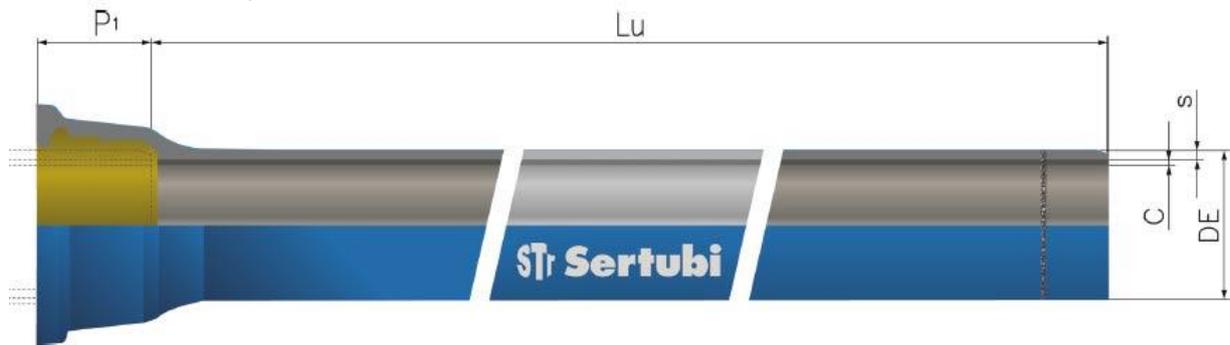


## MR System

### Ductile Iron Pipes for Water



The **mechanical MRJ (Mechanical Restraint Joint)** can be used with ductile iron pipes and fittings manufactured in accordance with the EN545 and EN598 standards with AJ or TJ automatic flexible joint and a collarete on the socket.

Ductile iron pipes have to be Aqua HP or Hydro HP ones.

**The MRJ system** has a weld bead on the spigot end, a locking ring which abuts the weld bead, a bolted gland to hold the ring in place and a series of hooked bolts.

The surface of the bolted gland is spherical, to ensure that the angular deviations of the AJ and TJ joints can be maintained.

The system can be applied to AJ and TJ socket profiles having a collarete. The restraint system is independent of the leak tightness provided by the AJ or TJ joint.

The MRJ system an alternative to anchor blocks, guaranteeing the stability of pressure pipelines at single points. It is also a suitable solution to anchor sections buried in a steep incline.

DN mm	Lu mm	Dimensions		Thickness		Weight		Class	PFA
		DE mm	P <sub>1</sub> * mm	Iron thickness mm	Concrete thickness mm	One pipe kg	One Meter kg/m		
100	5,5	118	82	6,0	4,0	97,5	17,7	C100	64
125	5,5	144	85	6,0	4,0	120,0	21,8	C64	64
150	5,5	170	88	6,0	4,0	144,1	26,2	C64	55
200	5,5	222	94	6,3	4,0	198,2	36,0	C50	44
250	5,5	274	94	6,8	4,0	263,1	47,8	C50	39
300	5,5	326	95	7,2	4,0	331,4	60,3	C40	37
350	5,5	378	98	7,7	5,0	436,9	79,4	C40	30
400	5,5	429	100	8,1	5,0	519,3	94,4	C40	30
450	5,5	480	103	8,6	5,0	613,7	111,6	C40	30
500	5,5	532	105	9,0	5,0	709,1	128,9	C30	30
600	5,5	635	110	9,9	5,0	923,4	167,9	C30	27
700	5,5	738	135	10,8	6,0	1190,7	216,5	C30	23
800	5,5	842	135	11,7	6,0	1461,7	265,8	C30	20
900 <sup>(1)</sup>	5,5	945	135	12,6	6,0	1757,6	319,6	C30	16
1000 <sup>(1)</sup>	5,5	1048	145	13,5	6,0	2078,0	377,8	C30	16

\* For AJ only

(1) Under development

NOTE: the pipes of this range entirely correspond to the K9 class (Iron wall thickness and PFA values) according to the EN 545:2006 norm; the pressure classes indicated in the table have been identified according to the criteria of correspondence mentioned in the annexe NA of the German version of DIN EN 545:2010.

Range available with AJ and TJ Joint

The MR System is applicable both on "AQUA PLUS HP" and "HYDRO HP" pipes provided of a weld bead on the spigot end and a collarette on the socket, making use of the MR Kit. Please refer to the Desing Guide for further details

### Internal Lining:

Blast furnace cement mortar to EN545 and ISO 4179.

### External Protection:

400 g/m<sup>2</sup> of zinc-aluminium alloy (85Zn-15Al) applied by metallisation followed by a layer of blue synthetic paint to EN545 and ISO 8179.

The weight is approximate.

Lu: standardized length 5.5m and/or 6.0m.