HAMOUN NYZEH Co.
Ductile Iron Pipe Manufacturer

Earthquake and Subsidence Resistance Ductile Iron Pipe

R.J.Pipe is a Push-on restrained joint of advanced design.The joint locking system prevent joint separation. The R.J.Pipe joint is used primarily to earthquake and subsidence resistance ductile iron pipelines.It may also be used for trenchless application systems.

The design provides joint deflection after assembly and easy installation without bolts and nuts.

This kind of pipes produced according to ISO 2531 and the joint tested according to ISO 10804.





Advantage

- Easy and fast installation
- Can withstand high pressure compared with Tyton joints
- Capable of linear and angular deflection
- Boltless push-on restrained joint

Application

- Restrained fittings can be used instead of concrete trust blocks
- Suitable for earthquake zone and unstable soils
- Suitable for bridge crossing, horizontal directional drilling, highway and railroad crossing



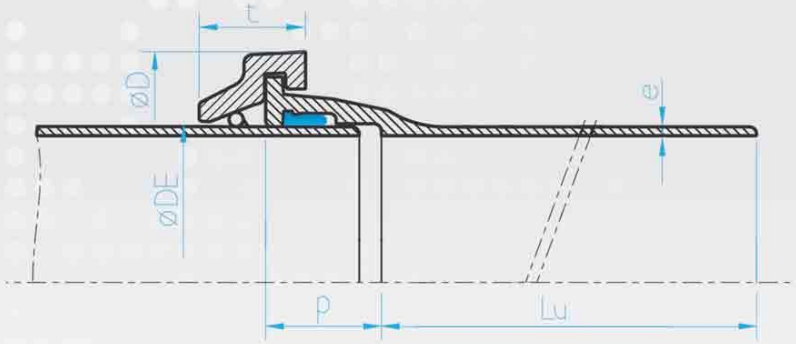
Max. R.J.Pipe joint deflection after assembly

Maximum deflection in degrees	DN
4	80-300
3	350-700

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k=9 | Weights in kg
Dimensions in mm

DN	DE		PFA[1]	Angular Joint Deflection		End Play[2]	Length of socket (P)	Thickness of wall pipe (e)	Socket Mass	Pipe mass include socket Lu=6m	O.D. of gland (D)	Gland Mass	Length of Gland (t)
	Nomi.	Tolerance		In 6 m									
mm	mm		bar	deg	mm	mm	mm	mm	kg	kg	mm	kg	mm
80	98	+1 to -2.7	64	4	400	22	84	6	3.4	87.5	207	7	83
100	118	+1 to -2.8	64	4	400	24	88	6	4.6	106.7	229.5	8	86
125	144	+1 to -2.8	64	4	400	25	91	6	5.5	136.2	256.5	9	87
150	170	+1 to -2.9	64	4	400	27	94	6	7	158	287	11.5	94.5
200	222	+1 to -3	64	4	400	25	100	6.3	11.3	217.2	347.5	15	94.5
250	274	+1 to -3.1	50	4	400	25	105	6.8	16.4	288.5	405	19.5	97.5
300	326	+1 to -3.3	50	3	300	25	110	7.2	20.3	363	463.5	24.5	101
350	378	+1 to -3.4	40	3	300	23	110	7.7	26.3	478.5	520.5	30	101
400	429	+1 to -3.5	40	3	300	20	110	8.1	30.2	568.5	576	36	104
450	480	+1 to -3.6	40	3	300	20	120	8.6	36.8	664.7	632	43	104
500	532	+1 to -3.8	40	3	300	20	120	9	42.5	776	689	50	106
600	635	+1 to -4	30	3	300	20	120	9.9	57.8	1011	797	65	106
700	738	+1 to -4.3	30	3	300	25	150	10.8	87	1304	905	82	108

1- PFA: Allowable Operating Pressure

2- End Play: Axial Joint Deflection

R.J.Pipe joint tested according to ISO 16134 to specify joint classification of pipeline components.

Parameter	Slip-out resistance	Expansion/contraction performance	Joint deflection angle
Class	A	S-3	M-3
Component performance	3d kN or more	Less than± 0.5% of L	Less than 7.5°

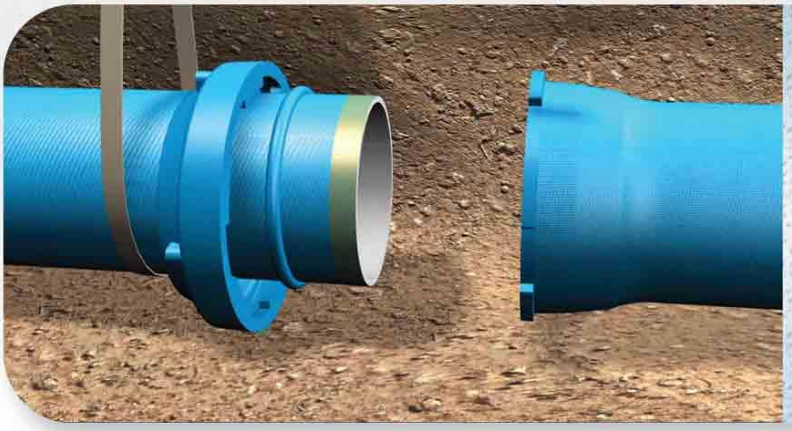
L is the component lenght, in millimeteres (mm)

d is the nominal diameter of pipe, in millimeters (mm)



