

F-ENGR-4	ADVISORY TECHNICAL BULLETIN #030
Bulletin Name:	Flowtite Internal Joint Testing Procedure
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JOINT TESTER EQUIPMENT SPECIFICATIONS AND INSTRUCTIONS

Joint Tester Frame: The Joint Tester frame assembly is to be constructed of heavy gauge steel channel that can be easily broken down into sections for ease of handling.



Bladder: The bladder is constructed of natural rubber and polyester tire cord approximately one inch thick. The operating size range and maximum inflation pressure will be molded into the bladder surface. The bladder shall have 2 telescopic stainless steel tubes to allow the bladder to test a 6" range of pipe IDs.

Control Panel: The joint tester control panel shall provide a reliable means of controlling the bladder and center cavity pressures. The single control panel shall be able to reliably perform an air or water test. The control panel shall be conveniently mounted inside the joint tester frame requiring only input from an air compressor and a water supply if performing a water test. A pressure relief valve shall be used to prevent over inflation of the bladder. Hoses shall be provided to route air and test media to the appropriate ports.

Wheel Assemblies: Each of the 2 wheel assemblies shall be mounted on the inside circumference of the joint tester frame. The mounts shall be adjustable to allow the joint tester to be centered in the pipe. The wheels provide an easy way to transport the joint tester to each joint and center joint tester at the test joint.

Bleed-Off Valve: A bleed off valve shall be fitted to the upper test port to bleed air from the cavity when performing a water test.

TESTING SPECIFICATIONS

Joint Air Testing:

1. Determine test pressure. Test pressure for large diameter pipe should be 3.5 psi (0.24bar). In addition to the 3.5 psi test pressure, add 0.43 psi (0.03bar) for each foot of water head above top of pipeline.
2. Position joint tester, center over joint. Inflate bladder to a minimum of 50 psi above test pressure, not to exceed maximum inflation pressure of bladder.
3. Pressurize center cavity with air to determined test pressure. Allow pressure in cavity to stabilize (approx. 10 seconds) then turn off pressure source.
4. If the pressure in the cavity holds or drops 1psi (.67bar) in 5 seconds, the joint is to be found to be acceptable. If the pressure drops more that 1 psi in 5 seconds, the joint is defective. This is practically a go-no go test.
5. When the joint test is completed, exhaust all pressure from the cavity, then exhaust bladder inflation pressure to 0 psi, then transport joint tester to the next joint to be tested.

Joint Water Testing:

1. Determine test pressure. Test pressure for large diameter pipe should be 3.5 psi (.24bar). In addition to the 3.5psi test pressure, add .43 psi (.03bar) for each foot of water head above top of pipeline.
2. Position joint tester, center over joint. Inflate bladder to a minimum of 50psi above test pressure, not to exceed maximum inflation pressure of bladder.
3. The center cavity shall be filled with water until water flows evenly from the bleed off valve, thus bleeding all air from the cavity. The bleed off valve is then closed and cavity pressurized to the determined test pressure.
4. If the pressure in the cavity holds or drops 1psi (.67bar) in 5 seconds, the joint is to be found to be acceptable. If the pressure drops more that 1 psi in 5 seconds, the joint is defective. This is practically a go-no go test.
5. When the joint test is completed, exhaust all pressure from the cavity, then exhaust bladder inflation pressure to 0 psi, then transport joint tester to the next joint to be tested.

It is recommended that the pipe sections being tested be backfilled to keep joints from separating while performing an air or water test.

Note: These test procedures are as prescribed by the testing equipment manufacturer and have been adopted as an acceptable means of testing the USCPS – Flowtite GRP Pipe.