



**RPMF**

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IS : 15905:2011



**HUBLESS  
Spun**

**CAST IRON  
PIPES & FITTINGS**



*Pattern Makers & Founders*

*The Preferred Choice of*

**ARCHITECTS PLUMBERS CONTRACTORS**



### RAJ PATTERN MAKERS & FOUNDERS PVT. LTD.

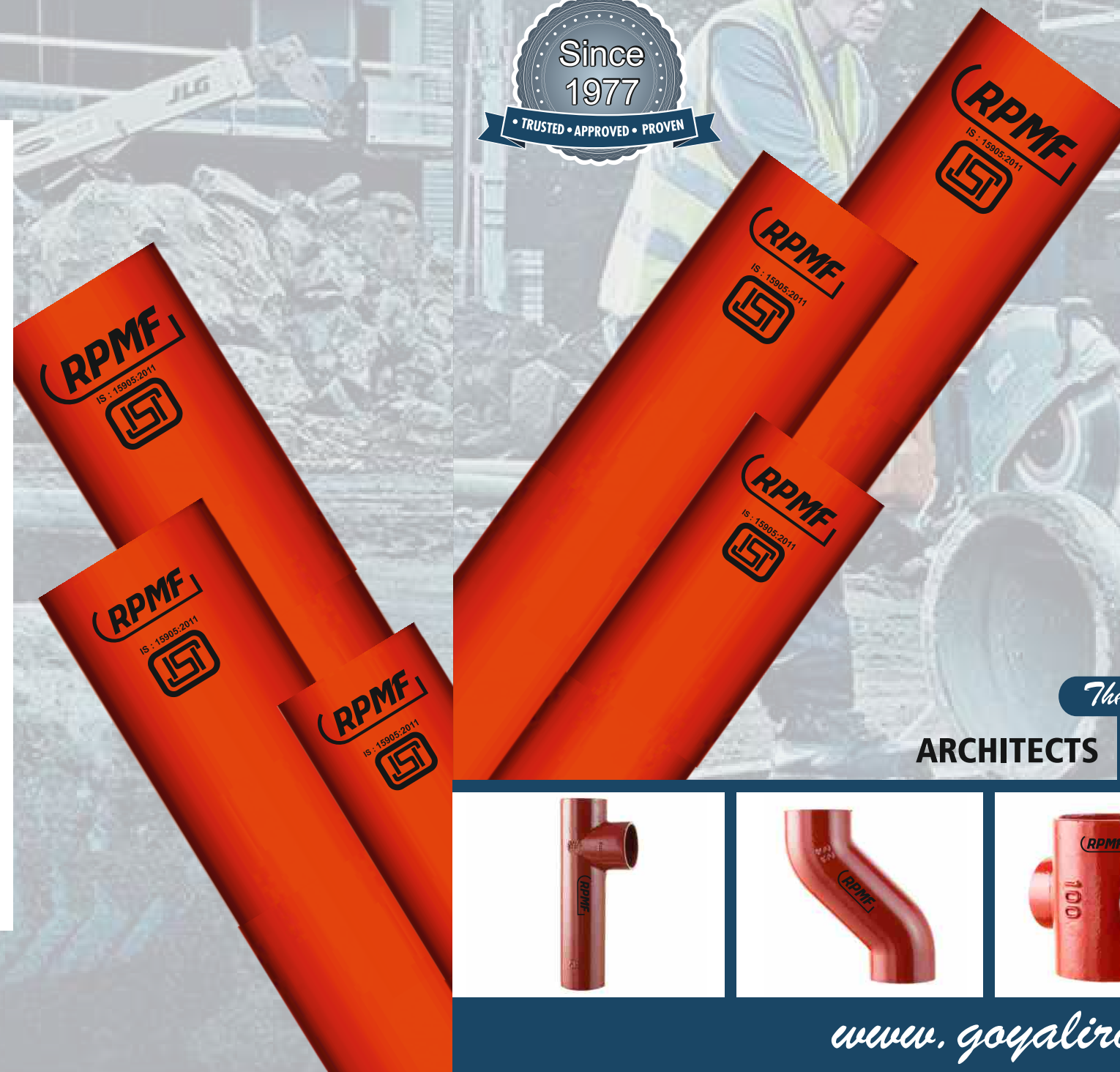
Manufacturers & Exporters of CI Hubless  
Pipes & Fittings as per IS 15905 : 2011  
C.I. Centrifugal Pipes & fittings  
according to IS:3989

Manhole Covers, Gratings, Decorative Casting,  
Iron Furniture, Spiral staircase, Lamp Posts,  
and Customized castings according to  
customer specifications.