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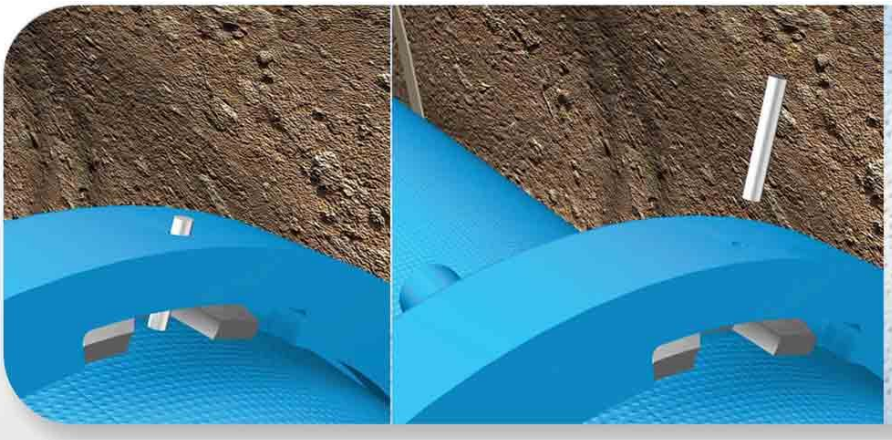
4.Guide spigot end into R.J pipe socket and provide reasonably straight alignment. Make joint by pushing the spigot end into the socket. A long bar or lever puller may also be used to pull the spigot end into the bell.





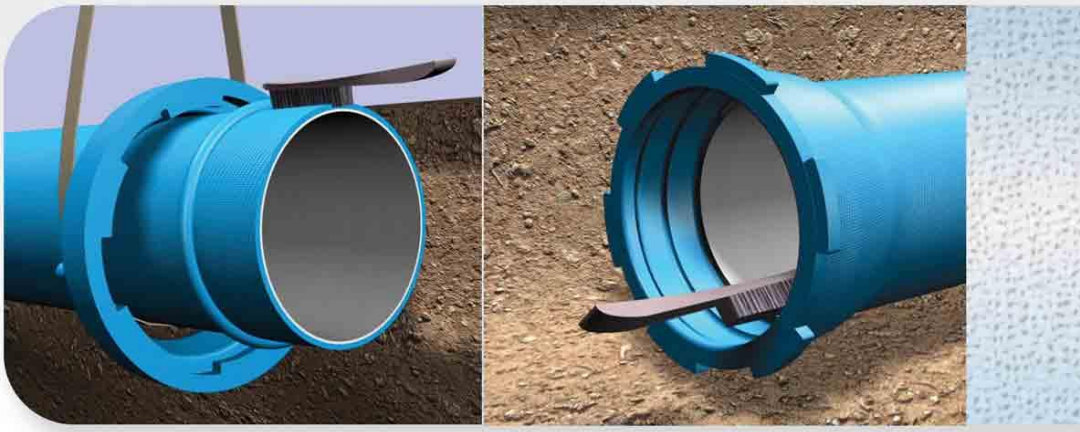
5. Position retainer so that the recesses line up with the lugs on the bell. Slide retainer over bell and rotate until the lugs on the bell and the retainer line up.

6.Insert retainer lock in recess formed by lugs on bell and retainer. Insert roll pin in drilled hole.



R.J PIPE ASSEMBLY INSTRUCTIONS

1.Remove hook bolts securing retainer. Clean spigot end of pipe and clean out any dirt behind retainer lugs.





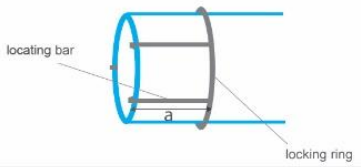
2.Make certain that the groove and bell socket of pipe are clean prior to gasket insertion. Then apply lubricant inside of socket and be sure that the correct gasket is used. Make one or two small loops in gasket depend on gasket size and insert it in the socket and make sure that properly seated.

3.Apply the lubricant on spigot end of mating pipe and inside of socket.



Welding Procedure Specification of R.J Pipe

If the pipes cut to required laying length or customer purchases pipes without lock ring please follow welding instruction.

Welding Process	SMAW(Shielded Metal Arc Welding)		
Joint Type	Single Part Welding		
Base Metal	Cast iron type	Standard	Thickness mm
	SG Cast Iron	EN-GJS450-15	3-11
Filer Metal	AWS/ASME SFA-5.15	DIN 8573	Electrod Diameter mm
	E NiFe-CI	E NiFe-1 BG-22	3.25
Electrical Charactristics	Transfer Mode	Current	
	Short Circuit	Electrode connects to positive DCEP polarity and use minimum amperage	
Welding Procedure	Amps 80-110	Volts 22-24	TS 3-6 mm/s
Welding Position	Horizontal position		
Joint Detail			

Locking ring from weathering steel or 1.7131 steel must be welded on specific distance to spigot end:

DN	80	100	125	150	200	250	300	350	400	450	500	600	700
Bar(Dia)	13	13	13	14	14	14	14	14	14	14	16	16	16
Bar (L)	340	400	480	565	730	895	1055	1220	1380	1540	1705	2030	2350
a	97	101	104	108	114	119	123	124	124	134	136	136	165
Tole	±1							±2					

Locating bar mesurments.

DN	80	100	125	150	200	250	300	350	400	450	500	600	700
X(±1)	90.5	94.5	97.5	101	107	112	116	117	117	127	129	129	158
ϕ (+0.5)	13			14							16		

