and manhole covers are coated as per the customer requirements. The finished pipe, fittings and manhole covers are then moved into storage or prepared for shipment.



Why HEPCO Cast Iron



- Durability exceeding expected building life. (CI not sensitive to thermal ageing whereas Polymers can deform)
- Resistance to corrosion. (Coated with anti corrosive paints)
- Non-combustible. Does not help spreading of flames has an ability to withstand extreme temperature. (Cast iron has a melting point over 1000°C)
- Resistance to abrasion.
- Ability to withstand trench loads, strength and rigidity. (Tensile strength 15000 psi and above)
- Low coefficient of expansion / contraction (CI 0.0104mm / cm at the temp 50°C & PVC 0.07mm / cm i.e. 7 time more)
- Joints which resist infiltration and exfiltration.
- Resistance to noise transmission. (CI pipe is known as silent pipe)
- Environmental friendly and Ecologically balanced. (It is being called as a Green Pipe by various institutions in USA and Europe as they can be recycle/or made of recycled materials. They even add extra benefit under Green Verification scheme.)
- Resale value after life time use. (The price of iron increases with time)

HEPCO Cast Iron Product Features -

The centrifugal casting process is used to produce pipe, while static casting is used to produce fittings and manhole covers. Centrifugal casting and modern static casting provide rigid production control and yields high quality pipe, fittings and manhole covers of uniform dimensions cast to exacting specifications.

Material(Fe) Grade : FG 150 as per IS 210

Chemical Properties:			
C	Si	Ce	Mn
3.5%	1.8%		0.35%
3.8%	2.2%	>4.3	0.55%

Mechanical Properties:	
Specific Mass	7.15 kg/dm ³
Tensile Strength	150N/mm ² and above

Coating:

Pipe and fittings both are coated internally and externally as per specification and customer requirement.

Product Use:

Pipe and fittings are used in the drainage system for soil, waste, rain water and ventilation.

HEPCO Hubless Pipe And Fittings Quality Test:

- Crushing Strength: 300 N/MM² MIN
- Hardness: 230 BHN (MAX)
- Co-Efficient Of Expansion: 0.01 mm/m/°C
- Dimensional Check: Confirming to IS 15905
- Hydrostatic Test: Should withstand water pressure upto 0.7 KG / CM²
- Hammer Test: Clear ring sound when stuck with light hand hammer
- Coating Test: No flow upto 65°C temperature and at a temperature of 0°C it should not chip off.
- Modulus of Elasticity: 62.1-240 GPa

IS 15905 Pipe and Fittings Tolerance Guide

1. External Diameters:

Nominal Size	External Diameter	Tolerance On
DN	DE	DE
50	58	+2/-1
75	83	+2/-1
100	110	+2/-2
150	160	+2/-2
200	210	+2.5/-2.5

2. Thickness:

Nominal Size	Thickness			
	Pipe		Fittings	
DN	Nom.	Min.	Nom.	Min.
50	3.5	3.0	4.2	3.0
75	3.5	3.0	4.2	3.0
100	3.5	3.0	4.2	3.0
150	4.0	3.5	5.3	3.5
200	5.0	4.0	6.0	4.0