**Mobile:** +91 9760 283 296, +91-9319 103 513  
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[www.goyaliron.com](http://www.goyaliron.com)



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## COMPANY PROFILE

Raj Pattern makers & Founders Pvt. Ltd. is engaged in the foundry business since 1974, producing Cast Iron hubless & Centrifugal Pipes, Fittings, Manhole Covers, Gratings, Ornamental Castings and hand pumps in our plant in Agra.

Our Products are the first choice of all Architects, Builders, Contractors & Plumbers due to Superior quality, timely delivery and competitive rates. We cater mainly to demand from Government & Semi Government Sector. To meet the increasing demand for hubless pipes & fittings, we Installed the latest technology available in the market to manufacture hubless pipes & fittings with IS Code IS:15905:2011 under brand **(RPMF)**

### Our Product Range covers the following items :

1. CI Hubless Pipe Fittings IS:15905:2011
2. C.I. Centrifugal Pipes & Fittings IS:3989:2009
3. C.I. Main Hole & Gratings

### WHY HUBLESS PIPES & FITTINGS?

1. **Compact System** : Hubless Couplings provide more compact arrangement. The great advantage of this System is that, it permits joints to be made in limited access areas.
2. **System Flexibility** : The Couplings permit sufficient flexibility under adverse conditions, also allow pipe movement, building sway movement without breakage or joint leakage. Also it resist the vibrations and absorb shocks.
3. **Versatility** : Hasselfree System, which can be used efficiently throughout, as per the requirement in adverse conditions also.
4. **Low Installation Cost** : Since Pipes are available in longer lengths, and Couplings are used for jointing, which results in speed and efficiency of work, hence saves the cost.
5. **Less Wastage** : Since Pipes & Fittings are Hubless, every inch of Pipe can be utilised by making Coupling Joints.
6. **Angular Deflection** : Coupling Joints allow deflection in piping upto 5 deg.
7. **Easy to Handle** : As compared to Hub Pipes these Pipes are very easy to handle.
8. **Hasselfree Installation** : Installation of Hubless Cast Iron Pipes & Fittings has no added complications like Fire collars, Cladding, Additional brackets, Sound insulation, Expansion joints, Thermal limiters etc. unlike U-PVC Pipes.
9. **Flexi Reorientation** : This System allows reorientation of Drainage System in future, since Couplings, Pipes & Fittings can be taken out and be reused any time.
10. **Hubless pipes & fittings** are very durable, resistant to abrasion, noise transmission, vibrations & shocks, have low co-efficient of expansion and withstand high temperature extreme .



## TECHNICAL SPECIFICATION & PRODUCT CHARACTERISTICS:

### 1. SPECIFICATIONS:

a) Pipes & Fittings:

\*As per ISO 6594 \*As per DIN 19522 \* As per IS 15905-2011

b) Stainless Steel Coupling with EPDM Rubber: \*DIN 19543

### 2. USES :

RPMF Cast Iron Hubless Pipes & Fittings are used in Gravity Drainage System for following purposes :

\*SOIL \*WASTE \*VENTILATION \*RAIN WATER

### 3. RANGE & NOMINAL SIZES :

Hubless Pipes & Fittings are manufactured and available in complete range as per product catalogue and in following nominal sizes, (pipe length : 3000 mm max.) :

\*75mm \*100mm \*150mm \*200mm

### 4. MATERIAL :

Cast Iron used for manufacturing Hubless Pipes & Fittings confirms to: IS 210, ISO 185 & grade FG 150 with chemical properties C-3.5 to 3.75%, Si-1.8 to 2.3%, CE-4.3

### 4. MECHANICAL PROPERTIES: HYDROSTATIC TEST PRESSURE:

1	Specific Wt.	7.15 kg/cm <sup>3</sup>
2	Tensile Strength.	150 N/mm <sup>2</sup>
3	Hardness	230 BHN max.
4	Co-efficient of Expansion	11x10 <sup>-6</sup> /deg.C
5	Crushing Strength	600 N/mm <sup>2</sup>
6	Modulus of Elasticity	10x10 <sup>4</sup> to 12x10 <sup>4</sup> N/mm <sup>2</sup>
7	Temperature Resistance	400 deg. C (Without significant reduction in mechanical properties)

### 6. HYDROSTATIC TEST PRESSURE :

It should bear water pressure at 0.7 Kg/ Cm<sup>2</sup> for at least 15 Sec. time

### 7. COATING:

Inside Black Bitumen Paint

Outside : Red Oxide Paint I Black Bitumen Paint For no brittle at 0°C and no flow up to 650° C

