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**Polymeric alloy pipe with restraint joint system**

**Abstract:**

The polymer alloy consists of PVC-U and chlorinated polyethylene (PE-C): this mix allows for obtaining pipes capable of guaranteeing excellent performances in terms of resistance to crack propagation, ductility and resilience – besides resistance to crushing, corrosion, chlorine and impermeability to pollutants.

The system can work continuously at a pressure equal to PN (nominal pressure), supporting the axial load generated by it, and it can work in depression up to -0,8 bar. The joint is equally well performing even for short periods at pressures higher than the nominal one, with resultant axial load reaching up to 440 kN (in the case of OD 400, PN20).

In trenchless applications, FITT BLUFORCE RJ is a decisive solution for applications on soft or sloping terrains and for direction changes, as it eliminates the need to use anchoring blocks. In those highly technical applications, FITT BLUFORCE RJ fully unleashes its innovative potential, which translates into tangible advantages:

- Reduction of pipe laying times: thanks to the socket joint, the bars can be assembled during the pulling phase, uninterruptedly.
- Compact work site: the 6-metre bars minimise the site's bulk – a critical factor especially in works on roads.
- No special processes on-site: since there is no need for welding, it is not necessary to use special equipment nor qualified workers.
- System flexibility: the combination of the restraint joint angular deflection and the ductility of the polymer alloy bar results in reduced bend radii values.
- Innovative technical solutions for trenchless technologies: FITT BLUFORCE RJ is the world's first polymer alloy pipe with restraint joint and it is the first polymer-based pipe ever made in Europe.