3. Lengths:

a) Pipe: 20mm

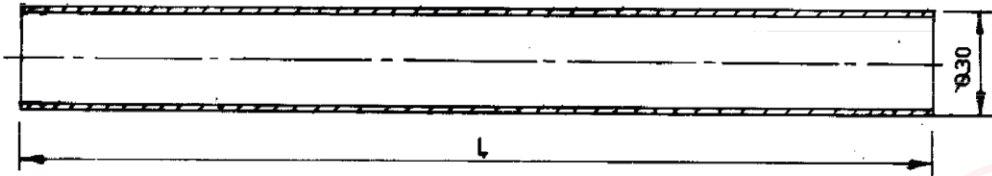
b) Fittings: ±5mm

4. Masses:

a) Pipe: -15%

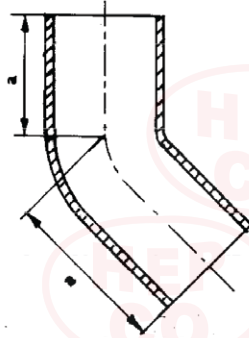
b) Fittings: -15%

▲ **Hubless Pipe** ▼



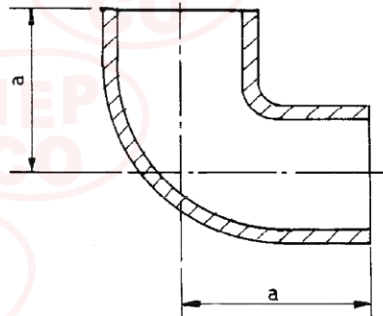
▲ **Half Plain Bend** ▼

SL No. (1)	Nominal Size DN (2)	a mm (3)
i)	50	50
ii)	75	60
iii)	100	70
iv)	150	90
v)	200	110



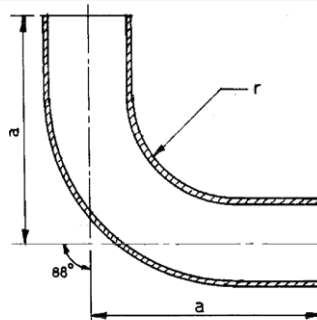
▲ **Plain Bend** ▼

SL No. (1)	Nominal Size DN (2)	a mm (3)
i)	50	75
ii)	75	95
iii)	100	110
iv)	150	145
v)	200	180



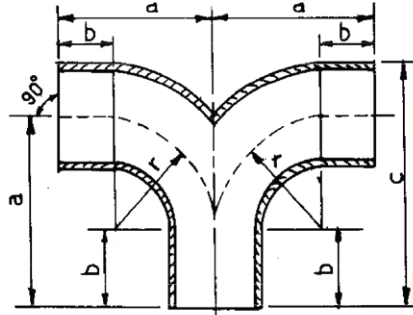
▲ **Long Radius Bend** ▼

SL No. (1)	Nominal Size DN1 (2)	a mm (3)	r mm (4)
i)	50	241	203
ii)	75	254	216
iii)	100	267	229
iv)	150	305	254



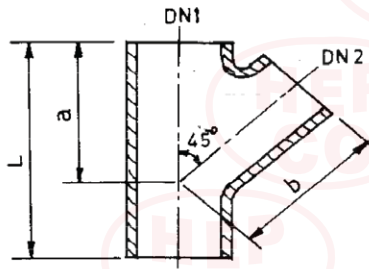
Double Bend

SL No. (1)	DN1 (2)	a (3)	b (4)	c (5)	r (6)
i)	75	134	45	175.5	89
ii)	100	152	50	207	102



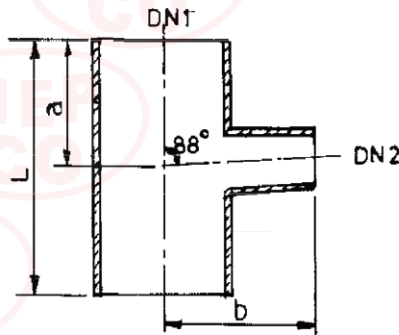
45 degree Single Branch Y Junction

Normal Size		L mm	a mm	b mm
DN1	DN2			
50	50	160	115	115
75	50	180	135	135
75	75	215	155	155
100	50	185	150	150
100	75	220	170	170
100	100	260	190	190
150	75	225	215	215
150	100	280	225	225
150	150	355	265	265
200	100	300	260	260
200	150	375	300	300
200	200	455	340	340



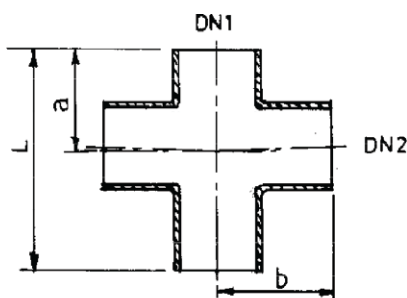
TEE Junction

Normal Size		L mm	a mm	b mm
DN1	DN2			
50	50	145	65	75
75	50	170	70	80
75	75	180	85	95
100	50	170	76	105
100	75	190	88	110
100	100	220	105	115
150	100	245	115	145
150	150	300	145	155
200	75	250	120	170
200	100	270	125	175
200	150	325	150	185
200	200	365	180	180