8. Hammer Test: For clear ringing soundness of casting

### 8. TOLERANCE :

#### 1) External Diameters :

Nominal Size	External Diameter	Tolerance On
DN (in mm)	DE (in mm)	DE (in mm)
75	83	+2/-1
100	110	+2/-1
150	160	+2/-1
200	210	+2.5/-2.5

#### 2) Thickness :

Nominal Size	Thickness			
	Pipe		Fittings	
DN (in mm)	Nom.	Min.	Nom.	Min.
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

All dimensions are in mm

#### 3) Lengths :

a) Pipe : ±20mm b) Fittings : ± 5mm

4) Masses: a) Pipe 15% b) Fittings :-15%





IS : 15905:2011



## HUBLESS PRODUCTS RANGE :



REDUCER



BEND WITH VENT



Y - VENTILATION PIPE



SINGLE BRANCH - YT



P-TRAP



SINGLE BRANCH - T



DOUBLE BEND



DOUBLE BRANCH

STAINLESS STEELCV/  
SHIELDED & D.I. COUPLINGS  
WITH EPDM RUBBER

PIPE

## INSTALLATION PROCEDURE:

1. Push Sealing on  
end of pipe2. Reverse Upper half  
of sealing3. Next put pip or  
fitting on central ring  
and defold sealing4. Lay collar around  
sealing5. Screw both ends firmly,  
ensuring that both plates  
are parallel

## CUTTING OF HUBLESS PIPES:

For cutting Hubless Cast iron Pipes, Cutting Machine is recommended ( as shown in figure below). which save time and cuts the pipe perpendicular with straight edges.

### Procedure :

- Mark the pipe surface from where the pipe has to be cut.
- Fix the pipe in machine vice.
- Now move the cutting wheel downwards till the pipe is cut



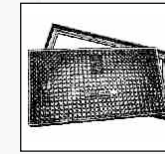
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## Cast Iron Manhole Covers, Frames & Gratings

### Square & Rectangular Manhole Covers

#### with frame

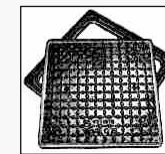


#### Size (mm)

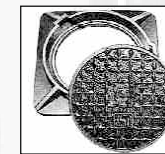
150x150  
200x200  
250x250  
300x300  
350x350  
375x375  
400x400  
450x450  
500x500  
550x550  
600x600

#### Weight (kg)

2  
3  
4  
6,7  
8  
9  
10.5  
14  
17  
20,24  
27  
14  
25,38  
35,52  
14  
18  
38



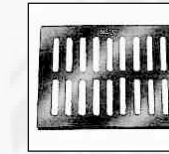
#### Circular



400  
450  
500  
560

14  
17  
20  
120, 208

### Gratings



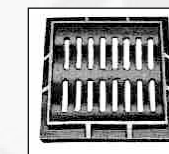
#### Size (mm)

75x75  
75 radius  
100x100  
100 radius  
125x125  
125 radius  
150x150  
150 radius  
175x175  
200x200  
250x250  
300x300  
200x200 Tile  
250x250 Tile  
300x300 Tile

#### Weight (kg)

0.200  
0.200  
0.400  
0.300  
0.600  
0.500  
0.700  
0.600  
1.0  
1.6  
2.8  
3.8  
2.0  
3.0  
4.2

### Gratings with frames



150x150  
200x200  
250x250  
300x300  
375x375

1.8  
2.5  
3.8  
5.5  
8.0



## Earthing Pipe

### Centrifugally Cast Iron Earthing Electrode

#### Salient Features

- Good Resistance to soil corrosion leading to good Conductivity.
- Cost Effective and durable compared to other Earthing Electrodes
- Excellent and uniform current dissipation
- Easy & Cost Effective installation & maintenance



- ▶ Nominal Bore (NB) - 75 mm 100mm 150 mm
- ▶ Length 1200 mm to 3000 mm (as per requirement)
- ▶ Thickness 3.5 mm to 13 mm (as per requirement)



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IS : 3989:2009



Manufacturers &amp; Exporters of:

1. C.I. Centrifugal Pipes & fittings according to IS:3989
2. C.I. & O.I. Manhole Covers & Gratings
3. C.I. Decorative Gate, Grills and Furniture

