

- c) For pipes up to and including 600mm nominal internal diameter joints shall be capable of withstanding a deflection of not less than one and a half degrees in any direction and remaining watertight. For pipes over 600mm nominal internal diameter joints shall be capable of withstanding a deflection of half degree in any direction and remaining watertight.
- d) Joints shall be capable of withstanding a draw of 13mm over and above the initial jointing allowance and remaining watertight. The initial jointing allowance is the gap between the spigot and the shoulder of the socket measured parallel to the centre line of the pipeline and must not be less than 6mm or greater than 13mm or as recommended by the pipe manufacturer.
- e) Additionally the pipe joints shall be capable of withstanding an external pressure equivalent to 10 m head of water without leakage in both the straight and deflected positions.
- f) Joint couplers may be used adjacent to structures or special fittings.
- g) When a pipe is cut or turned down in order to form a joint fully seal the exposed surfaces with a continuous coating of vinyl ester resin.
- h) Do not use butt/wrap joints without obtaining the approval of the Engineer. Approval will only be given if the Contractor can demonstrate that this type of joint is the most suitable method of forming the joint. Such joints will be formed by specialist operatives under the supervision of the pipe manufacturer and fully in accordance with his recommendations. Use materials to be compatible with the pipes to be joined. Obtain the Engineer's approval for the material along with the method, before work commences.

**Table 18-2:: Summary of test requirements for non-end-load-bearing flexible joints**

<b>Property to be tested</b>	<b>Tests to be performed</b>	<b>Test pressure in Bars</b>	<b>Duration</b>
<b>Initial Leakage</b>	Initial Pressure	1.5 x PN	15 min
<b>External pressure differential</b>	Negative pressure a	- 0.8 bar (- 0.08 MPa)	1 h
<b>Misalignment and Draw</b>	Positive static pressure	2.0 x PN	24 h