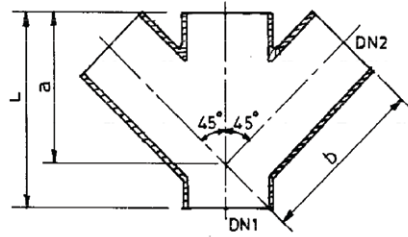
Double TEE Junction

Normal Size		L mm	a mm	b mm
DN1	DN2			
50	50	145	65	75
75	50	170	70	80
75	75	180	85	95
100	50	170	76	105
100	75	190	88	110
100	100	220	105	115
150	100	245	115	145
150	150	300	145	155
200	75	250	120	170
200	100	270	125	175
200	150	325	150	185
200	200	365	180	195



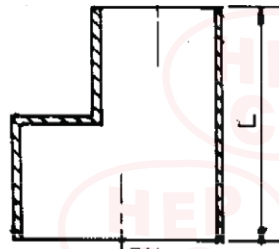
Double Y Junction

Nominal Size		L mm	a mm	b mm
DN1	DN2			
50	50	160	115	115
75	50	180	135	135
75	75	215	155	155
100	50	185	150	150
100	75	220	170	170
100	100	260	190	190
150	75	240	205	205
150	100	280	225	225
150	150	355	265	265
200	75	250	240	240
200	100	335	290	290
200	150	375	300	300
200	200	455	340	340



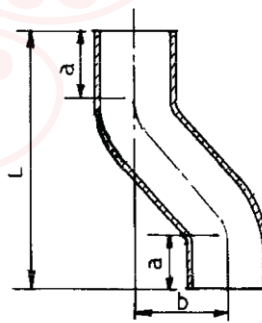
Reducer

Nominal Size		L mm
DN1	DN2	
75	50	80
100	50	80
100	75	90
150	75	100
150	100	105
200	100	115
200	150	125



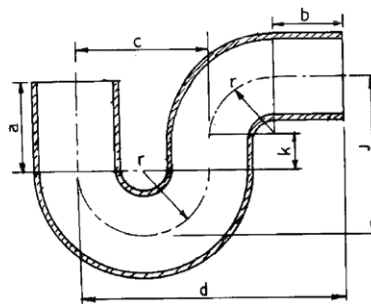
Offset

Offset	Nominal Size DN	L mm	a mm	b mm
65mm	50	165	50	65
	75	185	60	65
	100	205	70	65
	150	245	90	65
130mm	50	230	50	130
	75	250	60	130
	100	270	70	130
	150	310	90	130
	200	350	110	130
200mm	50	300	50	200
	75	320	90	200
	100	340	70	200
	150	380	90	200



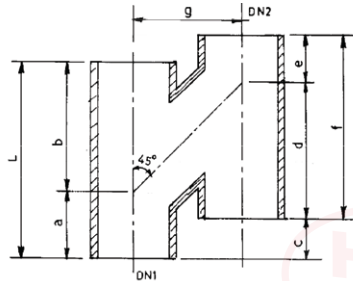
P Trap

DN	a	b	c	r	j	k	d
50	51	40	102	51	102	-	193
75	83	45	127	64	140	13	236
100	102	50	152	76	165	13	278
150	152	60	203	102	216	13	365



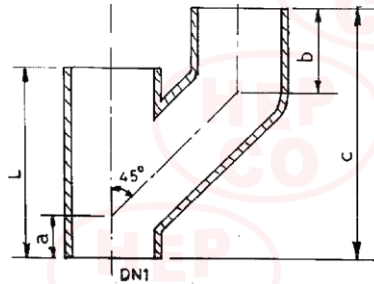
H Ventilation Pipe

DN1	DN2	L	a	b	c	d	e	f	g
75	75	190	55	135	63	138	52	190	150
100	75	225	60	165	50	136	60	225	150
100	100	230	61	169	85	170	60	230	230
150	100	280	50	230	96	200	60	260	241



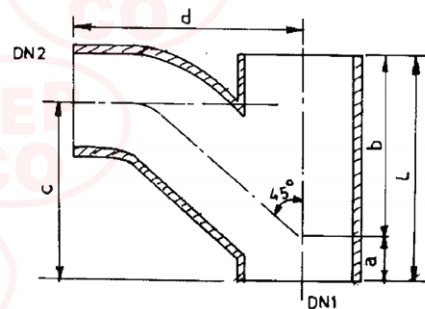
Y Ventilation Pipe

DN1	DN2	L	a	b	c	d
75	75	190	55	53	250	150
100	75	220	50	50	270	150
100	100	245	60	85	330	200
150	100	286	50	100	390	241