**Rate List of IS:15905 "HUBLESS" Cast Iron Pipe & Fittings(w.e.f:-1<sup>st</sup> Aug, 2022)**

CAST IRON <b>HUBLESS</b> PIPES	200MM	150MM	100MM	75MM	50MM
HUBLESS PIPE 3000 MM	10965	6760	3595	2955	2530
HUBLESS PIPE PCS 2700MM (9')	9375	5780	3295	2750	
HUBLESS PIPE PCS 2400MM (8')	8335	5140	2915	2465	
HUBLESS PIPE PCS 2100MM (7')	7825	4820	2665	2225	
HUBLESS PIPE PCS 1800MM (6')	7315	4490	2420	1980	1825
HUBLESS PIPE PCS 1500MM (5')	5850	3210	1925	1575	1190
HUBLESS PIPE PCS 1200MM (4')	4860	2990	1600	1305	
HUBLESS PIPE PCS 900MM (3')	3765	2375	1275	1055	
HUBLESS PIPE PCS 600MM (2')	2905	1605	840	695	
HUBLESS PIPE PCS 450MM (1.5')	2465	1310	705	560	
HUBLESS PIPE PCS 300MM (1')	1475	805	450	350	
CAST IRON <b>HUBLESS</b> FITTINGS					
PLAIN BEND	1735	840	380	255	195
DEGREE BEND	1285	600	290	195	155
DOOR BEND		1165	580	420	
H.R BEND		725	625	505	
PLAIN BEND WITH SOCKET			600		
DOOR BEND WITH SOCKET			880	735	
LARGE RADIUS BEND		1840	1030	870	330
LONG TAIL BEND 88D			775	520	415
PLAIN HORN BEND			705		
DOUBLE BEND		1255	925	560	
SINGLE BRANCH PLAIN T 88D	3655	1855	630	355	315
SINGLE BRANCH DOOR T 88D		2435	760	565	
SINGLE BRANCH DOOR T WITH SOCKET			985	655	
SINGLE BRANCH PLAIN T WITH SOCKET			1075	860	
SINGLE BRANCH PLAIN Y T 45D	3875	1885	705	430	315
SINGLE BRANCH DOOR Y T 45D		2435	965	805	
SINGLE BRANCH SWEEP PLAIN T		1840	670	380	
SINGLE BRANCH SWEEP DOOR T			1025	580	
SINGLE BRANCH T Y 88 D	4580	2265	975	580	345
DOUBLE BRANCH PLAIN T 88D		2405	840	450	
DOUBLE BRANCH PLAIN Y 45D	6045	2270	1030	550	
EQUAL PARELLEL BRANCH Y			1245		
P TRAP (HUBLESS)		2085	950	635	
P TRAP (WITH HUB)		2125	1240	790	
NAHANI TRAP HUBLESS			825		
FLOOR TRAP (50MM DEEP SEAL)			1120		
FLOOR TRAP with Hub			1410	1210	
VENT COWELL	1775	975	450	340	335
HANDHOLE INSPECTION PIPE / DOOR PCS	2745	1580	740	475	
OFFSET PROJECTION 130 MM		1210	690	505	
OFFSET PROJECTION 65 MM		1040	585	455	
VENTILATION PIPE (H)			1585	1020	
VENTILATION PIPE (Y)			1585		
END PLUG (CASTING)	1480	765	605	425	
SHIELDED (SS-304) COUPLING	1290	880	480	450	420



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### Rate List of 15905 Centrifugally Cast Iron Pipe & Fittings(w.e.f:-1<sup>st</sup> Aug, 2022)

UNEQUAL TEE	200X150	200X100	200X75	150X100	150X75	100X75	100X50	75X50
SINGLE BRANCH PLAIN Y T	2400	1870	1850	1470	980	720	465	455
SINGLE BRANCH PLAIN T	2070	1850	1720	1410	875	595	465	380
SINGLE BRANCH T Y 88D	2910	2080	1715	1610	1090	755	505	485
SINGLE BRANCH DOOR T				1840	1430	780		
SINGLE BRANCH SWEEP DOOR T						925		
DOUBLE BRANCH PLAIN T CROSS				1680	1250	660	505	525
DOUBLE BRANCH PLAIN Y T CROSS				1785	1300	865		
PARELLEL BRANCH						1180		
REDUCER	750	750	710	530	400	240	210	180
NAHANI TRAP						735		
P TRAP WITH HUB						955		
P TRAP (HUBLESS)						880		
FLOOR TRAP (50mm Deep Seal)						925		
Smart Floor Trap 100X75X50						1445		
Smart Floor Trap 100X100X50						1510		
H. VENTILATION PIPE				1805		1075		
Y. VENTILATION PIPE						915		
Multi Intel Pipe (Hubless)							1635	
Multi Intel Pipe with Hub							1950	
W.C CONNECTOR (PUSH-FIT) 100MM						620		
W.C CONNECTOR (350MM LONG) WITH EPDM RUBBER 100MM DIA						865		

#### Terms:-

1. Rates are ex-factory
2. GST & other levies as applicable shall be charged extra
3. Loading charge Rs.5.00 per quintal shall be charged extra.
4. Breakage in transit will be not be replaced or compensated.
5. If the rates of raw material increase, your order shall be supplied at new rates

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