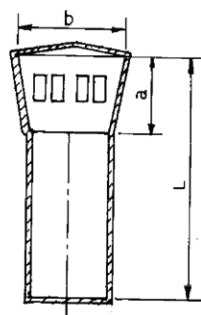
88° T Y Single Branch

DN1	DN2	L	a	b	c	d
50	50	150	45	105	119	126
75	50	165	33	120	125	138
75	75	195	50	139	157	164
100	50	165	22	130	122	154
100	75	195	39	150	165	180
100	100	270	57	163	199	210
150	75	230	23	184	176	208
150	100	243	42	201	187	210
150	150	320	75	245	268	270
200	75	255	10	220	190	237
200	100	290	27	237	219	252
200	150	340	60	265	277	300
200	200	410	98	312	340	349



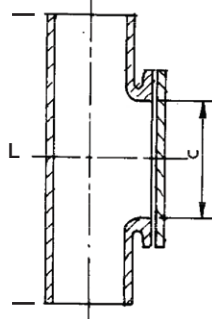
Vent Cowel

DN2	L	a	b
50	130	70	78
75	140	80	91
100	160	85	118
150	185	100	168
200	215	125	220



▲ Hand Hole Pipe ▼

DN2	L	c	b
50	175	53	105
75	205	75	125
100	250	104	159
150	330	155	215
200	400	205	262



▲ Coupling ▼

Hubless pipe and fittings are connected by mechanical coupling.

The coupling consist of

Clamp: Stainless Steel, Shield: Stainless Steel, Gasket: EPDM Rubber

▲ Coupling Installation Process ▼



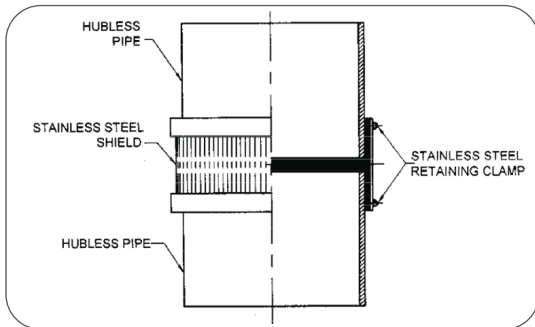
1. Slide the outer stainless steel shield over and down the pipe/fitting first. Then push gasket on end of pipe/fitting. Reverse upper-half of the gasket, for quick fitting.



2. Next insert pipe or fitting on central ring and defold the gasket.



3. Slide the shield back over the gasket.



4. **Screw both ends firmly, ensuring that both plates are parallel and pipes and fittings are firmly tight to ensure they are not loose to come out of the gasket.**

Recommended:

- For smooth cutting machines are recommended.
- When using field cut Pipe the ends should be cut square with straight edges.
- For minimum and maximum dia of the pipe as per ISI 15905, the minimum dia should be applied with extra rubber sleeves to match the diameter for firming of the coupling.
- 2-bands coupling is recommended for lower diameter pipes and fittings upto 100mm and the bands should be tightened alternatively.
- 4-bands coupling is recommended for higher diameter pipes and fittings above 100mm and the inner bands should be tightened first followed by the outer bands in proportion.



▲ *Special Fittings* ▼



Door-Tee



End-Cap



Single Hub Door-Tee



Door Bend



Plain Bend with Socket



P-Trap with Socket

▲ *End-Cap Installation Guide* ▼



Step 1 –
Insert the clamp and the rubber



Step 2 –
Place the casting plate and fix it with the clamp



▲ No-Hub Pipe and Fittings as per ASTM A 888 ▲

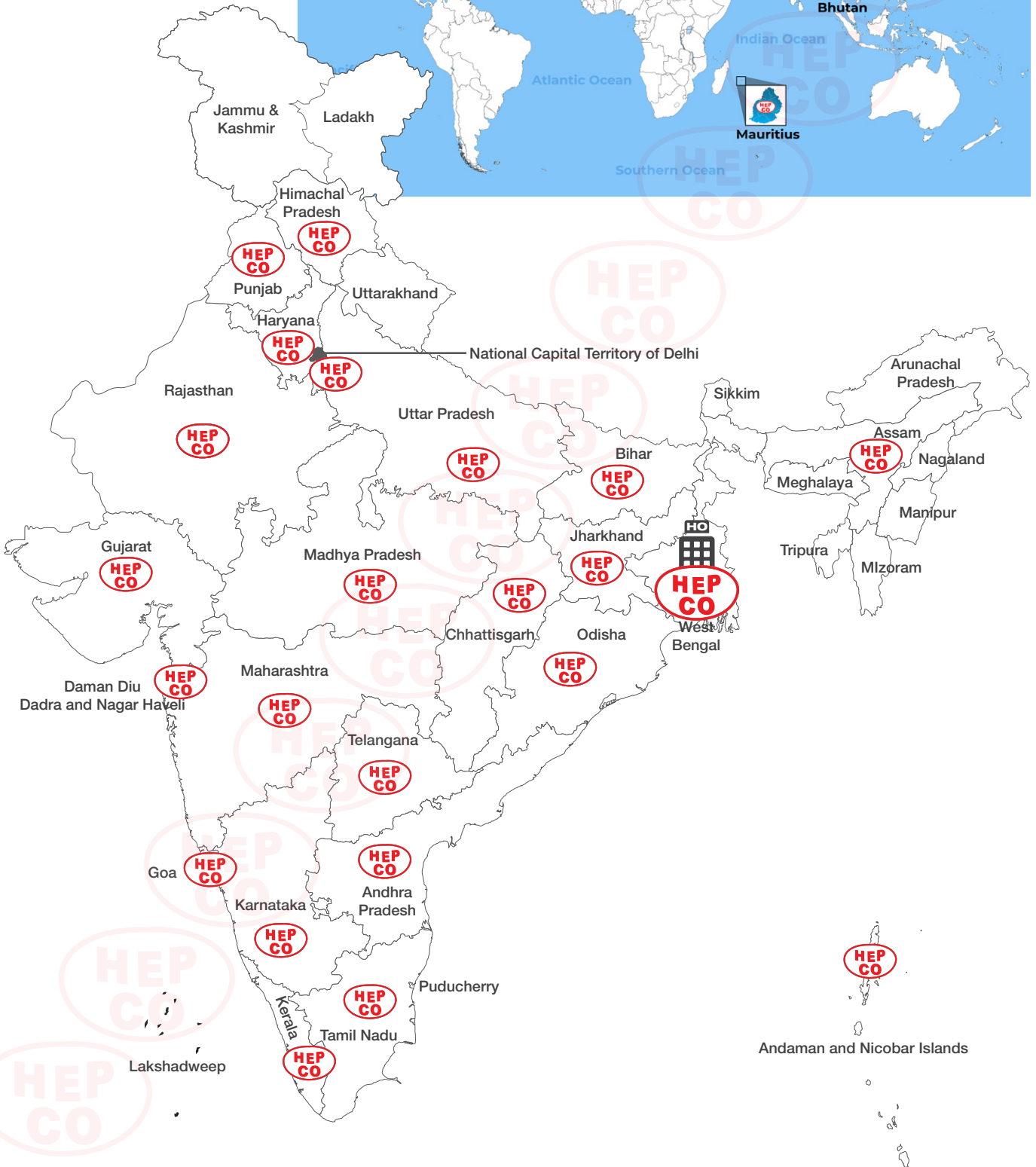


Our plant is UPC approved to manufacture ASTM A 888 and CISPI 301 products.





Our Reach



Cast Iron DWV System remains opulent even throughout the fast-evolving Plumbing Systems.

Best Choice, Cast Iron



As reliable as it is enduring, HEPSCO the brand you can trust for CI Pipes, Fittings, Manhole Covers, Gratings and Customized Requirements.

HEPCO promotes IPSC certified plumbers under Skill India



BINAY UDYOG PVT. LTD.

ESTD. 1983

🏠 20A Sura 3rd Lane, Kolkata 700 010

☎ +91 33 2353 9294 / 95 ✉ bpl@hepcoindia.com 🌐 www.hepcoindia.com

